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PRODUCTIVITY MEASUREMENT OF PUBLIC SECTORS BANKS IN INDIA**DR. BHAVET****FACULTY****M M INSTITUTE OF MANAGEMENT****MAHARISHI MARKANDESHWAR UNIVERSITY****MULLANA****Email: bhavetgarg@gmail.com****Voice: +91-9896989571****PRIYA JINDAL****FACULTY****DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES****MAHARISHI MARKANDESHWAR UNIVERSITY****MULLANA****DR. SAMBHAV GARG****FACULTY****M M INSTITUTE OF MANAGEMENT****MAHARISHI MARKANDESHWAR UNIVERSITY****MULLANA****Email: jaisyaramki@gmail.com****Voice: +91-9996009890****ABSTRACT**

In 1991 financial sector reforms were initiated in India as an overall economic reform. These reforms have changed the face of Indian banking industry. Liberalization has brought about changes in the way the banks operate. Liberalization of the Indian banking industry has thrown open the door for foreign banks, resulted in an increasingly competitive environment. The financial sector reforms emphasized the need to improve the productivity of the banks through appropriate rationalization measures so as to reduce the consumption of inputs and produce more outputs. Nowadays, productivity improvement in organizations is as one of executive managers and decision makers' main challenges in each country. In many countries, most of development programs are based on productivity improvement. Productivity is one of the most influential factors that lead to economical growth. The present study measures the productivity of banks on the basis of employees Productivity and Employee Cost Ratios. The banking industry is highly competitive. Banking being a service sector industry, productivity of the staff has a significant bearing on the banks overall performance. The key to a bank's success is having the best people. In fact, people are the main commodity. Banks don't manufacture anything; they offer a service. Human Resources are core to the success of the bank. Human resources have a significant bearing on the profitability, efficiency and overall organizational effectiveness. Public Sector banks has been worked on a recurrent theme that "people are our greatest asset".

KEYWORDS

Productivity, Human Resources Management, Financial Sector Reforms.

1. CONCEPT OF PRODUCTIVITY

Productivity denotes the efficiency with which output is produced by the resources utilized. It is generally defined in terms of efficiency with which inputs are transformed into useful output within the production process. Productivity as is understood in common parlance is the output per unit of input employed.

Productivity= Total output/ Total Input

Productivity attempts to compare in real terms the quantity of goods and services produced against the quantity of resources employed in a given period of time.

2. RELEVANCE OF PRODUCTIVITY OF BANKING INDUSTRY IN INDIA

The Banking Industry in India has recorded a phenomenal growth in business operations. It is necessary that banks must have a sound footing as it constitutes an important link in various socio-economic activities. Banking is fulcrum of an economy, any change in its processes affect the countries growth. Productivity is, of course a vital indicator of economic performance. Despite the fact in services business productivity is often more difficult to evaluate than manufacturing business productivity because it is difficult to determine the efficient amount of resources required to produce services outputs. Measuring the productivity of services business like banking requires techniques that are more sensitive. Output of a service Industry is the services rendered to customers, whether the customer is satisfied from the services or not is extremely difficult to measure because of the subjectivity involved. It enabled services industries like banking to avoid the question of productivity for a long time. However, as the economies grow the importance of services and territory sector increases, making it difficult to ignore its efficiency and productivity. Moreover, being an important economic activity, it cannot afford to lose sight of the concept of Productivity measurement.

3. SOURCES OF PRODUCTIVITY

Productivity attempts to compare in real terms the quality of goods and services produced against the quantity of resources employed in a given period of time. Productivity is at heart of economic growth and development, improvement in standard of living and quality of life. In view of the importance of productivity for maintaining high levels of income and standard of living, it becomes important to understand the factors which are the sources of productivity growth and could prove to be responsible for low productivity or its decline. Any factor which reduces the waste in any form, or increase efficiency can be called sources of

productivity. Anything notable happening in the society or economy may be helping or hindering productivity. The most important source of productivity growth is advance in technological knowledge applied to productive processes and instruments. Development and application of cost-reducing innovations to machines and methods of production can make significant contributions to the efficiency. Improved goods and services also contribute to productivity and welfare.

4. MEASUREMENT OF PRODUCTIVITY

If productivity is to be improved, there is need of control and for control it must be measured. While measuring Total factor productivity it poses many problems, as factors of inputs are always heterogeneous like labour, capital, material etc. For this reasons labour productivity as a measure of productivity is more popular than total factor productivity. In fact many inputs are difficult to measure and are therefore deliberately ignored in computation.

5. NEED OF THE STUDY

Banks play a vital role as they have to supply credit to the promotional and development activities of the society, at the same time restricting credit for socially undesirable and economically less beneficial purposes. In view of its key role, banking industry has to play a dual role of increasing productivity in banks themselves and also attune their operations in a manner that would promote productivity in other sectors of the economy. The need is that banks should make every effort on a continuing basis to bring down cost and improving productivity. However, no serious, systematic and conscious efforts are being made by banks to improve productivity and operational efficiency. It is believed that after liberalization PSBs witnessed substantial losses in their market share deposits and are still losing, will have a tough time for retaining their position in the coming times. So, there is need to have a look on productivity, the central element of the problem of prosperity of economy in Public Sector Banks.

6. REVIEW OF LITERATURE

Varde (1979) has made a distinction between effectiveness, efficiency and productivity of banks and has pointed out that efficiency of a bank could be classified into four categories viz. (i) manpower efficiency; (ii) operational efficiency; (iii) commercial efficiency; and (iv) efficiency of ancillary business. Efficiency of each of these four categories can be measured separately, and this efficiency in turn has got a positive influence on the productivity of the respective category. Subramanyam (1985) measured Total Factor Productivity (TFP) by using index number approach and addressed some of the conceptual issues and their growth on accounting implications. In this study Divisia index was shown to be preferable over Laspeyres index. Hansda (1995) had been constructed a composite index to judge the relative performance of 28 public sector banks during the period of post-liberalization from 1991-92 to 1993-94. He considered 25 indicators under five categories viz. labour productivity, branch productivity, financial management, profitability and growth by adopting principal component analysis, and found that in the pre-liberalization phase, the banks used to function in a more or less uniform or regulatory regime. However, the significant variation has been observed in their performance for the year 1991-92, which suggested that organizations culture and quality management had a significant sharing on the relative performance of banks. Ram Mohan and Ray (2005) considered Tornquist total factor productivity growth, Malmquist efficiency and revenue maximization efficiency from 1992-2000 to compare the performance of public sector banks and private sector banks. The study revealed the fact efficiency and productivity have not been lower in Public sector banks relative to their peers in the private sector. 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.

7. OBJECTIVES OF THE STUDY

The specific objectives of the study are:

1. To evaluate the Trend of productivity of PSBs in the post-liberalization period.
2. To identify the various factors affecting productivity of PSBs in the post-liberalization period.
3. To examine the contribution of Employees Productivity of PSBs in the post-liberalization period.
4. To make suggestions or the improvement in the productivity of PSBs.

8. HYPOTHESIS OF THE STUDY

Keeping in mind survey of literature and objectives of the study, the following hypotheses are

1. The productivity of PSBs has suffered in the post-liberalization period.
2. There has been a change in the nature of the factors affecting the productivity of PSBs in the post-liberalization period.
3. Various new generation private banks and foreign banks have posed a great challenge to PSBs in the post-liberalization period by introducing various innovative schemes.

9. RESEARCH METHODOLOGY

PERIOD OF STUDY

The post-reform period of seven years has been taken for measuring the Productivity performance of Public Sectors Banks in India. The years selected for analysis are 2006-2012. In order to study the productivity aspect the following indicators have been used:

TABLE 9.1: PER EMPLOYEE INDICATORS (LABOUR PRODUCTIVITY)

S. No	Ratio	Definition of Ratio
A. Employee Productivity Ratios		
1.	Deposit per employee	Total Deposits / No. of Employees
2.	Advance per employee	Total Advances/ No. of Employees
3.	Business Per Employee	Total Business/No. of Employees
4.	Net profit per employee	Net Profit/No. of Employees
B. Employee Cost Ratios		
5.	Employee cost to Operating Expenses	Establishment Exp./Operating Cost
6.	Employee Cost to Total Assets	Establishment Exp./Total Assets

SAMPLE- SIZE

As far as scope of the study is concerned, it covers all the 27 PSBs functioning in India. PSBs Banks are divided into two groups (1) SBI & its Associates (2) Nationalized Banks.

COLLECTION OF DATA

Data prove a useful aid for analysis of a research problem. Data are those relevant materials which are significantly used to describe the research findings in detail and to draw meaningful inferences. To achieve the objectives of the study, Secondary data is collected. Secondary data is a valuable source for research. It includes all those data which had been collected for some earlier research work and applicable or usable in the study researcher has presently undertaken. 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” brought by Indian Banker’s Association, “Statistical Tables Relating to Banks of India”. “Reserve Bank of India Monthly Bulletin”, “Reserve Bank of India Monthly Bulletin”, “Report on currency and Finance” and other publications of Reserve Bank of India.

DATA ANALYSIS

The following statistical tools have been used for analyzing data:

Ratio Analysis-To measure the Productivity of bank’s Employees, analysis of relevant ratios is commonly used. Profitability ratios have been employed for assessing the Productivity of Public Sector Banks.

Mean (X) = $\Sigma X/N$ Where ΣX = Sum of series of observations N = Number of items

S.D. (σ) = $\Sigma X/N$

Where $x = (X-X)$, X is the mean of the series and (X-X) is the deviation from the mean.

N = Number of items

C.V. = $(\sigma/X) \times 100$ Where σ is Standard Deviation (S.D.) and X is the mean of the series.

10. ANALYSIS AND DISCUSSION

DEPOSIT PER EMPLOYEE

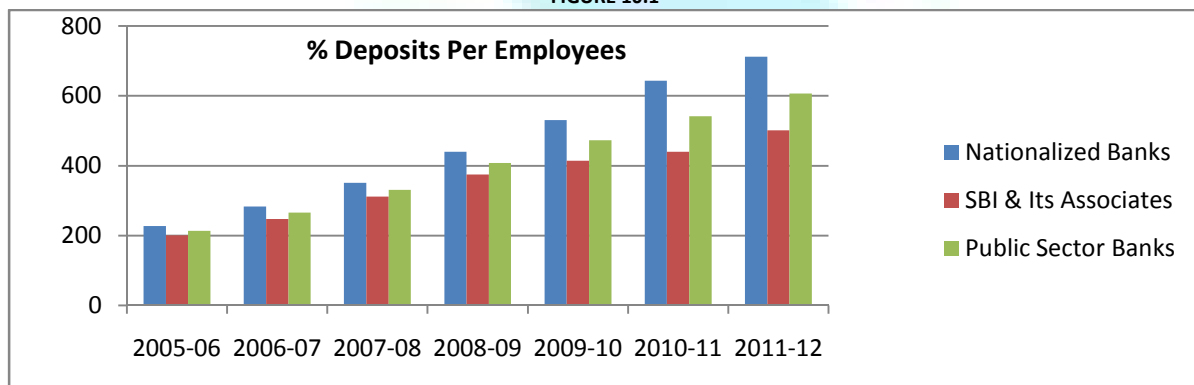
The success of the banking greatly lies on the deposit mobilization performance of the bank as the deposits are normally considered as a cost effective source of working fund. The commercial banks have emerged as one of the major financial intermediaries in the country to mobilize the community’s financial savings. This ratio has been computed by dividing the amount of total deposits by the number of employees in the bank.

TABLE 10.1: DEPOSIT PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Deposits	No. of Employees	% Deposits Per Employees	Deposits	No. of Employees	% Deposits Per Employees	Mean
2005-06	1054071	463479	227.43	542409	270611	200.44	213.93
2006-07	1317369	465697	282.88	633475	255699	247.74	265.31
2007-08	1606995	458138	350.77	773874	248425	311.51	331.14
2008-09	1993304	452725	440.29	1007041	268598	374.93	407.61
2009-10	2416049	455049	530.94	1108085	267332	414.50	472.72
2010-11	2946100	458129	643.07	1245862	283375	439.65	541.36
2011-12	3386496	475697	711.90	1405024	280256	501.34	606.62

Statistical shows that the Deposits per Employees of 20 Nationalized Banks has increased from 227.43% in 2006 to 711.90% in 2012 while that of eight SBI & Its Associates has increased from 200.44% in 2006 to 501.34% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Deposits per Employees. On an average Public Sector Banks showed an increased pattern from 213.93 % in 2006 to 606.62% in 2012.

FIGURE 10.1



ADVANCE PER EMPLOYEE

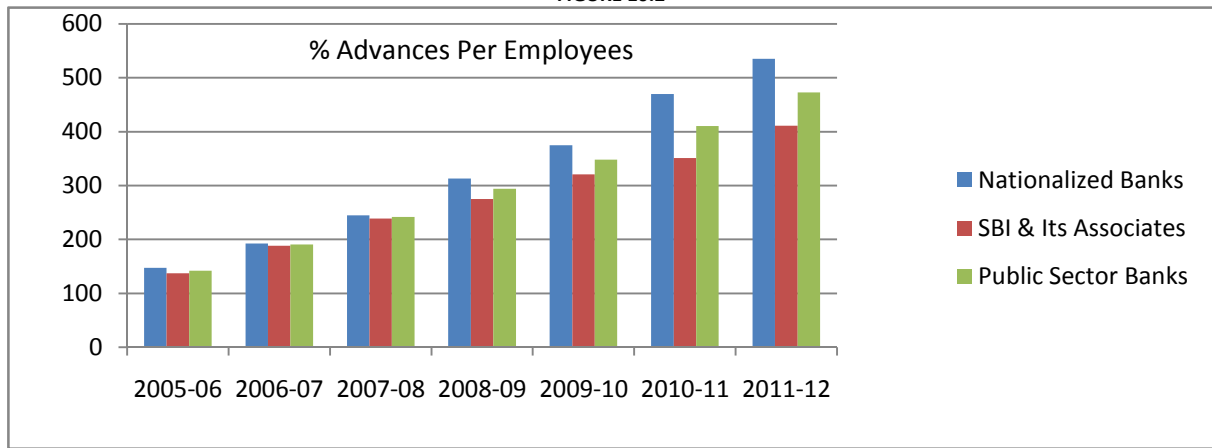
Deposits mobilized by the banks are utilized for loans and advances. Advances as a phenomenon of development and regarded the banking system along with entrepreneurship as being the key agent in the process of development. This ratio has been computed by dividing the amount of total advances by the number of employees.

TABLE 10.2: ADVANCE PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Advances	No. of Employees	% Advances Per Employees	Advances	No. of Employees	% Advances Per Employees	Mean
2005-06	681869	463479	147.12	371519	270611	137.29	142.20
2006-07	895405	465697	192.27	482269	255699	188.61	190.44
2007-08	1121569	458138	244.81	593722	248425	238.99	241.90
2008-09	1416317	452725	312.84	739449	268598	275.30	294.07
2009-10	1704899	455049	374.66	858198	267332	321.02	347.84
2010-11	2153181	458129	469.99	994153	283375	350.83	410.41
2011-12	2545162	475697	535.04	1151991	280256	411.05	473.04

Statistical shows that the Advances per Employees of 20 Nationalized Banks has increased from 147.12% in 2006 to 535.04% in 2012 while that of eight SBI & Its Associates has increased from 137.29% in 2006 to 411.05% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Advances per Employees. On an average Public Sector Banks showed an increased pattern from 142.20 % in 2006 to 473.04% in 2012.

FIGURE 10.2



BUSINESS PER EMPLOYEE

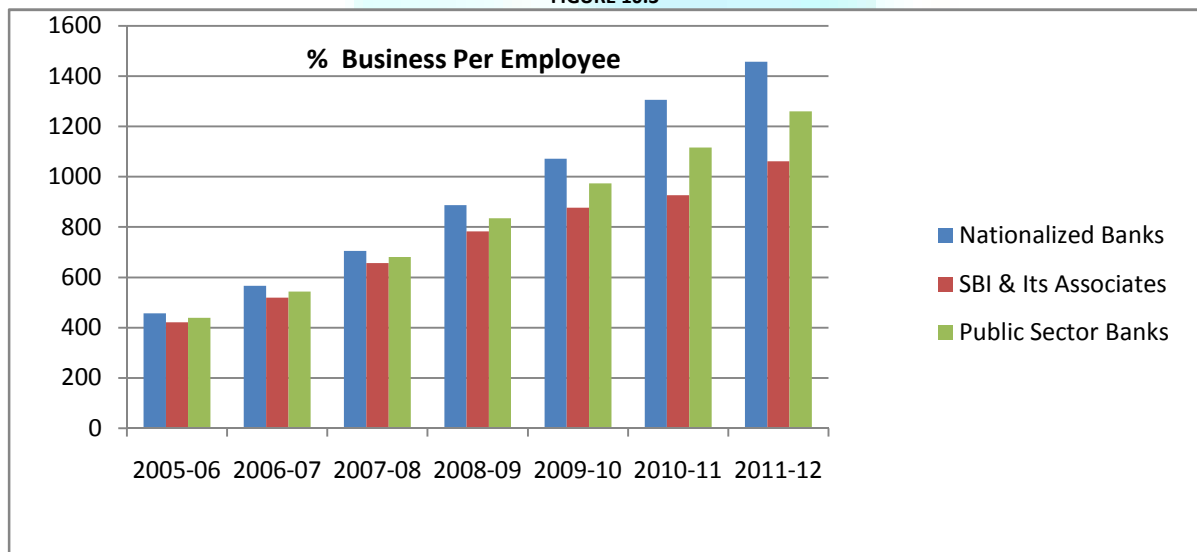
Total Business is the sum of total Deposit and total Advances. This ratio has been computed by dividing the amount of total business by the number of employees in the bank.

TABLE 10.3: BUSINESS PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Business	No. of Employees	% Business Per Employee	Business	No. of Employees	% Business Per Employee	Mean
2005-06	2119385	463479	457.28	1138874	270611	420.85	439.07
2006-07	2640081	465697	566.91	1327619	255699	519.21	543.06
2007-08	3230966	458138	705.24	1631420	248425	656.71	680.97
2008-09	4014616	452725	886.77	2104115	268598	783.37	835.06
2009-10	4875728	455049	1071.47	2343941	267332	876.79	974.13
2010-11	5981392	458129	1305.61	2625712	283375	926.59	1116.10
2011-12	6935238	475697	1457.91	2974337	280256	1061.29	1259.60

Statistical shows that the Business per Employees of 20 Nationalized Banks has increased from 457.28% in 2006 to 1457.91% in 2012 while that of eight SBI & Its Associates has increased from 420.85% in 2006 to 1061.29% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Advances per Employees. On an average Public Sector Banks showed an increased pattern from 439.07% in 2006 to 1259.60% in 2012.

FIGURE 10.3



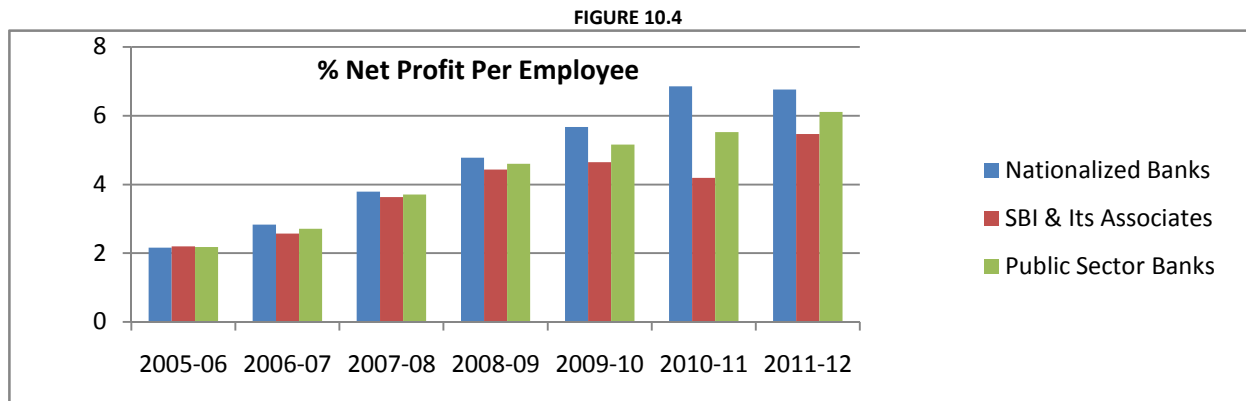
NET PROFIT PER EMPLOYEE

The balance of operating profit after the provisions and contingencies is known as net profit. Net profit mainly depends upon productivity of the bank and growth of profit per employee. Profitability is the ratio of earnings to the funds used. It indicates the efficiency with which a bank deploys its total resources to maximize its profits. This ratio has been computed by dividing the amount of total amount of net profits by the number of employees in the bank.

TABLE 10.4: NET PROFIT PER EMPLOYEE

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks
	Net Profit	No. of Employee	% Net Profit Per Employee	Net Profit	No. of Employee	% Net Profit Per Employee	Mean
2005-06	10021.3	463479	2.16	5956.48	270611	2.20	2.18
2006-07	13195.82	465697	2.83	6572.04	255699	2.57	2.71
2007-08	17344.19	458138	3.79	9005.79	248425	3.63	3.71
2008-09	21618.33	452725	4.78	11895.7	268598	4.43	4.60
2009-10	25793.18	455049	5.67	12432.62	267332	4.65	5.16
2010-11	31387.53	458129	6.85	11862.95	283375	4.19	5.52
2011-12	32148.73	475697	6.76	15333.64	280256	5.47	6.11

Statistical shows that the Net Profit per Employees of 20 Nationalized Banks has increased from 2.16% in 2006 to 6.76% in 2012 while that of eight SBI & Its Associates has increased from 2.20% in 2006 to 5.47% in 2012. All 28 Public Sector Banks have witnessed for increasing trend in Total income per Employees. On an average Public Sector Banks showed an increased pattern from 2.18 % in 2006 to 6.11% in 2012.



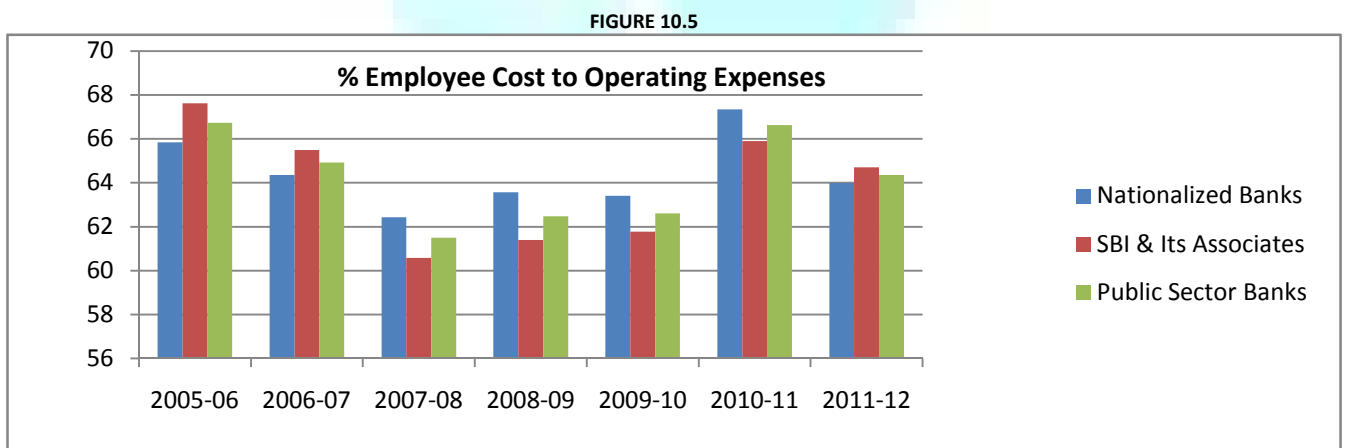
EMPLOYEE COST TO OPERATING EXPENSES

Employees Cost refers to payments to and provision for employees. The Employees Cost to operating Expenses is based on the portion of wage bill data in operating Expenses of the banks group. Banks have been treating them as critical factor for improving profitability and try to minimize them in relation to operating cost.

TABLE 10.5: EMPLOYEE COST TO OPERATING EXPENSES

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks Mean
	payments to and provision for employees	Operating Exp.	% Employee Cost to Operating Expenses	payments to and provision for employees	Operating Exp.	% Employee Cost to Operating Expenses	
2005-06	16394.57	24901.34	65.84	10665.09	15770.85	67.63	66.73
2006-07	17049.8	26489.3	64.36	10470.17	15986.75	65.49	64.93
2007-08	17883.47	28646.36	62.43	10294.23	16992.7	60.58	61.50
2008-09	21663.76	34078.06	63.57	12331.1	20087.71	61.39	62.48
2009-10	24706.28	38960.73	63.41	15568.27	25199.17	61.78	62.60
2010-11	34730.49	51564.6	67.35	19207.34	29145.91	65.90	66.63
2011-12	35108.25	54867.5	63.99	21183.53	32739.56	64.70	64.35

Statistical shows that Employee Cost to Operating Expenses of 20 Nationalized Banks has decreased from 65.84% in 2006 to 63.99% in 2012 while that of eight SBI & Its Associates has increased from 67.63 % in 2006 to 64.70 % in 2012. All 28 Public Sector Banks have witnessed for decline trend in Employee Cost to Operating Expenses. On an average Public Sector Banks showed a decline pattern from 66.73 % in 2006 to 64.35% in 2012.



EMPLOYEE COST TO TOTAL ASSETS

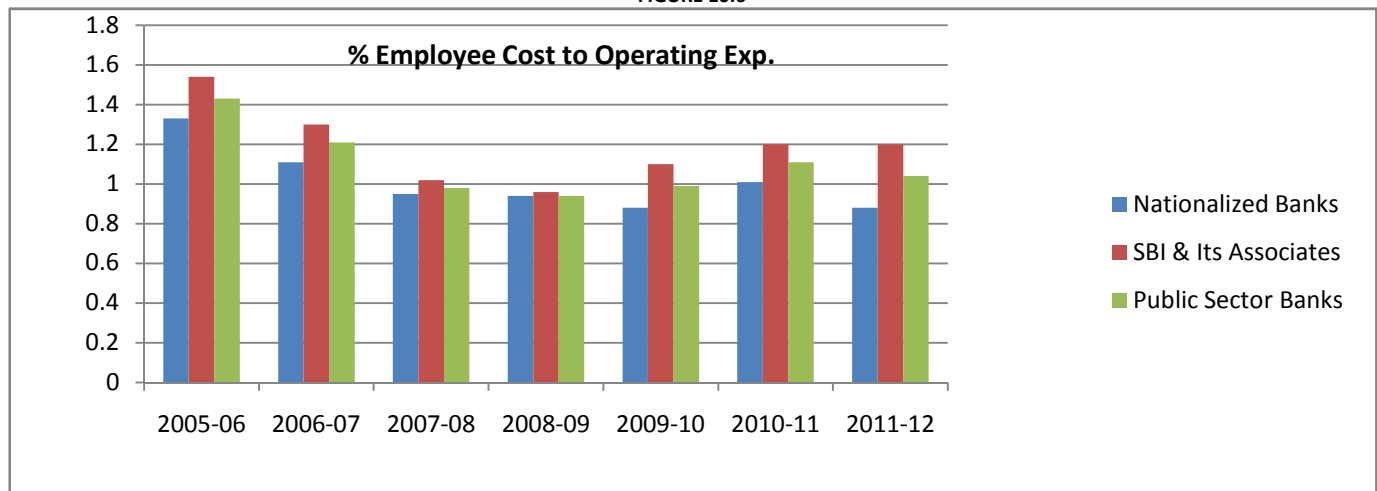
Employee cost to total Assets indicate payment to and provision for employees as a percentage of total assets. It is based on the wage bill of different bank groups in total assets. It is calculated by dividing Employee Cost to Total Assets.

TABLE 10.6: EMPLOYEE COST TO TOTAL ASSETS

Years	Nationalized Banks			SBI & Its Associates			Public Sector Banks Mean
	payments to and provision for employees	Total Assets	% Employee Cost to Operating Exp.	payments to and provision for employees	Total Assets	% Employee Cost to Operating Exp.	
2005-06	16394.57	1234462	1.33	10665.09	691871	1.54	1.43
2006-07	17049.8	1530531	1.11	10470.17	805795	1.30	1.21
2007-08	17883.47	1880374	0.95	10294.23	1011168	1.02	0.98
2008-09	21663.76	2313299	0.94	12331.1	1280055	0.96	0.94
2009-10	24706.28	2795027	0.88	15568.27	1412514	1.10	0.99
2010-11	34730.49	3442945	1.01	19207.34	1597684	1.20	1.11
2011-12	35108.25	3975930	0.88	21183.53	1771213	1.20	1.04

Statistical shows that the Employee Cost to Total Assets of 20 Nationalized Banks has decreased from 1.33% in 2006 to 0.88% in 2012 while that of eight SBI & Its Associates has increased from 1.54% in 2006 to 1.20% in 2012. All 28 Public Sector Banks have witnessed for declining trend in Employee Cost to Total Assets. On an average Public Sector Banks showed a declining pattern from 1.43% in 2006 to 1.04% in 2012.

FIGURE 10.6



11. FACTORS AFFECTING EMPLOYEE PRODUCTIVITY

QUALITY TRAINING PROGRAMMES

Once the bank has decided to achieve Productivity efficiency, suitable training programmes should be introduced and all members of staff should get an opportunity to participate in these programmes. All employees must be trained to develop quality consciousness and the bank must continually strive to improve the quality of services provided. Training increases the skill of the new employee in the performance of a particular job. An increase in skill usually helps increase in both quantity and quality of output.

IMPROVEMENT IN TECHNOLOGICAL KNOWLEDGE

Traditional banking are sometimes unnecessary and time consuming resulting in delay of operation thus it requires a proper study of organization and method to make the office processes. More over many new types of equipment like computer fax machines and ATMs have become able to spur the global competition but our public sector bank is far behind the new entrants. To enable quicker decision making in a scientific manner, on line inter connectivity is most useful. Most of the Indian banks have embarked upon the process of computerizing their branches. It is necessary that bank would have to reinvest in IT to remain in tune with the changing dynamics of the market. Technology also helps to reduce operation costs, offer customized products and manage risks more efficiently.

ECONOMIES OF SCALE

Achievement of economies of scale i.e. reduction in per unit cost due to increase in the scale of operation. Economies of scale mean reduction in per unit cost by producing multiple products with the same firm. For example: A bank can sell insurance units, mutual fund products etc with the same branch network. Product diversification can establish "one-stop shop" and attract new customers and achieve productivity efficiency. The banks based in South India may look for a bank in North India to have presence in North. Similarly banks in North may look for banks in South to increase its area of operations.

EMPLOYEE MORALE

Productivity is linked to employee morale. When employees are happy at work they have more motivation, which increases productivity. Poor morale causes employees to be disengaged. A study done by the Corporate Executive Board says that because employee engagement is down there has been a 5% decrease in productivity. When the employee is motivated-customer served well-does more business with banks- profitability of banks goes up-benefits passed on to the deserving employees-employee is motivated-excellent service to customers is provided.

12. CONCLUSION

The public sector banking system in India is standing at an important cross road. There are critical choices to be made and initiatives to be taken. The time is ripe for leaving the old baggage and taking bold measures. These measures would determine the future path of public sector banks and whether they would continue to retain their position of preeminence in the banking space or would they yield to the pressure from their peers in the private sector. The productivity of employees is crucial for measuring the overall efficiency of the banks. Researcher examined the various parameters of efficiency and given a number of suggestion to improve the efficiency of the banks in India. Faced with tough competition from the foreign and new private sector banks, public sector banks employed a number of measures to improve employee productivity and reduction of operating costs. Statistics reveals that employment in public sector banks had shrunk in 2007-2008. Aggregate number of workers in 28 public sector banks declined by 2% from 7, 22,878 in 2006-07 to 7, 14,793. It was felt that manpower cost of banks has been increasing steadily over the years and it is necessary to rationalization the work force. A conscious effort has to be done for the reduction of workforce in banks. These include going for fully automated systems (Core Banking Solution based operations) preceded with business process reengineering, offering VRS to its employees, training and retraining of staff, lateral recruitment of specialists. But one thing is more important that the productivity of bank employees as a result, has improved substantially. Employee productivity can be measured in terms of Business per employee and profit per employee. All 28 public sector banks have witnessed in increase in per employee business because of the use of IT infrastructure, training and development of the employees, and performance based promotion.

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