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# Productivity of Scheduled Commercial Banks in India

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**Abstract:** Banks play an important role in financing the economic needs of the country. Productivity plays a vital role in economic growth and development in Indian banks. Productivity leads to efficient utilization of human, material and technological resources. The present paper attempts to measure productivity trends of scheduled commercial banks. In this paper productivity is analyzed under three broad parameters of productivity that is branch productivity and employee productivity and financial productivity. The time period of the study is from 2010-11 to 2014-15. The paper concludes that performance of SCBs in terms of branch productivity is better on basis of total advances per branch than that of other ratios and employee productivity is better on basis of total deposits per employee than that of other ratios, whereas credit deposit ratio is better than return on assets and return on equity

**Keywords:** Financial, Productivity, Performance.

## I. INTRODUCTION

Banking sector forms the integral part of the financial sector. Due to process of globalization and liberalization remarkable changes have taken place in banking sector. Banks have expanded to every corner of the country; have become techno-savvy and offer diversified and wide variety of financial products to its customers. Academicians and Researchers are of the view that performance of Indian banking industry should be evaluated in the wake of changing economic scenario.

Indian Banking Industry is growing at rapid pace in co-ordination with global changes. Remarkable changes have taken place in the Indian banking since its inception. Bank development in India had undergone through various phases. The Reserve Bank of India was nationalised in 1949 followed by the nationalisation of Imperial Bank of India in 1955. In 1969, 14 major commercial banks were nationalised and exercise were repeated when 6 more commercial banks were nationalized in 1980. Nationalisation was a mixed blessing. After nationalisation there was a shift of emphasis from industry to agriculture. The country witnessed rapid expansion in bank branches even in rural areas

## II. OBJECTIVE OF THE STUDY

The prime objective of the study is to measure financial performance of Scheduled commercial banks in terms of branch, employee and financial productivity.

## III. DATABASE AND METHODOLOGY

The present paper study productivity of Scheduled Commercial banks in India. The study is secondary based and analytical in nature. The time period of the study is from 2010-11 to 2014-15. The various sources of data were: Statistical Tables Relating to Banks in India, Basic Statistical Returns of Scheduled Commercial Banks, Report on Trend and Progress of Banking in India published by RBI and Performance Highlights of Public sector banks published by IBA. Statistical tools such as mean, standard deviation, coefficient of variation, correlation coefficient and growth rate both simple growth rate and compound growth rate are used to provide analytical results of the data.

## IV. ANALYSIS AND INTERPRETATION

### A. Productivity

Productivity plays a vital role in economic growth and development in Indian banks. Productivity leads to efficient utilization of human, material and technological resources. Banks play an important role in financing the economic needs of the country. Indian banking industry is characterized by a large number of banks with the mixed ownership. It consists of variety of banks, financial institutions, capital market institutions, non-banks indigenous banking and financial institutions. Traditionally, it was divided into two sectors that organized and unorganized financial sector. The organized sector traditionally meant the imperial Bank of India, the

exchange banks and the Indian joint banks. The unorganized sector consisted of indigenous bankers, moneylenders, chit funds, midhi, etc. The share of unorganized sector in the rural sector was higher than in urban areas. The financial institutions can be sound only if they achieve higher levels of productivity.

#### *B. Branch Productivity (Per Branch Productivity)*

Branch Productivity shows that ratios are calculated to measure the branch productivity namely total deposits per branch, total advances per branch, total earnings per branch, total expenditure per branch, spread per branch, net profits per branch.

#### *C. Total Deposits per Branch*

This ratio indicates the total deposits raised per branch. This ratio is indicator of productivity of banks per branch. Higher value of ratio indicates higher productivity and lower ratio shows lower productivity.  $\text{Deposit per branch} = \text{Total Deposits}/\text{No. of branches}$

#### *D. Total Advances per Branch*

Total Advances per branch is an indicator of productivity of banks. Higher value of the ratio is indicator of higher productivity and lower value indicates lower productivity.

$\text{Total Advances per branch} = \text{Total advances}/\text{No. of branches}$

#### *E. Total Business per Branch*

The total business of the bank may be estimated by adding advances to deposits. Higher value of the ratio of total business per branch indicates higher productivity and lower value of ratio indicates lower productivity.

$\text{Business per branch} = \text{Volume of business}/\text{No. of branches}$

#### *F. Total Expenditure per Branch*

Total Expenditure includes interest and noninterest expenditure. Interest Expenditure by banks refers to fund based expenditure. It consists of interest paid on total deposits (time deposits plus saving deposits plus demand deposits) and interest paid on external borrowings (debt). Non-interest expenditure consists of three elements that establishment expenses, other operating expenses and provisions and contingencies. This ratio indicates total expenditure per branch. Higher value of this ratio indicated low productivity of bank and low value indicated better productivity of bank.

$\text{Total expenditure per branch} = \text{Total expenditure}/\text{No. of branches}$

#### *G. Total Earnings per Branch*

Total earnings comprise interest earnings and non-interest earnings. Interest earnings of a bank includes interest and discount earned, income on investment, interest in balance with RBI and other inter-bank and other accounts. Non-interest income is also known as other income. Non-interest income included all the incomes earned by a bank from the source other than the interest. This ratio measures total earnings per branch. Higher value of this ratio indicates better productivity of bank and lower value of this ratio indicates lower productivity of banks.

$\text{Total earnings per branch} = \text{Total earnings}/\text{No. of branches}$

#### *H. Spread per Branch*

Spread is basically calculated with the intention of evaluating the performance of banks. Spread is the difference between interest income and interest expenditure of a bank. It serves as a cushion for meeting various administrative related expenses. Higher value of this ratio indicates better productivity and lower value of this ratio indicates low productivity.

$\text{Spread per branch} = \text{Spread}/\text{No. of branches}$

#### *I. Net Profit per Branch*

Net profit is obtained by deducting provisions and contingencies from operating profits. This ratio is indicator of profitability per branch. Higher value of this ratio indicates higher productivity and lower value of this ratio indicates lower productivity per branch.

$\text{Net Profit per branch} = \text{Net Profit}/\text{No. of branches}$

Table 1 Performance of SCBS in India in terms Branch Productivity (In Crores)

| Year/ Parameter | TDB Value | TAB Value | TBB Value | TEAB Value | TEXB Value | SPB Value | NPB Value |
|-----------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| 2010-11         | 4.41      | 0.01      | 7.06      | 6.71       | 5.88       | 2.26      | 0.83      |
| 2011-12         | 4.80      | 0.10      | 9.24      | 8.15       | 7.25       | 7.15      | 0.90      |
| 2012-13         | 3.93      | 0.09      | 9.63      | 8.74       | 7.81       | 7.69      | 0.93      |
| 2013-14         | 3.77      | 0.40      | 10.35     | 0.31       | 0.22       | -1.93     | 0.04      |
| 2014-15         | 4.52      | 0.49      | 11.66     | 0.30       | 0.22       | -1.78     | 0.04      |
| Mean            | 4.28      | 0.21      | 9.58      | 4.84       | 4.27       | 2.67      | 0.54      |
| SD              | 0.43      | 0.21      | 1.69      | 4.21       | 3.77       | 4.65      | 0.47      |
| CV              | 9.95      | 97.49     | 17.60     | 86.89      | 88.13      | 173.55    | 84.88     |
| CAGR            | 0.49      | 117.79    | 10.56     | -46.29     | -48.17     | 0         | -45.47    |

Source: calculated values

The average ratio of total business per branch is highest (9.58) which is followed by average ratio of earnings per branch (4.84), total deposits per branch (4.28) and spread per branch (2.67) and the average ratio in case of total advances per branch (0.21) is lowest. It indicates that SCBs are showing better performance in terms of total business per branch and poor performance on average on basis of total advances per branch. The value of standard deviation is highest in case of spread per branch (4.65) which indicates more variability and less homogeneity. The value of standard deviation is lowest in case of total advances per branch indicating more homogeneity and less variability. Coefficient of variation is very high in case of spread per branch (173.55) which indicates high variability and very less consistency. Coefficient of variation is lowest in case of total expenditure per branch (88.13) which indicates less variability and more consistency. The values of coefficient of variation of other ratios such as total advances per branch, total business per branch, spread per branch, total earnings per branch, and net profits per branch are showing less consistency as compared to total deposits per branch. Growth rate analysis shows that compound annual growth rate is highest in total business per branch (10.56) followed by total deposits per branch (0.49). It is lowest and negative in case of total expenditure per branch and total earnings per branch. In case of spread per branch, it is zero. In case of total advances per branch growth rate is 117.79, for total earnings per branch is -46.29 and in case of net profits per branch is -45.47. Growth rate is negative for all these three ratios. This indicates that growth rate is satisfactory in case of total business per branch and total deposits per branch and is negative for other ratios calculated to measure branch productivity of SCBs in India.

It can be concluded that performance of SCBs in term of branch productivity is better on basis of total advances per branch than that of other ratios.

## V. EMPLOYEE PRODUCTIVITY

Employee productivity is the indicator of long term viability of banks. It shows contribution of an individual employee over total output. This parameter indicates how efficient the bank employees in generating business and profits. Per employee productivity is an indicator of the capacity to work of the bank employees. This ratio helps in checking whether the bank group is over or under staffed. Employee efficiency is measured in terms of deposits per employee, advances per employee, business per employee, total expenditure per employee, total earnings per employee, spread per employee, operating profit per employee, net profit per employee.

### A. Total Deposits per Employee

This ratio indicates the deposits raised per employee in banking industry. Higher value of this ratio indicates better productivity of bank and lower value of this ratio indicates lower productivity.

Total deposit per employee= Total deposits/No. of employees

**B. Total Advances per Employee**

This ratio indicates the advances made per employee. Higher value of this ratio indicates better productivity and lower value indicates lower productivity  
 Total advances per employee= Total advances/No. of employees

**C. Total Business per Employee**

The Total business per employee is an improved measure of productivity because total business combines deposits, advances and investment. Higher value of this ratio is indicator of better productivity and low value of this ratio indicates low productivity.  
 Business per employee = volume of business/ No. of employees

**D. Total Earnings per Employee**

Total Earnings include both interest earnings and non-interest earnings. High value of this ratio indicates better productivity of banks and lower value indicates lower productivity.  
 Total earnings per employee= Total earnings/ No. of employees

**E. Total Expenditure per Employee**

Total expenditure includes both interest expenditure and non-interest expenditure. Higher value of this ratio indicates lower productivity and lower value of this ratio indicates higher productivity.  
 Total expenditure per employee= Total expenditure/No. of employees

**F. Spread per Employee**

Spread is calculated as difference between interest income and interest expenditure of a bank. Higher value of this ratio indicates better productivity and lower value of this ratio indicates low productivity.  
 Spread per employee= spread per employee/No. of employee

**G. Net Profit per Employee**

Net profit implies the balance of profit as per profit and loss account. This ratio shows net profit earned per employee. Higher value of this ratio indicates better productivity per employee of a bank and lower value of this ratio indicates lower productivity per employee of a bank.  
 Net profit per employee= net profit/No. of employees

Table 2 Performance of SCBS in India in terms of Employee productivity (In Crores)

| Year/Parameter | TDE Value | TAE Value | TBE Value | TEAE Value | TEXE Value | SPE Value | NPE Value |
|----------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| 2010-11        | 5.13      | 0.00      | 0.64      | 0.61       | 0.54       | 0.20      | 0.07      |
| 2011-12        | 5.34      | 0.05      | 0.79      | 0.70       | 0.62       | 0.61      | 0.07      |
| 2012-13        | 1.58      | 0.00      | 0.80      | 0.73       | 0.65       | 0.64      | 0.07      |
| 2013-14        | 0.15      | 0.03      | 0.90      | 0.02       | 0.01       | -0.16     | 0.03      |
| 2014-15        | 0.17      | 0.04      | 1.09      | 0.02       | 0.02       | -0.16     | 0.04      |
| Mean           | 2.47      | 0.02      | 0.84      | 0.41       | 0.36       | 0.22      | 0.05      |
| SD             | 2.59      | 0.02      | 0.17      | 0.36       | 0.32       | 0.39      | 0.02      |
| CV             | 104.58    | 95.92     | 19.66     | 87.56      | 88.2       | 173.85    | 34.81     |
| CAGR           | -49.41    | 0         | 11.24     | -49.52     | -48.27     | 0         | -10.59    |

Source: calculated values

The average ratio of total deposit per employee is highest (2.47) which is followed by average ratio of business per employee (0.84), total earning per employee (0.41) and total expenditure per employee (0.36) and the average ratio in case of spread per employee (0.22) is lowest. It indicates that SCBs are showing better performance in terms of deposit per employee and poor performance on average of spread per employee. The value of standard deviation is highest in case of total deposit per employee (2.59) which indicates more variability and less homogeneity. The value of standard deviation is lowest in case of net profit per

employee(0.02) indicating more homogeneity and less variability. Coefficient of variation is very high in case of spread per employee (173.85) which indicates high variability and very less consistency. Coefficient of variation is lowest in case of total deposits per employee (104.58) which indicates less variability and more consistency. The values of coefficient of variation of other ratios such as total advances per employee, total business per employee, total expenditure per employee, total earnings per employee, net profits per employee are showing less consistency as compared to total business per employee. Growth rate analysis shows that compound annual growth rate is highest in total business per employee (11.24) followed by total deposit per employee (-49.41). It is lowest and negative in case of total expenditure per employee. In case of spread per employee, it is zero. In case of total advances per employee growth rate is also zero, for total earnings per employee is -49.52 and in case of net profits per employee is -10.59. Growth rate is negative for all these three ratios.

It can be concluded that performance of SCBs in term of employee productivity is better on basis of total deposits per employee than that of other ratios

## VI. FINANCIAL PRODUCTIVITY

Financial productivity is the indicator of long term viability of banks. It shows contribution of an individual employee over total output. This parameter indicates how efficient the bank employees in generating business and profits. Per employee productivity is an indicator of the capacity to work of the bank employees. This ratio helps in checking whether the bank group is over or under staffed. Employee efficiency is measured in terms of deposits per employee, advances per employee, business per employee, total expenditure per employee, total earnings per employee, spread per employee, operating profit per employee, net profit per employee.

### A. Credit Deposit Ratio

This ratio indicates the total advances as a proportion of total deposits. It indicates the deployment of bank resources by way of loan and advances. The ratio of 60 percent is considered as a norm for banks. If CD ratio is higher a larger percentage of deposits mobilized is lent to different sector and it will lead to an improvement in financial productivity of banks.

### B. Return on Assets (ROA)

Return on assets is defined as net income divided by total assets. It measures the bank profits per currency units of assets. It is an indicator of assets management's efficiency of an organization.

$$ROA = \text{Net income} / \text{Total assets}$$

This is the main indicator of profitability and used international comparisons and among the guidelines of RBI for balance sheet analysis of bank. Higher value of this ratio indicates better financial productivity and profitability of banks and lower value indicates lower productivity of banks.

### C. Return on Equity (ROE)

This ratio is a measure of accounting profits per unit of book equity capital. It is an indicator of the profitability of a bank from the shareholder's perceptions. The ability of the banks to attract fresh capital in the market depends upon this indicator. Return on Equity is calculated with the help of the following formula

$$ROE = \text{Net Profit} / \text{Capital} + \text{Reserves} + \text{surplus}$$

Higher value of this ratio indicates better financial productivity of bank and lower value indicates lower financial productivity of bank.

Table 3 Performance of SCBS in India in terms of financial productivity (In Crores)

| Year/Parameter | CDR Value | ROA Value | ROE Value |
|----------------|-----------|-----------|-----------|
| 2010-11        | 72.20     | 1.10      | 14.96     |
| 2011-12        | 75.70     | 1.08      | 14.60     |
| 2012-13        | 78.00     | 1.04      | 13.84     |
| 2013-14        | 77.90     | 0.81      | 10.68     |
| 2014-15        | 77.60     | 0.81      | 10.42     |

|      |      |       |       |
|------|------|-------|-------|
| Mean | 76.2 | 0.96  | 12.9  |
| SD   | 2.47 | 0.15  | 2.18  |
| CV   | 3.23 | 15.07 | 16.94 |
| CAGR | 1.45 | -5.94 | -6.98 |

Source: calculated values

This ratio shows interest earned on advances as percentage of total advances. The average ratio of credit deposit ratio is highest (76.2) which is followed by average ratio of return on equity (12.9), return on assets (0.96) is lowest. It indicates that SCBs are showing better performance in terms of credit deposit ratio and poor performance on average on basis of return on assets. The value of standard deviation is highest in case of credit deposit ratio (2.47) which indicates more variability and less homogeneity. The value of standard deviation is lowest in case of return on assets indicating more homogeneity and less variability. Coefficient of variation is very high in case of return on equity (16.94) which indicates high variability and very less consistency. Coefficient of variation is lowest in case of credit deposit ratio (3.23) which indicates less variability and more consistency. The values of coefficient of variation of other ratios such as credit deposit ratio, return on assets. Growth rate analysis shows that compound annual growth rate is highest is credit deposit ratio (1.45) followed by return on asset (-5.94). It is lowest and negative in case of return on equity. This indicates that growth rate is satisfactory in case of credit deposit ratio and return on assets and is negative for return on equity calculated to measure

It can be concluded that performance of SCBs in term of credit deposit ratio is better than return on assets and return on equity. Growth rate is satisfactory in case of credit deposit ratio and return on equity and negative for return on assets.

## VII. CONCLUSION

The present study concluded that performance of SCBs in term of branch productivity is better on basis of total advances per branch than that of other ratios and performance of SCBs in term of employee productivity is better on basis of total deposits per employee than that of other ratios, whereas performance of SCBs in term of credit deposit ratio is better than return on assets and return on equity. Growth rate is satisfactory in case of credit deposit ratio and return on equity and negative for return on assets.

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