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Labour Productivity of Banks in India: A Comparative Analysis of Public Sector Banks and Foreign Banks

Dr. Aparna Bhatia*, Megha**

Banking being a service industry human resource is one of the most important assets for the banks. Employee/Labour Productivity is an important part of total productivity. The objective of the present study is to analyze the labour productivity performances of the public sector banks and foreign sector banks. The study also compares the labour productivity performance of public sector banks with that of foreign sector banks. The study covers the time period of 11 years i.e. 2000-01 to 2010-11. Descriptive Statistics like Mean, Standard Deviation, Coefficient of Variance and Annual Compounded Growth Rate have been used to compare the productivity performance of Public sector banks with that of foreign sector banks. The study concluded that the productivity performance of Foreign Sector Banks is much better than the Public Sector Banks during the study period.

Introduction

Human resource is one of the most important assets for the banks as the profitability of banks depend upon them to a great extent. Employees plays important role in improving the business of banks. Each and every activity of a bank is directly related to the attitude, motivation and work culture of the employees (Sinha ND). Banks do not make products rather they offer services to customers through their employees. So, it becomes necessary to evaluate profitability of a bank in terms of its employee's productivity. Employee/Labour Productivity is an important part of total productivity which means units of production by an individual in terms of different important variables. Labour Productivity for banks can be calculated by dividing all the variables like Business, Profit, Deposit, Advances, and Interest Income etc with number of employees. It indicates the performance of banks in terms of employees. Bank's productivity is a measure of bank's effectiveness in using all its resources, viz. Labour, financial resources, fixed assets etc (Verghese 1983). Different kinds of measurements are employed to assess the productivity of banks. Measuring productivity is very important for judging long term viability of the banks. To measure the productivity of banks numbers of indicators can be used. The productivity of banks can be measured as per labour productivity, operational productivity and branch productivity. The efficiency or the growth of a bank can be measured through various measures like deposits, advances, working funds, incomes, expenditures, profits, assets, number of account and branches etc. The standard measure of productivity, known as accounting measure involves calculation of output per unit with change in a single input assuming that other variable factors remain unchanged.

The term productivity is defined differently by different authors. Productivity is the measure of how well resources are brought together in the organisation for accomplishing a set of results (Mali 1987). It is a measure relating a quantity or quality of output to the inputs required to produce it. The concept of productivity includes all such factors which increase the production or output with the optimum utilisation of all the resources. It is usually defined as a ratio of output produced per unit of resource (Chen 1982). To an economist, "productivity refers to a comparison between the quantity of goods or services produced and the quantity of resources employed in turning out these goods or services" (Solomon 1985). Productivity is the ability and willingness of an economic unit to produce maximum possible output with given inputs and technology (Kalirajan & Chand 1994). Higher the output per unit of input, higher is the productivity. According to the Organization for European Economic Co-operation (OEEC 2001), "Productivity is the quotient obtained by dividing output by one of the factors of production". Productivity is measured as a ratio of the proportionate change in income in relation to proportionate change in expenditure. In other words, productivity is the responsiveness of output measured by the incremental income in relation to the incremental expenditure (Abedin 1989). Productivity can be expressed as a physical measure (for example, number of cars produced per employee), a monetary measure (for example, thousands of dollars output per hour worked), or an index (for example, output per unit of labour = 100 in 1997-98).

Review of Literature

A brief review of some of studies conducted on productivity of

*Assistant Professor, Department of Commerce and Business Management, Guru Nanak Dev University, Amritsar, Punjab, India.
**Junior Research Fellow, Dept. of Commerce and Business Management, Guru Nanak Dev University, Amritsar, Punjab, India.

banks in foreign and Indian context are given in this section.

Ojha (1987) studied productivity and profitability of public sector banks with a number of indicators and made international comparison of India with Iraq, Japan, United States of America, Britain, Australia, Brazil and Pakistan for the year 1985. The variables in terms of per employee like assets, deposits, net interest and pre-tax profits as well as pre-tax profits on assets were used. The results showed that the Japan was the first in respect of assets per employee which was 63 times more than State Bank Group of India. Japan was the top performer in terms of deposits. India was at the bottom. He also analysed the productivity of Indian Public Sector Banks for 4 years i.e. 1969, 1979, 1983 and 1984. The results also showed that there was growth in productivity per employee in public sector banks since 1969. He concluded that the growth in productivity had not been enough to offset the declining trend in profitability. The reason was the excessive recruitment of staff by banks in order to cope with the rapid expansion of branches and volume of business since 1969. He emphasised that a more comprehensive and multi - dimensional approach has to be adopted to increase productivity and profitability.

Singh (1992) examined the trends in the productivity in public sector banks. He included the State Bank of India and its subsidiaries along with the nationalised banks in 1969 for analysis. The study was conducted for the period of 1969-1985. He had analysed the trends and changes in productivity, with particular emphasis on labour productivity and branch productivity. The trends, changes and differentials in productivity in different banks and bank groups were examined in detail based on seventeen indicators like deposit, credit, business, spread, and establishment expenses for both per employee and per branch. The results showed that among the State Bank of India (SBI) and its subsidiaries, SBI continuously improved its performance from 1977 onwards which was evident from the average t scores which showed the highest t scores for SBI. He also concluded that all the other nationalised banks showed improvement in productivity except UCO bank, which showed decline in all indicators. He suggested that all banks should create productivity cells which should develop and implement productivity programmes. He further suggested that the productivity information should become the part of annual reports of banks.

Athma and Srinivas (1997) conducted the study to analyse the productivity in commercial banks group wise i.e. public, private and foreign banks for the period of 1982 to 1995. They measured the bank productivity through two aspects. One aspect of productivity was Business per employee and per branch. Second aspect was cost responsiveness i.e. percentage variation in cost/percentage variation in earnings and return on working funds. The results showed that the productivity both per employee and per branch showed a rise for all the three banks though it was relatively higher in the case of private and foreign banks. A high cost responsiveness results in lower productivity and vice versa. The return on working funds was showing an increasing trend for private sector banks. But, foreign sector banks were showing a negative growth rate in the year 1992-93 and it was reversed in the next years. All the three groups made efforts to improve their productivity in1994-1995 and succeeded in earning profits by recovering the operative costs fully.

Ramamoorthy (1997) measured the productivity of Indian Commercial Banks for the period 1991-92 to 1995-96 using business per employee as the measure of productivity. The results showed that the productivity for the whole banking system had gone up from Rs.45.33 crores to Rs.73.40 crores during the post reform period i.e. 1992-1996. The nationalised banks were incurring losses and had highest productivity at Rs.44 lakhs in the pre reform period i.e. 1991-92. During 1995-96, private sector banks were at the top with the productivity level of Rs.83.39 lakhs. The study concluded that the productivity as the business per employee did not truly represent the business and to evaluate productivity on various other alternative variables should be taken.

Aggarwal (2003) analysed the productivity of commercial banks in India. The objective was to study the trends of labour productivity, operational productivity and management productivity of public, private and foreign sector banks in India for the period of 1980-2001. Compound growth rate, average, standard deviation and Coefficient of Variation were used to measure the productivity of banks. The study concluded that the foreign banks showed sharp increase than the public and private sector banks in deposit per employee, credit per employee, business per employee, operating profit per employee and spread per employee. Public sector banks showed more increase in case of business per employee, and spread per employee in comparison with private banks. On the other hand, in case of profit per employee private banks exceed the public banks. Overall, the productivity performances of foreign banks were much better than the other banks during the study period.

Paul *et al.* (2005) analysed the performance of Public Sector Banks (PSBs) through productivity ratios during pre and post reform years. The pre reform years were from 1985-86 to 1990-91 and the post reform years were from 1995-96 to 2000-01. The bank group wise productivity per branch and per employee i.e. deposit per employee, advances per employee, business per employee, deposit per branch, advances per branch and business per branch were calculated. The study found that the average labour productivity measured by deposit, advances and business per employee was lowest in Public sector banks than that of Foreign and Private Banks. During the period 1985-2001, the average business per employee for PSBs was Rs.61.1 lakhs; the corresponding value for private and foreign banks was Rs.93.9 lakhs and Rs.300.3 lakhs respectively. The average productivity per branch of PSBs in terms of deposits, advances and business was higher than the private banks but much lower than the foreign banks during the pre reform years. In the post reform years, productivity of PSBs was lower than both the private and foreign banks.

Saggar (2005) studied the productivity trends and average productivity per branch in terms of deposits, credit, earnings, expenditure and business handled of all the scheduled Commercial banks. The time period taken for the study was from 1971 to 1996. Each productivity ratios in case of SBI group of Banks continuously rose during the study period. SBI group recorded highest profits during 1991-96 and total business handled per branch as well as deposits and credit per branch also grew at higher rate during this period. Overall branch productivity of SBI was favourable. In case of other nationalised banks productivity grew at a higher rate indicated by all productivity ratios during the decade 1981-90. During the post liberalisation period deposit, credit and total business per branch grew at higher rate compared to that of previous periods. Productivity performance of Foreign Banks showed the highest rates of growth over the sub period 1981-90. Further all these rates fell during 1991-1996. Overall, during the eighties each ratio recorded highest rate of growth while it was lowest in nineties.

Kumar *et al.* (2007) compared the parameters of employees' productivity viz. business per employee (BPE) and profit per employee (PPE) and employee cost viz. employee cost to operating expenses, employee cost to total business and employee cost to total assets ratios between the traditional banks (public sector and old private sector banks) and modern banks (foreign and new private sector banks) from 1997 to 2008. The objective of the study was to observe the trend and the impact of measures taken by traditional banks to face the challenges posed by the modern banks. The Gap Indexes was used to see whether or not the gap between modern and traditional Banks was reduced after several initiatives taken by the traditional banks. The study concluded that the business per employee for traditional banks was continuously improving. The profit per employee had increased both for traditional and modern banks. This increase had been significantly higher for traditional banks, 6.79 times compared to modern banks 2.73 times. The employee cost to operating expenses for traditional banks remained more than double of modern banks till 2006, however, this ratio decreased significantly during 2007 & 2008. Still, it was higher than the modern banks. The employee cost to total business in respect of traditional banks was consistently reducing from 1.45 per cent in 1997 to 0.68 per cent in 2008. The study also concluded that the performance of the modern banks (foreign and new private sector banks) was much superior to the traditional banks (public sector and old private sector banks). The gap between the performance of modern and traditional banks on all the five variables had shown a decreasing trend, which had significantly reduced during the period of 12 years under study, on account of the measures taken by the traditional banks during the period.

Mittal *et al.* (2007) focused on the achievement and performance of Public Sector Banks vis-a-vis Private Sector Banks and Foreign Banks. The parameters selected for evaluation of performance of various categories of banks were profitability and productivity. The time period for the performance analysis was 1999- 00 to 2003-04. The ratios used for measuring the profitability of the banks were interest earned ratio, interest paid ratio, non-interest income ratio, other operating expenses ratio, establishment expenses ratio, spread ratio, burden ratio, and profitability ratio. Productivity had been measured in terms of the outputs (like Business, deposits, advances) per input (employee/branch). The study concluded that the public sector banks are less profitable than the private sector and foreign banks in terms of overall profitability (Spread – Burden ratio) but their profitability was improving over the last 5 years. The study also found that the deposit per employee ratio of foreign banks were far ahead of the public banks. Even the private sector banks especially the new private sector banks were very comfortably placed as compared to the public sector banks. Though the ratio was showing an increasing trend for the public sector banks they had to go a long way to be at par with their competitors. The same holds good for the advances per employee and business per employee ratios as well. Again, the ratios of deposit, advance and business per branch for the public banks were much lower to private and foreign banks.

Pal *et al.* (2008) analysed the cross relationship among various components of productivity like earning per employee, business per employee and profit per employee for public, private and foreign sector banks using the data for five years i.e. 2001-02 to 2005-06. Various statistical tools like averages, ACGR (Annual compounded growth rate), regression and parametric test were used to examine, evaluate and quantify the cross sectional relationship among the variables. The results showed that the foreign banks were at the top in all the selected parameters. But, the average ACGR was highest for public sector banks in case of business per employee. Regression equations established that the Earning per employee, business per employee and profit per employee of PSBs were negatively related to each other. It showed that earnings of employees of PSBs were not linked to their productivity. Private sector banks were showing negative relation between earnings and profit per employee for three years. Regression equations were showing significant relation between EPE and BPE in 2002-03 and 2004-05 only. Foreign sector banks were showing significant relation between earnings and profit per employee but not in case of earning and business per employee. It confirms that earnings of foreign sector banks are related to change in profits of these banks.

Sinha (ND) examined the profitability of State Bank of India (SBI) in terms of its employee's productivity during the period of 2003-2008. The objective was to appraise the financial position of the bank through the application of employee productivity performance analysis technique. The employee productivity performance analysis of SBI had been performed on the basis of two ratios i.e. working funds per employee ratio and operating profit per employee ratio. The ratio of working funds per employee for SBI showed it had performed very satisfactorily in the last six years. The ratio observed a consistent increase and it laid between the range of Rs. 16267.38 and Rs. 29082.43. In the year 2003, the ratio stood at Rs. 16267.38, which increased to Rs. 37358.44 in 2008 recording an overall increase of Rs. 21091.06. It showed that the productivity of employees had increased in a significant manner. The ratio of operating profit per employee for SBI lies between the range of Rs. 370.29 and Rs. 732.23. In the year 2003, the ratio stood at Rs. 370.29, which increased to Rs. 570.65 in 2006. But in 2007, a decrease had been recorded in the ratio and it came down to Rs. 540.49. In the last year 2008 again, there was an increase in the ratio, it reached to Rs. 732.23. The study concluded that the productivity and the profit generating capacity of employees, both were increasing in an appropriate and profitable manner.

Anand (2011) compared the productivity and profitability of Public Sector Banks with that of Private Sector Banks. Bank of Baroda was taken from the public sector banks and from the private sector banks ING Vysya Bank was taken for the period of 5 years i.e. from 2005-06 to 2009-10. Productivity was measured in terms of the outputs (like Business, Deposits, and Advances) per input (employee, branch). In the year 2005-06 deposits per employee of ING Vysya were more than Bank of Baroda but during the 5 year's period of study the performance of Bank of Baroda had totally changed. In the year 2005-06 the advances per employee were higher in case of ING Vysya Bank but in the year 2009-10 the advances per employee of Bank of Baroda were approximately 1.5 times those of ING Vysya Bank. The rise in case of ING Vysya Bank was 50.24% whereas the rise in case of Bank of Baroda during these 5 years was 169.63%, which again shows that the total business per employee had risen much more in case of Bank of Baroda than in ING Vysya Bank. Analysis of profit per employee and business per employee showed that Bank of Baroda was doing better than ING Vysya bank. Total deposits, advances and business per branch of ING Vysya Bank were more than that of Bank of Baroda during 2005-06 but year by year the position of Bank of Baroda was improving faster than that of ING Vysya. This shows that now Bank of Baroda was more productive than ING Vysya Bank.

Uppal (2011) conducted the study about profitability, productivity and impact of prime determinants on profitability of various bank groups in era of liberalization. The sample of the study was Indian banking industry that comprises of four major bank groups i.e. Public Sector Banks, Old Private Sector Banks, New Private Sector Banks, and Foreign Banks. The time period of the study was from 2004-05 to 2007-08. Various variables were used to measure profitability were net profit to total assets, deposits per employee, credit per employee, business per employee, total expenditure per employee, spread to total assets and credit deposit ratio. The Net profit as a percentage of working funds was very low in case of public sector bank as compared to foreign banks and new private sector banks. Deposits per employee, Credits per employee and Spread per employee were also very low in case of the public sector banks. Overall, profitability was highest in foreign banks and new private sector banks as compared to public and old private sector banks. Similarly, to measure productivity deposits per branch, credits per branch, business per branch, total expenditure per branch, total earnings per branch were used. Productivity was also highest in foreign banks and new private sector banks. Though, the total earnings per branch had increased in all bank groups but the maximum average had been observed in foreign bank group i.e. 92.07 so foreign bank group had been more benefited than other bank groups.

Alam *et al.* (2012) examined the productivity performance of two development banks i.e. Bangladesh Shilpa Bank (BSB) and Bangladesh Shilpa Rin Sangstha (BSRS) using various parameters like Deposit per employee, credit per employee, total expenditure per employee, manpower per employee, non-interest expenses per employee, working fund per employee, loans and advances per employee, interest income per employee, and net profit per employee were used to measure the productivity of these two banks. The study covered a period of 10-years ranging from 1999-2009. In case of BSB, Deposit per employee, Investment per employee, total expenditure per employee, manpower expenses per employee, and non interest income per employee had an increasing trend during the whole period. While working fund per employee, loans and advances per employee, interest income per employee, and net profit per employee had a declining trend over the study period. But for the BSRS, Deposit per employee, total income per employee; non-interest income per employee, interest income per employee had an increasing trend during the period. While investment per employee, working fund per employee, loans and advances per employee total expenditure per employee and net profit per employee had a declining trend over the period. The study concluded that the most of the outputs indicators had a declining trend and the input indicators had a raising trend for both the organizations. During 1999-2009 the whole period of review, the productivity performance of both the banks was rather poor.

Hoque *et al.* (ND) studied the performance of 15 Private Commercial Banks (PCBs) operating in Bangladesh. The study covered five financial years ranging from 2007-2011. The objective of the study was to analyze the factors influencing productivity performances of the Private Commercial Banks and to analyze the productivity performance of these Banks during the study period of 2007 to 2011. The productivity performance was measured through Deposits per employee (DPE), loans & advances per employee (LAPE), Investment per employee (IPE), Business per employee (BPE), total expenditure per employee (ExPE), equity capital per employee (EAPE) and ratio of loans & advances and investments to deposits, total assets per employee (TAPE). Average DPE, LAPE, EAPE, and BPE were satisfactory in case of most of the Banks.

Need of the study

Increasing competition is squeezing profitability of the Indian banks and is forcing them to work efficiently thereby making optimum utilisation of resources. In order to compete with other financial institutions and foreign sector banks, Indian banks must increase their productivity with the best use of their inputs. As suggested by review of literature various studies have analyzed the productivity performance of banks but these studies are restricted to few banks only. As Ojha, 1987 and Singh, 1992 took a sample of Public sector Banks only. Similarly, Anand (2011) took sample of only two banks i.e. Bank of Baroda and ING Vysya Bank. Even Alam *et al.* (2012) studied only two development banks in Bangladesh. Though, some studies have taken the sample of all the Banks (Athma and Srinivas, 1997; Ramamoorthy, 1997; Aggarwal, 2003; Pal *et al.,* 2008 and Saggar, 2005), but these studies focus only on few variables of productivity. Moreover, the time period considered for the present study is 11 recent years which would help to compare the productivity performance of public banks with the foreign banks in the most recent times. As suggested by the review of literature, Public Sector Banks have been dominating the Indian banking sector in terms of efficient utilisation of resources (Paul, 2005; Sinha, ND) and foreign banks have been successful in competing with the public sector banks (Aggarwal, 2003; Uppal, 2011). This study is conducted to see if the same trend is prevailing in the recent times also. Therefore, the study focuses to compare the labour productivity parameters of public sector banks with that of foreign sector banks.

Objectives of the study

The main objectives of the present study are:

1. To analyze the labour productivity performances of the public sector banks and foreign sector banks.
2. To compare the labour productivity performance of public sector banks with that of foreign sector banks.

Data Base and Methodology

All the Public sector banks and foreign sector banks in India constitute the sample of the study. The study covers the time period of 11 years i.e. 2000-01 to 2010-11. The productivity performance of Public sector banks and foreign sector banks has been analyzed and compared for these 11 years. This time period has been taken due to the reason that it has been 20 years since liberalisation. Liberalisation came in India in 1991 and after 10 years of gestation period it is desirable to study the changes in productivity performance of Public Sector Banks vis a vis Foreign sector Banks. Moreover, it is the latest time period in which the performance of public sector banks or foreign sector banks should be reviewed in terms of productivity parameters. The data has been collected from the website of Reserve Bank of India (RBI). Descriptive Statistics like Mean, Standard Deviation, Coefficient of Variance and Annual Compounded Growth Rate have been used to compare the productivity performance of Public sector banks with that of foreign sector banks.

Techniques and Tools used:

Ratios:

The productivity of the labour has a significant bearing on the bank's overall performance. This one factor can enable the bank to develop a unique competitive advantage. Banking being in the service industry, the staff efficiency is an important factor in assessing a bank's performance. To measure the Labour productivity of the banks following ratios have been calculated in terms of Employee Indicators:

1. Deposit per Employee (DPE),
2. Loan and Advance per Employee (LAPE),
3. Business per Employee (BPE),
4. Interest Income per Employee (IIPE),
5. Non Interest Income per Employee (NIIPE),
6. Total Income per Employee (TIPE),
7. Interest Expenses per Employee (IEPE),
8. Operating Expenses per Employee (OEPE),
9. Total Expenditure per Employee (TEPE),
10. Operating profit per Employee (OPPE),
11. Net Profit per Employee (NPPE),
12. Spread per Employee (SPE),
13. Burden per Employee (BDPE).

DPE (Deposit per employee) represents the strength of the bank's employees to attract the customers with their behaviour to deposit their money in the banks. LAPE (Loan and Advances per employee) shows how efficiently the banks give out their funds through their employees in profitable investments. Business per employee (BPE) is combination of Loan and advances per employee and deposits per employee. IIPE (Interest Income per employee) and NIIPE (non-interest income per employee) gives an idea about the banks' earning of interest income and other income through the employees. IEPE (Interest expenses per employee) and OEPE (Operating Expenses per employee) tells about the banks' spending through the employees for operating the business. Spread is the difference between interest earned and interest paid and gives an idea about net interest margin earned by the banks through interest bearing business. Higher spread contributes to higher profits. Burden is the difference between non-interest expenses and non-interest income and lower the burden higher the profits. OPPE (Operating profit per employee) and NPPE (net profit per employees) affirm the banks' efficiency to make profits through the employees.

Data Analysis and Interpretation

Table: 1 Labour Productivity Performance of Public Sector Banks (Amount in Rs. Lakhs)

YEAR	DPE	LAPE	BPE	IIPE	NIIPE	TIPE	IEPE	OEPE	TEPE	OPPE	NPPE	SPE	BDPE
2000-01	107.78	52	159.78	11.41	1.57	12.98	7.74	3.51	11.25	1.73	0.54	3.67	1.94
2001-02	128.04	63.53	191.56	13.31	2.18	15.5	9.14	3.49	12.63	2.86	1.1	4.17	1.31
2002-03	142.54	72.55	215.09	14.16	2.81	16.96	9.22	3.82	13.04	3.92	1.62	4.93	1.01
2003-04	163.01	84.07	247.08	14.55	3.73	18.28	8.74	4.3	13.04	5.24	2.2	5.81	0.57
2004-05	191.84	114.08	305.92	16.07	3.23	19.31	9.18	4.95	14.13	5.17	2.06	6.89	1.72
2005-06	217.98	148.63	366.61	18.52	2.94	21.47	10.82	5.55	16.37	5.1	2.22	7.71	2.61
2006-07	273.6	197.58	471.18	22.53	3.25	25.78	13.99	5.93	19.92	5.85	2.76	8.54	2.68
2007-08	343	251.24	594.24	29.78	4.58	34.37	20.81	6.52	27.34	7.03	3.72	8.97	1.94
2008-09	425.52	308.84	734.35	37.33	5.81	43.14	26.44	7.59	34.03	9.1	4.7	10.89	1.78
2009-10	499.16	365.18	864.34	41.37	6.61	47.98	28.65	8.93	37.59	10.39	5.31	12.71	2.32
2010-11	577.27	436.37	1013.63	48.36	6.32	54.68	30.51	10.95	41.47	13.21	5.93	17.84	4.63

Table: 1 shows the labour productivity performance of public sector banks. The variables like DPE, LAPE and BPE showed increasing trend during the last 11 years. This shows that the Public sector Bank's business is increasing in terms of per employee. IIPE also shows increasing trend, this increase was due to increase in the advances of the Public Sector Banks and increase in the interest rate of banks which shows increase in the productivity of employees. NIIPE follows an erratic behaviour. It increased till 2003-04 to 3.73 later on it started to decline and reached at 2.94 in 2005-06 again it increased. This decline was due to decline in non-interest income that includes trading income and fee based income as an important source of income for banks. Non-interest income declined in 2004-05 and 2005-06 due to decline in trading income and marked-to-market (MTM) losses. TIPE shows increasing trend which shows banks are performing well. IEPE, OEPE and TEPE show that all increased during the last 11 years which shows with increase in business of banks leads to increase in expenses. OPPE firstly increased till 2004-05 then it declined in 2004-05 this was due to fall in income of the banks and increase in expenses of the banks. SPE increased during the study period which is the good sign. NPPE also showed an increase. BDPE follows an erratic pattern. It was continuously declining till 2003-04 and reached at 0.57 then shows a sharp increase and reached 2.68 in 2006-07. Later on again it declined in 2008-09. It shows that banks non-interest income is lower than their operating expenses which mean that they are not concentrating on the fee based activities or non-core business. Various productivity ratios show that the public sector banks improved their performance in 2010-11 as compared to 2000-01. Labour productivity of Public sector banks shows that it is increasing in earnings and business too.

Table- 2 Labour Productivity Performance of Foreign Sector Banks (Amount in Rs. Lakhs)

YEAR	DPE	LAPE	BPE	IIPE	NIIPE	TIPE	IEPE	OEPE	TEPE	OPPE	NPPE	SPE	BDPE
2000-01	420.42	305.39	725.81	67.27	17.85	85.12	40.97	22.09	63.06	22.06	7.24	26.3	4.24
2001-02	466.56	351.72	818.28	70.15	23.58	93.73	43.78	24.54	68.32	25.41	10.79	26.37	0.96
2002-03	592.27	445.79	1038.06	76.67	26.24	102.92	43.28	27.77	71.06	31.86	15.53	33.39	1.53
2003-04	566.1	427.4	993.51	63.5	28.41	91.91	30.18	26.51	56.68	35.23	15.84	33.33	-1.9
2004-05	502.85	438.41	941.25	53.38	22.5	75.88	23.52	25.71	49.24	26.64	11.54	29.85	3.21
2005-06	514.29	441.12	955.41	55.57	24.29	79.86	23.28	26.47	49.75	30.11	13.87	32.29	2.18
2006-07	530.32	444.45	974.77	63.05	24.78	87.83	26.75	27.24	53.99	33.84	16.13	36.31	2.47
2007-08	577.42	486.72	1064.14	73.75	31.98	105.73	32.03	31.27	63.3	42.43	19.97	41.72	-0.71
2008-09	723.18	558.69	1281.88	102.43	50.31	152.75	43.3	41.55	84.85	67.9	25.37	59.13	-8.77
2009-10	827.92	582.36	1410.28	94.14	35.5	129.63	31.88	39.6	71.48	58.15	16.91	62.25	4.11
2010-11	860.56	699.13	1559.68	101.98	39.23	141.21	37.98	44.9	82.88	58.33	27.6	64	5.67

Table- 2 shows the labour productivity performance of foreign sector banks. DPE, LAPE, BPE follows an unpredictable pattern. DPE declined in 2004-05 later it started increasing till 2010-11 and reached 860.56. LAPE also declined in 2003-04 after that it increased continuously. BPE declined in 2003-04 and 2004-05 due to decline in DPE and LAPE. IIPE, NIPE, TIPE, IEPE, OEPE and TEPE follow the same trend firstly it shows increase and then declined in 2003-04 and 2004-05 because of decline in the business of foreign Banks. Later on it increased and then again declined in 2009-10 and then increased in 2010-11. This decline in 2009-10 was due to consequences of the crisis which decreased the interest income of the foreign banks. OPPE and NPPE continuously increased from 2000-01 to 2008-09 but it declined in 2009-10. The ratio declined because of decline in the profit of the banks which was a result of increase in the provisions and contingencies which result in a low growth in net profits in 2009-10. SPE shows continuously increase during the last 11 years. BDPE follows an erratic pattern due to change in operating expenses and non-interest income and number of employees

Table- 3 Combined Performance of Both Banks

Public Sector Banks													
	DPE	LAPE	BPE	IIPE	NIIPE	TIPE	IEPE	OEPE	TEPE	OPPE	NPPE	SPE	BDPE
Mean	279.07	190.37	469.43	24.31	3.91	28.22	15.93	5.96	21.89	6.33	2.92	8.38	2.05
S.D	160.79	132.98	293.67	12.88	1.69	14.5	8.91	2.39	11.21	3.4	1.76	4.2	1.07
C.V	57.62	69.86	62.56	52.99	43.31	51.37	55.93	40.18	51.22	53.66	60.24	50.09	52.32
ACGR	18.27	23.7	20.29	15.54	14.94	15.47	14.7	12.05	13.94	22.54	27.08	17.13	9.09
Foreign Sector Banks													
	DPE	LAPE	BPE	IIPE	NIIPE	TIPE	IEPE	OEPE	TEPE	OPPE	NPPE	SPE	BDPE
Mean	598.35	471.02	1069.37	74.72	29.52	104.23	34.27	30.7	64.96	39.27	16.44	40.45	1.18
S.D	144.36	109.19	250.59	17.47	9.22	25.82	7.95	7.69	12.17	15.43	6.05	14.41	3.96
C.V	24.13	23.18	23.43	23.39	31.25	24.77	23.2	25.06	18.74	39.3	36.78	35.62	335.67
ACGR	7.43	8.64	7.95	4.25	8.19	5.19	-0.75	7.35	2.77	10.21	14.32	9.3	2.95

Table- 3 shows the labour productivity performance of both public sector and foreign sector banks. It shows the Average, Standard Deviation, Coefficient of Variance and Annual Compound Growth Rate (ACGR) of both the banks. Table highlights that the average of all the variables i.e. DPE, LAPE, BPE, IIPE, NIIPE, TIPE, IEPE, OEPE, TEPE, OPPE, SPE and NPPE were higher in case of foreign banks than that of public sector banks. The average of BPE was 1069.37 for foreign banks which was much higher whereas it was 469.43 for public sector banks. The average of all other variables also shows the same trend except BDPE. The average of BDPE shows that it was higher for the public sector banks than that of the foreign sector banks. This is the good sign for foreign sector banks which shows that they are also concentrating on the non-interest income. This shows foreign banks are performing better in all areas in comparison with that of Public sector banks.

However, table: 3 also show that the ACGR was higher for the public sector banks than the foreign sector banks for all the variables. This means that the public sector banks are improving at much faster pace. The labour productivity ratios for public sector banks in 2000-01 shows that DPE-107.78, LAPE-52.00, BPE-159.78, IIPE-11.41, NIIPE-1.57, TIPE-12.98, IEPE-7.74, OEPE-3.51, TEPE-11.25, OPPE-1.73, NPPE-0.54, SPE-3.67, NPPE-1.94 whereas for foreign sector banks it was DPE-420.42, LAPE-305.39, BPE-725.81, IIPE-67.27, NIIPE-17.85, TIPE-85.12, IEPE-40.97, OEPE-22.09, TEPE-63.06, OPPE-22.06, NPPE-7.24, SPE-26.30, BDPE-4.24. Similarly, the ratios of 2010-11 for public sector banks were DPE-577.27, LAPE-436.37, BPE-1013.63, IIPE-48.36, NIIPE-6.32, TIPE-54.68, IEPE-30.51, OEPE-10.95, TEPE-41.47, OPPE-13.21, NPPE-5.93, SPE-17.84, BDPE-4.63, and for foreign sector banks were DPE-860.56, LAPE-699.13, BPE-1559.68, IIPE-101.98, NIIPE-39.23, TIPE-141.21, IEPE-37.97, OEPE-44.90, TEPE-82.88, OPPE-58.33, NPPE-27.60, SPE-64.00, BDPE-5.67. From the productivity ratios of the both the years we can see that the values for public sector banks were much lower than that of foreign sector banks whereas growth rate shows that the public sector banks grow at faster rate still they are lacking behind. This also highlights that perhaps foreign sector banks were already doing well and the room for improvement of Public sector banks was more, hence more Annual Compounded growth Rate

The results conclude that the foreign sector banks are far ahead of the public sector banks due to the reason that the public sector banks are slow in technology up gradation and improving staffing and employment practices (Ram Mohan, 2002). Public Sector Banks have more number of employees than that of foreign banks. The public sector banks have huge staff and a wide network of branches still they are far lacking behind the foreign sector banks due to the reason they are not very much tech-savvy. Public sector Banks have been slow in keeping pace with the changing technology (Leeladhar, 2005). Though, the public sector banks have been trying to reduce the employees via different VRSs (Voluntary Retirement Schemes) which have shown a positive impact on the productivity. Still the productivity ratios for foreign sector banks are higher than the public sector banks. This shows that there is a problem of over staffing in Public sector banks which is the main reason for the lower productivity. It shows that the foreign sector banks are doing well in comparison with that of public sector banks.

Our results are similar to that of Kumar *et al.* who concluded that the performance of the modern banks (foreign and new private sector banks) was much superior to the traditional banks (public sector and old private sector banks) for the parameters of employees' productivity viz. business per employee (BPE) and profit per employee (PPE). Our results are also supported by Uppal (2010) as he concluded that the profitability was highest in foreign banks and new private sector banks as compared to public and old private sector banks. Similarly, productivity was also highest in foreign banks and new private sector banks. Though, the total earnings per branch had increased in all bank groups but the maximum average had been observed in foreign bank group i.e. 92.07. So, foreign bank group had been more benefited than other bank groups. Our results are also similar to that of Mittal *et al.* (2007) who concluded that the public sector banks are less profitable than the private sector and foreign banks in terms of overall profitability (Spread – Burden ratio) but their profitability was improving over the last 5 years. The same holds good for the advances per employee and business per employee ratios as well.

However, our results are also contradictory to Athma and Srinivas (1997) who found that the results showed that the productivity per employee showed a rise for all the three banks. But, foreign sector banks were showing a negative growth rate in the year 1992-93 and it was reversed in the later years. All the three groups made efforts to improve their productivity in 1994-1995 and succeeded in earning profits by recovering the operative costs fully.

Conclusion

In this paper various productivity performance parameters are used to compare the performance of two sector banks in India i.e. Public Sector Banks and Foreign sector Banks. Overall, the productivity performance of foreign banks is much better than the public banks during the study period. The average of all the productivity parameters shows that it was highest for the foreign sector banks. But, the compounded growth rate shows that it was highest for the public sector banks. This means that public sector banks are trying to improve their performance though still they seem to be lagging behind the foreign sector banks. This is perhaps due to the reason of over staffing problem in Public Sector Banks. Also, PSBs are slow in technology up gradation among the staff to adopt the technology efficiently. No doubt, Public Sector banks are trying to reduce the staff with different VRSs (Voluntary

Retirement Schemes); but it would take some time for banks to improve their performance in terms of per employee parameters and continue to be the dominating banks in the Indian banking sector.

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