An Analytical Study of Employee Productivity of Banks in India

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Introduction

Employees of an organisations are generally termed as "Human Resource", that makes us ponder that amongst other resources which are used to augment the productivity of an organisation, employees are the only "Resources" which have the ability of generative learning (Artificial Intelligence is experimenting to replicate the same with limited success). This implies that employees have the ability to integrate new knowledge with their past experiences and devise new ideas/solutions. Therefore, they can be trained and up-skilled as per the changing needs of the organisations.

Employee productivity in general parlance refers to the assessment of efficiency of an employee or group of employees. Employee productivity has been an area of high significance, particularly, in a service industry like banking where inputs could be ascertained to a greater extent but quantification of output is difficult.

There are several school of thoughts and research studies on how to improve employee productivity, however, there is dearth of studies on measuring the employee productivity particularly, in the banking sector. Although, there have been several initiatives on improving the productivity at senior management & board level at Indian Banks, very few studies have been conducted to measure, quantify and analyse productivity of employees at banks in India as aggregates or at industry level.

The present study is based on aggregate data of 10 years related to Scheduled Commercial Banks (SCBs). In accordance with the available literature review, among various productivity indicators, labour productivity indicators like profit per employee and business per employee are utilised for gauging the employee productivity at banks. These select Employee Productivity ratios were calculated using the time-series data to understand the trend of employee productivity at banks in India.

Objectives of the study

- To analyse Employee Productivity Ratios for Schedule commercial banks.
- To study Employee Cost to Operating Cost for different types of Scheduled Commercial Banks.

Trends of distribution of employees at Indian Banks

Table 1 shows the distribution of employees at different types of banks in India from 2012-2022. The Public Sector Banks (PSBs) have been major employers followed by Private Sector Banks. However, there has been a reduction in the percentage of total employees at PSBs from 2012-13 (73%) to 2021-22 (46%). At Private Sector Banks, the overall percentage of employees have increased from 2012-13 (19%) to 2021-22 (39%). During 2021-22, Foreign banks, Small Finance Banks, Payment Banks & Regional Rural Banks together constitute around 15% of the total employees at SCBs. Overall, the employee strength at SCBs has increased by around 40% from 2012 to 2022.

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Table 1: Distribution of Bank Employees in past 10 years

Year (End-March)	Public Sector Banks	Private Sector Banks	Foreign Banks	Regional Rural Banks	Small Finance Banks
2021-22	46%	39%	2%	6%	7%
2020-21	49%	37%	2%	6%	7%
2019-20	50%	36%	2%	6%	6%
2018-19	56%	33%	2%	6%	4%
2017-18	58%	30%	2%	6%	3%
2016-17	61%	31%	2%	6%	-
2015-16	64%	28%	2%	7%	-
2014-15	67%	25%	2%	7%	-
2013-14	67%	24%	2%	7%	-
2012-13	73%	19%	2%	7%	-

Source: Prepared from the data extracted from database on Indian Economy, RBI.

Table 2: Distribution of Bank Employees across cadres (as on 31 March)

Year	Officers	Clerks	Subordinates
2021-22	71.90%	19.56%	8.54%
2020-21	68.92%	22.10%	8.98%
2019-20	68.93%	22.26%	8.81%
2018-19	65.00%	24.72%	10.28%
2017-18	62.23%	26.07%	11.70%
2016-17	61.38%	26.70%	11.92%
2015-16	59.27%	27.79%	12.94%
2014-15	56.52%	29.16%	14.32%
2013-14	51.11%	34.44%	14.45%
2012-13	45.20%	39.73%	15.08%

With reference to the present study, total no. of Employees includes employees under Officers, Clerical & Subordinate cadres of all Public Sector Banks, Private Sector Banks, Foreign Banks, Payments Banks & Small Finance Banks as mentioned in Table 2. The employees in the officer's cadre constitute around 72% of total no. of employees in banks. Table 2 shows that there has been a gradual shift in the composition of Human Resources at banks in India. The number of employees in officer cadre have shown a considerable increase from 2012 to 2022. At the same time, the number of employees in clerical and sub-staff level came down to half from 39.73% to 19.73% and 15.08% to 8.54% respectively between 2012-13 to 2021-22.

Literature Review

(World Bank Group) Capital deepening directly increases labour productivity, while human capital improvements like education and training enhance the quality of labour input and thereby improving the quality of resultant output produced. The effectiveness of labour input may be influenced by the level of education, training, and health of workers. These aspects of human capital can be determined by estimating the average number of years of schooling of the employees and life expectancy to proxy workforce health. However, the quality of formal education and health, and the effects of on-the-job training provided outside of the education system, is difficult to measure consistently. The number of people involved in the production process does not consider different work arrangements that vary the intensity of labour input. The intensity of labour input may be ascertained by no. of hours worked, however, such data are not available.

(OECD Economic Outlook) Technological advances will increase the range of tasks that can be automated. This may enhance productivity but will involve related transition costs. While automation has started with manual routine tasks in manufacturing activities, it is increasingly affecting "cognitive routine" tasks that are typical of service sectors. As the performance of artificial intelligence is improving, more tasks will be automated, even in relatively high-skilled occupations. This means that certain jobs will disappear, but above all that the nature of many jobs will change.

(Mohan) The labour productivity of the top four banks in India (which includes one de novo private bank) and the four state-owned Chinese banks indicates that except the private bank, the top three public sector banks in India recorded much lower employee productivity.

(Kumar and M.) The inefficiency is the main factor contributing to the high cost of banking services in India. The study of the employee productivity and employee cost ratios between the traditional banks and modern banks from 1997 to 2008 concludes that the performance of the modern banks (foreign and new private sector banks) was much superior than the traditional banks (public sector and old private sector banks). However, the gap between the performance of modern and traditional banks had shown a decreasing trend.

(Krugman) In principle, the measurement of labour inputs should also take into account differences in workers' educational attainment, skills and experience. Krugman stated that the measurement of hours worked suffers from a number of statistical problems like, different concepts and basic statistical sources that are used across countries which may hinder international comparability. To overcome this adjusted labour input measures may be used.

Research Methodology

The following Employee Productivity Ratios were calculated for all scheduled commercial banks using the time series data extracted from database on Indian Economy, RBI's data warehouse.

The select employee productivity ratios were calculated using following formulas:

• The Business per Employee (BPE) is calculated using the formula:

BPE = Total Business/Total no. of Employees of SCBs

• The Profit per Employee (PPE) is calculated using the formula:

PPE = Net Profit/ Total no. of Employees of SCBs

Employee Cost to Operating Expenses is calculated using the wage bill data of Scheduled Commercial Banks (SCBs). It is calculated as Payments to and Provisions for employees as a percentage of Operating Expenses.

Data Analysis

1. Business per Employee (BPE)

According to the established literature on banking output four major approaches have been identified for ascertaining banking output - the production approach, the intermediation approach, the operating (income-based) approach and the modern approach. In this study, considering the value added approach, to create per unit cost measure, the aggregate of advances and deposits are considered as output.

Also, the Frexias and Rochet (2008) model defines banking activity as the production of deposit and loan services, therefore, the total Business is calculated as sum of Advances & Deposits.

Table 3 shows the BPE from 2012 to 2022. The BPE has grown 2.6 times from Rs. 5.40 Crore in 2012-13 to Rs.14.12 crore in 2021-22. The hike in BPE can be attributed to the growth in the advances (2.07 times) and deposits (2.31 times) from 2012 to 2022.

2. Profit per Employee (PPE)

The Labour productivity is generally measured as output per worker, with the number of employees used as the unit of labour input.

With reference to the calculations as mentioned in Table 3, the PPE has shown a considerable growth from Rs. 8 lakhs in 2012-13 to Rs 12 lakhs in 2021-22.

Table 3: Employee Productivity Ratios

(Amount in crores)

Year (End-March)	No. Employees of SCBs	Advances	Deposits	Total Business	Net Profit	BPE	PPE
2021-22	15,68,789	1,22,08,009	1,71,82,709	2,21,57,409	1,82,032	14.12	0.12
2020-21	14,91,503	1,08,06,381	1,55,80,325	2,03,54,269	1,21,998	13.65	0.08
2019-20	14,65,955	1,03,01,897	1,39,75,045	1,85,51,129	10,911	12.65	0.01
2018-19	13,64,285	96,76,183	1,28,86,643	1,67,47,989	-23,397	12.28	-0.02
2017-18	13,33,405	87,45,997	1,17,94,005	1,49,44,849	-32,438	11.21	-0.02
2016-17	13,00,008	81,16,100	1,11,11,400	1,31,41,709	43900	10.11	0.03
2015-16	12,56,085	78,96,500	1,00,92,700	1,13,38,569	34100	9.03	0.03
2014-15	11,80,069	7388179	9433838	95,35,429	89078	8.08	0.08
2013-14	11,50,281	6735230	8533170	77,32,289	80910	6.72	0.07
2012-13	10,96,980	5879773	7429677	59,29,149	91165	5.40	0.08

Employee Cost to Operating Expenses

Table 4: Employee Cost to Operating Expenses (%)

Year	Public Sector Banks	Private Sector Banks	Foreign Banks	Small Finance Banks	Payments Banks	All Scheduled Commercial Banks
2021-22	60.31	37.58	36.76	54.05	16.15	49.68
2020-21	61.13	38.54	35.33	57.01	31.81	51.30
2019-20	60.11	37.39	36.50	53.29	54.21	50.24
2018-19	57.96	35.87	35.94	50.64	-	48.67
2017-18	55.92	37.30	38.18	56.78	-	48.82
2016-17	58.36	39.35	40.49	61.36	-	51.35
2015-16	59.61	40.59	42.48	-	-	53.01
2014-15	61.20	41.27	42.68	-	-	54.40
2013-14	62.47	41.50	40.92	-	-	55.31
2012-13	63.03	42.34	42.08	-	-	55.77

The Employee cost to Operating expense ratio of all SCBs have shown a considerable decrease from 55.77% to 49.68% from the period 2012-2022. This may be attributed to extensive use of technical upgradation in overall banking operations which reduced the operating expenses. The study period of 2012-13 to 2021-22 corresponds to the timelines when several initiatives were taken to introduce new payment systems & digitalisation of several other services which greatly impacted on reducing the operating expenses & Employee Cost to Operating Expenses.

The Employee Cost to Operating Expenses of Public Sector Banks had improved from 63.03% in 2012-13 to 60.31% in 2021-22.This may be due to several developments in PSBs during the study period like EASE Reforms, introduction of social security schemes etc. However, there counterparts, Private sector banks have shown a considerable greater reduction in Employee Cost to Operating Expenses from 42.34% in 2012-13 to 37.58% in 2021-22. Similarly, foreign banks have also curbed Employee Cost to Operating Expenses from 42.08% to 36.76% in this period.

The differentiated banks have also shown a firm reduction in Employee Cost to Operating Expenses. Payments Banks have shown a drastic decrease from 54.21% to 16.15% in last 3 years. Small Finance Banks have also steadily curtailed Employee Cost to Operating Expenses from 61.36% to 54.05% from 2016 to 2022.

Correlation Matrix: Multiple correlation between No. of employees in SCBs and Advances & Deposits of SCBs

Correlation Matrix	No. of employees in SCBs	Advances	Deposits
No. of employees in SCBs	1		
Advances	0.99005432	1	
Deposits	0.99181259	0.9954467	1

The data from 2012 to 2022 was analysed to study the relationship between number of employees and the business of the SCBs. The deposits & loans/advances were identified as the parameters for representing business of the banks. The multiple correlation matrix was generated based on the 10 years' data which shows that there is a very strong correlation (0.99) between number of employees and deposits with banks. Also, there is a strong positive correlation (0.99) between number of employees and loans & advances of SCBs. This may infer that in past 10 years, business of the banks grew with the growth in number of employees of banks.

Conclusion

Let us try to draw symmetry between pluripotent human cells and human resources. Both are inducted in the system as generalists and few of them develop themselves into specialists. Human Resources of a bank have a strong potential to add value to their organisation in terms of profitability, increase in business and reduction in Non-Performing Assets. The present study shows the improvement of Employee productivity ratios over the period of 10 years. Banks are multi-input and multi-output organisations, also many of the financial services are jointly produced and prices are typically assigned to a bundle of financial services.Employee productivity improves when supplemented with enhanced technological innovations that helps to expand the range production possibilities.The OECD has cited digitalisation as a key avenue for future productivity growth. Digitalisation may harness the power to rapidly diffuse and replicate ideas, informational goods and business processes at near zero marginal cost.

To conclude, it may be restated that Employee productivity is an integral part of overall productivity of banks and employees have the ability to adapt to the changing needs of the banks by learning, un-learning and re-learningwith time.

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