An Empirical Analysis of the Impact of Agricultural Banking Industry profitability in Bangladesh: An Evaluation of Internal Indicators of RAKUB

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Abstract: The study is on diagnostic and exploratory in nature and it depends on secondary data. The finding shows a steady growth in terms of branches, manpower, deposits, loan & advances, investments, total income, total expenditure, deposit interest rate, loan interest rate and net profit of RAKUB (Rajshahi Krishi Unnayan Bank) during the period 2004-2011. Using simple regression analysis, was used to test the trend of indicators were significantly positive tendency with the change of the above period. Correlation matrix was use to find the inter relationship among the indicators; total net profit have strongly related with manpower, total deposit, total loan and advance, loan recovery, total income and total expenditure. Using multiple regression analysis, a variance inflation factor (VIF) demonstrated that there was no evidence of a multicollinearity problem among the indicators when total net profit was considered as a dependent indicator. The coefficients of the regression line demonstrated that there was a significant positive relationship between the total net profit and number of branch, manpower, total deposit, total loan and advance, loan disbursement, loan recovery, total invest, deposit interest rate with (P < 0.05), while the total expenditure was a negatively association with total net profit. Stepwise regression analysis showed that with respect to total net profit, the best indicators were loan recovery, number of branch, manpower and total loan & advance. These results suggest that most of the profitable appear to influence for improving the rural economic future performance of Bangladesh by Rajshahi Krishi Unnayan Bank (RAKUB) to develop the loan recovery, number of branch, manpower, total loan & advance.

Keywords: Agriculture, Deposits, Loan & Advance, Investment, Deposits Interest Rate, Loan Interest Rate, Multiple Regression Analysis and Stepwise regression analysis and Mallows Cp.

1. Introduction

Agriculture is the life line of Bangladesh. The people of this country are dependent on agriculture as the primary sources of living. Many developing countries, like Bangladesh have a vast rural society which accounts for about 85 % of the total population. The major occupation of the people of Bangladesh is "Krishi" which means "Agriculture". Farmers of this country firstly produce crops what fulfills family subsistence needs then they show interest on production of cash crop such as cotton, jute, tea, tobacco, coffee, and so on are mainly aimed in covering demand of home market and export in foreign currency for developing countries. Moreover, the bank is involved in production of livestock such as poultry, goats, cows, pigs, and sheep that carry out needs for meat, milk and egg. In spite of this major contribution from the agricultural sector to the economy, the rural sector in developing countries only has modest means to fulfill its task. The majority of the rural population is subjected to severe poverty, inequalities and unemployment. In spite of decades of state intervention, no substantive changes in the socioeconomic conditions of the rural poor have taken place. Bank is a well - known institutional framework that has achieved considerable success in improving the socioeconomic conditions of the rural poor. Bangladesh has been striving to bring about improvements in the quality of life of the rural poor.

Specially, rural people in Bangladesh are facing problem in the inadequate supply of finance that is considered as the blood of an economy. Enough and timely financing is essential for obtaining real development in agriculture. Keeping this in mind, that financing facilities works as an incentive to the producer to increase production. But in Bangladesh, the major sources of finance to rural households and particularly low- income working household has been the informal sources. Many different institutional approaches have been pursued over the years to promote rural Government has development activities. Bangladesh established Rajshahi Krishi Unnayan Bank (RAKUB). The sector offered finance at very established to overcome these types of problem and taking banking service to the doorstep of rural people. The bank is continuously trying hard to provide the financial support for the development and growth of the agricultural sector. It motivate the middle and lower middle class of urban and rural people for improving their

savings and the bank also improve investment in different sectors of agriculture and agro-based industry and trade. In this respect, the bank acts as a major contributor for the development of the agricultural sectors.

2. Objectives of the Study

- i. To test the trend in different indicators of RAKUB in Bangladesh.
- ii. To find inter relationship among the indicators of RAKUB in Bangladesh.
- iii. To evaluate the average relationship in total net profit with other indicators.
- iv. To determine the best indicators for total net profit.

3. Review of Literature

A publication entitled "World Agriculture: Horizon 2015/2030", the Food and Agricultural Organization (FAO) mentions that: For many of the currently more than 1.1 billion people that are living in extreme poverty, economic growth based primarily on agriculture and on non-farm rural activities. Agricultural finance is essential to improve their livelihoods. Agricultural growth gives better access to land, water, credit, health and education for rural people that alleviate poverty and hunger (3).

Avkiran(4) (1997) stated that the details the process whereby multivariate interdisciplinary measures of potential to perform are integrated with performance measures to develop models of retail performance for bank branches. The predictive models use the key business drivers of a major trading bank as dependent variables. Independent variables explaining business drivers are the theorized potential variables that measure the capacity to generate retail business. The models allow a comparison between the predicted and actual levels of key business diverts, thus measuring unrealized performance. Findings can assist decision making during restructuring, branch closures or downsizing. The variables presented should be regarded as examples rather than universally accepted measures of branch performance.

Bhatt & Ghosh (6) (1992), observed that the profitability of commercial banks depend on several factors some of them are endogenous and some exogenous. The endogenous factors represent control of expenditure, expansion of banking business, timely recovery of loans and productivity. The exogenous factors consist of direct investments such as SLR (Statutory Liquidity Ratio), CRR (Cash Reserve Ratio) and directed credit programs such as region wise, population wise guidelines on lending to priority sectors. The regulated and restricted regime in the operation of banking system in terms of investment, credit allocation, branch expansion, interest rate determination and internal management eroded the productivity and profitability of commercial banks.

Chowdhury(7) (2002) observed that banking industry of Bangladesh is a mixed one comprising nationalized, specialized, private and foreign commercial banks. Many efforts have been made to explain the performance of these

banks. Understanding the performance of banks requires knowledge about profitability and the relationship between variables like market size, bank's risk and bank's market size with profitability.

Chowdhury and Islam(8) (2007) showed that deposits and loan and advances of Specialized Banks (SBs) are more sensitive to interest rate changes than those of Nationalized Commercial Banks (NCBs). So SBs should not make abrupt change in lending rate and deposit rate by following the NCBs. If NCBs change their lending rate or deposit rates, their deposits and loan and advances will be affected less than those of SBs. However, SBs offer higher deposit rate and charge higher lending rates than NCBs. That is why the interest rate spared of SBs was higher than that of NCBs.

T.A. Chowdhury & S.S. Chowdhury(9) (2011) have analyzed the development and growth of specialized agricultural banks in Bangladesh and the different services and facilities they are providing for the overall improvement of this sector. It is observed that both agricultural banks are able to achieve a steady growth in terms of employees, branches, deposits, loans and advances.

According to Farid Ahmed M (11) (1980) though Bangladesh inherited an agrarian economy, agriculture did not get due importance hitherto. As such the farmers did not find change of their lot, rather the number of landless and marginal farmers increase day by day. The main drawback of our agriculture is the lack of finance as the vast majority of our farmers are living at or below subsistence level. These farmers were found to receive 86% of their credit from non institutional sources which includes money lenders, shopkeepers, relatives, friends, well to do rural people, market intermediaries and others. It was guessed that non institutional sources still provide 70% of the credit. In this regard institutional credit facility can be considered. Institutional sources refer to the government, cooperatives, agricultural banks, and commercial banks etc. that are entrusted with the responsibility of credit dispensing. Institutional sources provide an increasing trend with the passage of time

Hossain and Bhuiyan(12) (1990) stated that there is no universally accepted operational definition of performance measures. In broad sense performance level of an enterprise can be measured by the extent of its organizational effectiveness. In the context of services rendered towards public the performance of an organization can be viewed as 'the extent to which its work is carried out within established specifications for goods and services produced, to the general satisfaction of the clientele served, within given cost and time constraints, and in such a manner as to support or contribute to the achievement of the organization objectives. Jahangir, Shill and Haque(13) (2007) observed that the traditional measure of profitability through stockholder's equity is quite different in banking industry from any other sector of business, where loan to deposit ratio works as a very good indicator of bank's profitability as it depicts the status of asset liability management of banks. But bank's risk

is not only associated with asset liability management, but also related to growth opportunities. Smooth growth measures higher future returns to holders and there lies profitability which means not only current profits, but future returns as well.

According to Khalily, Huda and Lalarukh(14) (1997), credit is necessary for agricultural development vis-à-vis rural economic development. But loan recovery rate is low. This has adverse impact on revolving of loan able fund and viability of rural financial system. Poor performance of lenders in agricultural credit does affect viability of rural financial system. A quick estimate shows that social cost of forgiveness program has been twenty five percent of loan outstanding. On the other hand continued interest of the political lenders in interest and loan forgiveness program also affects expected recovery behavior of the borrowers. Burden of social cost for agricultural or rural credit cannot be fully attributed to crop loans as it constitutes only forty percent of the total agricultural credit. Non crop loans are likely to be less risky. Therefore, the problem of high social cost for agricultural credit can perhaps be linked to institutional behavior.

Mahmud. T (15) (2006) observed that the rural poor generally have low income to sustain their livelihood. They do not have the capacity to start any income generating activities due to lack of financial capital. They also have very limited access to the formal financial institutions because of the inability to fulfill formal collateral requirement. Thus in order to widen rural poor access to finance, micro credit program has been launched which require no collateral to obtain funds.

4. Materials and Methods

The present study has been carried out to internal parameter analysis on Rajshahi Krishi Unnayan Bank (RAKUB). The present study is diagnostic and exploratory in nature and makes use of secondary data. The relevant data and information were collected from annual reports of this banks, Bangladesh Bank, Securities and Exchange Commission and websites of relevant agricultural banks in Bangladesh. The study is confined only to the specific areas like number of branches, district coverage, deposits mobilized, credits and investments made by the agricultural bank for the seven years period starting from 2004 to the year 2011. For internal indicators analysis, these data has been analyzed through the various statistical measures like growth percentage, simple regression analysis was to find the secular trend of the growth.

To examine the average relationship between total net profit and internal indicators, multiple regression analysis was utilized. The underlying multiple linear regression models corresponding to each variable are:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + ... + \beta kXk + \varepsilon$$
(1)

where Y is the response variable (total net profit), Xi (i = 1, 2, 3,..., k) are the predictor variables (inter parameter measurements), $\beta 1$ is the intercept term, $\beta 1$, $\beta 2$,..., βk are the unknown regression coefficients, and is the error term with an N(0, $\sigma 2$) distribution.

In multiple regression analysis, an important assumption is that the explanatory variables are independent of each other, i.e. there is no relationship between the explanatory variables to estimate the ordinary least squares (OLS). However, in some applications of regression, the explanatory variables are related each other. This problem is called the multicollinearity problem (Chatterjee and Hadi, 2006). In this study, a variance inflation factor (VIF) was used to check for the multicollinearity problem among the predictor variables.

The variance inflation for independent variables Xi is:

VIF_j =
$$\frac{1}{(1-R_j^2)}$$
, j = 1, 2,..., p(2)

where, p is the number of predictor variables and R_j^2 is the square of the multiple correlation coefficient of the jth variable with the remaining (p-1) variables where:

- 1) if 0 < VIF < 5, there is no evidence of multicollinearity problem;
- 2) if $5 \le VIF \le 10$, there is a moderate multicollinearity problem; and
- 3) if VIF > 10, there is seriously multicollinearity problem of variables.

Finally, stepwise regression was used to choose the most influential internal parameter measures for total net profit. Stepwise regression is a technique for selecting influential variables in multiple regression models (Chatterjee and Hadi, 2006). Statistical analyses were carried out using Minitab and SPSS software version 15.

5. An Overview of the Rajshahi Krishi Unnayan Bank (RAKUB)

Rajshahi Krishi Unnayan Bank (RAKUB) was established by the President's Ordinance No. 58 of 1986 with the aim of providing institutional agricultural credit for optimum utilization of agricultural potentials of Rajshahi Division. Taking over all the 253 branches and offices along with assets and liabilities of the Rajshahi Krishi Unnayan Bank within Rajshahi division, the bank started functioning on 15 March 1987. As the largest development partner in the northwest region Rajshahi Krishi Unnayan Bank aims at overall development of the farmers and all the sectors and sub-sectors of agriculture in this region. Besides catering to agricultural credit, financing agri-business and agro based industries, activities related to socioeconomic development and poverty alleviation programs, the bank performs most commercial banking functions. At the time of establishment authorized capital of the bank was Tk. 1500.00 million(taka one thousand five hundred million) which was raised do Tk. 1800.00 million (taka one thousand eight hundred million)

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during the financial year 2005-2006. During fiscal 2007-2010 the bank under look a plan, approved by the ministry of finance, to raise authorized capital of the bank in the four consecutive years and lift it to Tk. 7500.00 million(taka seven thousand five hundred million) only. Accordingly authorized capital stood at Tk. 2200.00 million (taka two thousand two hundred million). At present Paid-up capital amounts to Tk 2200.00 million and reserve amounted to Tk. 208.40 million.

A seven-member Board of Directors is entrusted with the responsibility of policy formulation for attainment of growth in agriculture leading to economic development of the country through agricultural credit support. The government appoints all the directors of the board. An executive committee constituted of the Chairman and two other directors including the Managing Director is there for taking emergency decisions. The Managing Director is the chief executive of the bank. The Head Office of the bank is stationed at Rajshahi. The branch network comprises 364 branches including one in Dhaka. One General Manager's office at Rangpur and one at Rajshahi eighteen zonal offices stationed at district headquarters control branches under them. There are 18 independent regional audit offices under direct control of the head office for conducting regular audit in branches as well as in zonal offices (greater Rangpur, Dinajpur and Bogra districts). The bank has a training institute at Rajshahi. Out of total workforce of 3,448 officers counted 1,419 and other staff 2,029 as on 30 June 2010 against approved strength of 4236 including 2110 officers and 2126 others staff.

Like RAKUB also gives importance to accumulation of rural small savings through its branches. RAKUB renders all sorts of deposit banking services to its over one million valued customers. The Bank operates deposit accounts like Savings Bank Accounts, Current Deposit Accounts, Short Term Deposit Accounts and Fixed Deposit Accounts. The poverty-stricken area of north-west Bangladesh is characterized by comparatively lower rate of savings, inadequate capital

accumulation and slim employment opportunities. The existing collateral-based banking system is also of little use in respect of extending support to the millions of landless people. To address the problem, the Bank has been financing collateral-free micro-credit for income and employment generation through its poverty alleviation credit programs. The Bank finances for production of all the summer and winter crops, horticulture & nursery etc. It extends credit facilities for systematic and commercial livestock farming which includes dairy, beef-fattening, poultry, raising and setting up of hatcheries which in turn is expected to increase production of milk, meet and eggs, the main source of protein. In today's technology-based farming of high yielding and high-value crops, mechanization of cultivation, irrigation and pest-control is indispensable. To cope with the situation, the Bank also provides financing for power tillers, tractors, tube wells, power-pumps and fertilizer and pesticide application devices. Agro-industries for import sub situation are specially encouraged by offering moderate terms of financing. These agro based industries are – poultry farm, dairy farm, food processing plant, fish freezing/processing industries, leather process and leather based products item, vegetables etc.

6. Results and Discussion

It was necessary first to test the TNPs for normality. To check the normality of TNPs, the Kolmorov–Smirnov normality test was utilized. The Kolmorov–Smirnov normality test showed that there was no problem concerning the normality of CI, because the P-value was greater than 0.05 (Table 1). To examine the linear relationship between the TNP (total net profit) and internal indicators of RAKUB, regression coefficients were computed. Table 2 shows the coefficients of linear regression showed that the trend of all internal indicators of measurements were significantly positive with the change of duration period (Fig -1 to Fig-09).

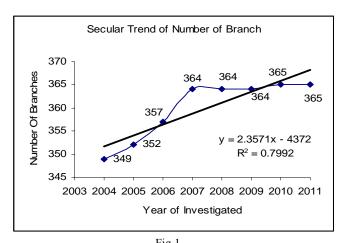
Table 1. Kolmogorov-Smirnov normality test for the CI

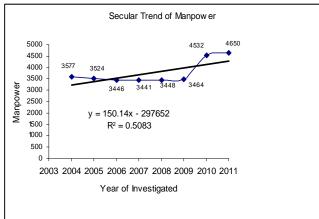
Variable	Statistic	df	P-value
Total net profit	0.023	10	0.200

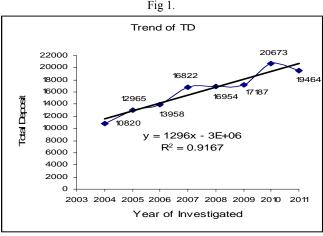
Table 2. Coefficients of trend line of the investigated year on different internal indicators of RAKUB in Bangladesh.

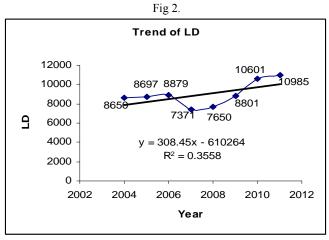
Serial	Measurements	RAKUB				
No.		Coefficients	P - value			
01	NB	2.36*	0.000			
02	MP	150.14*	0.000			
03	TD	1296	0.563			
04	LD	308.45*	0.034			
05	LR	518.26	0.045			
06	DIR	0.3857	0.000			
07	TOI	341.25*	0.003			
08	TOE	383.66	0.067			
09	TNP	362.96*	0.000			

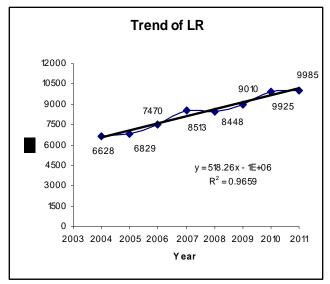
NB: RAKUB = Rajshahi Krishi Unnayan Bank, NB = number of branch, MP = manpower, TD = total deposit, TLA = total loans and advances, TI = total investments, DIR = deposit interest rate, LIR = loan interest rate, TOI = total income, TOE = total expenditure, TNP = total net profit. * Significance at 5 % level.











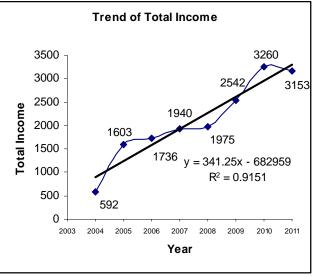
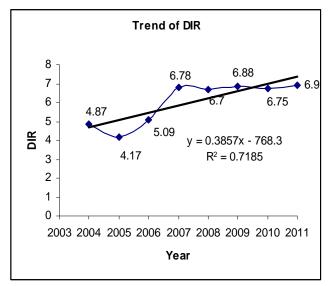


Fig 5. Fig 6.



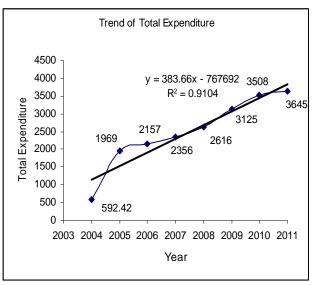


Fig 7. Fig. 8

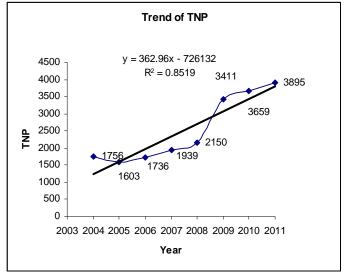


Fig 9.

Inter parameters of correlation matrix analysis

Table 3: shows inter parameter correlation matrix among different parameters of Rajshahi Krishi Unnayan Bank in Bangladesh. The selection parameters are: total net profit (TNP), number of branch (NB), manpower (MP), total deposit (TD), total loan and advance (TLA), loan disbursement (LD), loan recovery (LR), total investment (TI), total income (TOI), total expenditure (TOE), deposit interest rate (DIR) of RAKUB. From the correlation matrix the researchers have observed the followings:

 Total net profit have positive strongly related with manpower, total deposit, total loan and advance, loan recovery, total income and total expenditure.

- Number of branch have positive strongly related with total deposit, loan recovery, deposit interest rate.
- Manpower have positive strongly related with loan disbursement.
- Total deposit have positive strongly related with total loan and advance, loan recovery, total income, total expenditure, deposit interest rate.
- Total loan and advance have positive strongly related with total expenditure, total income and loan recovery.
- Loan recovery have positive strongly related with deposit interest rate, total income and total expenditure.
- Total income have positive strongly related with total expenditure.

Table3 . Correlation coefficients matrix among the inter parameters of RAKUB in Bangladesh

Variable	TNP	NB	MP	TD	TLA	LD	LR	TI	TOI	TOE	DIR
TNP	1.00										
NB	0.69	1.00									
MP	0.79	0.41	1.00								
TD	0.83	0.93	0.68	1.00							
TLA	0.91	0.87	0.77	0.96	1.00						
LD	0.76	0.21	0.91	0.49	0.66	1.00					
LR	0.91	0.92	0.72	0.98	0.98	0.56	1.00				
TI	0.46	0.05	0.49	0.24	0.22	0.36	0.28	1.00			
TOI	0.88	0.84	0.73	0.96	0.97	0.65	0.95	0.24	1.00		
TOE	0.83	0.89	0.62	0.95	0.96	0.54	0.93	0.16	0.98	1.00	
DIR	0.72	0.94	0.39	0.89	0.79	0.19	0.89	0.18	0.72	0.75	1.00

N.B: Same notation of Table 2.

Multiple regression analysis

A develop a multiple regression model is

$$TNP = \beta 0 + \beta 1NB + \beta 2 MP + \beta 3 TD + \beta 4 TLA + \beta 5 LD +$$

 $\beta 6 LR + \beta 7TI + \beta 8TOE + \beta 9DIR + \varepsilon$ (3)

The estimated regression equation is

$$TN\hat{P} = 79.85 + 0.291 \text{ NB} + 0.302 \text{ MP} + 0.437 \text{ TD} + 0.297$$

 $TLA + 0.330 \text{ LD} + 0.041 \text{ LR} + 0.563 \text{TI} - 0.281 \text{ TOE} + 0.183 \text{ DIR} \dots (4)$

The regression coefficients and the VIF of the independent variables are presented in Table 4. The VIF showed that there was no evidence of a multi co linearity problem among the predictor variables. The coefficient of the regression line showed that there was a significant positive association between the total net profit and number of branch, manpower, total deposit, total loan and advance, loan disbursement, loan recovery, total invest, deposit interest rate with (P < 0.05), while the total expenditure was a negatively association with the total net profit.

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Table 4. Multiple Regression coefficient for internal indicators of RAKUB in Bangladesh when total net profit (TNP) as a response variable

Predictor	Coefficient	Standard deviation	T- value	P-value	VIF	
NB	0.291	0.291	0.984	0.043	1.184	
MP	0.302	2.291	1.363	0.022	2.152	
TD	0.437	3.291	0.898	0.004	1.187	
TIA	0.297	4.291	1.290	0.045	4.903	
LD	0.330	0.291	1.476	0.030	1.276	
LR	0.041	0.291	1.255	0.046	5.763	
TI	0.563	0.291	0.265	0.000	4.927	
TOE	-0.281	0.291	-0.549	0.603	5.554	
DIR	0.183	0.291	1.205	0.014	3.800	
	MSE = 0.3854	R – Squa		R- Square(adj)		
		(R2) = 99.9 %		$(\overline{R}\ 2)=99.9\%$		

Stepwise regression analysis

The stepwise regression analysis showed that loan recovery was included in the first step (Table 5). The R2 value indicated that there was an 82.26 % contribution in the overall increasing variation of total net profit due to the predictor indicator of loan recovery. The second step included both the loan recovery and number of branch. The R2 value now indicated a 93.09 % contribution of overall increasing variation of total net profit due to these two independent indicators. The third step included loan recovery, number of branch and manpower with the R2 value, indicating a 98.03 % contribution in the overall

increasing variation of total net profit due to these three independent indicators. The final step included loan recovery, number of branch and manpower and total loan & advance with an R2 demonstrating a 99.18 % contribution in the overall increasing variation in the total net profit due to these four independent indicators. The value of Mallows' Cp decreased with each increment and the smallest value (6.70) was found in the final step. These results demonstrated that the most important internal indicator that influenced the total net profit were loan recovery, number of branch, manpower and total loan & advance of Rajshahi Krishi Unnayan Bank in Bangladesh.

Table 5. Summary of the stepwise regression analysis for the selection of best indicators of RAKUB in Bangladesh when total net profit is a response variable

Step	Step-1		Step -2		Step-3		Step-4	
Predictor	Coeffi- cient	t - value	Coeffi- cient	t -value	Coeffi- cient	t – value	Coeffi- cient	t- value
LR	0.68	5.27	1.24	5.66	2.40	6.16	2.19	7.11
NB			1.22	2.80	2.92	4.91	3.17	6.89
MP					1.36	3.17	1.67	4.72
TLA							0.095	2.05
SE	43.8		30.0		17.9		13.3	
R2	82.26 %		93.09 %		98.03 %		99.18 %	
R2(adj)	81.67%		93.00 %		97.88 %		99.13 %	
Mallows' CP	135.23		18.56		13.25		6.70	

7. Conclusion

The agricultural bank has started in Bangladesh in the year 1986. After commencement the agricultural bank is playing a vital role in the economic development of the country. It is reflected from the analysis that almost every year the bank is opening new branches. The bank should open more new branches for the overall development of agricultural sector in Bangladesh. The agricultural bank has created employment opportunities for more than ten thousand people in Bangladesh. However, from the analysis the researchers have found that the bank lost their manpower during the year 2005 to 2008 but they have regained their manpower at the end of 2011. From the simple regression analysis the researchers

have observed that R2 of loan disbursement for the bank is less than 35.58 % even worse. These indicate that the prospect of loan disbursement of the agricultural bank is negative performance. The bank should take remedial measures to reduce their loan disbursement turnover. Correlation matrix to find the inter relationship among the internal indicators; total net profit have positive strongly related with manpower, total deposit, total loan and advance, loan recovery, total income and total expenditure. Using multiple regression analysis, a variance inflation factor (VIF) demonstrated that there was no evidence of a multi co linearity problem among the indicators when total net profit was considered as a response indicator. The coefficients of the regression line demonstrated that there was a significant positive relationship between total net profit and number of

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branch, manpower, total deposit, total loan & advance, loan disbursement, loan recovery, total invest, deposit interest rate with (P < 0.05), while the total expenditure was a negatively association with total net profit. Stepwise regression analysis showed that with respect to total net profit, the best indicators were loan recovery, number of branch, manpower and total loan & advance. These results suggest that most of the profitable appear to influence for improving the future rural economic performance in Bangladesh by Rajshahi Krishi Unnayan Bank to develop the loan recovery, number of branch, manpower, total loan & advance.

The bank should concentrate more on loan interest rate. It is reflected from the analysis that there is no consistent pattern for agricultural loan interest rate. However, the scenario is relatively better for industrial loan disbursement and recovery. It is recommended that the bank should disburse loan for easy condition and should set a target for loan recovery in the sectors. It is always better if the bank can recover loan at a consistent pattern in every year. Otherwise the bank profitability can be hampered. The researchers are quite optimistic that if the given suggestions of this study are implemented then the agricultural banks may be able to overcome its present problems and may contribute in the rapid development of the agricultural sectors of Bangladesh. The findings may be of considerable use to banking institutions and policy makers in developing countries and to academic researchers in the area of banking comparative concert evaluation. Presumably, the answer is multifactorial and a combination of various factors. Clearly, more research is required.

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