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# Productivity in Public Sector and Private Sector Banks in India

**Amar Inder Singh* and Vandna Rani****

* *School of Management Studies, Punjabi University, Patiala*

** *School of Management Studies, Punjabi University, Patiala*

**Abstract**

The study depicts that banks showed an improvement in all the productivity indicators in public sector banks, while these could not show significant improvement in private sector banks. The productivity was significantly positive in public sector banks, while on the other side, it was significantly positive only in Axis Bank and non-significant in HDFC and ICICI. The position of ICICI was highly deteriorated in terms of productivity. The study highlights that the financial performance of public sector banks is better than that of private sector banks.

**Key Words**

Public Banks, Private Banks, Productivity Ratios

## INTRODUCTION

Efficiency refers to the ability to get things done economically. It commonly refers to the ratio of output to input. Efficiency is an important attribute because all inputs are scares. Time, money and raw material are limited, so it makes sense to try to conserve them while maintaining an acceptable level of output or a general production level. Banks are multiproduct firms. Moreover, banking is a service industry with its product in the form of services. Where a firm's final output consists of some quantitative commodity, the concept of productivity in relation to that firm is likely to be relatively simple. Also, the thrust of firm would be in the direction of maximizing its quantitative output while minimizing the total of input in different forms. However, the problem in case of banks is more complicated while some of their outputs are measured in terms of deposits etc., the product also seems to consist of other intangibles that are difficult to measure or compute, but nonetheless important.

## OBJECTIVES

1. To evaluate the trends in business, deposits and advances in public and private sector banks in India;
2. To examine the trends in profit, income and operating expenses in public and private sector banks in India.

## REVIEW OF LITERATURE

Murthy (1991) indicates that in urban areas Western region, in semi-urban areas Northern and Eastern regions and in rural areas Southern region showed the highest per branch deposits. There was extreme variation in per branch deposits-urban branches had ten times greater deposits than the rural branches. Singh, Arora and Anand (1991) indicate that operational efficiency of Punjab Financial Corporation (PFC) is better than that of Haryana Financial Corporation (HFC). But profitability of operations of HFC is better than that of PFC. Varde (1992) found that analysis of performance of commercial banks in rural areas for a period of more than two decades after nationalization reveals a fairly good picture of quantitative achievements. However, the need of the day is that rural banking must not only quantitatively expand but must become a viable and commercial proposition leading to the true development of the rural sector of the Indian economy.

Rao (1994) in his article made an appraisal of the performance of four private sector banks i.e. Bharat Overseas Bank Ltd., The Karnataka Bank Ltd., Bank of Madura Ltd. and City Union Ltd. for the year ending 31.03.1994. A glaring feature of the performance is that while most of the nationalised banks have reported losses in their balance sheets, the private banks have invariably recorded profit which signifies that given the necessary impetus and environment, the private banks can play their roles well and even excel in showing desired results despite the harsh prudential norms of the RBI. Saini (1995) measured that the performance of nationalized banks decreased in respect of advances deployment and deposits mobilization, while profitability of the bank increased considerably. Sarkar, Sarkar and Bhaumik (1998) found that in comparison between private banks and public sector banks (PSBs), there was only a weak ownership effect. Traded private banks were superior to PSBs with respect to profitability measures but not with respect to efficiency measures. Non-traded private banks did not significantly differ from

PSBs in respect at either profitability or efficiency.

Pandey and Bandhopadhaya (2003) reveal that knowledge of B.E. level income and also the level of margin of safety will help designing ways by which the bank's business may not be reduced below the B.E. level and how margin of safety can be improved consistently. This required knowledge of factors affecting profitability of banks. Das (2005) empirically estimates and analyses various efficiency scores of Indian banks during 1997-2003 using data envelopment analysis (DEA). Inspite of gradual liberalization aimed at strengthening the operational efficiency of the financial system in the 1990s, it is observed that Indian banks are still not much differentiated in terms of input-oriented or output-oriented technical efficiency and cost efficiency. Sensarma (2005) indicates that public sector banks have shown higher cost efficiency than private sector banks, whereas it has been the other way round in the case of profit efficiency. New private and foreign banks exhibit the least efficiency in terms of both measures. Moreover, the cost efficiency improved during the sample period while profit efficiency underwent a decline. This is, however, an expected result in an economy undergoing transition and deregulation. Bodla (2005) concluded that in carrying quality, measured in terms of the ratio of operating profit to average working funds, net profit to average assets etc., ICICI Bank has outperformed SBI. The same is true regarding asset quality, earning quality and management quality ratios. The liquidity position of both the banks is sound and does not differ significantly. Rainaye (2006) examines the performance planning, analysis and development in two prestigious commercial banks, namely, State Bank of India and the Jammu & Kashmir Bank. Results of the study strongly suggest that it is worth investing time and effort to do it well. Reddy (2006) examines total factor productivity, technical and scale efficiency changes in regional rural banks by using data from 192 banks for the period 1996 to 2002. Rural banks showed significant economies of scale in terms of assets and number of branches under each bank. Total factor productivity growth of rural banks was higher in profitability than in service provision during liberalization.

## METHODOLOGY

The banks were chosen on the basis of number of branches as given by RBI. The selected banks were State Bank of India, Punjab National Bank and Central Bank of India from public sector and Axis Bank, HDFC Bank and ICICI Bank from private sector. The secondary time series data on some important productivity ratios were collected from the official website of Reserve Bank of India. The productivity ratios include business per employee, profit per employee, deposits per employee, advances per employee, income per employee and operating expenses per employee. In order to assess the existence trend compound growth rate of different ratios were calculated. Coefficient of variation was also calculated. The data pertained to the period from 2006-07 to 2010-11.

## RESULTS AND DISCUSSION

In order to measure the efficiency, the productivity ratios are calculated in relation to employees and the results are presented in Table 1 to Table 6. In the present study following six ratios have been taken:

### Business per Employee

**Employees are indispensable in banking functioning :** However, over a period of time, on account of modernization, technological up-gradation, computerization, coming up of modern information technology and growing competition, the scope of absorption of workforce in different banking activities is narrowing down. Employee in this ratio includes the total staff per bank and the term business means total of deposits and credits. The results are presented in Table 1.

**Table 1**

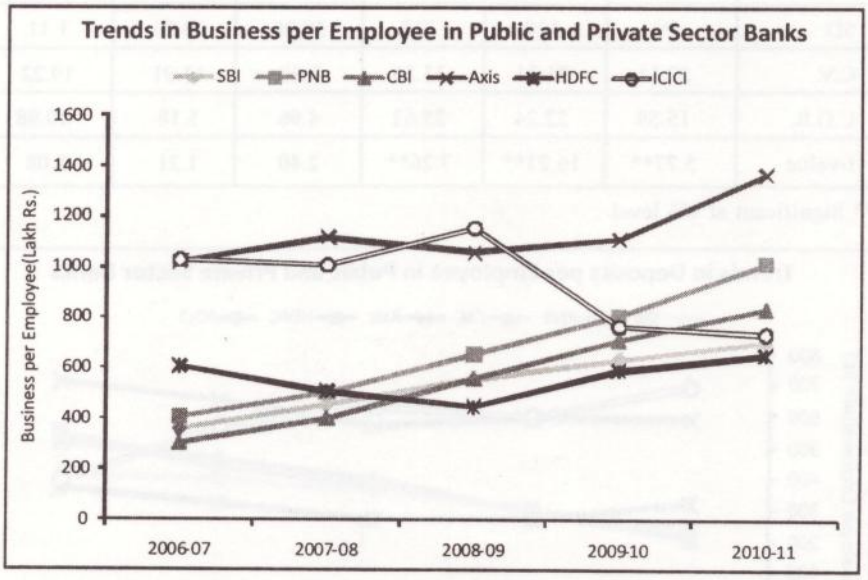
**Trends in Business per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 357.00 | 407.41 | 303.85 | 1024.00 | 607.00 | 1027.00 |
| 2007-08 | 456.00 | 504.52 | 400.99 | 1117.00 | 507.00 | 1008.00 |
| 2008-09 | 556.00 | 654.92 | 560.28 | 1060.00 | 446.00 | 1154.00 |
| 2009-10 | 636.00 | 807.95 | 711.76 | 1111.00 | 590.0 | 765.0 |
| 2010-11 | 704.65 | 1017.80 | 835.17 | 1366.00 | 653.00 | 735.00 |
| Mean | 541.93 | 678.52 | 562.41 | 1135.60 | 560.40 | 937.80 |
| SD | 138.84 | 243.00 | 217.73 | 134.36 | 83.17 | 180.70 |
| C.V. | 25.62 | 35.81 | 38.71 | 11.83 | 14.84 | 19.27 |
| C.G.R. | 18.44 | 25.89 | 29.64 | 5.88 | 3.04 | -9.02 |
| t-value | 9.13** | 50.32** | 12.49** | 2.29 | 0.55 | 2.10 |

** Significant at 1% level

Business per employee analysis shows that mean value was Rs. 562.41 lakh in Central Bank of India, Rs. 678.52 lakh in Punjab National Bank and Rs.

541.93 lakh in State Bank of India. The exponential growth rate of business per employee was significantly positive in all the public sector banks under study. The growth rates came to be 18.44, 25.89 and 29.64 per cent compounded annually in State Bank of India, Punjab National Bank and Central Bank of India respectively. The banks with high business per employee show that these banks are advancing higher amount of credit and collecting higher amounts of deposits in relation to the number of employees as compared to those with low rate of business per employee. Higher rate of business also implies the higher labour productivity in the banks. This is a good sign for the financial health of the public sector banks.




In private sector banks, business per employee mean value was Rs. 1135.60 lakh in Axis Bank, Rs. 560.40 lakh in HDFC Bank and Rs. 937.80 lakh in ICICI Bank. The exponential growth rates were insignificant in all the selected private sector banks. This showed that the management of public sector banks was performing better than that of private sector banks.

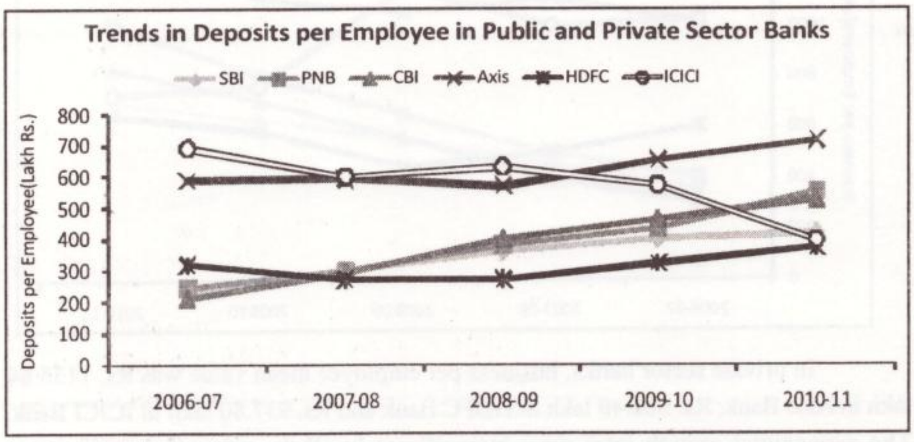
**Deposits per Employee**

In a service industry like banking, human resource plays crucial role in extending qualitative services needed for overall deployment and for making the banking profitable and enduring. Deposits in this ratio includes demand deposits, saving bank deposits, term deposits and deposits of branches (in India as well as outside India). The results are presented in Table 2.

**Table 2**
**Trends in Deposits per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 235 | 244 | 212 | 589 | 318 | 692 |
| 2007-08 | 300 | 297 | 294 | 595 | 270 | 601 |
| 2008-09 | 360 | 383 | 400 | 569 | 271 | 631 |
| 2009-10 | 401 | 437 | 465 | 653 | 323 | 573 |
| 2010-11 | 419 | 549 | 527 | 716 | 374 | 396 |
| Mean | 343 | 382 | 380 | 624 | 311 | 579 |
| SD | 76 | 120 | 127 | 59.96 | 43.26 | 1.11 |
| C.V. | 22.11 | 31.31 | 33.56 | 9.60 | 13.91 | 19.22 |
| C.G.R. | 15.59 | 22.24 | 25.63 | 4.96 | 5.18 | -10.98 |
| t-value | 5.77** | 16.21** | 7.26** | 2.40 | 1.21 | 3.08 |

** Significant at 1% level




In public sector, the mean value of deposits per employee was Rs. 380 lakh in Central Bank of India, Rs. 382 lakh in Punjab National Bank and Rs. 343 lakh in State Bank of India. The rate of growth worked at 15.59, 22.24 and 25.63 per cent compounded annually in State Bank of India, Punjab National Bank and Central Bank of India respectively, which were found to be significant. The increasing trend in deposits per employee in all the public sector banks is an indicator of people's confidence in public sector from security and safety point of view. This is an encouraging trend in the era of acute competition.

In private sector, the mean value of deposits per employee was Rs. 624 lakh in Axis Bank, Rs. 311 lakh in HDFC Bank and Rs. 579 lakh in ICICI Bank. The growth rates were non-significant. However, it was even negative in ICICI. This shows that public sector banks performed better and more efficiently as compared to the private sector banks as far as deposits per employee is concerned.

**Advances per Employee**

One of the most important indicators to measure employee-based efficiency in the banks is credit development for employee. Higher the credit deployment, higher will be the earning and so efficiency of the banks. The results are presented in Table 3.

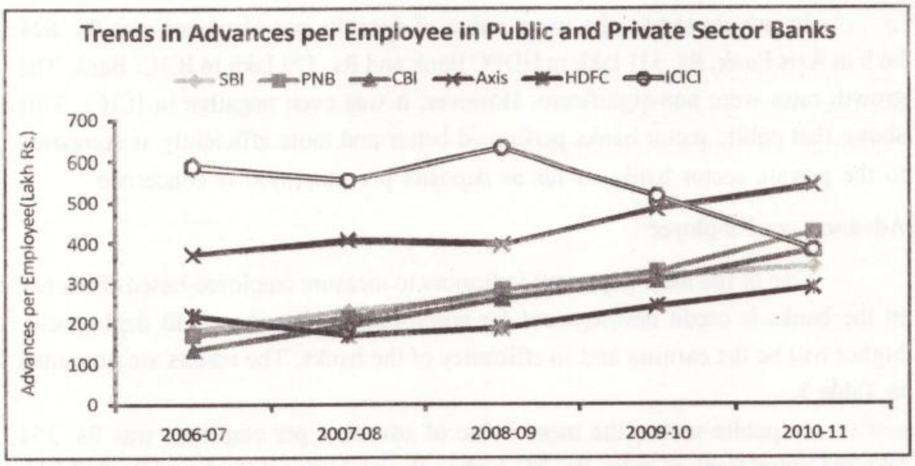
In public sector, the mean value of advances per employee was Rs. 254 lakh in Central Bank of India, Rs. 283 lakh in Punjab National Bank and Rs. 267 lakh in State Bank of India. The advances per employee increased significantly at the rate of 16.79 per cent in State Bank of India, 25.57 per cent in Punjab National Bank and 29.09 per cent in Central Bank of India. The increasing trend in advances per employee in all the public sector banks is an indicator that the earnings from advances are increasing year after year and vice-versa. This is an encouraging trend in the era of acute competition.

**Table 3**

**Trends in Advances per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 182 | 169 | 133 | 370 | 219 | 588 |
| 2007-08 | 233 | 213 | 195 | 405 | 170 | 555 |
| 2008-09 | 263 | 282 | 261 | 395 | 188 | 631 |
| 2009-10 | 315 | 327 | 303 | 482 | 243 | 514 |
| 2010-11 | 339 | 425 | 381 | 539 | 287 | 380 |
| Mean | 267 | 283 | 254 | 438 | 221 | 533 |
| SD | 63 | 100 | 96 | 70.18 | 46.27 | 96.06 |
| C.V. | 23.74 | 35.33 | 37.74 | 16.02 | 20.93 | 18.01 |
| C.G.R. | 16.79 | 25.57 | 29.09 | 9.74 | 9.43 | -9.06 |
| t-value | 9.02** | 18.50** | 9.10** | 4.66* | 1.57 | 2.15 |

** Significant at 1% level; * Significant at 5% level




In private sector, the mean value of advances per employee was Rs. 438 lakh in Axis Bank, Rs. 221 lakh in HDFC Bank and Rs. 533 lakh in ICICI Bank. The exponential growth rate of advances per employee was significantly positive only in Axis Bank (9.74%) while it was non-significant in HDFC and negative in ICICI. This shows that public sector banks performed better and more efficiently as compared to the private sector banks as far as advances per employee is concerned.

**Profit per Employee**

Profit per employee measures efficiency of employees (management) working in a concern. It indicates the proportion of income available to the owners and extent to which it can decrease or cost can increase without inflating loss to owners. So, this ratio shows firms capacity to face adverse economic situations. Higher ratio is favourable for the business. Lower ratio reveals decline in profit and inefficiency of the management. The results are presented in Table 4.

Bank-wise analysis shows that in public sector, the mean value of profit per employee was Rs. 2.38 lakh in Central Bank of India, Rs. 5.53 lakh in Punjab National Bank and Rs. 3.83 lakh in State Bank of India. The compound growth rate was non-significant in State Bank of India while it increased at a significant rate of 34.15 and 33.66 per cent per annum in Punjab National Bank and Central Bank of India,

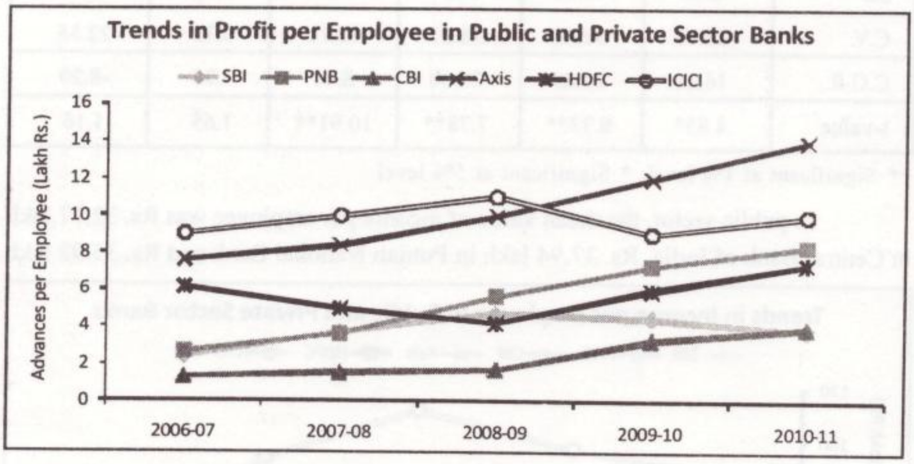
The high profit per employee shows that these banks are earning higher profits without increasing the cost of the bank. This also highlights the efficiency of the management. The management of banks with insignificant or negative growth rates may be said inefficient in deploying resources in profitable avenues.

**Table 4**

**Trends in Profit per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 2.37 | 2.68 | 1.35 | 7.59 | 6.13 | 9.00 |
| 2007-08 | 3.73 | 3.66 | 1.56 | 8.39 | 4.97 | 10.00 |
| 2008-09 | 4.74 | 5.64 | 1.71 | 10.00 | 4.18 | 11.00 |
| 2009-10 | 4.46 | 7.31 | 3.30 | 12.00 | 5.98 | 9.00 |
| 2010-11 | 3.85 | 8.35 | 3.96 | 14.00 | 7.37 | 10.00 |
| Mean | 3.83 | 5.53 | 2.38 | 10.40 | 5.73 | 9.80 |
| SD | 0.92 | 2.38 | 1.18 | 2.63 | 1.21 | 0.84 |
| C.V. | 23.95 | 43.14 | 49.46 | 25.27 | 21.20 | 8.54 |
| C.G.R. | 12.18 | 34.51 | 33.66 | 17.17 | 5.69 | 1.06 |
| t-value | 1.47 | 8.42** | 4.69* | 17.81** | 0.74 | 0.35 |

** Significant at 1% level; * Significant at 5% level




In private sector, the mean value of profit per employee was Rs. 10.40 lakh in Axis Bank, Rs. 5.73 lakh in HDFC Bank and Rs. 9.80 lakh in ICICI Bank. The exponential growth rate of profit per employee was significantly positive only in Axis Bank (17.17%). In the remaining private sector banks, the growth rates were insignificant. This revealed that management in public sector banks was more efficient than that in private sector banks.

## Income per Employee

Income in income per employee is defined as total income. Total income comprises interest income and non-interest income. It is an important indicator of efficiency of banks. Higher income per employee is a sign of good prosperity of banks and vice-versa. The results are presented in Table 5.

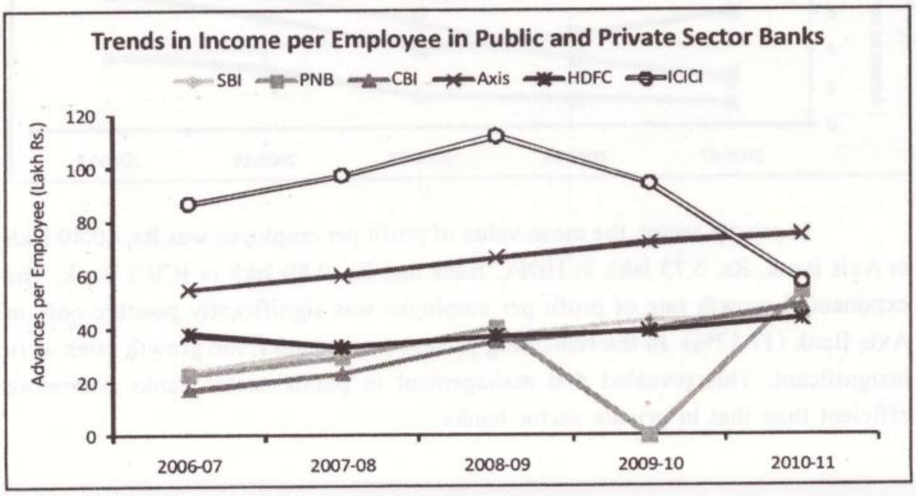
**Table 5**

**Trends in Income per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 23.74 | 22.62 | 17.18 | 54.83 | 38.01 | 86.80 |
| 2007-08 | 32.17 | 29.03 | 23.44 | 59.71 | 33.16 | 97.33 |
| 2008-09 | 37.14 | 40.51 | 35.13 | 66.58 | 37.24 | 111.85 |
| 2009-10 | 42.92 | 43..84 | 39.62 | 72.01 | 38.85 | 94.13 |
| 2010-11 | 43.61 | 53.72 | 48.47 | 74.85 | 43.52 | 57.26 |
| Mean | 35.92 | 37.94 | 32.77 | 65.60 | 38.16 | 89.47 |
| SD | 8.25 | 12.29 | 12.54 | 8.34 | 3.71 | 20.18 |
| C.V. | 22.96 | 32.40 | 38.27 | 12.72 | 9.72 | 22.55 |
| C.G.R. | 16.24 | 23.89 | 29.68 | 8.44 | 4.38 | -8.29 |
| t-value | 4.85* | 8.33** | 7.78** | 10.91** | 1.65 | 1.16 |

** Significant at 1% level; * Significant at 5% level

In public sector, the mean value of income per employee was Rs. 32.77 lakh in Central Bank of India, Rs. 37.94 lakh in Punjab National Bank and Rs. 35.92 lakh



in State Bank of India. The income per employee increased significantly at the rate of 29.68 per cent in Central Bank of India, 23.89 per cent in Punjab National Bank and 16.24 per cent in State Bank of India.

The increasing trend in income per employee in all the public sector banks, except in Bank of India, is an indicator that the earnings from advances and investments are increasing year after year and vice-versa. This is a healthy trend in the era of free competition.

In private sector banks together, income per employee increased significantly only in Axis Bank at the rate of 8.44 per cent compounded annually. The mean value of income per employee was Rs. 65.60 lakh in Axis Bank, Rs. 38.16 lakh in HDFC Bank and Rs. 89.47 lakh in ICICI Bank. The non-significant growth rate was positive in HDFC while it was negative in ICICI. This shows that public sector banks performed better and more efficiently as compared to the private sector banks as far as income per employee is concerned.

**Operating Expenses per Employee**

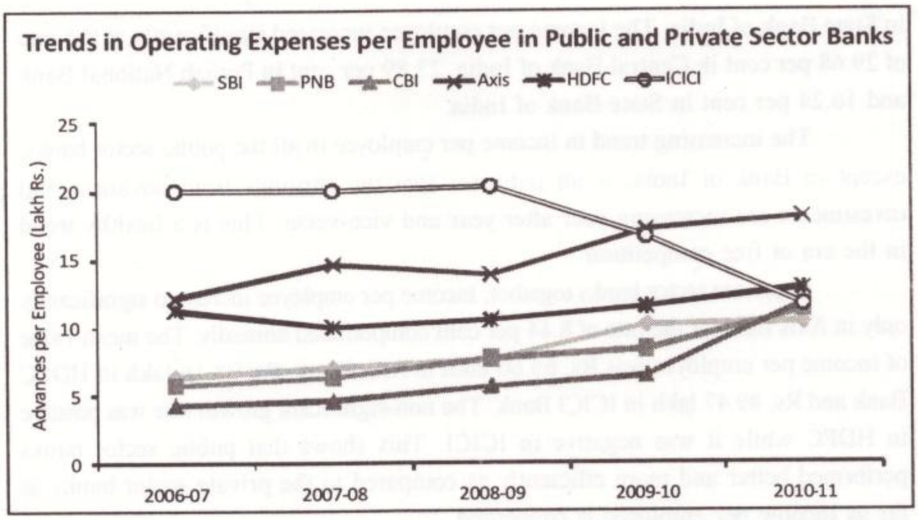
Operating expenses comprise broadly wage expenses and non-wage expenses such as rent, taxes, establishment expenses, advertisement, directors' fees, allowances and legal charges. In order to be most profitable and efficient, the banks should be able to reduce these expenses, without adversely affecting their progress. The results are presented in Table 6.

**Table 6**

**Trends in Operating Expenses per Employee in Selected Banks**

| Year | SBI | PNB | CBI | Axis | HDFC | ICICI |
|---|---|---|---|---|---|---|
| 2006-07 | 6.38 | 5.80 | 4.31 | 12.17 | 11.27 | 20.08 |
| 2007-08 | 7.04 | 6.29 | 4.66 | 14.62 | 10.02 | 20.04 |
| 2008-09 | 7.60 | 7.68 | 5.68 | 13.86 | 10.50 | 20.36 |
| 2009-10 | 10.14 | 8.34 | 6.38 | 17.14 | 11.45 | 16.62 |
| 2010-11 | 10.32 | 11.17 | 11.76 | 18.08 | 12.83 | 11.62 |
| Mean | 8.30 | 7.86 | 6.56 | 15.18 | 11.21 | 17.74 |
| SD | 1.82 | 2.12 | 3.02 | 2.42 | 1.07 | 3.76 |
| C.V. | 21.96 | 26.94 | 46.07 | 15.92 | 9.57 | 21.17 |
| C.G.R. | 14.21 | 17.25 | 26.2 | 9.97 | 4.00 | -12.03 |
| t-value | 5.81* | 7.34** | 3.74* | 4.36* | 1.48 | 2.91 |

** Significant at 1% level; * Significant at 5% level




In public sector, the mean value of operating expenses per employee was Rs. 6.56 lakh in Central Bank of India, Rs. 7.86 lakh in Punjab National Bank and Rs. 8.30 lakh in State Bank of India. The operating expenses per employee increased significantly at the rate of 26.20 per cent in Central Bank of India, 17.25 per cent in Punjab National Bank and 14.21 per cent in State Bank of India. The increasing trend in operating expenses per employee in all the public sector banks is an indicator that the wages and non-wages expenses in the public sector banks are increasing year after year and vice-versa. This is not a bad sign as the productivity ratios are also on the increase.

In private sector, the mean value of operating expenses per employee was Rs. 15.18 lakh in Axis Bank, Rs. 11.21 lakh in HDFC Bank and Rs. 17.74 lakh in ICICI Bank. Operating expenses per employee increased significantly at the rate of 9.97 per cent compounded annually in Axis Bank, while it was non-significant in HDFC and ICICI. However, the rate of growth was found to be negative in ICICI.

This growth of productivity as well as operating expenses in public sector banks was higher than that in private sector banks. This shows that public sector banks are more efficient in making a rational combination of productivity and expenses as compared to the private sector banks.

## CONCLUSIONS

Overall, it can be concluded that productivity is an absolute concept measured by the ratio of output to input. It is one of the important factors used to assess the performance of the banks. In the present study it is measured in terms of employees. Six ratios have been used to evaluate the performance of banks. The results depict that banks showed an improvement in all the productivity indicators in public sector banks, while these could not show significant improvement in private sector banks. If we are to evaluate the productivity in relation to the management, it can be clearly said that the management exerted significantly positive effect on the productivity of public sector bank, while on the other side, the effect of management was significantly positive only in Axis Bank and non-significant in HDFC and ICICI. The position of ICICI Bank was highly deteriorated in terms of productivity.

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