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RESEARCH ARTICLE

EMPLOYEES PRODUCTIVITY IN INDIAN BANKING: A COMPARATIVE STUDY OF TOP PUBLIC AND PRIVATE SECTOR BANKS

***Vinod Kumar Adwani**

Asstt. Professor, Deptt. of Commerce, The BSSS College Bhopal, India

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ABSTRACT

Since the implementation of liberalisation policy in 1991, both public and private sector banks have shown a robust growth in the economy of the country. Both the banks are became an undivided part of this valuable banking industry. Now these banks are giving a challenge to each other in a healthy business environment of India. With their own positives and negatives, both types of banks are working with an objective of providing fast and secure financial services to the mass population of the country. This paper is an attempt to compare the productivity of the employees of these banks by taking the latest data of top ten public and private sector banks as a suitable sample. To measure the productivity of employees of these banks, various parameters and ratios are used along with their appropriate analysis and interpretation. With the help of banking data, this paper also focuses on finding the variation between the employees productivity of public and private sector banks.

Key words: Per Employee Business, Employees Productivity, Public Sector Banks, Per Employee Profit, Private Sector Banks.

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INTRODUCTION

Finance is the life blood of each and every business activity and commercial banks are the suppliers of this vital component to the entire economy of the nation. In this way banks are playing a significant role in the social and economic development of the country. Deposits and credit facilities provided by the commercial banks directly affect the output, income and employment level. Banking sector is one of the largest labour or human resources based service sector, because the performance of the banks mainly depends upon the performance and efficiency of their human resources. For the growth and survival of each and every commercial bank, it's all employees have to give their positive contribution. So at the end of a particular period it is essential to assess the human resources or employees' productivity of this large service sector of the country. What is productivity? Let's start with the answer to this question. As we know the process of production is contributed by four major inputs that are land, labour, capital and entrepreneurship. Productivity is the simple relationship between the inputs (or we can say the resources used in the process of the production of goods or services) and the resulted output (or we can say production or yield). In the term of the formula:

$$\text{Productivity} = \text{Output} / \text{Input}$$

With the measurement of the productivity we can easily determine the performance and efficiency of one particular type of input or more than one input. Banking is the mental labour based industry, as it is completely depends upon its employees working. In this way measurement of the employees productivity of the banking sector is just like measurement of productivity of entire banking sector. To assess the productivity of the any sector of the economy various tools and methods are developed. Some parameters are specially developed for the analysis of the productivity of employees of the banking sector, such as Business Per Employee (BPE), Revenues Per Employee (RPE), Profit Per Employee (PPE) etc. With the analysis and interpretation of these parameters we can easily compare and assess their performance in a systematic manner. These are very helpful to take any decision regarding human resources management in banking sector. A commercial bank in which Central Govt. of India holds majority shares and also managed or controlled by the central Govt. of India, is known as Government Bank or Public Sector Bank. These banks are one of the major components of Indian banking sector. Majority of these banks were established before our independence and have a greater credibility of general public. As on 31st January 2018 total 21 public sector banks are operational in India. They are holding on majority of total deposits and advances of the entire banking sector of India. A commercial bank controlled, managed and operated by private entities is called Private Sector Bank.

***Corresponding author: Vinod Kumar Adwani,**
Asstt. Professor, Deptt. of Commerce, The BSSS College Bhopal, India.

Since the introduction of New Economic policy in 1991, growth of these banks in our country is appreciable and they also became an important part of our economy. As on 31st January 2018 total 23 private sector banks are operational in India. In the terms of no. of branches, no. of employees' amount of deposits and advances public sector banks are well ahead of private sector banks,

Literature Review

Review of literature is a critical analysis of work related to our research topic. There are many books, reports; research papers etc are available on the analysis of the employees' productivity, branches productivity, performance and various financial aspects of the Indian Banking Sector. Few of them are as under:

- Sharma (1974) emphasized the growth of the banking facilities in the rural and the semi urban area of the nation.
- Shah (1977) expressed concern about the growing overheads and slow growth of the productivity of the banks.
- Desai (1978) emphasized on providing for the management of the productivity related staff development technique.
- Kulkarni (1979) suggested that banks should try to make the developing business as successful as possible, to reduce the cost and increase the productivity.
- Venkatachalam (1979) gave the reasons for the erosion of the bank profits and the profitability in recent years.
- Nayan K. (1982) conducted a study on the performance evaluation of commercial banks and presented a performance evaluation model.
- Joshi (1986) has suggested that profit planning at micro and macro level for the banking industry to overcome the trend of declining profitability.
- Singh (1990) has analyzed branch productivity, per employee productivity of public sector banks and SBI at constant price.
- Amita B. (1996) examined the policy constraints on the profitability of the Indian scheduled commercial banks.
- B. Janki (2002) stated that the banking needs to upgrade the technology to improve operating efficiency and better customer service.
- Souza (2002) has evaluated that the performance of public sector banks, private sector banks and foreign banks on the basis of their spread and working fund ratio.
- Bhatia (2007) found that the amount of the NPAs has been seen on a continued growth and reached at alarming level for the financial institutions.
- Hawa S. (2013) has analyzed that the performance of the private sector banks is showing an increasing trend from 2004-05 to 2011-12.
- Shashi (2015) stated that SBI Group Banks must organize training and development programmes to have more efficiency and better productivity.
- Malyadri (2015) has suggested that both public and private sector banks to work upon the cost of funds issue, as it is higher than the foreign banks.
- Mahila (2016) Found that the number of branches and number of employees of are highly influencing the productivity of banks.

Objectives

It is necessary to determine objectives before starting any research study. There are four main objectives of this study:

i. To measure the efficiency of the employees of top commercial banks of India. To compare the employees productivity of the Public and Private Sector banks on the basis of Employees Productivity Parameters for the Financial Year 2016-17. To analyze the variation between the employees' productivity of the Public and Private Sector banks. To provide appropriate suggestions to increase the productivity of employees of the banking sector.

Limitations

- This research study is based on only top ten public sector and private sector banks of India, which are selected on the basis of their total assets as on 31st March 2017.
- This research study is based on the employees' productivity of these banks only for F.Y. 2016-17.
- This research study is based on the analysis of the performance of banking employees on the basis of the selected Banking employees' productivity Parameters.

Hypothesis

Hypothesis is basically an assumption, which is useful to clear the objective of the research study. For the comprehensive analysis and to get a fair conclusion of above objectives we can take following two null hypotheses:

First Null Hypothesis - for the analysis of the productivity of the employees on the basis of business (deposits + advances) activities (Business Per Employee- BPE)).

(Ho1): "There is no significant difference between Business Per employee (BPE) of the public sector banks and private sector banks of India in Financial Year 2016-17."

Second Null Hypothesis - for the analysis of the productivity of the employees on the basis of revenue earned by these banks (Revenue Per Employee- RPE)

(Ho2): "There is no significant difference between Revenue Per Employee (RPE) of the public sector banks and private sector banks of India in Financial Year 2016-17."

MATERIALS AND METHODS

This quantitative and analytical research study is mainly based on secondary or published data. Financial data of top ten public and private sector banks are collected from the annual reports of these banks. For the Analysis or interpretation of data and testing the hypothesis it is essential to use statistical and accounting methods or research tools. So following parameters, related with the banking productivity applied for this purpose:

$$(a) \text{ Deposits Per Employee (DPE)} = \frac{\text{Total Deposits}}{\text{Total No. of Employees}}$$

$$(b) \text{ Advances Per Employee (APE)} = \frac{\text{Total Advances}}{\text{Total No. of Employees}}$$

$$(c) \text{ Business Per Employee (BPE)} = \frac{\text{Total Business}}{\text{Total No.of Employees}}$$

Total Business: Total Deposits + Total Advances

$$(d) \text{ Profit Per Employee (PPE)} = \frac{\text{Net Operating Profit}}{\text{Total No.of Employees}}$$

$$(e) \text{ Revenue Per Employee (RPE)} = \frac{\text{Total Revenue}}{\text{Total No.of Employees}}$$

$$(f) \text{ Cost Per Employee (CPE)} = \frac{\text{Employees Cost}}{\text{Total No.of Employees}}$$

$$(g) \text{ Student's t-Test: For the test of Hypothesis} \quad t = \frac{x_1 - x_2}{s} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}}$$

Breif Financials of the top ten banks

Entire banking sector of our country is working under the control and regulation of Reserve Bank of India, the central bank of India. Our commercial banking system is very strong and well diversified. Different types of banks, with thousands of the branches and ATMs are always ready to provide their services to more than 700 millions of customers. Following is the brief financial profile of the top ten public and private sector banks of India:

Analysis: Out of the top ten public sector banks SBI has the maximum amount of income and expenditures during the F.Y. 2016-17. PNB is at 2nd position in the terms of the amount of income and expenditures. OBC has the lowest amount of income and employees cost, while CBI has the lowest net operating profit. Out of the top ten private sector banks HDFC has the maximum amount of income and expenditures during the F.Y. 2016-17. ICICI is at 2nd position in the terms of the amount of income and expenditures. But the net operating profit of ICICI is more than HDFC. SIB has the lowest amount of income and net operating profit while IDFC has the lowest employees cost.

Analysis: Out of the top ten public sector banks, SBI has the maximum number of employees, branches and ATMs. In the same terms PNB stood at 2nd position. IDBI has the minimum number of employees and branches. Out of the top ten private sector banks, HDFC has the maximum number of employees, ICICI has the maximum number of branches and AXIS has maximum number of ATMs. IDFC has the minimum number of employees' branches and ATMs.

Analysis

- **Deposits Per Employee (DPE):** Accepting deposits is the core activity of all the commercial banks, as it provides required funds to be distributed as advances to the needy customers.

Table 1. Top ten public & private sector banks of india (on the basis of total assets as on 31st march 2017) financial profile: at a glance (in rs. crore)

PUBLIC SECTOR BANKS				
S.No.	Bank, Head Office & Establishment Year	Total Assets	Total Deposits	Total Advances
1.	State Bank of India (SBI), Mumbai. (Est. year – 1806)	2550731.12	2044751.39	1725086.11
2.	Punjab National Bank (PNB), New Delhi. (Est. year – 1894)	704314.33	621704.02	439000.21
3.	Bank of Baroda (BOB) Vadodara. (Est. year – 1908)	672589.87	601675.17	409016.6
4.	Bank of India (BOI), Mumbai. (Est. year – 1906)	611924.75	540032.01	394132.59
5.	Canara Bank (CANARA) Bengaluru (Est. year – 1906)	568464.34	495275.24	367259.78
6.	Union Bank (UNION) Mumbai (Est. Year – 1919)	443593.65	378391.58	303838.56
7.	IDBI Bank (IDBI) Mumbai. (Est. year – 1964)	347465.72	268538.1	228800.63
8.	Syndicate Bank (SYNDICATE) Manipal (Est. year – 1925)	292220.57	260560.86	205921.69
9.	Central Bank of India (CBI) Mumbai. (Est. year – 1911)	323904.78	296671.19	158250.16
10.	Oriental Bank of Commerce (OBC) Gurugram. (E.Y. – 1943)	248052.94	219339.39	174050.77
PRIVATE SECTOR BANKS				
1.	HDFC Bank (HDFC) Maumbai (Est. year – 1994)	807130.87	643639.66	596798.02
2.	ICICI Bank (ICICI) Mumbai (Est. year – 1994)	737546.29	490039.06	526766.63
3.	AXIS Bank (AXIS) Ahmedabad (Est. year – 1993)	575172.20	414378.79	418671.22
4.	Kotak Mahindra Bank (KOTAK).Mumbai(EY 2004)	206139.28	157425.86	145406.13
5.	Yes Bank (YES) Mumbai (Est. year – 2003)	203534.59	142873.86	132262.68
6.	Indusind Bank (INDUS) Mumbai. (Est. year – 1994)	169672.04	126572.22	121982.79
7.	Federal Bank (FEDERAL) Kochi. (Est. year – 1947)	112504.27	97664.56	78839.20
8.	IDFC Bank (IDFC) Mumbai. (Est. year – 2015)	105148.46	40208.22	55799.41
9.	Jammu & Kashmir Bank(JK)Srinagar. (EY– 1938)	79415.64	72463.09	53798.53
10.	South Indian Bank (SIB) Thrissur (Est. year – 1929).	72923.74	66117.49	50338.66

Source: Annual Report F.Y. 2016-17 of All the Banks

Table 02. Total revenue, employees cost and net operating profit of top ten public & private sector banks of India (for the financial year 2016-17)

(In Rs. Crore)

PUBLIC SECTOR BANKS						
S.No.	Bank	Interest Earned	Non Interest Income	Total Revenue	Employees Cost	Net Operating Profit
1	SBI	175518.24	35460.95	210979.19	26,489.28	50847.92
2	PNB	47275.99	8951.37	56227.36	5420.72	14565.16
3	BOB	42199.93	6758.06	48957.99	4637.77	10975.07
4	BOI	39290.85	6772.33	46063.18	5,396.62	9732.64
5	CANARA	41387.64	7554.4	48942.04	4915.09	8913.89
6	UNION	32659.98	4964.6	37624.58	3,434.20	7430.1
7	IDBI	27791.37	3967.6	31758.97	2,203.59	4578.45
8	SYNDICATE	23003.79	3457.36	26461.15	3,793.95	4233.2
9	CBI	24661.33	2875.64	27536.97	4,214.31	3088.54
10	OBC	18422.33	2765.52	21187.85	2,099.34	4170.14
	TOTAL	472211.45	83527.83	555739.28	62,604.87	118535.11
PRIVATE SECTOR BANKS						
1	HDFC	69305.96	12296.5	81602.46	6,483.66	25732.4
2	ICICI	54156.28	19504.48	73660.76	5,733.71	26486.74
3	AXIS	44542.16	11691.31	56233.47	3,891.86	17584.52
4	KOTAK	17698.93	3477.16	21176.09	2,768.53	5984.81
5	YES	16424.69	4156.76	20581.45	1,805.04	5837.58
6	INDUS	14405.67	4171.49	18577.16	1,521.02	5451.01
7	FEDERAL	8677.38	1081.81	9759.19	1163.75	1924.92
8	IDFC	8532.71	1013.12	9545.83	573.62	1753.46
9	JK	6685.86	492.86	7178.72	1122.54	1294.4
10	SIB.	5847.08	715.56	6562.64	676.52	1214.58
	TOTAL	246276.72	58601.05	304877.77	25,740.25	93264.42

Source: Annual Report (2016-17) of All the Banks

Table 03. Employees, branches and atms of top ten public & private sector banks of india (as on 31st march 2017)

PUBLIC SECTOR BANKS				
S.No.	Bank	No. of Employees	No. of Branches	No. of ATMs.
1	SBI	2,09,567	17,170	50,188
2	PNB	73,919	6,938	10,681
3	BOB	52,420	5,538	10,441
4	BOI	47,750	5,016	7,717
5	CANARA	59,413	6,083	10,519
6	UNION	36,377	4,282	7,183
7	IDBI	17,570	1,995	3,700
8	SYNDICATE	34,989	3,933	3,974
9	CBI	37,130	4,714	5,285
10	OBC	21,552	2,376	2,621
PRIVATE SECTOR BANKS				
1	HDFC	84,385	4,715	12,260
2	ICICI	82,841	4,850	13,882
3	AXIS	56,086	3,304	14,163
4	KOTAK	46,500	1,369	2,163
5	YES	20,125	860	1,785
6	INDUSIND	25,314	1,200	2,036
7	FEDERAL	11,593	1,252	1,667
8	IDFC	5,148	74	21
9	JK	10,014	865	1,096
10	SIB.	7,677	852	1,334

Source: Annual Report (2016-17) of All the Banks & Report on trends and Progress in Banking by RBI

Out of the top ten public sector banks in the term of DPE, IDBI is at 1st position with Rs.15.28 Crore and BOB is at 2nd with Rs.11.48 Crore, while SYNDICATE has the minimum DPE of Rs.7.45 Crore. Out of the top ten private sector banks in the term of DPE, SIB is at 1st position with Rs.8.61 Crore and FEDERAL is at 2nd with Rs.8.42 Crore, while KOTAK has the minimum DPE of Rs.3.39 Crore. So in terms of both the maximum and minimum values the DPE of public sector banks is significantly greater than the DPE of private sector banks. Five public sector banks have DPE of more than Rs.10 Crore, while only two private sector bank has the maximum DPE between Rs. 8 to 9 Crore. The minimum amount of DPE of public sector banks is almost equal to the maximum amount of DPE of private sector banks.

We can also observe such variation in average DPE, as average DPE of public sector banks (Rs. 10.06 Crore)) is about 50% more than private sector banks (Rs. 6.85 Crore). So the employees' productivity of public sector banks is greater than the private sector banks in terms of the DPE.

- **Advances Per Employee (APE);** Out of the top ten public sector banks in the term of APE, IDBI is again at 1st position with Rs.13.02 Crore and UNION is at 2nd with Rs.8.35 Crore, while SYNDICATE has the minimum APE of Rs.4.26 Crore. Out of the top ten private sector banks in the term of APE, IDFC is at 1st position with Rs.10.84 Crore and AXIS is at 2nd with Rs.7.46 Crore, while KOTAK has the minimum APE of Rs. 3.13 Crore.

(Ho1): “There is no significant difference between Business Per employee (BPE) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

Table 04. Test of first null hypothesis by student's t-test

S.No	Particulars	Public Sector Banks	Private Sector Banks.
1.	No. of banks sample (n)	$n_1 = 10$	$n_2 = 10$
2.	Average BPE (x)	$\bar{x}_1 = 17.66$	$\bar{x}_2 = 13.35$
3.	Sum of the squares of deviations	$\sum (d_1)^2 = 189.96$	$\sum (d_2)^2 = 99.88$
4.	(S) :	$\sqrt{\frac{\sum (d_1)^2 + \sum (d_2)^2}{n_1 + n_2 - 2}} = 4.02$	
5.	Student's T – Test	$\frac{\bar{x}_1 - \bar{x}_2}{S} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}} = 2.39$	
6.	Degree of freedom (d.f.)	$(n_1 + n_2 - 2) = 18$	
7.	Critical Value at 18 d.f. and 5% significance level	2.101	
8.	Result	Calculated Value > Critical Value 2.39 > 2.101 Ho1 : Rejected	
4.	Alternative hypothesis Accepted	“There is a significant difference between Business Per Employee (BPE) of the public sector banks and private sector banks of India in Financial Year 2016-17.”	

Source: Own Computation on the basis of banking data.

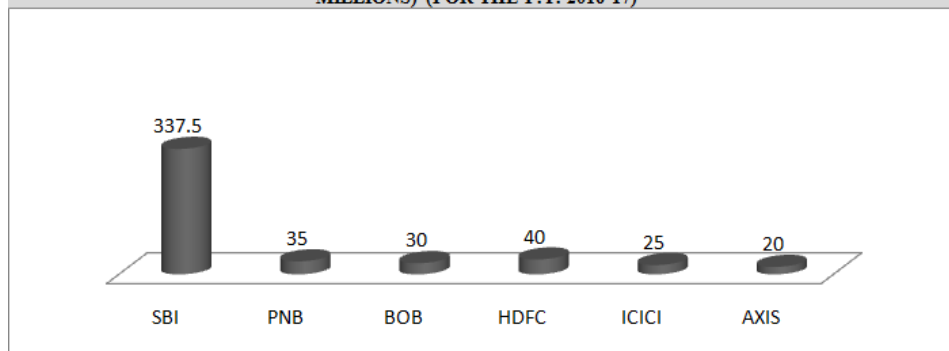
(Ho2): “There is no significant difference between Revenue Per Employee (RPE) of the public sector banks and private sector banks of India in Financial Year 2016-17.”

Table 05. Test of second null hypothesis by student's t-test

S.No	Particulars	Public Sector Banks	Private Sector Banks .
1.	No of banks sample (n)	$n_1 = 10$	$n_2 = 10$
2.	Average RPE (x)	$\bar{x}_1 = 98.13$	$\bar{x}_2 = 93.39$
3.	Sum of the squares of deviations	$\sum (d_1)^2 = 8702.94$	$\sum (d_2)^2 = 11936.25$
4.	(S) :	$\sqrt{\frac{\sum (d_1)^2 + \sum (d_2)^2}{n_1 + n_2 - 2}} = 33.86$	
5.	Student's T – Test	$\frac{\bar{x}_1 - \bar{x}_2}{S} * \sqrt{\frac{n_1 * n_2}{n_1 + n_2}} = 0.14$	
6.	Degree of freedom (d.f.)	$(n_1 + n_2 - 2) = 18$	
7.	Critical Value at 18 d.f. and 5% significance level	2.101	
8.	Result	Calculated Value < Critical Value 0.14 < 2.101 Ho2 : Accepted	

Source: Own Computation on the basis of banking data.

GRAPH 03: CUSTOMER BASE OF TOP THREE PUBLIC AND PRIVATE SECTOR BANKS OF INDIA (IN MILLIONS) (FOR THE F.Y. 2016-17)



Source: Annual Reports of the Banks.

So in terms of both the maximum and minimum values the APE of public sector banks is greater than the APE of private sector banks. Five public sector banks have APE of more than Rs.8 Crore, while only one private sector bank has the same. We can also observe such variation in average APE, as average APE of public sector banks (Rs. 7.60 Crore) is more than private sector banks (Rs. 6.50 Crore). So the employees' productivity of public sector banks greater than the private sector banks in terms of the APE.

- **Business Per Employee (BPE):** Out of the top ten public sector banks in the term of BPE, IDBI is at 1st

position with Rs.28.30 Crore and BOI is at 2nd with Rs.19.56 Crore, While CBI has the minimum BPE of Rs.12.25 Crore. Out of the top ten private sector banks in the term of BPE, SIB is at 1st position with Rs.18.65 Crore and FEDERAL is at 2nd with Rs.15.22 Crore, while KOTAK has the minimum BPE of Rs.6.52 Crore. So in terms of both the maximum and minimum values the BPE of public sector banks is significantly greater than the BPE of private sector banks. Five public sector banks have BPE of more than Rs.18 Crore, while only one private sector bank has the same. We can also observe such variation in average BPE, as average BPE

of public sector banks (Rs. 17.66 Crore)) is about 35% more than private sector banks (Rs. 13.35 Crore). So the employees' productivity of public sector banks is greater than the private sector banks in terms of the BPE.

Analysis

- **Revenue Per Employee (RPE):** Out of the top ten public sector banks in the term of RPE, IDBI is at 1st position with Rs.189.76 Lacs and UNION is at 2nd with Rs.103.43 Lacs, while SYNDICATE has the minimum RPE of Rs.74.16 Lacs. Out of the top ten private sector banks in the term of RPE, IDFC is at 1st position with Rs.185.43 Lacs and YES is at 2nd with Rs.102.27 Lacs, while KOTAK has the minimum RPE of Rs. 45.54 Lacs. So in terms of both the maximum and minimum values the RPE of public sector banks is slightly higher than the RPE of private sector banks. Three public sector banks and three private sector banks have RPE of more than Rs.100 Lacs. We can also observe such variation in average RPE, as average RPE of public sector banks (Rs. 98.13 Lacs) is higher than private sector banks (Rs. 93.39 Lacs). So the employees' productivity of public sector banks is slightly higher than the private sector banks in terms of the RPE.
- **Profit Per Employee (PPE):** Out of the top ten public sector banks in the term of PPE, IDBI is at 1st position with Rs.26.06 Lacs and SBI is at 2nd with Rs.24.26 Lacs, while CBI has the minimum PPE of Rs.8.32 Lacs. Out of the top ten private sector banks in the term of PPE, IDFC is at 1st position with Rs.34.06 Lacs and ICICI is at 2nd with Rs.31.97 Lacs, while JK has the minimum PPE of Rs. 12.93 Lacs. So in terms of both the maximum and minimum values the PPE of private sector banks is higher than the PPE of public sector banks. Five public sector banks have PPE in the range of Rs.20-26 lacs, while four private sector banks have PPE in the range of Rs.30-34 Lacs. We can also observe such variation in average PPE, as average PPE of private sector banks (Rs. 23.66 Lacs) is 27% higher than public sector banks (Rs. 18.65 Lacs). So the employees' productivity of private sector banks is significantly greater than the public sector banks in terms of the PPE.
- **Cost Per Employee (CPE) :** Out of the top ten public sector banks in the term of CPE, SBI is at 1st position with Rs.12.64 Lacs and IDBI is at 2nd with Rs.12.54 Lacs, while UNION has the minimum CPE of Rs.9.44 Lacs. Out of the top ten private sector banks in the term of CPE, JK is at 1st position with Rs.11.21 Lacs and IDFC is at 2nd with Rs.11.14 Lacs, while KOTAK has the minimum CPE of Rs. 5.95 Lacs. So in terms of both the maximum and minimum values the CPE of public sector banks is higher than the CPE of private sector banks. Five public sector banks have CPE in the range of more than Rs.10 lacs, while only three private sector banks have the same. We can also observe such variation in average CPE, as average CPE of public sector banks (Rs. 10.23 Lacs) is 25% higher than private sector banks (Rs. 8.37 Lacs). It means public sector banks are spending more amounts on their employees in form of their salary and allowances etc. So banking sector is one of the few service sectors in our country where salaries offered public by sector is

significantly higher than the private sector. On other hand the CPE of CBI is more than its PPE, it means they are paying salary to the employees, more than their profits. In case of SYNDICATE the difference between CPE and PPE is very narrow. In case of public sector banks the CPE is 10.5 % of their RPE, while in case of private sector banks this is only 9%.

Test of Hypothesis

Reasons of variation in Productivity: With the analysis of above tables and test of hypothesis, it is noticeable that there is significant difference between the employee's productivity of public sector banks and private sector banks. In term of BPE the productivity of the public sector banks is higher than the private sector banks as it is also visible in the test of first null hypothesis. However there is no significant variation in the terms of RPE as it is also visible in the test of second null hypothesis. It means the main variation is concerned with the BPE, PPE and CPE. We can discuss the main reasons of this variation on the basis of the following points:

- **Customer Base:** In the terms of the DPE and APE the performance of the employees of the public sector banks is better than the private sector banks; as a result the BPE of public sector banks is also higher. Due to the Government ownership and existence of more than 100 years, public sector banks are enjoying great trust and credibility of the general public. This is a special advantage to the public sector banks, so they are able to attract a huge amount of deposits from their large number of customers. For example customer base of SBI (337.5 millions) is more than total customers of all the private sector banks of India. In fact interest paid on deposits by private sector banks is always higher than the public sector banks, still the deposits of public sector banks is higher. Average interest earned on advances by private sector banks is also slightly higher than the average interest earned by the public sector banks, but again the advances of public sector banks are more than the private sector banks. So the main reason of variation is the loyal customer base of public sector banks.
- **Branch Network:** Extensive network of branches spread over the each and every corner of country is also one of the main reasons for the better performance of the employees of the public sector banks. This large network of branches and ATMs is very useful to achieve a higher BPE of public sector banks. Due to this network they can easily deliver their services according to the requirement of the general public. As on 31st March 2017 total branches of top ten public sector banks were 58,045 which was almost three times of top ten private sector banks, so they can attract a huge amount of deposits.
- **Non Performing Assets (NPAs):** In the terms of the DPE, APE and BPE the performance of the employees of the public sector banks is better than the private sector banks; even in the terms of RPE their performance is slightly better. But in the terms of an important parameter PPE the performance of public sector banks is well below the private sector banks. Main reason for same is growing NPAs of public sector banks. According to the Ministry of Finance, Govt. of India, Gross NPAs of entire banking sector till the end

of the last financial year (31st March 2017) it is more than 8,50,000 Crore, out of this the major share belongs to the public sector banks. Due to this major financial problem their productivity of earning the income cannot convert into the real profits.

- **Non Interest Income:** Earning interest on the loans and advances is the major source of revenue of all the commercial banks, but to face intense competition they are also trying to generate some extra revenue from other sources. It is known as non interest income such as commission, exchange, brokerage, fees or charges, profit on sale of investments, profit on sale of fixed assets, profit on revaluation of investments, merchant banking services etc. Private sector banks are always deploying enough human resources to earn noninterest income to boost up their profits. So in private sector banks there are thousands of employees which are not involve in direct banking activities of deposits and advances, but they are engaged in search of non interest income. Out of the total revenue of the private sector banks average 19.22% is earned as non interest income, while public sector banks are earning average 15.03% from this source. So non interest income is one of the major reasons of the higher PPE of private sector banks.
- **Human Resources Management (HRM):** As we all know entire banking system is depends upon the working of Human Resources, so the effective and efficient HRM is the first condition of the success of any bank on this globe. In this term private sector banks are well ahead of the public sector banks. We can observe this through the efficiency, knowledge, skill, attitude and personality of employees of the private sector banks. The average age of all the employees of the public sector banks is 40 years while the average age of the private sector bank employees is only 30 years. Average CPE of private sector banks is 35.4 % of their PPE, but in case of public sector banks this is 54.9%. This percentage reflects the difference between the HRM practices and utilisation in both the type of banks.
- **Employee Benefit Expenses:** Human resources are not only asset of a commercial bank; it is also a major operating expenditure after the interest cost. So the payments and provisions for the employees (or employees benefit expenses) is main expenditure for both types of banks. In case of public sector banks out of the total non interest expenses 57.13% is meant for the employees benefit expenses but in case of the private sector banks this is only 38.11%. It means that public sector banks are spending more amount on employees as compare to private sector banks. This fact also visible in the terms of CPE, where CPE of public sector banks is higher than the private sector banks. It is also affecting the PPE of public sector banks.
- **Non Banking Activities:** It is also one of the main reasons of the lower PPE of the public sector banks. As we already know that the public sector banks are playing a key role in the implementation of all the major social benefit schemes of the Govt. of India. Like PM Jan Dhan Yojna, Jeevan Jyoti Yojna, Jeevan Surksha Yojna, Sukanya Samridhi Yojana, Transfer of Subsidy of LPG, Kerosene, Scholarships etc. Large part of human resources of these banks is always engaged in such non banking and non profitable activities. For

example under PM Jan Dhan Yajana SBI has successfully opened more than 85 million accounts. While on other hand the role of private sector banks is limited in this field due to unavailability of wide network of branches and limited social responsibility.

Suggestions and Conclusion

On going through the analysis of the employee's productivity of top public and private sector banks of India through the appropriate parameters and test of hypothesis we can easily observe a significant variation between the employee's performances of both types of banks. The comprehensive analysis of productivity shows that:

- DPE of public sector banks is 50% more than private sector banks, so the productivity of private sector banks is well ahead of public sector banks. Their APE is also higher than the private sector banks. Because of higher DPA and APA, the BPE of public sector banks is about 35% higher than the private sector banks.
- The employees' productivity of public sector banks is also slightly higher than the private sector banks in terms of the RPE.
- Average PPE of private sector banks is 27% higher than public sector banks. So the employees' productivity of private sector banks is significantly greater than the public sector banks in terms of the PPE.
- Such variation is also visible in average CPE, as average CPE of public sector banks is 25% higher than private sector banks. It shows that in terms of per employee cost public sector banks are spending more amounts than the private sector banks. In this way banking sector is one of the few service sectors in our country where salaries offered public by sector is significantly higher than the private sector.

With the analysis of the main reasons of the variation in productivity, we can suggest that the employees and management of both the banks are required to improve their performance. They should work on the issue of NPAs, with dual approach. First they should try to disburse the credit in favour of solvent and honest customers, after proper enquiry and without political pressure.

In second they should try to resolve the matters of previous NPAs according to the guidelines of RBI. Public sector banks are also suggested to launch new credit products for maximum utilisation of the bulk amount of the deposits available. Proper use of the advance technology will helpful for them to reduce their operating cost. They should also try to improve their HRM efficiency to achieve greater profit per employee. Private sector banks are also suggested to open their new branches in rural and semi urban area to collect their savings and to give banking facilities cover to large unbanked population. Public sector banks are not only the back bone of our economy, but they are also playing a leading role in the process of social welfare of the millions of the people of this great country. This is a hard fact and before reaching any conclusion we should consider this fact, because it was also the main objective of the nationalisation of these banks. We cannot expect that they can achieve the greater standards of the productivity with these types of activities. Instead of this we can expect that they can use their available vast resources to give at par competition to the private sector banks.

REFERENCES

- Amarchand, D. 1987. Research Methods in Commerce Chennai, Emerald Publishers
- Amita, B. 1996. Banking Profitability with a Hybrid Profit Function: The Indian Case, IER Vol. XXXI No. 2, pp 223-24
- Annual Reports of all the Banks (F.Y. 2016-17)
- Bhatia, S. Kumar, B. and Banga, G. 2007. Menace of Non Performing Assets (NPAs) in Non Banking Finance Companies (NBFCs), India J. Acct. 38 42-50
- Credit Rating Information Services of India Limited. (CRISIL) 2002. Profitability of Banks A Study Report.
- Desai, V.R.M. 1978. Banking Development in India, Jaipur, Rawat Publication, 33-34
- Ende, 2016. Financial performance Analysis Using Economic Value Added, Bandung University of Pendidikan, Indonesia
- Hussain Farhat, 1986. Public Sector Commercial Banks in India, New Delhi Deep & Deep Publications.
- Janki, B. 2002. Unleashing Employees Productivity: Need for a Paradigm Shift, Indian Banking Association Bulletin Vol. CXIV No. 03, March, 7-9
- Joshi, P.N. 1986. Profitability and Profit Planning in Banks Bankers, New Delhi Economists Meet.
- Kothari, C.R. 1990. Research Methodology, Methods And Techniques, New Delhi Wiley Eastern Ltd.
- Kulkarni, L.O. 1979. Development Responsibility and profitability of Banks. Economic and Political Weekly, 1-16.
- Malyadri, P. and Sirisha, S. 2015. An Analytical Study on Trend and Progress of Indian Banking, Journal of Business & Financial Affairs. Vol.4, Issue 1 1-7
- Nayan, K. 1982. Performance Evaluation of Commercial Banks: Development of an evaluation Model Ph.D. Thesis Shimla. Himachal Pradesh University.
- Rappaport, A. 1986. Creating Shareholder Value New York, The Free Press.
- Reserve Bank of India (2017) – Statistical Report on Banks.
- Shah, S.C. 1977. Banking Personnel Manpower of banking, Commerce JBD Publication Productivity. Sept. 24, 7-11
- Sharma, B. P. 1974. The Role of the Commercial Banks in India's Developing Economy, New Delhi Sultan Chand & Co Pvt. Ltd.
- Singh Hawa and Kamlesh, 2013. Employees Productivity of Private Sector Banking in India, *International Journal of Management and Social Sciences Research*, Vol. 2 No. 10 Oct.pp 64-80
- Singh Sultan, 2007. Banking Sector Reforms in India, New Delhi Kanishka Publishers and Distributors.
- Singh, J. 1990. Productivity in Indian Banking Industry, New Delhi Deep & Deep Publication.
- Sirbu, A. 2012. EVA –Main Indicator in measuring the Value Creation of the Target Corporation Inc. Romania. IJRRAS.
- Souza, D. 2002. How well have public sector banks done? A Note. Economic and Political Weekly 23, 245-256.
- Stewart, G.B. 1994. The quest for value: A guide for senior Managers New York, Harper Business.
- Thangam, D., Mahila Vasanthim and Thoushifa, T. 2016. Productivity Analysis of Selected Banks in India, International Conference on Research Avenues in Social Science Organised by SNGC, Coimbatore, Vol. 1 Issue – 3 308-315.
- Venkatachalam, 1979. Operational efficiency and Profitability of Public Sector Banks, RBI Staff Occasional Paper. June.
- Yadav Shashi and Garima, 2015. Employees Productivity in Indian Banks: A Comparative Analysis, Pacific Business Review International Vol. 8 Issue 5, Nov. Pp 11-19
