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A STUDY OF OPERATIONAL EFFICIENCY OF SELECTED PUBLIC SECTOR BANKS IN INDIA – ISSUES AND CHALLENGES

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ABSTRACT

Operational efficiency is a vital indicator of economic performance and resilience of an economic system. It is a well known fact that the rate of economic growth of any country has a direct link with the efficiency of financial sector of the country and an efficient financial sector achieves faster rate of economic growth. Measuring the operational efficiency of banks assumes greater significance in the overall rating of banks. Banks normally use factorial productivity measures such as business per employee and business per branch for measuring operational efficiency. With the radical changes taking place in the economic scenario in general, and in the banking sector in particular, it is time that banks move beyond the concept of per employee business to a more realistic method in measuring their productivity. The focus of this paper is to measure operational efficiency on the basis of profitability and productivity of selected public sector banks in India, using a non-parametric model. It denotes operational; efficiency with which inputs are transformed into useful output within the production process as well as output is produced by the resources utilized.

KEYWORDS

operational efficiency, profitability, financial sector, factorial productivity.

MEANING OF OPERATIONAL EFFICIENCY

 Operational efficiency is the ability for an organization to execute its tactical plans maintaining a healthy balance between cost and productivity. The process of identifying wasteful processes draining the organization's profits is termed as Operational Efficiency.

OPERATIONAL EFFICIENCY IN BANKING SECTOR

In a manufacturing industry, efficiency can be measured easily in quantitative terms but in case of service industry like banking, the outputs are not homogenous. The banking industry belongs to service industry, delivering financial services to their customers. In case of banking sector, it is very difficult to define the input and output of a bank as many of the financial services provided by the banks are jointly produced and they are priced for entire bundle of financial services.

OPERATIONAL EFFICIENCY AND PRODUCTIVITY

Productivity is reflected in the relationship between output of goods manufactured or services rendered and input of production resources used in supplying such output. The most common formula for expressing productivity is-

Productivity=output/ input

The productivity of a firm is therefore measured by considering the ratio of output and input of production factors.

OPERATIONAL EFFICIENCY AND PROFITABILITY

Profit is the difference between aggregate revenues and aggregate costs, while the ability to make or earn profits is known profitability. Efficiency, in simple words, is defined as ability to achieve business objectives (in the best way), whatever these objectives are: Maximization of profits is the main objective of a private business. Therefore in such cases profit provide the most important criterion of judging operational efficiency. But profit maximization is not, and never be, the reason of existence in public sector banks. Therefore, profitability alone cannot be used as the test of operational efficiency in the case of public utilities.

NEED OF THE STUDY

The study may be used as an important tool for the further references related to the Indian Banking Sector. Measuring the operational efficiency of Banks assumes greater significance in the overall rating of banks. Therefore the study on the topic "A study on operational efficiency of the selected Public sector

banks in India- Issues and Challenges” has the relevance and it is the demand of present day, as the growth in the Indian economy is expected to be stronger for quite some time especially in its service sector.

REVIEW OF LITERATURE

Subramanyam and Swamy (1994b) adopted taxonomic method through simple regression for the period (1974-76 and 1984-86). It was found that production efficiency differences between the firms arise not only from technological improvements but also from competence. **Noulas and Katkar(1996)** analyzed scale and technical efficiency of public sector banks in India by using DEA and used cross-sectional data of 19 public sector banks for the year 1993. It has been observed that overall technical inefficiency was approximately 3.75% of which 1.5% was due to pure technical inefficiency and 2.25% due to scale inefficiency. Also, a majority of the public sector banks were found to be operating under increasing returns to scale. **Battacharya (1997)** examined the impact of partial liberalization during mid-eighties on the productive efficiency of different categories of banks in India using DEA. The study reviewed 70 commercial banks for the period 1986-1991 and found that public sector banks had the highest efficiency followed by foreign banks; private banks were found to be least efficient. They also found a temporal improvement in the performance of foreign banks, but no clear trend in the performance of a private bank and temporal decline in the performance of public sector banks. **Mukherjee (2002)** used DEA to explore technical efficiency and benchmark of the performance of 68 commercial banks for the period 1996-99. They found that in India, Public sector banks are more efficient than both private and foreign banks. Also, the performance of public sector banks improved during the study period. Besides these, publicly owned banks were rated uniformly in terms of self-appraisal as well as peer-group appraisal. **Mohan and Ray (2004)** measured the comparative performance among commercial banks using physical quantities of inputs and outputs to compare revenue maximization efficiency of banks during 1992-2000 by employed DEA. They showed that public sector banks performed significantly better than the private banks but not differently from foreign banks. **Sinha (2006)** estimated efficiency of Indian commercial banks (under constant returns to scale) using the data envelopment analysis. He considered loan as the output indicator. Number of bank branches and borrowed capital were taken as two inputs. The results were for 1996-97, 1998-99, 2000-01, and 2002-03 respectively. The results suggest superior performance by the observed private sector commercial banks as compared to the observed public sector commercial banks.

OBJECTIVES OF THE STUDY

The specific objectives of the study are

1. To measure the operational efficiency of the Selected Public Sector Banks in India.
2. To examine the variations in the operational efficiency of the Public Sector Banks and to indentify the influencing factors.
3. To rank the bank based on operational efficiency.

RESEARCH METHODOLOGY

SCOPE OF THE STUDY

The past second reform phase of five years (2005-2010) has been taken into consideration for the analysis of operational efficiency of selected public sector banks in India on the basis of different profitability and productivity parameters.

SAMPLE SIZE

The present study is based on five selected public sector banks in India. The selection of public sector banks for the purpose of study has been taken on the basis of business per banks as on 2010. Business per bank means total business of a bank (sum of deposits and Advances divided by no. of employees). This has been guiding consideration in the selection of the bank as the business is one of the determinants of performance of a bank.

DATA COLLECTION

The study is primarily based on secondary data. A major part of the database has been drawn from the published secondary sources, primarily the reports of Indian Bankers Association (IBA) and the Reserve Bank of India (RBI). The data relating to financial performance of the selected public sector banks have been obtained from various sources like “Financial Analysis of Banks” published by Indian Banker’s Association, “Statistical Tables Relating to Banks of India”. “Reserve Bank of India Monthly Bulletin”, “Report on currency and Finance” and other publications of Reserve Bank of India.

SELECTION OF INPUT AND OUTPUT FACTORS

Various inputs and outputs have been undertaken for measuring operational efficiency on the basis of productivity.

INPUT FACTORS

1. Network of branches
2. Number of staff
3. Deposits

OUTPUT FACTORS

1. Advances
2. Interest spread
3. Net profit

In order to facilitate the comparison of one bank to the other, the market share of each factor in percentage terms is taken into account instead of the absolute levels.

DATA ANALYSIS

Due care has been taken while selecting input and output factors. There is bound to be some amount of correlation among inputs factors like number of branches and staff, branches and Total Deposits. Similarly among the output factors like advance and spread, spread and profits etc. There is bound to be inherent correlation. Simple arithmetic averages of the input and output factor measures in terms of respective percentage in market share. Diagrammatic and graphic presentation of data.

AVERAGE INDEX OF INPUT SHARE OF SELECTED PUBLIC SECTOR BANKS

TABLE 1: BRANCHES OF BANKS (in numbers)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	862 (10.35)	923 (10.71)	964 (11.10)	1035 (11.54)	1108 (11.45)	55.15	11.03
Oriental Bank of Commerce	1191 (14.30)	1334 (15.48)	1344 (15.48)	1422 (15.85)	1530 (15.81)	76.92	15.38
Bank of Baroda	2786 (33.45)	2812 (32.64)	2845 (32.77)	2915 (32.49)	3088 (31.92)	163.27	32.65
Punjab and Sind Bank	839 (10.07)	860 (9.98)	839 (9.66)	859 (9.58)	899 (9.30)	48.59	9.718
Canara Bank	2650 (31.82)	2686 (31.18)	2690 (30.98)	2740 (30.54)	3050 (31.52)	156.04	31.20
Total Market Share	8328 (100)	8615 (100)	8682 (100)	8971 (100)	9675 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 1 presents the details of average branches market share (in percentage) of five public sector banks during 2005-2010 . The amount shown in bracket shows the share of particular bank in total market. The table reveals that percentage of average market share of Bank of Baroda contributed higher i.e. 32.65% followed by Canara Bank i.e. 31.20%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 1

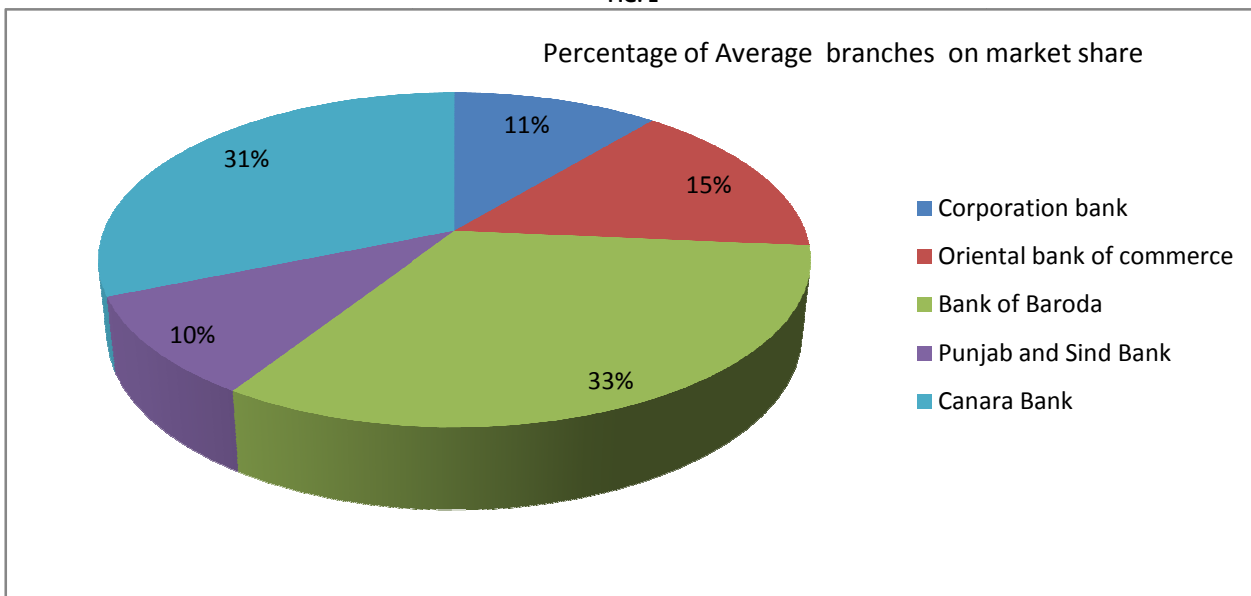


TABLE 2: NO. OF EMPLOYEES OF BANKS (in numbers)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	11325 (9.3)	11880 (9.8)	12010 (10.15)	12465 (10.68)	13143 (11.11)	51.04	10.21
Oriental bank of Commerce	14962 (12.31)	14730 (12.18)	14804 (12.51)	14656 (12.55)	15358 (12.98)	62.53	12.51
Bank of Baroda	38774 (31.91)	38604 (31.93)	37260 (31.48)	35838 (31.55)	38152 (32.25)	159.12	31.82
Punjab and Sind Bank	9542 (7.85)	9342 (7.73)	9013 (7.62)	8700 (7.45)	8259 (6.98)	37.63	7.53
Canara Bank	46893 (38.60)	46359 (38.34)	45260 (38.42)	44090 (37.76)	43380 (36.67)	189.61	38
Total Market Share	121496 (100)	120915 (100)	118347 (100)	116749 (100)	118292 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 2. Presents the details of average no. of employee’s market share (in percentage) of five public sector banks during 2005-2010. The table reveals that percentage of average market share of Canara Bank contributed higher i.e. 38.0% followed by Bank of Baroda i.e. 31.82%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 2

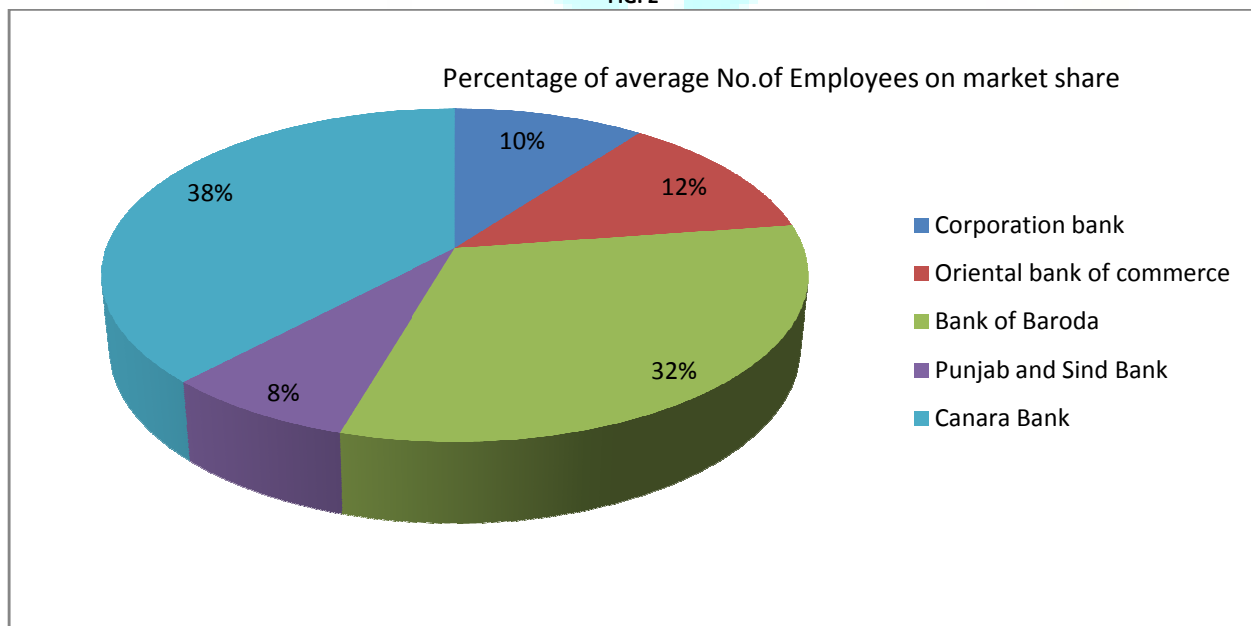


TABLE 3: DEPOSITS OF BANKS (in crore)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	3287653 (10.59)	4235689 (10.78)	5542442 (11.94)	7398391 (12.62)	9273367 (100)	58.49	11.70
Oriental bank of Commerce	5019746 (16.17)	6399597 (16.29)	7785670 (16.77)	9836885 (16.78)	12025759 (16.29)	82.30	16.46
Bank of Baroda	9366199 (30.17)	12491598 (31.79)	15203413 (32.75)	19239695 (32.81)	24126193 (32.69)	160.21	32.04
Punjab and Sind Bank	1692459 (5.45)	1931875 (4.92)	2483142 (5.35)	3467565 (5.9)	4915509 (6.67)	28.29	5.66
Canara Bank	11680324 (37.62)	14238144 (36.23)	15407242 (33.19)	18689251 (31.88)	23465144 (31.80)	170.72	34.14
Total Market Share	31046381 (100)	39296903 (100)	46421909 (100)	58631787 (100)	73805972 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table3. Reveals that percentage of average deposits market share of Canara Bank contributed higher i.e. 34.14% followed by Bank of Baroda i.e. 32.04% on the other hand Punjab & Sind Bank contributed less percentage on average deposits in market share i.e.5.66%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 3

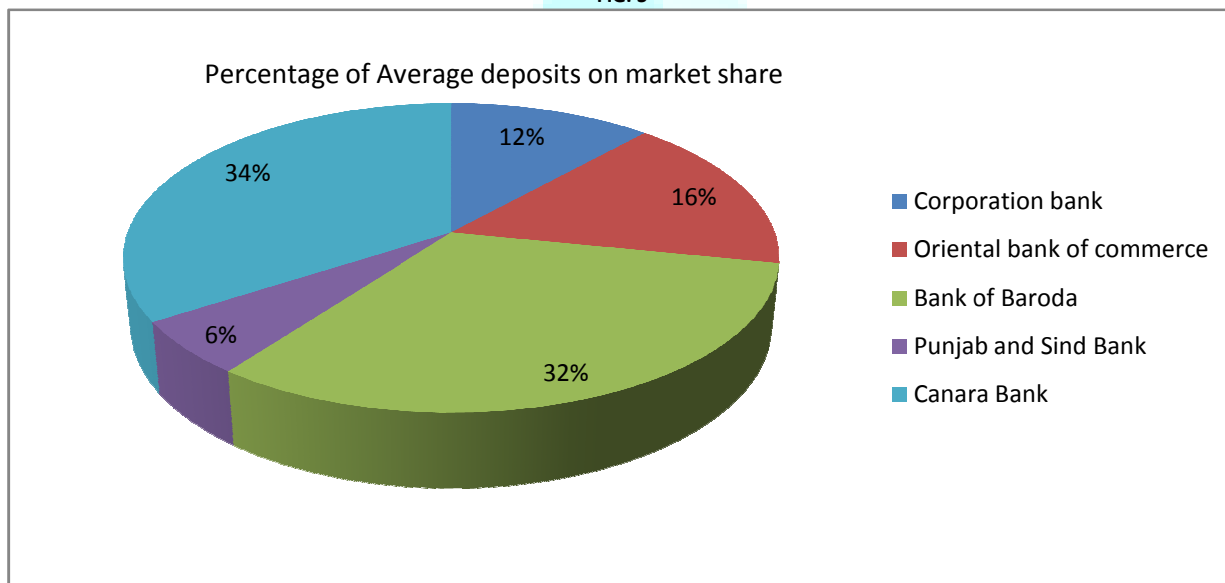


TABLE 4: MARKET SHARE OF INPUTS (in percentage)

Banks	Branches	No. of Employees	Total Deposits	Average Input
Corporation Bank	55.15	51.04	58.49	54.89
Oriental bank of Commerce	76.92	62.53	82.30	73.92
Bank of Baroda	163.27	159.12	160.21	160.87
Punjab and Sind Bank	48.59	37.63	28.29	38.17
Canara Bank	156.04	189.61	170.72	172.12

Table 4 Shows Average Percentage of all inputs on market share.

Average percentage of input factors namely branches, no. of employees and total deposits etc. on market share stood at the maximum of 172.12% for Canara Bank. The next index was registered by 160.87% of Bank of Baroda. Punjab & Sind Bank presented the lowest average market share percentage of index of all input factors at 38.17%.

AVERAGE INDEX OF OUTPUT SHARE OF SELECTED PUBLIC SECTOR BANKS

TABLE 5: ADVANCES OF BANKS (in crore)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	2396243 (11.63)	2994965 (11.18)	3918557 (12.0)	4851216 (11.47)	6320256 (12.07)	58.35	11.67
Oriental bank of Commerce	3357725 (16.30)	4413847 (16.47)	5456583 (16.74)	6850037 (16.19)	8348930 (15.94)	81.64	16.33
Bank of Baroda	5991178 (29.1)	8362087 (31.21)	10670132 (32.73)	14325141 (33.86)	17503529 (33.42)	160.32	32.1
Punjab and Sind Bank	910747 (4.42)	1173751 (4.38)	1834329 (5.63)	2461535 (5.82)	3263911 (6.2)	26.45	5.29
Canara Bank	7942569 (38.56)	9850569 (36.76)	10723804 (32.89)	3821940 (32.67)	16933463 (32.33)	173.21	34.64
Total Market Share	20598462 (100)	26795219 (100)	32603405 (100)	42309869 (100)	52370089 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 5 presents the details of average advance market share (in percentage) of five public sector banks during 2005-2010. The amount shown in bracket shows the share of particular bank in total market. The table reveals that percentage of average market share of Canara Bank contributed higher i.e.34.64 percent followed by Bank of Boroda i.e. 32.1 %.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 4

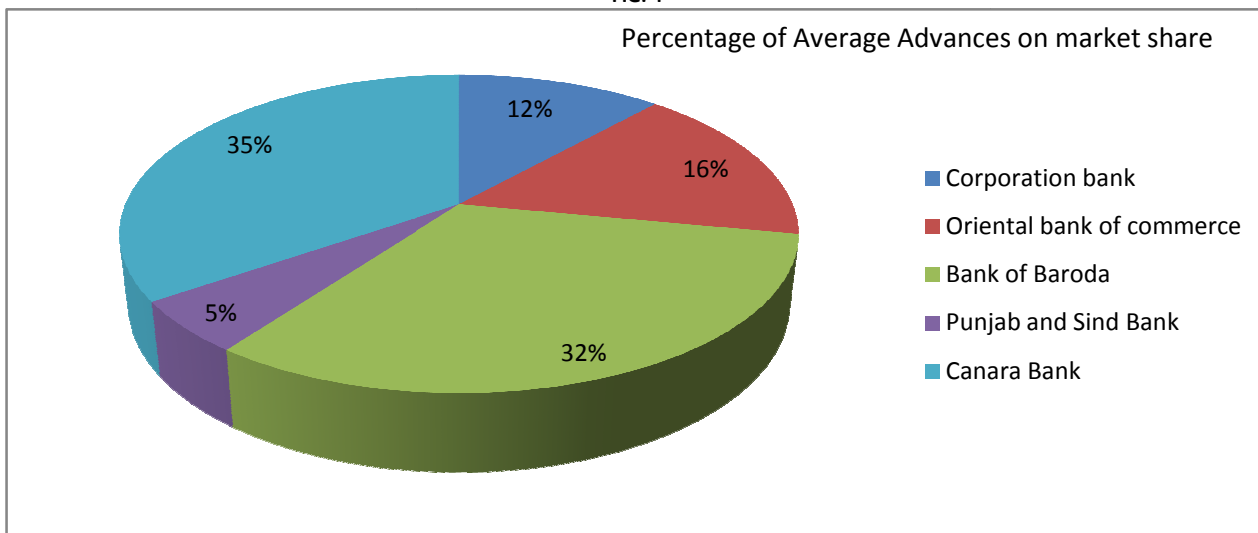


TABLE 6: NET PROFITS OF BANKS (in crores)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	44446 (13.55)	53614 (14.17)	73499 (16.44)	89278 (13.66)	117025 (13.16)	70.98	14.20
Oriental bank of Commerce	55719 (16.99)	58078 (15.35)	35323 (7.9)	90543 (13.86)	113468 (12.76)	66.86	13.4
Bank of Baroda	826978 (25.21)	102650 (27.14)	143552 (32.11)	222723 (34.08)	305833 (34.39)	152.93	30.59
Punjab and Sind Bank	10831 (3.30)	21852 (5.78)	38232 (8.55)	43718 (6.69)	50880 (5.72)	30.04	6.008
Canara Bank	134323 (40.95)	142081 (37.56)	156499 (35.0)	207240 (31.71)	302143 (33.97)	179.19	35.84
Total Market Share	328016 (100)	378275 (100)	447105 (100)	653502 (100)	889349 (100)	(500)	(100)

Sources: (RBI) Report on Trends and Progress of Banking in India, Various Issues.

Table 6 presents the details of average net profits market share (in percentage) of five public sector banks during 2005-2010. The table reveals that percentage of average market share of Canara Bank contributed higher i.e.35.84 percent followed by Bank of Baroda i.e. 30.59%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 5

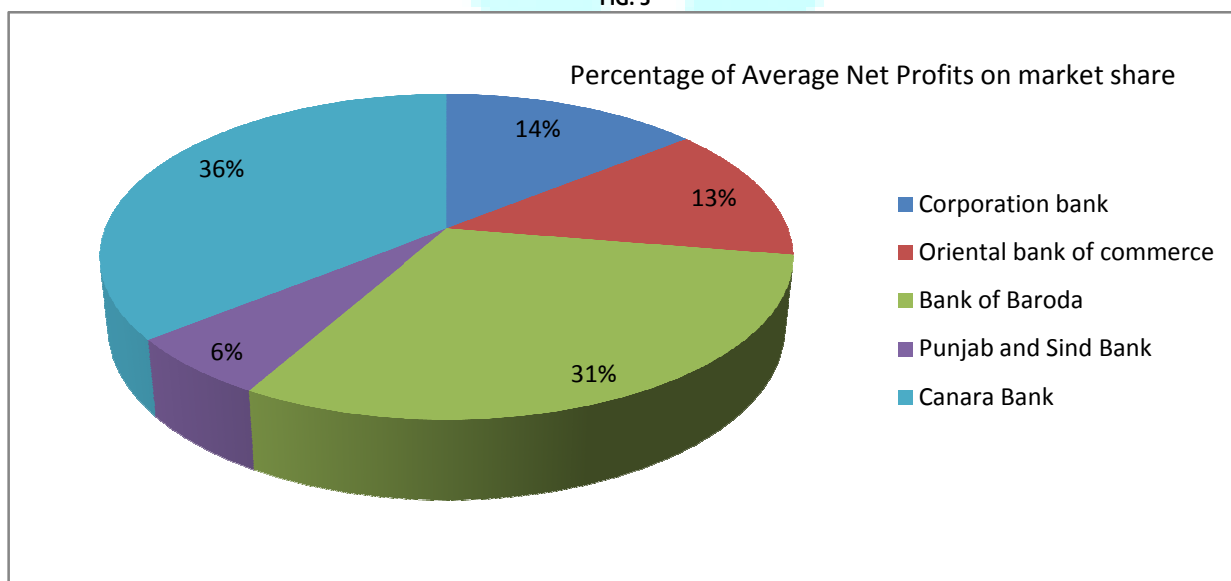


TABLE 7: SPREAD OF BANKS (in crores)

Banks	2005-06	2006-07	2007-08	2008-09	2009-10	%of total market share	%of average market share
Corporation Bank	122681 (12.0)	137780 (11.83)	144333 (12.67)	169098 (11.63)	221025 (12.33)	60.46	12.09
Oriental Bank of Commerce	160507 (15.71)	169133 (14.52)	168202 (14.77)	1996501 (13.73)	290744 (16.22)	74.95	14.99
Bank of Baroda	317486 (31.1)	378609 (32.50)	391180 (34.34)	512342 (35.24)	593948 (33.14)	166.32	33.26
Punjab and Sind Bank	63056 (6.17)	76701 (6.58)	81590 (7.16)	101187 (6.96)	118395 (6.60)	33.47	6.70
Canara Bank	358150 (35.05)	402683 (34.57)	353779 (31.06)	471780 (32.45)	568053 (31.70)	164.83	33.0
Total Market Share	1021880 (100)	1164906 (100)	1139084 (100)	1454057 (100)	1792165 (100)	(500)	(100)

The difference between interest income and interest expenses is known as spread or net interest income. Table 7. Reveals that percentage of average spread market share of Bank of Baroda contributed higher i.e. 33.26% followed by Canara Bank i.e. 33.0%.

GRAPHICAL PRESENTATION OF THE ABOVE FINDINGS

FIG. 6

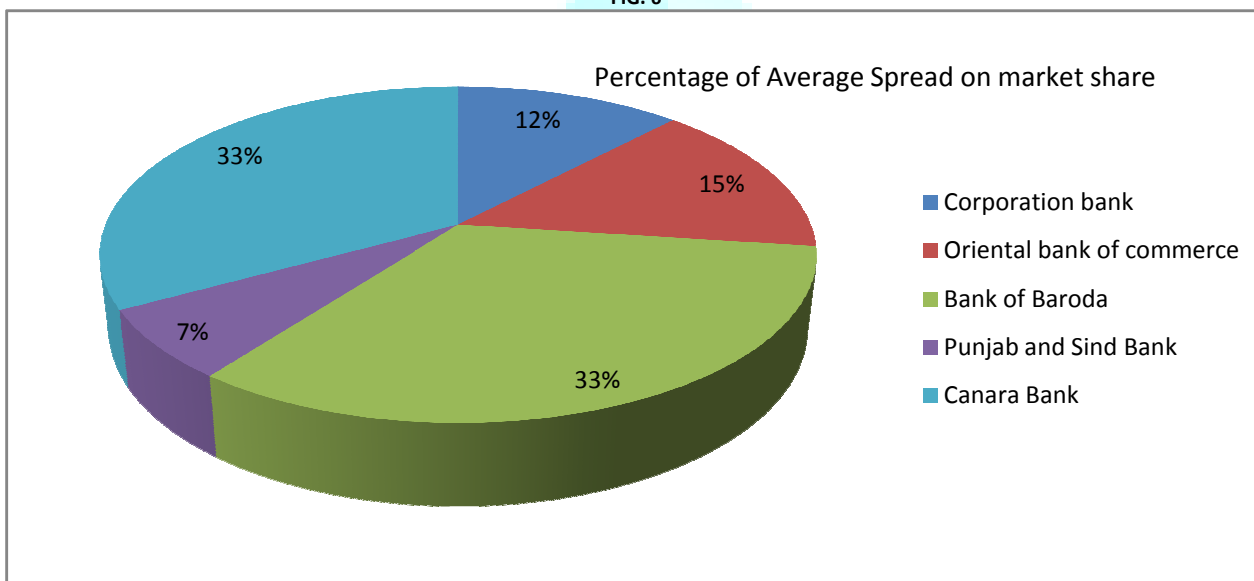


TABLE 8: MARKET SHARE OF OUTPUTS (in percentage)

Banks	Advances	Net Profits	Spread	Average Output
Corporation Bank	58.35	70.98	60.46	63.26
Oriental Bank of Commerce	81.64	66.86	74.95	74.48
Bank of Baroda	160.32	152.93	166.32	159.86
Punjab and Sind Bank	26.45	30.04	33.47	29.99
Canara Bank	173.21	179.19	164.83	172.41

Table 8 Shows Average Percentage of all Output on market share.

The table shows average percentage of output factors namely Advances, net profit and spread on market share stood at the highest of 172.41% for Canara Bank. The next higher index was register by Bank of Baroda i.e. 159.86 percent. Punjab & Sind Bank presented the lowest average index of all output factors that is 29.99 percent.

TABLE 9: PRODUCTIVITY OF SELECTED PUBLIC SECTOR BANKS ON THE BASIS OF OUTPUT / INPUT

Banks	Output	Input	Productivity Output/Input*100	Rank
Corporation Bank	63.26	54.89	115	I
Oriental Bank of Commerce	74.48	73.92	101	II
Bank of Baroda	159.86	160.87	99	IV
Punjab & Sind Bank	29.99	38.17	79	V
Canara Bank	172.41	172.12	100	III

Operational efficiency of the selected public sector bank has been determined by computing the efficiency ratio by using the following formula.

$$\text{Efficiency ratio} = \frac{\text{Average \% index of all output}}{\text{Average \% index of all inputs}}$$

The table shows that operational efficiency of Corporation Bank stood at the top with the highest productivity ratio 115% followed by Oriental Bank of Commerce with 101% and Canara Bank with 100% efficiency.

LIMITATIONS

Like any other study, this research is also not without limitations. The following are the main limitations of the study.

1. In the present study the operational efficiency of selected public sector banks has been examined, all public sector banks have not been considered for this purpose. Therefore, the study does not reflect the overall picture of the performance of banking sector.
2. The study is based on secondary data as published in various publications of RBI and IBA. This data is based on historical accounting concept, which ignores the impact of inflation.

3. In the present study, only the quantitative aspects of performance has been examined, qualitative aspects such as motivation of employees, customer satisfaction, image of the bank has not been considered which plays a definite role in the operational efficiency of a bank.

CONCLUSION

Due to financial sector reforms initiated during early nineties, the banks are focusing on productivity, profitability, efficiency, transparency etc. in order to make them work on high standards. Operational efficiency of Bank assumes greater significance in the prevailing financial and economic scenario. Public sector banks are competitive enough, so far as the productivity & profitability parameters (taken in the present study) are concerned. Of the five selected public sector banks in India one bank had achieved high level of efficiency. Corporation Bank stood at the top in operational efficiency among all five selected Public sector banks. The banking sector of India portrays a picture of a developing economy, moving towards being a developed economy through continuous efficiency improvement.

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