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Productivity Analysis of Rural Banks in India: A Case of Meghalaya Rural Bank

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Abstract

The Productivity is the cornerstone of banking growth and economic development. In common parlance, productivity indicates efficiency and effectiveness of services. In order to survive in the present competitive environment, banks should be strengthened adequately and would attain competitiveness through the use of its existing resources and managing business in effective manner. It is therefore imperative to assess the productivity performance of rural bank in India. In the present paper, an attempt has been made to study the productivity performance of Meghalaya Rural Bank (MRB), keeping in view the trends of rural banks in the national context. The productivity in terms of labour, branch, return on assets (ROA), return on investment (ROI), profit as per cent of business volume, etc., have been calculated to examine the innovativeness of MRB. It is found that the MRB is utilizing efficiently the resources that they mobilized and has been doing relatively better than that of the Regional Rural Banks (RRBs) as a whole. However, a variation in the productivity has been observed which might have adverse effect on profitability of the bank. This disparity may be due to lesser involvement of rural banks in profitable activities and wicked nature of rural clients for non-repayment of loans.

Introduction

In economics, productivity is the ratio of output produced by per unit of input (Ahuja, 2006).[1] It may refer to the technical efficiency of production relative to the allocation of resources of enterprises. If the goal is to increase productivity, enterprises must produce more with the same level of input. The goal can also be achieved by maintaining the same level of output using fewer inputs. The drive to increase

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productivity can be caused by various factors, but perhaps the most apparent is the aspiration of an enterprise to increase profitability. There are certain factors affecting the productivity of entities. General categories of the factors concerning productivity include the labour force, product, quality, process, capacity, and external influences. The resources are also important to consider in assessment of productivity of an entity.

In the present competitive environment, the most sustainable source of profitability is constant productivity improvement. In other words, profitability is the fleeting reward of productivity improvement. This dynamic also holds true in more complex market situations. Two companies that are located in different regional environment, but which compete directly in a global market may face different input factor costs (i.e., higher wages or cost of capital). In a state of equilibrium, the company that faces higher input factor costs will be able to compensate for this disadvantage through higher productivity. Higher wages, for example, reflect the greater productivity of the labour force in that region. In a competitive environment, where there is a level playing field, an increase in productivity by one company will start the same process as described above, where the company's competitor is forced to make productivity improvements. In fact, this process may eventually lead to a convergence in input factor costs between the two countries (Leade, 2009).[2] The pressure for ever-increasing profit is intense and unrelenting today and accommodating Wall Street, coping with local competitors and thriving in the global economy make bottom-line efficiency an absolute day-to-day business essential (Frei and Mader, 2008).[3]

The productivity analysis may be said as an evaluative activity of the performance of an entity (Miller, 2010).[4] Profitability analysis is the assessment of the impact of various marketing strategies on the profit contribution that can be expected from a product or product line whereas productivity analyses is the assessment of the sales or market share consequences of a marketing strategy. In the present changing economic scenario, the importance of productivity has assumed a crucial significance for the viability of banks. Productivity is one of the factors affecting the profitability among others like expansion of banks' operations in areas where they are handicapped by less avenues for profitable deployment of funds, increased overdraft, higher overhead expenses, increase in sickness in industrial units, NPAs etc. Higher the productivity, proportionately

lower will be the establishment cost. It also indicates the kind of business a particular bank may be doing. A high productivity indicates that, along smaller transactions, a bank does high volume of transactions too. A lower productivity increases relative operational cost and often becomes the cause of losses as intermediary returns are directly related to the quantum of productivity. Bank, as a business concern, can not overlook the profitability aspects since profit signifies efficiency. For the long term survival and growth of banks, profit is imperative. The banks have, of late, demonstrated a remarkable ability to adjust to the new operating environment and acquired a high level of business strength.

The regional rural banks (RRBs) were established to mobilize rural savings and its use especially for the development of the village economy of the nation through agriculture, small industry etc. and in the process of utilization of village potential resources. Therefore, it is an urge to understand whether the resources accumulated by the RRBs are utilized effectively for achieving overall productivity. With the initiation of financial sector reforms there have been several changes in the working of RRBs because various measures have been undertaken by the government to improve the commercial viability of the RRBs and their level of productivity. The various committees also apprehended that RRBs are always important for changing the ground reality of village economy but what is necessary is to improve the operational viability of the institution and thereby to bring higher productivity and profitability.

Objectives and Methodology

The objective of the paper is to examine the productivity of RRBs in general and Meghalaya Rural Bank (MRB) in particular, mainly to test whether the banks have achieved their desired business volume in the present day competition. For this purpose, we have considered all the branches of MRB operating in Meghalaya. As on March 2011, there are 58 numbers of branches of MRB operating in six districts of Meghalaya. To analyze the productivity of bank, we have considered the parameters viz., labour productivity, branch productivity, return on assets and profit as per cent of volume of business. The variables viz., branch expansion, deposit, advances, population per branch, business per branch, employee per branch, credit deposit ratio etc have also considered for the purpose of the study. The data have been collected from the various issues of annual

reports of Meghalaya Rural Bank, financial statements compiled by the head office of Meghalaya Rural Bank, RBI Annual Reports, and RBI Trend and Progress of Banking in India. The widely used financial ratios and statistical techniques have been used for the purpose of the analysis.

Previous Studies

Productivity as a universal concept refers to an organization's effectiveness in using all its resources viz., labour, financial resources, fixed assets and premises. It indicates the relationship between output and input expended in any work situation (Monga, 1992).[5] In this respect, Drucker (1980)[6] opined that business does not have direction without productivity objectives and it does not have control without productivity measurement. Productivity is an efficiency index that measures the rate of output per unit of input like man, material, machine, money and space. It explains the efficiency in the use of factors of production employed by an organization.

Productivity is the corner stone of banking growth and economic development. In simple sense, it means efficiency and effectiveness of services. In fact, productivity is an essential part of our urge for self-improvement and achievement of excellence that is a part of our dynamic society. Optimum productivity is reached when there is a balance between all factors of production that yield maximum output for least effort (Choudhary, 1998).[7] The productivity measures the extent to which the actual input consumption exceeds the minimum input necessary to produce the actual output level (Ahmed, 2003).[8] The minimum input consumption is determined in a manner consistent with other current knowledge of the available production technology (Diwan, 1997)[9] but there are difficulties in measuring productivity in service industries where quality of services assumes greater importance. A bank is described as a financial institution generating a stream of financial services in order to sustain a stock of assets and liabilities. The financial services are produced, delivered and consumed instantaneously. In the process, the consumer is exposed to an experiential quality that is part of the service. In case of banks, the distinction between input and output is not clear (Athma and Srinivas, 1997).[10] One aspect of productivity is the measurement of business (deposit + advances) per branch and per employee and the other aspect is cost responsiveness and return on working fund (Angadi, 1984).[11]

In the context of institutional dimension, Nitin and Thorat (2004)[12] observed that efforts taken during the reform era have limited impact because the reform process change in institutional dimension has not been given adequate importance. Few efforts were made to redesign the perverse institutional arrangements that gave rise to incompatible incentive structures for key stakeholders, such as political leaders, policy makers, stockholders, bank staff, and clients and suggested to bring change further to increase productivity of the bank. Hosmani (2002)[13] in his study on the performance of RRBs relating to Malaprabha Grameen Bank, observed that the managerial efforts in terms of imparting recent banking know-how, knowledge and skills helped to improve the business performance of the bank by way of increased deposits, advances, business, recovery and profitability. Joshua and Nahm (2006)[14] studied on cost and profit efficiency for Australian banks between 1995 and 2002 by using Data Envelopment Analysis (DEA) to construct an efficient frontier for ten banks listed on the Australian Stock Exchange. Empirical results indicate the major banks have improved their cost and profit efficiency, while the regional banks have experienced little change in cost efficiency, and a decline in profit efficiency.

Banking sector efficiency is considered as a pre-condition for macro-economic stability, monetary policy execution, and economic growth. In this respect, Qayyum and Khan (2006)[15] investigated empirically the efficiency, scale economies, and technological progress of commercial banks operating in Pakistan. They observed that that the domestic banks operating in Pakistan are relatively less efficient than their foreign counterparts. Sathye (2003)[16] measured the productive efficiency of banks in India. He found that the mean efficiency score of Indian banks compares well with the world mean efficiency score and the efficiency of private sector commercial banks as a group is, paradoxically lower than that of public sector banks and foreign banks in India. The study recommended that the existing policy of reducing non-performing assets and rationalization of staff and branches may be continued to obtain efficiency gains and make the Indian banks internationally competitive. Das (2002)[17] analyzed the level of risk and productivity of public sector banks and observed interrelationship of the fact that the productivity, capital base and risk taking tend to be jointly determined and reinforced. Cheema and Agarwal (2002)[18] observed that productivity is a measure for efficient resource use and showed that commercial banks operating in India are below the average level of efficiency. Ahmed (2003)[19] analyzed empirically

the bank's productivity performance and inferred that the wicked nature of clientele resulted in lower productivity of banks. The factors like lower contribution to priority sector lending, lesser involvement in private sector lending and profitable activities are mainly responsible for this state of affairs. In the liberalized environment, Pati (2005)[20] has referred financial parameters in almost all the states of NER as far below the national level. He observed that many RRBs in this region are on the verge of financial collapse due to their level of business volume. Reddy (2006)[21] examined total factor productivity technical and scale efficiency changes in regional rural banks by using data from 192 banks for the period 1996 to 2002. It observed that total factor productivity growth of rural banks was higher than the service provision during liberalization. Banks located in economically developed as well as low banking density regions exhibited significantly higher productivity growth. It also observed that parent PSBs have no influence on the efficiency and productivity growth of rural banks.

Khanokoje and Sathye (2008)[22] measured the efficiency of rural banks with the help of non-parametric technique of Data Envelopment Analysis (DEA). Efficiency scores were calculated for the years 1990 to 2002; thereafter these scores were compared for before and after the restructuring year (1993-94). The study found that productive efficiency of RRBs has increased. Ibrahim (2010)[23]observed that performance of rural banks have significantly improved after amalgamation process which has been initiated by the Government of India. Credit-deposit ratio has increased over the years showing a remarkable deployment of credit by these banks in rural areas. It also observed that during the post merger period although the numbers of RRBs have decreased the number of branches and districts covered by the RRBs in the country have increased.

Reddy and Prasad (2011)[24] observed that the banks have penetrated into every corner of the country and have been extending a helping hand in the growth of the economy. Despite the RRBs' journey of over three decades, they have achieved performance to the expected level turning towards sound financial management and productivity. Moreover the achieved performance is not uniform though they are working under the approach of same management. Bhaskar (2011)[25] observed that RRBs have to be repositioned and carry out their entrusted responsibility of meeting the credit requirement in rural sector, their various constraining factors such as low credit off take, small ticket business, low recovery rate and high employee cost. In order to reposition RRBs, loss making

RRBs should take steps for enhancing productivity by improving the skill and performance of their employees by better and specialized training in the areas of banking and finance, IT, management etc.

Whatever studies have emerged on the topic, they have primarily relied on exploratory analysis done for a particular year or on a group of RRBs to draw inferences. This kind of an approach has a serious limitation that the findings are guided by the choice of the years of analysis. To overcome this problem, one needs to consider, as attempted in this paper, bank specific study with reasonably long period for analysis where extreme observations would be evened out so that one may get results that are more dependable.

Productivity Performance of Regional Rural Banks: India vs. NER

The total numbers of RRBs in India were 196 in 2000-01, which reduced to 82 in the year 2010-11. This decrease in number is due to restructuring strategies adopted and amalgamation of various RRBs in the country which started after the implementation of the Narasimham Committee recommendation by the Government of India. Although the numbers of RRBs have decreased over the years, the branch network has increased to 15,658 in 2010-11 from 14,301 branches in 2000-01. During the eleven year period under consideration, 1,357 number of branches were set up to cover more number of districts. This has been confirmed by the fact that the number of districts covered by the RRBs in the country has increased from 484 in 2000-01 to 621 districts in 2010-11. It indicates that an additional 137 numbers of districts were covered by setting up of new branches in the various uncovered and under-banked districts of the country. The population served per branch of RRBs is interestingly high ie, roughly 84.6 thousand in 2000-01 which slightly improved and figured at 77.3 thousand populations served per branch in 2010-11. The scenario is extremely terrible while compared with the population per branch of commercial bank as a whole which covered 18 thousand populations by each branch during 2010-11 (IBA, 2011).[26] The number of employee per branch was found to be very low i.e., around 4 to 5 persons throughout the period. In 2000-01 the average number of employee per office was 4.90 which declined to 4.14 during the year 2010-11. This decrease in average number of employee per branch may be due to computerization of the in certain branches of RRBs. The data relating to the background of RRBs are presented in Table -1.

Table-1
Performance of Regional Rural Banks in India

Year	No. of RRBs	No. of Branches	No. of Employee per branch	No. of Districts Covered	Population Per Branch*	Deposits (Rs. in Crores)	Loans and Advances (Rs. in Crores)	Credit-Deposit Ratio (%)
2000-01	196	14,301	4.90	484	84622.99	37,027	15,794	41.0
2001-02	196	14,390	4.86	511	84099.61	43,220	18,629	41.8
2002-03	196	14,433	4.82	516	83849.06	48,346	22,158	44.2
2003-04	196	14,446	4.79	518	83773.60	57,010	26,115	46.3
2004-05	133	14,484	4.76	523	83553.81	62,143	32,871	52.8
2005-06	94	14,494	4.73	525	83496.17	71,329	38,520	55.6
2006-07	90	14,520	4.70	534	83346.65	83,144	47,326	58.3
2007-08	90	14,761	4.60	594	81985.87	99,093	57,568	59.5
2008-09	86	15,181	4.51	616	79717.64	1,20,189	65,609	56.4
2009-10	82	15,475	4.22	619	78203.13	1,45,035	79,157	57.6
2010-11	82	15,658	4.14	621	77289.14	1,63,928	98,244	59.6

*Population per branch of RRB is calculated with the total population as per 2011 census divided by the number of branches
Source: Reserve Bank of India, *Basic Statistical Return of Scheduled Commercial Banks, Various Issues.*
RBI Report on Trend and Progress of Banking in India, Various Issues

Resource mobilization is an integral part of banking activity. The government has directed the banks to make all possible efforts to access to new deposits that can expedite the pace of lending activities. During the period under study, a substantial rise of deposits i.e. 4.43 times is observed although there has been decrease in number of RRBs in the country.

The bank credit is an important input variable in the production functions of agriculture, industry, commerce and allied productive activities for the socio-economic development of the backward region of the country. The loans and advances offered by the RRBs in the country are also increasing over the years in a continuous manner as observed from Table-1. The total amount of loans and advances of RRBs in the country was Rs. 15,794 crores in 2000-01; the amount has gone up to a total of Rs. 98,244 crores in 2010-11. It is clear that the total amount of loans and advances of RRBs in the country has increased by more than 5 times over the period.

The credit deposit of the RRBs in India has been increased over the years. The fact has been delineated in Table-1. In 2000-01 the credit deposit ratio of the RRBs in the country was 41.0 per cent which increased to 59.6 per cent in 2010-11. The trend of credit deposit ratio of commercial banks is much higher than that of the RRBs; the figure was 53.5 per cent in 2000-01 which has reached to the level of 72.7 per cent in 2010-11 (RBI, 2011).[27] Hence the apparent fact remains that the RRBs failed to maintain the C/D ratio of commercial banks of the country during the period. The reason of significantly low C/D ratio of RRBs may be attributed to nature of loans sanctioned, non-recovery of loans, stubborn cheaters, lack of direction of end use of bank credit, lack of implementation of bankable schemes and so on.

Productivity of Regional Rural Banks

The consequence of productivity analysis has assumed a crucial implication for the viability of banks. The high productivity indicates that a bank does high volume of transactions. A lower productivity increases relative operational cost and often becomes the cause of losses as intermediary returns are directly related to the quantum of productivity. The RRBs can not overlook the profitability aspects since profit signifies

efficiency. The increase in productivity decreases the costs per unit produced and leads to better profitability. Productivity improvement is one means among others for increasing the profitability of actions. Therefore it is imperative to assess the productivity performance of RRBs. The productivity measured in terms of labour productivity, branch productivity, return on assets and profit as per cent of volume of business etc have been calculated to examine the footing of rural banks for the period 2000-01 to 2010-11.

Labour Productivity of RRBs

The parameters like deposit per employee, advance per employee and business per employee have been used to measure the labour productivity of RRBs as a whole. The following ratios have been calculated for measuring the labour productivity of banks.

1. Deposit per employee = $\frac{\text{Total Deposits}}{\text{No. of Employees}}$

2. Advance per employee = $\frac{\text{Total Advances}}{\text{No. of Employees}}$

3. Business per employee = $\frac{\text{Deposits + Advances}}{\text{No. of Employees}}$

The accompanying Table-2 shows labour productivity of RRBs in India during 2000-01 to 2010-11.

Table-2
Productivity Ratios of Regional Rural Banks in India
(Amount Rs. in Crores)

Year	Labour Productivity			Branch Productivity		
	Deposit per employee	Advance per employee	Business per employee	Deposit per branch	Advances per branch	Business per branch
2000-01	0.53	0.23	0.75	2.59	1.10	3.69
2001-02	0.62	0.27	0.89	3.00	1.29	4.30
2002-03	0.70	0.32	1.01	3.35	1.54	4.88
2003-04	0.82	0.38	1.20	3.94	1.81	5.75
2004-05	0.90	0.48	1.38	4.29	2.27	6.56
2005-06	1.04	0.56	1.60	4.92	2.66	7.58
2006-07	1.22	0.69	1.91	5.73	3.26	8.99
2007-08	1.46	0.85	2.30	6.71	3.90	10.61
2008-09	1.75	0.96	2.71	7.92	4.32	12.24
2009-10	2.22	1.21	3.43	9.37	5.12	14.49
2010-11	2.53	1.52	4.04	10.47	6.27	16.74
Grand Mean	**1.25**	**0.68**	**1.93**	**5.66**	**3.05**	**8.71**

Source: *Calculated*

The deposit per employee in 2000-01 was Rs. 0.53 crores which increased to Rs.2.53 crores in 2010-11. In case of advance per employee of the RRBs, it was Rs. 0.23 crores in 2000-01, which increased to Rs. 1.52 crores in 2010-11. Although there has been continuous increase in the level of advance per employee, the average deposit per employee is higher than the average advances per employee throughout the period. Similarly, the business (deposit plus advances) per employee was Rs. 0.75 crores in 2000-01 which increased to 4.04 crores in 2010-11 recording 5.39 fold increases.

Branch Productivity of RRBs

The productivity ratios of banks are worked out by relating the total deposits, total advances and the total business (deposit plus advances)

of the banks to the total number of branches. The following are the commonly used ratios measuring productivity of the banks and presented in Table-2.

1. Deposit per branch = $\frac{\text{Total Deposits}}{\text{No. of branch}}$

2. Advance per branch = $\frac{\text{Total Advances}}{\text{No. of branch}}$

3. Business per branch = $\frac{\text{Deposits + Advances}}{\text{No. of branch}}$

It is observed from the table that the average productivity per branch in terms of deposits, advances and total business has increased considerably. The deposit per branch in 2000-01 was Rs. 2.59 crores which has increased to Rs. 10.47 crores in 2010-11. Over the years there is 4.04 times increase in the deposit per branch of RRBs. In case of advances per branch, it increased from Rs 1.10 crores to Rs. 6.27 crores recording 5.70 times increase. As a result, the business per branch increased from Rs. 3.69 cores to 16.74 crores between the periods 2000-01 to 2010-11 recording 4.54 times increase over the years. It is evident from the table that there has been continuous growth of deposit per branch, advances per branch and the business per branch. The growth of deposits per branch is higher than growth of advances per branch throughout the period under consideration. This is a positive sign for productivity performance of RRBs. However, the RRBs performance in business volume per branch while compared to scheduled commercial banks (SCBs) of the country is not up to the mark. The figure for business per branch for SCBs at the national level was Rs. 88.15 crores in 2009-10 (RBI, 2010-11).[28]

Relationship between Per Employee Income, Expenditure and Productivity:

To attain higher productivity by the banking institution it needs to be highly competitive in the present market environment. After the reform in 1991, the nature of competition and the mode of operation

of the rural banks have changed. The strategy of enhancing volume of business per branch and as well as reducing per employee expenditure of the bank became the need of the hour. In case of RRBs for attaining higher productivity and its healthy growth in the backward economy of the country, it required to have its own strategy for its survival. Therefore, an attempt has been made to examine the relationship between income, expenditure and productivity. For this purpose, per capita employee income, per capita employee expenditure, per employee profits and per branch income, expenditure and profits are considered and presented in Table-3.

Table-3
Per Capita and Per Employee Income, Expenditure and Profits of RRBs
(Amount Rs. In Crores)

Year	Per capita employee income	Income per bank branch	Per capita employee expenditure	Expenditure per bank branch	Profit Per employee	Profit per bank branch
2000-01	0.07	0.33	0.06	0.29	0.008	0.04
2001-02	0.08	0.39	0.07	0.34	0.009	0.04
2002-03	0.09	0.41	0.08	0.37	0.008	0.04
2003-04	0.09	0.43	0.08	0.38	0.011	0.05
2004-05	0.09	0.42	0.08	0.37	0.011	0.05
2005-06	0.10	0.45	0.09	0.41	0.009	0.04
2006-07	0.11	0.53	0.10	0.48	0.009	0.04
2007-08	0.14	0.64	0.12	0.57	0.015	0.07
2008-09	0.17	0.75	0.15	0.66	0.019	0.09
2009-10	0.21	0.89	0.18	0.77	0.029	0.12
2010-11	0.25	1.04	0.21	0.91	0.031	0.13

Source*: Calculated*

The correlation matrix analysis has been employed to examine the nature of relationship among the aforesaid variables viz, per capita employee income, per capita employee expenditure, per employee profits, per branch income, per branch expenditure and per branch profits. The results obtained are displayed in Table-4.

Table-4
Correlation Matrix of the Variables of RRBs

Variables	PEI	IPB	PEE	EPB	PPE	PPB
PEI	1					
IPB	0.99	1				
PEE	0.99	0.99	1			
EPB	0.99	0.99	0.99	1		
PEB	0.97	0.97	0.97	0.96	1	
BPB	0.98	0.97	0.97	0.96	0.99	1

Source: *Calculated*
Where,
PEI= Per Capita Employee Income
IPB=Income per Bank Branch
PEE=Per Capita Employee Expenditure
EPB= Expenditure per Bank Branch
PPE=Profit per Employee
PPB= Profit per Bank Branch

The correlation matrix discerned that the 'r' values between the variables are highly positive indicating a high degree of relationship that exists among the variables. The level of per employee income is associated with the level of per employee business. With the increasing volume of expenditure, there will be a corresponding increase in volume of business. Thus incentives to employees, automation of branches, facilities to the customers are the pre requisites for the growth of productivity of the employees and the branches of RRBs.

Return on Assets, Investment and Volume of Business

The productivity of RRBs may further be examined on the basis of the parameters viz, profit as per cent of investment, profit as per cent of total assets and profit as percentage of volume of business. The return on investment enables us to know profitability of the funds used for investment. It shows the productivity of capital employed. Higher the profits as a percentage of volume of business, the better will be the productivity performance of a bank. The return on investment (ROI), profit as per cent of assets (ROA) and profit as percentage of volume of business can be calculated with the help of following formulas.

1. Return on investment (ROI) = $\frac{\text{Net profit}}{\text{Investment}}$ x 100

2. Profit as per cent of assets (ROA) = $\frac{\text{Net profit}}{\text{Total assets}}$ x 100

3. Profit as per cent of volume of business = $\frac{\text{Net profit}}{\text{Volume of business}}$ x 100

Table-5 depicts the aforesaid productivity ratios. The profit as per cent of total assets has declined with extreme fluctuation, throughout the period. The above ratio indicates that the RRBs productivity performance has declined leading to an adverse effect on profitability of banks. This may be due to repositioning strategies of RRBs at national level in one hand, and also due to character of rural clients for non repayment of loans and advances they gain, on the other.

Table -5
Return on Investment (ROI), Profit as per cent of Assets (ROA) and Profit as percentage of Volume of Business

Year	Profit as % of volume of business	Profit as % of Investment	Profit as % of total Assets
2000-01	1.12	7.81	1.21
2001-02	0.98	8.98	1.07
2002-03	0.74	4.19	0.83
2003-04	0.93	4.41	1.09
2004-05	0.79	3.23	0.96
2005-06	0.56	2.48	0.69
2006-07	0.48	2.37	0.59
2007-08	0.66	3.40	0.82
2008-09	0.72	3.51	0.89
2009-10	0.84	3.98	1.02
2010-11	0.76	3.60	0.92
Grand Mean	**0.78**	**4.36**	**0.91**

Source: *Calculated*

Productivity Performance of RRBs in North East:

The productivity of individual rural banks in NER states vis -a vis India as a whole may be had from the following table-6.

Table-6
Productivity of RRBs of NER as on March, 2010
(Amount Rs. in Lakhs)

Name of RRBs	**Branch Productivity** (Business per branch)	**Staff Productivity** (Business per employee)
1. Arunachal Pradesh Rural Bank	963.53	298.56
2. Assam GraminVikas Bank	1427.13	298.68
3. Langpi Dehangi Rural Bank	864.90	205.23
4. Manipur Rural Bank	438.33	140.89
5. Meghalaya Rural Bank	1259.63	317.80
6. Mizoram Rural Bank	1166.05	333.94
7. Nagaland Rural Bank	418.86	113.20
8. Tripura Gramin Bank	2567.42	437.76
RRBs at NER	1138.23	268.26
RRBs as a Whole	1471.93	330.02

Source: *RRB Monitoring, Key Performance Indicators of RRB, Key Statistics 2009-10*

It is clear from the regional level analysis of productivity of RRBs that MRB is placed in 3rd rank among the RRBs in NER in terms of both labour and branch productivity. However, average productivity of Meghalaya Rural Bank (MRB) is higher than the productivity of RRBs in NER as on March 2010. With this backdrop, a further analysis on productivity performance of MRB is undertaken on the basis the similar parameters to have in depth study of the problem.

Productivity of Meghalaya Rural Bank: The Empirical Analysis

The foregoing analyses clearly reveal that efforts are being made to improve the productivity of RRBs in India during the period under

consideration as reflected from branch and labour productivity parameters. In the following paragraphs, an attempt has been made to analyse the productivity performance of Meghalaya Rural Bank. For this purpose, we have considered all the branches of MRB operating in Meghalaya. To analyse the productivity of bank branches under consideration, we have considered labour productivity, branch productivity, return on assets and profit as per cent of volume of business. The data have been collected from the various issues of annual reports of MRB during the period 2000-01 to 2010-11.

Performance of MRB: The Backdrop

Meghalaya Rural Bank has an extensive network of 58 branches spread across the 6 out of 7 districts of Meghalaya viz, East Khasi Hills, West Khasi Hills, Jaintia Hills, Ri Bhoi, West Garo Hills and East Garo Hills. The bank has the distinct record for over 50 per cent of the total number of rural bank branches in its area of operation. However, it has not set up any satellite branch or extension counter. It is revealed from the following Table-7 that in 2000-01, there were only 51 branches of MRB functioning in 4 out of 7 districts of the state. In 2010-11, the number of branches of the MRB has increased to 58 in 6 districts of Meghalaya.

The population served per branch of MRB is 58.1 thousand in 2000-01 which slightly improved and figured at 51.1 thousand populations served per branch in 2010-11. The scenario is relatively better while compared with the population per branch of RRBs as a whole which covered 77.3 thousand populations by each branch during 2010-11. The number of employee per branch found to be very low ie, around 3 to 4 persons throughout the period. This may be due to the abolition of clerical cadre over a period of time by converting the staff into multipurpose workers. The staff norms ie, 4.2 number of staff per branch as recommended by Agarwal Committee in 2000[29], was not achieved by MRB till 2009-10.

Table-7
Performance of Meghalaya Rural Bank

Year	No. of Branches	No. of employee per office	No. of Districts Covered	Population Per Branch*	Deposits (Rs. In thou-sands)	Loans & advances (Rs. In thou-sands)	C/D Ratio
2000-01	51	3.6	4	58,118	12,26,293	3,03,392	30.00
2001-02	51	3.5	4	58,118	14,32,184	3,52,205	25.00
2002-03	51	3.6	4	58,118	15,53,924	4,06,167	26.00
2003-04	51	3.6	4	58,118	17,58,127	4,62,522	26.31
2004-05	51	3.6	4	58,118	21,99,196	5,42,438	24.67
2005-06	51	3.5	4	58,118	25,04,085	6,66,700	26.63
2006-07	51	3.5	4	58,118	28,01,385	8,25,357	29.36
2007-08	52	4.1	5	57,000	31,59,848	9,73,316	30.80
2008-09	54	3.8	6	54,889	40,39,445	11,86,477	29.37
2009-10	55	3.9	6	53,891	53,23,070	16,04,869	30.15
2010-11	58	4.4	6	51,104	67,74,188	21,61,545	31.91

*population per branch of MRB is calculated with the total population of Meghalaya as per 2011 census divided by the number of branches
Source: *Annual Report of Meghalaya Rural Bank, Various issues.*

The C/D ratio of MRB is not up to the mark while compared with RRB as a whole. The same for RRBs was 41.0 per cent in 2000-01 which augmented to 59.6 per cent in 2010-11. The reason for significant low ratio of MRB may be attributed to non recovery of loans, willful defaulters, lack of supervision of end use of bank credit and lack of implementation of bankable schemes. This exhibited poor credit absorption capacity of the entire area along with lack of entrepreneurial zeal to undertake viable projects.

In order to examine the degree of relationship between growth of deposits and growth of advances of MRB, coefficient of correlation analysis has been employed. For this purpose, deposit per office and advance per office have been considered for the period of 11 years from 2000-2001 to 2010-11.

The high correlation (r = 0.997) value between per office which is statistically significant at 1 percent confirms that over the years deposit per

office and advance per office of the Meghalaya Rural Bank are moving in the same direction.

Productivity of MRB

Deposit per employee, advance per employee and business per employee, are widely used parameters to measure the labour productivity and deposit per branch, advances per branch and business per branch, to measure branch productivity. The accompanying table-8 exhibits the productivity ratio of MRB.

The MRB maintained the similar trend of business growth of per employee with the business growth of RRBs as a whole. The bank, however, has been doing better in terms of volume of business per branch

Table-8
Productivity Ratios of Meghalaya Rural Bank
(Amount Rs in thousands)

Year	Labour Productivity			Branch Productivity		
	Deposit per employee	Advance per employee	Business per employee	Deposit per branch	Advances per branch	Business per branch
2000-01	6,701.05	1,657.88	8,358.93	24,044.91	5,948.86	29,993.82
2001-02	7,912.62	1,945.88	9,858.50	28,082.02	6,905.98	34,988.02
2002-03	8,445.24	2,207.43	10,652.67	30,470.00	7,964.06	38,433.16
2003-04	9,555.04	2,513.71	12,068.74	34,473.08	9,069.06	43,542.14
2004-05	12,017.46	2,964.14	14,981.61	43,121.49	10,636.04	53,757.53
2005-06	14,067.89	3,745.51	17,813.40	49,099.71	13,072.55	62,172.25
2006-07	15,916.96	4,689.53	20,606.49	54,929.12	16,183.47	71,112.59
2007-08	14,904.94	4,591.11	19,496.06	61,957.80	19,084.63	79,483.92
2008-09	19,608.96	5,759.60	25,368.55	74,804.54	23,264.26	96,776.33
2009-10	24,417.75	7,361.78	31,779.54	96,783.09	29,179.44	1,25,962.52
2010-11	26,461.67	8,443.54	34,905.21	1,16,796.34	37,268.02	1,54,064.36
Grand Mean	**14,546.33**	**4,170.92**	**18,717.25**	**55,869.28**	**16,234.22**	**71,844.02**

Source: *Calculated*

while compared with RRBs. The better productivity performance of MRB is due to the fact that they are able to mobilize more deposits from the area. This indicates that the MRB is utilizing efficiently the resources that they mobilized. This implies that MRB has significantly turned up the banking propensity and inclination among the common people of Meghalaya for socio economic development. Further, we have considered correlation analysis for labour and branch productivity between MRB as well as RRB in order to examine the extent of productivity of MRB. The result found is as under:

Correlations between MRB and RRB	
Labour Productivity	**Branch Productivity**
0.989	0.991

The high positive 'r' values for both the parameters indicate a close relationship between MRB and RRBs in respect of their productivity performance. It is observed that MRB is performing as good as RRBs as a whole particularly with regard to business per bank branch and business per employee during 2000-01 to 2010-11. It means that the MRB in the state of Meghalaya performing at par with RRBs of the country. This improvement in productivity of MRB may be due to materialization of banking habit among the rural populace of Meghalaya at large.

Per Employee and Per Branch Income, Expenditure and Productivity of MRB

The data relating to per employee income, expenditure, profits and per branch income, expenditure, profits of MRB have been collected from the annual reports of Meghalaya Rural Bank for the period of 2000-01 to 2010-11. On the basis of collected data, employee income, expenditure and branch productivity ratios are calculated which is shown in table-9.

The table of the MRB showed that income and expenditure for both per employee and per branch have increased over the years. However, to assess the interrelationship between the variables, correlation has been calculated considering a period of 11 years from 2000-01 to 2010-11. The results obtained are presented in table-10.

Table-9
Per Capita and Per Employee Income, Expenditure and Volume of Business of MRB
(Amount Rs. in thousand)

Year	Per capita employee income	Income per bank branch	Per capita employee expenditure	Expenditure per bank branch	Profit Per employee	Profit per branch
2000-01	765.72	2,747.57	622.21	2,232.65	143.50	514.92
2001-02	945.49	3,355.55	731.52	2,596.20	213.96	759.35
2002-03	929.44	3,353.27	760.91	2,745.25	168.53	608.02
2003-04	918.34	3,313.23	798.06	2,879.27	120.28	433.96
2004-05	975.62	3,500.76	893.97	3,207.78	81.65	292.98
2005-06	953.51	3,327.94	844.96	2,949.06	108.56	378.88
2006-07	1,184.97	4,089.31	986.68	3,405.02	198.29	684.29
2007-08	1,269.07	5,173.90	989.75	4,035.12	279.33	1,138.79
2008-09	1,902.65	7,258.24	1,341.88	5,119.02	560.77	2,139.22
2009-10	1,940.25	7,690.44	1,406.48	5,574.76	533.77	2,115.67
2010-11	2,236.08	9,869.59	1,767.65	7,802.05	468.43	2,067.53

Source*: Calculated*

Table-10
Correlation Analysis of the Variables of MRB

Variables	PEI	IPB	PEE	EPB	PPE	PPB
PEI	1					
IPB	0.99	1				
PEE	0.98	0.99	1			
EPB	0.97	0.99	0.99	1		
PPE	0.93	0.90	0.85	0.83	1	
PPB	0.96	0.94	0.89	0.88	0.99	1

Source: *Calculated*
Where,
PEI= Per Capita Employee Income, IPB= Income per Bank Branch, PEE=Per Capita Employee Expenditure, EPB= Expenditure per Bank Branch, PPE= Profit Per Employee, PPB= Profit per Bank Branch

The correlation matrix discerned that the 'r' values between the variables are highly positive and statistically significant. Thus, it can be argued that -

- Expenditure per branch is highly associated with the profit per branch. With the increase in volume of expenditure, there will be corresponding increase in profitability.
- Correlation between per capita employee expenditure and profit per employee indicates that employee productivity of MRB is directly related to expenditure.

Return on Investment and Profit as Percentage of Volume of Business of MRB

The productivity of MRB has also been assessed with the return on investment (ROI) and profit as percentage of volume of business and the calculated figures are presented in table-11.

Table-11
ROI and Profit as Per Cent of Volume of Business of MRB

Year	Return on Investment	Profit as % of Volume of Business
2000-01	2.48	1.72
2001-02	3.07	2.17
2002-03	0.22	1.58
2003-04	1.56	0.99
2004-05	0.91	0.55
2005-06	1.09	0.61
2006-07	1.68	0.96
2007-08	2.53	1.43
2008-09	3.01	2.21
2009-10	3.58	1.68
2010-11	4.11	1.34
Average	**2.20**	**1.39**

Source: *Calculated*

The ROI and profit as per cent of business volume has increased over the years with fluctuations. However, while compared with rural banks in India, average ROI and profit as per cent of business volume of MRB is better throughout the period under study. This is a positive sign for the MRB operating in rural Meghalaya. The high level of productivity of MRB indicates that bank does high volume of transactions with a clear indication of the viability of rural banks in Meghalaya.

Concluding Note

The paper concludes with an idea that the better productivity performance of MRB is due to the fact that they are able to mobilize more deposits from the area. It is observed that the MRB is utilizing efficiently the resources that they mobilized. The analysis further indicates that although MRB has been doing relatively better than that of the RRBs, there has been a wide variations in the productivity, as per the indicators identified, which might have adverse effect on profitability of the said bank. This variation may be due to lesser involvement of banks in profitable activities, wicked nature of rural clients for non repayment of loans and advances they obtain.

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