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Measuring Performance of Banks: A Comparative Analysis of Public sector and Private sector banks

Simran Jain, Assistant Professor, St Joseph's Degree and PG College, Hyderabad.
DrManoj Kumar Sharma, Assistant Professor, Bhupal Nobles University, Udaipur(Rajasthan)

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I. Introduction

Modern banking in India started in 18th Century and Bank of Hindustan was among first bank established in 1770. India's largest and oldest bank of India was State Bank of India (SBI) which was started as Bank of Calcutta in 1806. In 1809 it was renamed as the Bank of Bengal. The other two banks that were founded by presidency government were Bank of Bombay in 1840 and Bank of Madras in 1843. These three banks were later merged in 1921 and became Imperial Bank of India. After independence in 1955 this Imperial Bank of India become State Bank of India. Reserve bank of India was established in 1935 under Reserve Bank of India Act, 1934.

In 1969 the Indian government nationalized 14 major private banks. In 1980, 6 more private banks were nationalized. The nationalized banks are the majority of lender in Indian Economy.

The Indian banking sector is classified into scheduled and non-scheduled banks. The scheduled banks are those banks which are included in the 2nd Schedule of the Reserve Bank of India Act, 1934. The scheduled commercial banks are classified into

(a) Nationalized banks (b) State Bank of India and its associates (c) Regional Rural Banks (RRB) (d) Foreign banks and (e) Indian private sector banks. The commercial banks include both scheduled and non-scheduled commercial banks .

Banks play important role in economic development of any economy. Economic development is a dynamic and continuous process dependent on mobilization of resources, investment and operation efficiency of the various segments of the economy. Therefore, for strong economy, a strong banking sector is required for growth, employment generation, wealth generation, poverty eradication, entrepreneurial activities and increasing Gross Domestic Product (GDP) growth.

Banking sector provides a large portion of the medium of exchange of a country and is primary institution through which monetary policy is conducted through their deposit mobilization and lending operations. Banks facilitate the productive utilization of ideal funds, thus assisting society to produce wealth.

Bank performance

The dictionary meaning of performance is "the action or process of performing a task or function". Performance also means undertaking of duty. "Bank Performance" is defined as the reflection of the way in which the resources of a bank are used in a form which enables it to achieve its objectives. The term bank performance means the adoption of a set of indicators which are indicative of the bank's current status and the extent of its ability to achieve the desired objectives.

Bank profitability is also an important indicator of bank performance, it represents the rate of return a bank has been able to generate from using the resources at its command in order to produce and sell services. Like all businesses, banks profit by earning more money than what they pay in expenses. The major portion of a bank's profit comes from the fees that it charges for its services and the interest that it earns on its assets. Its major expense is the interest paid on its liabilities.

Banks increase profits by using leverage Profits can be measured as a return on assets and as a return on equity. Because of leverage, banks earn a much larger return on equity than they do on assets.

Importance of Measuring Bank performance

Banks are considered to be the backbone of the financial system; they play an important role in the economic development as they play the role of intermediary to transfer funds from surplus units to deficit units. So, the efficiency of a bank is essential and needs to be paid more attention. There is a major shift in the banking system in the policy atmosphere after the introduction of financial sector reform in 1992 and these reforms impact the working of commercial banks. One of the objectives of financial sector reform was to improve the efficiency of the banking system.

The concept of efficiency as a general performance indicator for all types of businesses was first formulated in the early works of Edgeworth (1881) and Pareto (1927) and recorded its empirical implementation in the book of Shephard (1953). Efficiency in economics is interpreted as the maximum potential ratio between the output and the input of the product development process, which shows the optimal distribution of available resources that would allow achieving the maximum potential (Cvilikas&Jurkonyte-Dumbliauskiene 2016). According to Drucker (1963), efficiency can be defined as the ability of an organization to achieve its output from the minimum input level. In other words, Efficiency is defined as the measure of effectiveness that produces the minimum waste of time, effort, and skill.

The term efficiency is different from the term effectiveness, both are used to describe the performance of an entity but according to Jouadi&Zorgui (2014), efficiency summarizes the idea to produce with the best manner, which means that efficiency is focused on the use of minimum inputs to produce the best output, in other words, the optimized use of resources to generate the best products with the minimum costs. On the other hand, the effectiveness concept summarizes the yield of factors and the reach of goal, without considering the manner and the resources optimized use. Regarding the banking sector, Isrova (2010) stated that efficiency supports the fruitfulness of implemented macroeconomic policies, which generate the durable development, economic growth, and welfare for society, this is the same meaning that McKnley&Banaian (2000) stated as they define efficiency in terms of cost minimization and profit maximization.

Objectives of the study

1. The objective of the present study was to measure the performance of the public sector and private sector banks in India.
2. To compare relative performance of public sector and private sector banks.

Hypotheses of the Study

H_{01}: There is no significant difference in the branch wise performance of public sector banks and private sector banks

H_{02}: There is no significant difference in the employee wise performance of public sector banks and private sector banks

II. Research Methodology

In order to conduct this study five banks for public sector and five banks for private sector were randomly chosen. The selected banks from public sector were Bank of Baroda, State Bank of India, Punjab National Bank, Union Bank of India, and Canara Bank. The five banks from private sector were Axis Bank, HDFC Bank, IDBI Bank, Federal Bank and Yes Bank. The indicators chosen to measure performance were deposits, advances, income, expenditure, profit and interest earned. Since branch and employees are two most important components of any bank therefore performances were measured and compared at two levels (a) at branch level and (b) at employee level.

The period of this study was from 2011 to 2020. Data for this research work was secondary and taken form balance sheets of respective banks which are published annually in respective bank reports. The data collected from the balance sheets were then calculated at branch level and at employee level and analysis on these calculated values was done.

Data Analysis and results

From the data collected for five-five banks from each public and private sector over the ten-year period was subject to analysis and following statistics came out which are displayed in tables 1 and 2. Table 1 shows statistics related to per branch from public and private sector whereas table 2 depict statistics related to per employee variables.

Per Branch performance of the banks

Table 1: Per branch statistics of public sector and private sector banks

Parameter	Bank Type	N	Mean*	SD	t	p
Deposit per branch	Private	50	130.24	44.33	5.43	0.000
	Public	50	93.28	18.75		
Advances per branch	Private	50	109.18	43.11	6.27	0.000
	Public	50	68.89	14.32		

Parameter	Bank Type	N	Mean*	SD	t	p
Income per branch	Private	50	17.03	6.44	7.97	0.000
	Public	50	9.31	2.33		
Expenditure per branch	Private	50	15.96	7.26	6.37	0.000
	Public	50	9.05	2.47		
profit per branch	Private	50	3.72	6.73	3.11	0.000
	Public	50	0.65	1.86		
net interest per branch	Private	50	4.83	1.90	-8.85	0.000
	Public	50	7.94	1.60		
* All values are in ₹ crore						

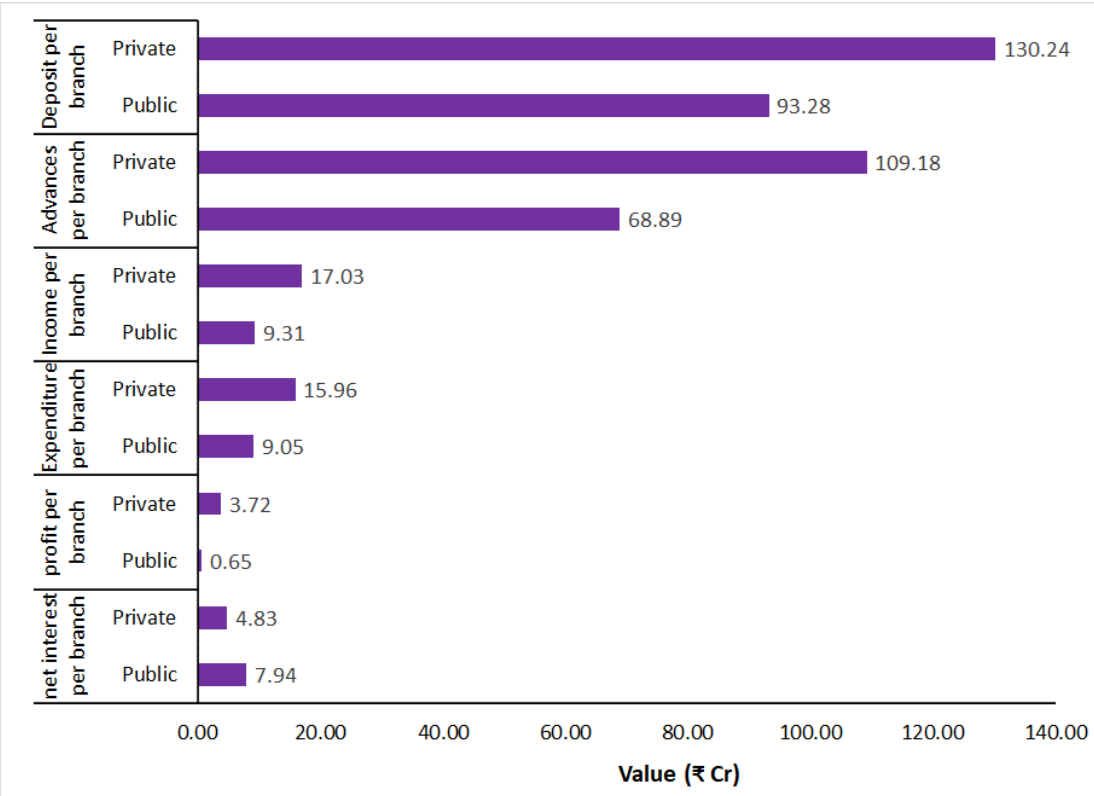

Fig. 1: Branch wise performance of the banks

In table 1 statistics related to per branch variables is given. The values given in the table above are average value of specific variable for sampled banks for the period of 2011 to 2020. From the table given above it can be clearly seen that for all the variable except net interest per branch the value for private sector banks were high as compared to public sector banks e.g., deposit per branch for private sector banks was ₹ 130.24 Cr whereas deposit per branch for public sector banks was ₹ 93.28 Cr. It can be seen that for other variables also the values private sector banks were higher as compared public sector banks. This difference in the per branch values was also tested statistically and it was found the difference in the public sector banks value and private sector banks value was highly significant (all p value <0.001).

Only one variable where value pf public sector banks was significantly higher (t = -8.85, p<0.001), than that of private sector banks was net interest per branch. In this case net interest per branch of public sector banks was significantly higher than that of private sector banks. Hence, it can be said that private sector banks are ahead of public sector banks in branch wise performance.

Per Employee performance of the banks

Table 2: Per employee statistics of public sector and private sector banks

Parameter	Bank Type	N	Mean*	SD	t	p
Deposit per employee	Private	50	8.93	3.28	-0.17	0.860
	Public	50	9.03	2.12		
Advances per employee	Private	50	7.33	2.67	1.65	0.100
	Public	50	6.63	1.43		
Income per employee	Private	50	1.14	0.39	3.91	0.000
	Public	50	0.89	0.21		
Expenditure per employee	Private	50	1.10	0.53	2.72	0.010
	Public	50	0.87	0.24		
profit per employee	Private	50	0.16	0.57	1.44	0.150
	Public	50	0.05	0.14		
net interest per employee	Private	50	0.31	0.07	-18.46	0.000
	Public	50	0.76	0.16		
* All values are in ₹ crore						

Table 2 given above shows per employee statistics of sampled five public sector banks and five private sector banks for the period of ten years (2011 to 2020). In case of per employee performance significant difference between public sector banks and private sector banks was found in only the variables which are income per employee, expenditure per employee and net interest per employee. In case of income per employee the average income per employee of private sector banks was ₹ 1.14 Cr whereas income per employee of public sector banks was ₹ 0.89 Cr this difference was statistically highly significant ($t = 3.91$, $p<0.001$). Similarly, expenditure per employee of private sector banks was significantly high as compared to expenditure per employee of public sector banks ($t = 2.72$, $p<0.05$).

As far as net interest per employee is concerned, similar to net interest per branch, net interest per employee of public sector banks were statistically significantly high as compared to private sector banks ($t = -18.46$, $p<0.001$). Non-significant difference in deposit per employee ($t = -0.17$), advances per employee ($t =1.65$) and profit per employee ($t = 1.44$) of public sector banks and private sector banks was found. Therefore, it can be said that in employee wise performance too private sector banks were ahead of public sector banks though in a smaller number of variables as compared to per branch variables.

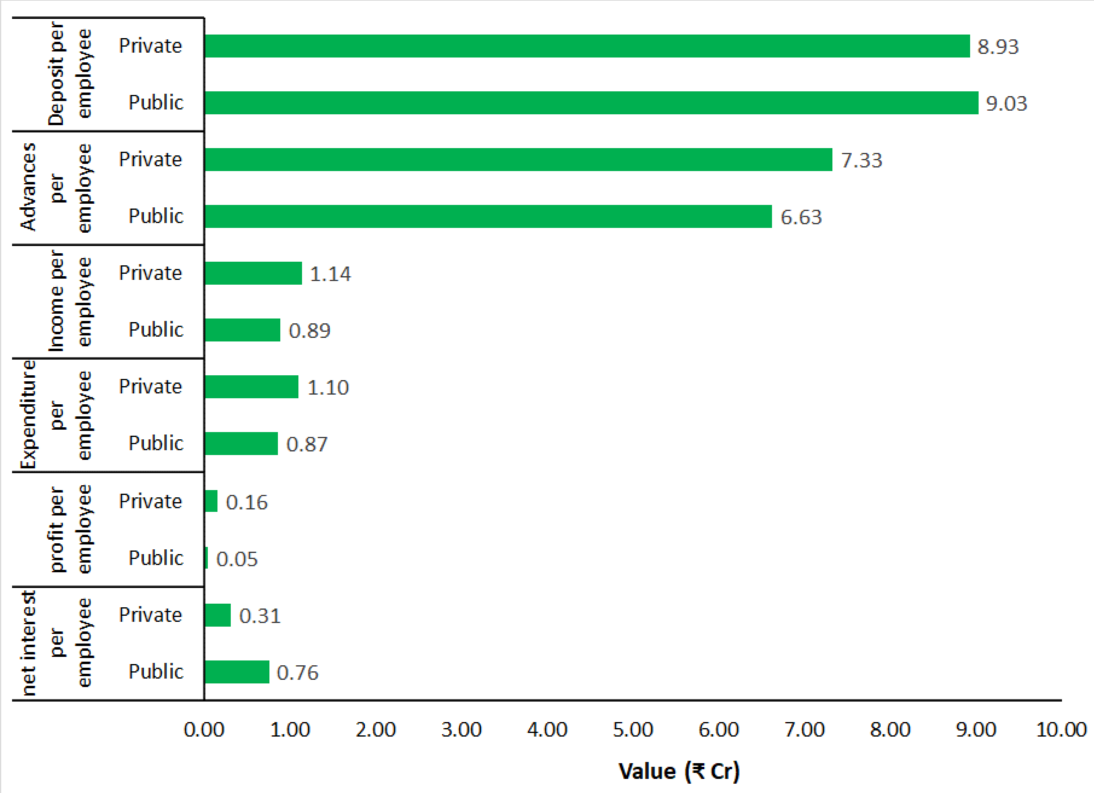

Fig. 2: Employee wise performance of the banks

Overall performance compared

After analysis of individual variables finally overall performance of public sector banks and private sector banks were compared first at branch level and second at employee level. For this an index was created which combined all the variables discussed above and the index scores of public sector banks and private sector banks were compared using t-statistics.

Per Branch performance

H_{01}: There is no significant difference in the branch wise performance of public sector banks and private sector banks

Table 3: Per branch performance of public sector and private sector banks

Bank Type	N	Mean	SD	t	df	p-Value	Result
Public	50	2.00	0.98	-11.438	98	0.000	***
Private	50	4.12	0.87				

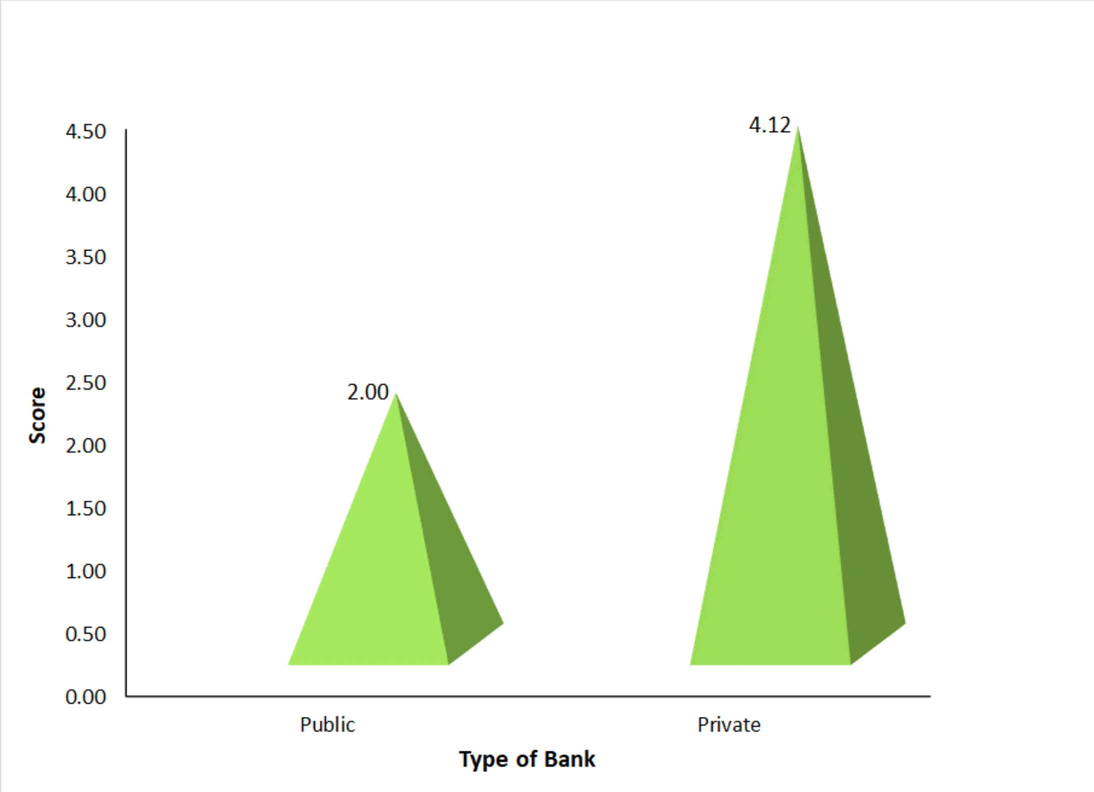

Fig. 3: Table 3: Per branch performance of public sector and private sector banks

The test results given above shows that index score of private sector banks banks was significantly high as compared to index score of public sector banks (t =-11.44, p<0.001). This result shows that as far as branch wise performance is concerned private sector banks are much better than public sector banks. Hence, null hypothesis is rejected.

Per Employee performance

H_{02}: There is no significant difference in the employee wise performance of public sector banks and private sector banks

Table 4: Per branch performance of public sector and private sector banks

Bank Type	N	Mean	SD	t	df	p-Value	Result
Public	50	2.96	0.99	-8.329	98	0.000	***
Private	50	4.54	0.90				

In this test per employee performance of public sector banks and private sector banks were compared, using same procedure as discussed above, index for per employee variables were formed and compared for public sector banks and private sector banks. The test results given above shows that score of private sector banks was significantly high (t = -8.33, p<0.001) as compared to score of public sector banks. This result shows that with regard to employee wise performance also private sector banks are much better than public sector banks. Hence, null hypothesis is rejected.

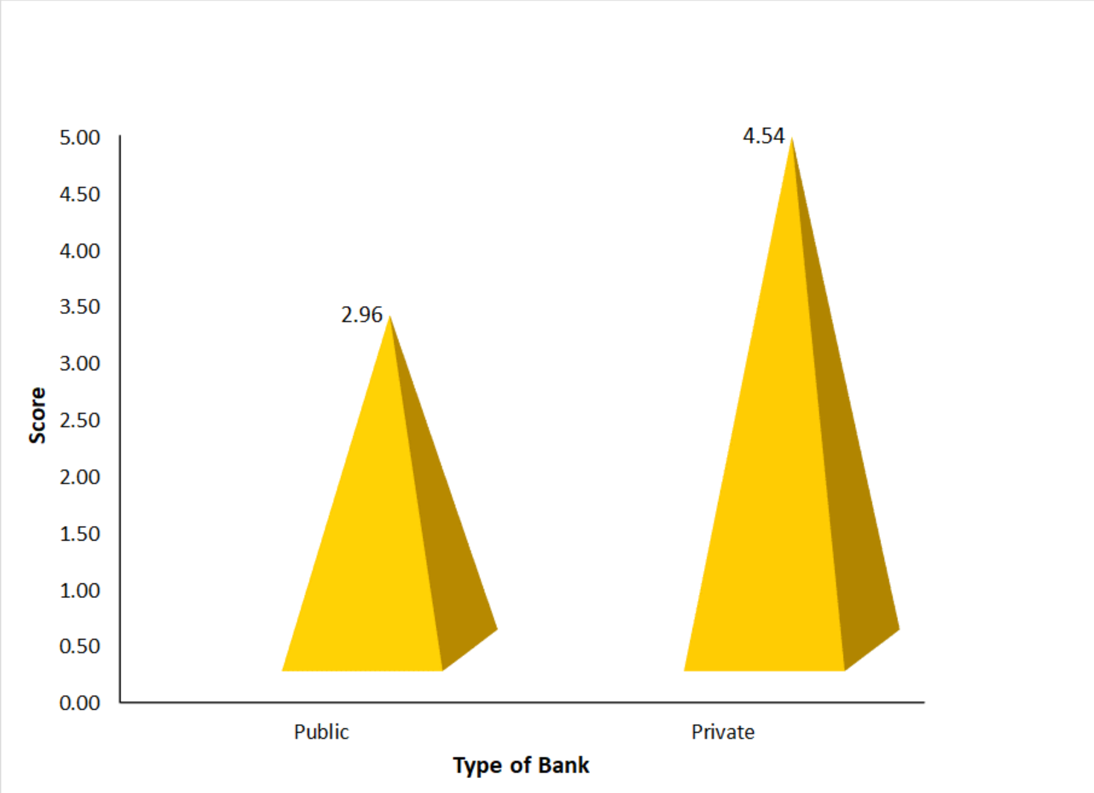

Fig. 4: Table 3: Per branch performance of public sector and private sector banks

III. Conclusions

In the present research work performance of public sector banks and private sector banks were compared. For this, five banks for public sector and five banks form private sector selected randomly. Data related to this work was obtained from published annual reports of respective banks. These data were taken for the period of 10 years i.e., from 2011 to 2020. Performance of both type of banks were tested at branch level and employee level. The variables taken for investigation were deposits, advances, income, expenditure, profit and net interest earned. The analysis revealed that although deposits and advances, income in the banks have increased but profitability of both type of banks have decreased after 2015 and specially in 2020 the profits of the banks become negative, which may be due to covid pandemic. Overall, through the analysis and hypotheses testing it came out that private sector banks are performing better than public sector banks. The reason for under performance of public sector banks may be that objective of public sector banks is not only profit making but social welfare also. On the other hand, private sector banks work only on the motto of profit making. Political interference, not so strong management etc. may be the other reason of low performance of the public sector banks as compared to private sector banks.

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