

AN ANALYTICAL STUDY OF PRODUCTIVITY OF SELECTED INDIAN BANKS

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ABSTRACT

Productivity is thought to be a key sign of an economy's resiliency. Despite widespread concern about productivity, it is worth noting that no commonly agreed definition of productivity exists. As a result, there is no one set of metrics or indicators that a company or government agency may use to assess its productivity. In different conditions, different measures are applied. The current study is an analytical examination of the productivity of chosen Indian banks. For analytical purposes, several ratios and the F-Test were utilised, and it was discovered that certain banks with higher productivity, which illustrates that increased production does not necessarily result in higher profitability. Such banks must consider what reasons, despite strong production, prevent them from achieving higher profitability.

Keywords:- productivity, profitability, Total Earning and Total Working Fund

INTRODUCTION

Productivity has always been connected with the production of Industrial Products. In most situations, it is regarded in connection to a certain industry's ultimate product. There is widespread agreement that productivity should be seen as a ratio concept: the ratio of an organization's output of goods and services produced or created divided by the input needed to produce them. In common parlance, productivity is defined as output per unit of input used. It is, in other words, the output/input ratio. So the simplest definition of productivity is the output-to-input ratio, or simply,

$$\text{Productivity} = \frac{\text{total output}}{\text{total input}}$$

Obviously, this definition of productivity cannot be applied to the banking business, since it is mostly a service industry in which all inputs and outputs are difficult to quantify and hence assess. Productivity is significantly more difficult to quantify in a financial firm such as a bank than in a manufacturing business. Nonetheless, as long as it is engaged in economic activity, it cannot afford to lose sight of the notion of productivity. Bank is a multi-product service industry that functions in a highly regulated atmosphere and where both personnel and money may be stretched indefinitely. As a result, there are several variables to bank productivity. It has traditionally been associated with the size of working capital, the volume of business, and profitability. The researcher employed the following employee productivity

measures to assess the productivity of chosen banks: Net Profit Per Employee, Total Earnings Per Employee, and Total Working Fund Per Employee.

Globalization and advances in information technology have resulted in major changes in the working environment of Indian banks during the last decade. Banks used a variety of strategies to increase operational efficiency, staff performance, achieving consumer expectations, and lowering operating costs. Banks have implemented some of these initiatives, such as business process reengineering, staff training and retraining, lateral recruitment of specialists, VRS for its workers, and so on. Human resources are critical in the Indian banking sector. The productivity and general efficiency of banks are dependent on employee productivity since each and every action of a bank is closely tied to the workers' attitude, motivation, and work culture. As a result, staff productivity becomes a significant aspect in determining a bank's overall efficiency and productivity. As a result, in the current study, staff productivity was examined using several indicators such as total earnings, total working funds, and net profit.

LITERATURE REVIEW

Dr. Aparna Bhatia and colleagues (2012) investigated the drivers of profitability in India's private sector banks. Researchers discovered that the bigger the spread ratio, the better the profitability, generating more non-interest revenue positively affects the ROA, and enhanced labour efficiency increases profitability using the regression analysis approach. Furthermore, it was shown that in order to boost profitability, banks should focus on decreasing operational expenditures because they have a negative influence on bank profitability. Nonperforming assets, provisions, and contingencies also have a negative association with ROA.

Dr. Virender Koundal (2012) makes an attempt to compare the performance of Indian banks. To compare the performance of public sector, old private sector, new private sector, and foreign sector banks, as well as to explore the obstacles and possibilities encountered by public sector banks, the researcher chose all commercial banks as examples. It was discovered that numerous changes had a positive impact on commercial banks in India. It has been recognised that the profitability of public sector banks has begun to improve, yet despite this, foreign and private sector banks continue to dominate.

Dr. A. Jayakumar and others (2012) sought to shed light on the issues confronting the Indian banking system and the need for innovation to address these challenges. Because of technological advancements and globalisation. The Indian banking sector has seen significant changes such as technical advancement, exploration of new avenues to boost business and capture new markets, recognising the demands of the rural market, adoption of universal banking and smart cards, and so on.

Jeevraj J. Purohit (2012) evaluated the Indian banking system before and after reform. The researcher concluded that banks become more conscious of client service during the post-

reform period. Banks have introduced several innovative goods and services, such as anyplace banking, net banking, phone banking, ATM access, and so on. Several new trends have emerged in Indian banking, such as earlier deposit mobilisation and outstanding deposit figures as yardsticks for measuring performance, whereas today return on assets, per employee productivity, quantum of profits and per employee profits, low ratio of NPAs and net NPA rate, earning per share are regarded as important parameters.

Vivek Singla (2013) examined the broad productivity behaviour and compared productivity among selected private sector banks using various variables such as interest paid, interest earned, total deposits and advances, non operating income and expenses, number of employees, number of branches, establishment expenses, and so on. According to the researcher, ICICI bank outperformed other banks in terms of deposit per employee, advances per employee, and advance+ deposits per employee.

Dr. D.Mahila Vasanthi Thangam and Ms.Thoushifa.T (2016) did a study to assess the link between bank profitability and productivity. According to the researcher, public sector banks could lower the number of branches in order to boost efficiency or take efforts to improve profitability. The number of workers in public sector banks is likewise enormous, which has a negative impact on productivity per employee.

Nitleen Kaur (2016) measures and analyses the productivity of the SBI group using cross-sectional and temporal analysis based on 17 different criteria. These criteria are divided into three categories: workers, branches, and businesses. From 2003 to 2013, the researcher split the study period into six equal sub-periods of two years each. According to the researchers, productivity is the sole answer to practically all major societal and economic concerns. Productivity encompasses all sectors of the nation, including government, large industrial units for small companies, profit organisations for public utilities, and so on.

Ms. Pallavi¹ and Dr. Rajni Saluja (2017) assess financial performance of selected scheduled commercial banks in terms of branch, staff, and financial productivity. The researcher concluded that the performance of scheduled commercial was better in terms of branch productivity based on total advances per branch than other ratios, and employee productivity was better based on total deposits for employees than other ratios, whereas credit deposit ratio was better than return on assets and return on equity.

R. K. Uppal and Rupani (2017) examine the productivity of public, private, and foreign sector banks during the pre- and post-mature IT eras. To compete with private and foreign sector banks that have a strong technological foundation, public sector banks have frequently sponsored training and development programmes.

Jena Rupak Kumar (2019) investigates the overall productivity and profitability growth of four bank groups: SBI, nationalised banks, private sector banks, and foreign sector banks. The study's findings revealed that during the second phase of reforms, the complete sample

analysis demonstrated a decrease in establishment expenditures, other expenses, and a rising trend in other revenue, which was the key predictor of profitability. SBI Groups is one of the four sample Bank Groups.

NET PROFIT PER EMPLOYEE

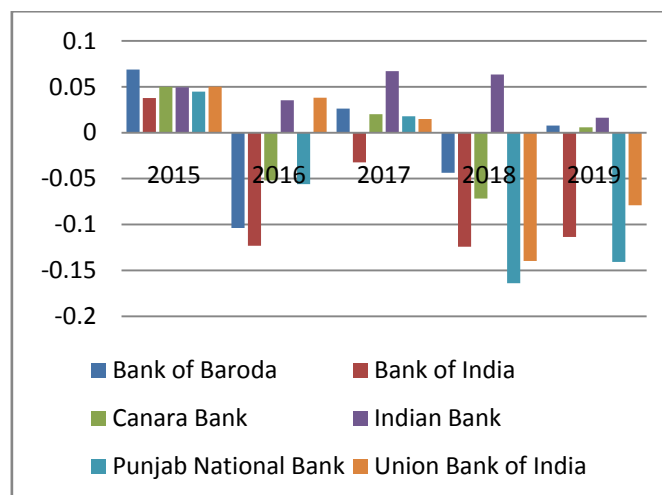
Divide the entire amount of net profit by the total number of human resources employed by banks to determine this ratio. This metric measures the amount of profit made by employees. This ratio demonstrates how well workers work for the bank. The greater the profit statistics, the more efficient personnel and management are. A lower ratio shows that banks and workers are less productive. This ratio was computed as follows:

$$\text{Net Profit per Employee} = \frac{\text{Net profit}}{\text{No. of Employees}}$$

Table -1 Net Profit per Employee Ratio of Selected Indian Banks

Banks	Years				
	2015	2016	2017	2018	2019
Bank of Baroda	0.0688	-0.1037	0.0263	-0.0436	0.0077
Bank of India	0.0377	-0.1231	-0.0323	-0.1241	-0.1136
Canara Bank	0.05	-0.052	0.0201	-0.0717	0.0059
Indian Bank	0.0495	0.0353	0.0671	0.0634	0.0164
Punjab National Bank	0.0448	-0.0561	0.0179	-0.1639	-0.1408
Union Bank of India	0.0501	0.0381	0.015	-0.1396	-0.0791

(Source: Collected and Computed from RBI & Annual Reports of Selected Banks)



Graph 1 Net Profit per Employee Ratio of Selected Indian Banks

The table and graph above show the link between Net Profit and the number of employees at various banks. The researcher discovered that the ratios of Bank of Baroda and Canara Bank fluctuate with a negative ratio over the study period, however the ratio of Bank of India does not. During the study period, the ratio of Indian Bank shows a positive mixed

pattern, and it is the only bank that has recorded a positive ratio during the research period. After 2017, the ratio of Punjab National Bank displays a mixed positive and negative development, while the ratio of Union Bank of India shows a negative trend.

The researcher compared the Net Profit per Employee Ratios of chosen banks year by year to determine the greatest and lowest ratios for each year of the study period. In 2015, the researcher discovered the highest ratio 0.0688 percent in Bank of Baroda and the lowest ratio 0.0377 percent in Bank of India, while in 2016, the highest ratio 0.0381 percent in Union Bank of India and the lowest ratio -0.1231 in Bank of India were discovered. However, in the third year of the study period, the researcher observed the highest ratio 0.0671 percent in Indian Bank and the lowest ratio -0.0323 percent in Bank of India, and in the year 2018, the highest ratio is found in Indian Bank, i.e., 0.0634 percent, and the lowest ratio is found in Punjab National Bank, i.e., -0.1639 percent, and in the year 2019, the highest ratio 0.0164 percent is observed in Indian Bank and the lowest ratio - 0.14

Table- 2 Statistical analysis of Net Profit per Employee ratio

SUMMARY				
Groups	Count	Sum	Average	Variance
Bank of Baroda	5	-0.0445	-0.0089	.004436
Bank of India	5	-0.3554	-0.07108	.005166
Canara Bank	5	-0.0477	-.00954	.002582
Indian Bank	5	0.2317	0.04634	.000438
Punjab National Bank	5	-0.2981	-.05962	.008597
Union Bank of India	5	-0.1155	-0.0231	.006816

Table 2 provides a statistical summary of the selected bank's Net Profit per Employee ratio. The table below displays the positive and negative average means. According to the table, Indian Bank has the greatest and most positive average mean, 0.04634, when compared to other selected banks, whilst Bank of India has the lowest average mean, -0.07108, when compared to other selected banks. During the research period, the average mean for all other chosen banks ranged from -0.0231 to -0.010304. Apart from that, when compared to other selected banks, Bank of Punjab national banks has the highest variance, which is 0.008597, indicating that it has a high productivity ratio during the study period. In other words, a high variance indicates that the ratio is very spread out from the mean and from one another.

Indian Bank, on the other hand, has the lowest variance of all the examined institutions, at 0.00049. The ratio's productivity is poor. In other words, a low variance means that the ratio tends to be quite near to the mean and to one another. During the research investigation, however, all other selected banks had variance ranging from 0.00515 to 0.00914.

Hypothesis

H₀: The Net Profit per Employee ratios of the chosen institutions do not differ much.

H₁: The Net Profit per Employee ratios of selected banks varies significantly.

Table-3 “F”-Test One Way Analysis of Variances for Net Profit per Employee Ratio

ANOVA					
Source of Variation	SS	DF	MS	F Cal	F crit
Between Groups	0.124515	6	0.013835	1.876517	2.124029
Within Groups	0.294908	38	0.007373		
Total	0.419422	44			

The Single Factor ANOVA of Net Profit per Employee Ratio is shown in Table 3. The test was used to determine whether or not there is a significant difference in the Net Profit per Employee Ratios of the selected banks. In this case, F is determined to be 1.876517, whereas the critical/table value for the 6, 38 degree of freedom at 5% level of significance is 2.124029. According to the preceding table, the computed value for F is smaller than the table value for F. As a result, the null hypothesis H₀ is accepted and the alternative hypothesis H₁ is rejected, indicating that there is no substantial difference in the Net Profit per Employee ratios of the selected banks.

TOTAL EARNING PER EMPLOYEE

This ratio was calculated by dividing the bank's total income by the number of workers. Total earnings per employee is a measure of how well a bank uses its staff. In general, a considerably greater total earnings per employee ratio is a favourable indicator that the banking is figuring out how to get more money out of each of its human resources. Lower ratios imply incapacity and inefficiency of banks and staff in making profits. This ratio was computed as follows:

$$\text{Total Earning per Employee} = \frac{\text{Total Earning}}{\text{No. of Employees}}$$

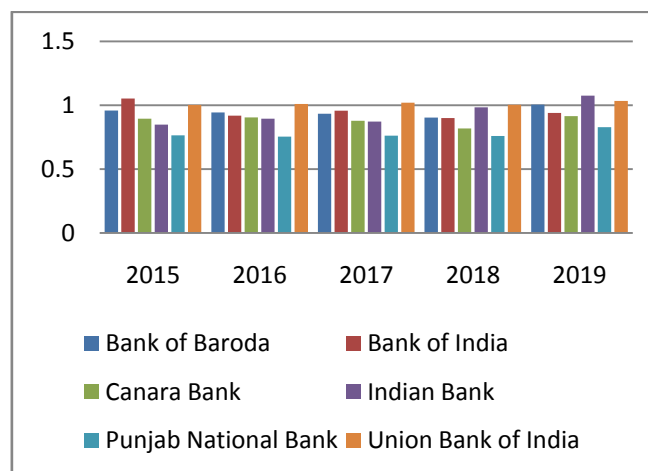
Where,

$$\text{Total Earning} = \text{Interest Earning} + \text{NonInterest Earning}$$

Table -4 Earning per Employee Ratio of Selected Banks

Banks	Years				
	2015	2016	2017	2018	2019
Bank of Baroda	0.9592	0.943	0.9339	0.9037	1.0055
Bank of India	1.0521	0.9189	0.957	0.8998	0.9404
Canara Bank	0.8947	0.9053	0.8784	0.8188	0.9149
Indian Bank	0.8483	0.8949	0.8722	0.9836	1.0746
Punjab National Bank	0.7644	0.7545	0.7613	0.7593	0.8288
Union Bank of India	1.0026	1.01	1.0202	1.004	1.0343

(Source: Collected and Computed from RBI & Annual Reports of Selected Banks)

**Graph-2 Earning per Employee Ratio**

The table and graph above depict the link between total earnings and the number of employees at selected banks throughout the research period. The researcher examined the performance of selected banks and discovered that the ratio of Bank of Baroda shows a decreasing trend from 2016 to 2018 and then increases in 2019, whereas the ratios of Bank of India, Canara Bank, and Punjab National Bank show a mixed trend during the study period, and the ratio of Union Bank of India shows an increasing trend from 2015 to 2017 and then decreases. Except for the year 2017, the study discovered that the percentage of Indian banks is growing.

The researcher compared the Total Earnings per Employee ratios of chosen nationalised banks year by year to determine the top and lowest ratios for each year of the study period and discovered that the Bank of India had the highest ratio, 1.0521 percent, and the lowest ratio, 0.7644 percent. In the year 2015, the highest ratio 1.01 percent is found in Punjab National Bank, while the lowest ratio 0.7545 percent is found in Punjab National Bank. In the third year 2017, the highest ratio 1.0202 percent is noticed in Union Bank of India, while the lowest ratio 0.7613 is found in Punjab National Bank, and then the highest ratio 1.004 is noticed in Union Bank of India and the lowest ratio 0. In the years 2018 and 2019, the study discovered the

greatest ratio 1.0746 percent in Indian Bank and the lowest ratio 0.8288 percent in Punjab National Bank when compared to other chosen institutions.

Table 5 Statistical Summary of Total Earning per Employee Ratio

SUMMARY				
Groups	Count	Sum	Average	Variance
Bank of Baroda	5	4.7453	0.94906	0.001403
Bank of India	5	4.7682	0.95364	0.003497
Canara Bank	5	4.4121	0.88242	0.001448
Indian Bank	5	4.6736	0.93472	0.00873
Punjab National Bank	5	3.8683	0.77366	0.000963
Union Bank of India	5	5.0711	1.01422	0.000174

Table 5 provides a statistical summary of the selected bank's Total Earnings per Employee ratio. The study discovered that Union Bank of India has the greatest average mean, 1.01422, when compared to other selected banks, while Punjab National Bank has the lowest average mean, 0.77366, when compared to all other selected banks. During the research period, however, the average mean for all other chosen banks ranged from 0.74516 to 0.99324. Aside from that, Indian Bank has the largest variance, 0.00873, when compared to the other selected banks, indicating that it has a high productivity ratio throughout the research period. In other words, a large variance shows that the ratio is widely dispersed from the mean and from one another. Union Bank of India has the lowest variance of any of the examined banks, at 0.00017. It demonstrates a poor production ratio. In other words, a low variance means that the ratio tends to be quite near to the mean and to one another. During the research investigation, the other selected banks had variation ranging from 0.00026 to 0.00873.

H₀: There is no discernible variation in the Total Earnings per Employee ratios of the examined institutions.

H₁: The Total Earnings per Employee ratios of selected banks varied significantly.

Table 6 “F”-Test One Way Analysis of Variances for Total Earning per Employee Ratio

ANOVA					
Source of Variation	SS	DF	MS	F Cal	F crit
Between Groups	0.489817	6	0.054424	13.66458	2.124029
Within Groups	0.159314	38	0.003983		
Total	0.649131	44			

Table 6 shows the Single Factor ANOVA of Total Earnings per Employee Ratio. The test was used to determine whether or not there is a significant difference in the Total Earnings per

Employee Ratio of chosen banks. The estimated value of F in this case is 13.66458, whereas the critical/table value for the 6, 38 degree of freedom at 5% level of significance is 2.124029. The table shows that the computed value for F is bigger than the table value for F. As a result, the null hypothesis H_0 is rejected and the alternative hypothesis H_1 is accepted, indicating that there is a substantial difference in Total Earnings per Employee of chosen nationalised banks.

CONCLUSIONS

The current study is an analytical examination of the productivity of chosen Indian banks. For analytical purposes, several ratios including the F-Test were utilised, and it was discovered that certain banks with better productivity do not have higher profitability, demonstrating that increased productivity does not necessarily result in higher profitability. Such banks must consider what reasons, despite strong production, prevent them from achieving higher profitability. According to the report, the top performing banks in terms of productivity are Bank of Baroda, Bank of India, and Union Bank of India. Banks may simply enhance branch productivity by enhancing staff productivity.

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