

A Study on Employee`s Productivity in Indian Banking Sector



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Abstract

Productivity is defined as the relation between output and input, in other words, a ratio of output to input. The present study focused on banking sector in terms of Employees Productivity. The objective is to conceptualize employee productivity, develop a comprehensive measure of it and to explore the dynamics of its growth in Indian Banking Industry. Largely based on the technique of ratio analysis and secondary macroeconomic data of India, a detailed analysis of trends and growth in employee productivity in Indian banking Industry as a whole and also across distinct ownership groups is done. The study is concluded with suitable policy prescriptions for the banking sector in India.

Keywords: Productivity, Employee productivity, Ratio Analysis.

Introduction

Productivity: A Conceptual Framework

In simple words, the productivity is often defined as the output per unit of input employed. The concept of productivity is difficult to be applied in those industries where output cannot be measured easily like service industry. It is a complicated task to measure productivity in a multi product industry like banking. In banking sector, Human resources are most powerful and valuable assets which show the ability of banks to deliver value to the customers. So, skills of employees or labor or staff play an important role to achieve high productivity in banks. Employee's productivity means capacity of employees to produce maximum output with the use of minimum input and efforts. There are number of indicators to measure it. It is useful to make comparison of employee's productivity in different ownership groups of Banks: Public sector, Private sector and Foreign banks. Findings and conclusion given by the researcher will be helpful to the Indian Banks to improve the labor productivity.

Objectives of the Study

1. To study employee's productivity in the context of Banking sector in India.
2. To develop a comprehensive measure and explore the dynamics of employee productivity growth in Indian Banking industry.
3. To give valuable suggestions to improve Employee's Productivity.

Research Methodology

The study is confined to Indian Banking Industry. The productivity is analyzed on bank group and industry level. It is largely based on secondary macroeconomic data of India collected from RBI and IBA databases. Productivity is analyzed using Ratio analysis and a Comprehensive Employee Productivity index has been computed which take into account different variables. Time series data on all outputs and inputs from 1991-92 to 2013-14 are used for empirical analysis. The ratios were analyzed and interpreted by calculating Mean, Standard Deviation, Coefficient of Variations and compound Annual growth Rate to get a better picture of the labor productivity of Indian commercial banks.

Productivity Trends in Indian Banking

The following table shows the number of employees in different ownership groups from the year 1991-92 to 2013-14.

Table 1
Number of Employees / Staff in Scheduled Commercial Banks in India

Years	Nationalized Banks	SBI and Associates	Private Sector Banks	Foreign Banks
1991-92	560105	301855	52568	13081
1992-93	566113	304811	53615	13435
1993-94	582679	309106	54034	13051
1994-95	581788	313003	54760	13262
1995-96	579659	314175	58254	13935
1996-97	570866	318307	60660	14192
1997-98	566314	321162	62341	14903
1998-99	563771	319877	64706	15078
1999-2000	558021	315548	66377	13567
2000-01	507677	289654	69073	14143
2001-02	472572	284053	73096	13827
2002-03	472514	282923	65855	11083
2003-04	471951	280676	83350	14662
2004-05	467983	278269	92411	17210
2005-06	463479	270611	108873	20999
2006-07	465465	256225	139285	27850
2007-08	458138	248425	158197	33114
2008-09	455862	268598	176339	30304
2009-10	455049	267332	182284	27764
2010-11	461480	282453	218679	27976
2011-12	475697	280256	214304	25967
2012-13	502099	296565	229588	25454
2013-14	532830	294819	251722	24824

Source: Performance Highlights of Banks, Various Issues, Indian Banks' Association Publication

The Employee productivity indicators

In the present study, employee productivity of banks has been evaluated by taking six ratios in consideration. A brief summary of all these ratios are as under:

Deposit per employee

Deposits are the basic raw materials for banks. They help the banks to channel credit for productive investment in the economy. Higher the ratio of deposit per employee better is the productivity. From the table 2, it can be observed that the average

deposit per employee was highest in case of foreign banks (Rs. 5.37 cr.), followed by private banks (Rs. 2.79 cr.) for the entire study period. It is lowest in case of SBI and its Associate banks (Rs.2.17 cr.), thus showing low productivity. The total banking sector as a whole on an average had deposits per employee: Rs. 12.94 cr. for the total time period. On the whole, the ratio shows an increasing trend for the total banking sector as seen from the positive simple growth rate of deposits per employee over the years.

Table 2
Deposits Per Employee

(Rs. cr.)

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Simple Growth Rate
1991-92	0.28		0.47		0.23		1.29		2.27	
1992-93	0.31	11.77	0.53	13.69	0.29	23.34	1.55	20.28	2.69	18.18
1993-94	0.35	11.17	0.62	17.18	0.37	29.71	1.98	27.71	3.33	23.9
1994-95	0.41	16.14	0.71	13.27	0.48	29.77	2.12	6.71	3.71	11.5
1995-96	0.45	11.61	0.81	13.78	0.62	28.71	2.19	3.26	4.07	9.48
1996-97	0.53	16.56	0.92	14.47	0.84	35.57	2.62	19.84	4.91	20.81
1997-98	0.63	19.68	1.07	15.93	1.12	32.55	2.88	9.81	5.69	15.91
1998-99	0.74	17.17	0.69	-35.85	1.29	15.75	3.08	7.18	5.80	1.89
1999-2000	0.86	16.4	0.99	44.29	1.71	32.5	3.64	17.93	7.20	24.09
2000-01	1.08	25.09	1.08	8.95	1.98	15.71	4.19	15.22	8.32	15.65
2001-02	1.31	21.24	1.24	14.7	2.32	17.16	4.67	11.39	9.53	14.47
2002-03	1.46	11.47	1.38	11.83	2.66	14.78	5.88	26.06	11.38	19.47
2003-04	1.68	15.48	1.54	11.6	3.28	23.27	5.44	-7.51	11.94	4.95
2004-05	1.96	16.24	1.82	17.82	3.45	5.12	5.03	-7.6	12.25	2.54
2005-06	2.28	16.41	2.08	14.54	3.92	13.58	5.42	7.77	13.69	11.79
2006-07	2.83	24.34	2.47	18.79	3.95	0.89	5.41	-0.05	14.67	7.14

2007-08	3.51	23.94	3.12	26.01	4.27	8.05	5.77	6.6	16.66	13.61
2008-09	4.37	24.66	3.11	-0.24	4.17	-2.19	7.06	22.4	18.72	12.35
2009-10	5.31	21.43	4.15	33.38	4.66	11.74	8.57	21.28	22.69	21.2
2010-11	6.39	20.27	4.41	6.42	4.59	-1.69	8.60	0.43	23.99	5.73
2011-12	7.12	11.5	5.01	13.66	5.48	19.53	10.67	24.02	28.28	17.92
2012-13	7.77	9.12	5.46	8.86	6.08	10.93	11.32	6.1	30.62	8.28
2013-14	8.49	9.33	6.20	13.64	6.32	4.01	14.20	25.42	35.21	14.99
MEAN	2.61		2.17		2.79		5.37		12.94	
S.D	2.65		1.75		1.96		3.39		9.59	
C.V (%)	101.21		80.78		70.25		63.09		74.14	
CAGR	17%		12%		16%		12%		13%	
	17.93%		12.34%		15.75%		9.90%		31.61%	
AGR	17.93138		12.34289		15.74656		9.900651		68.53236	

Source : Performance Highlights of Banks, Various Issues, IBA Publication

Advances per Employee

It shows how efficiently the banks share out their funds in profitable investments. The table 3 demonstrates that the average advances per employee was highest in case of foreign banks (Rs. 4.18 cr.), followed by private banks (Rs.2.02 cr). Among all the bank groups, the lowest average was in case of SBI and associate banks (Rs. 1.59 cr.) and

the overall gap comes out to be Rs. 2.59 cr. Overall , an increasing trend is seen for all the banks as far as this indicator is concerned except for the year 1998-99 where the advances declined and had a negative growth (-4.37%).The growth analysis reveals that for the whole banking sector , the growth rate was 15%. for the entire study period of 23 years.

Table 3
Advances Per Employee

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)
1991-92	0.16		0.32		0.12		0.70		1.30	
1992-93	0.17	5.41	0.35	10.25	0.17	38.41	0.78	10.47	1.47	12.41
1993-94	0.16	-4.6	0.33	-5.94	0.18	7.73	0.88	13.26	1.55	5.95
1994-95	0.19	21.82	0.41	21.72	0.25	40.6	1.10	25.27	1.96	25.94
1995-96	0.22	14.53	0.48	18.96	0.38	50.61	1.51	36.98	2.60	32.78
1996-97	0.24	7.8	0.52	6.89	0.47	23.16	1.86	23.13	3.09	18.81
1997-98	0.29	18.87	0.60	15.49	0.57	20.16	1.96	5.25	3.40	10.3
1998-99	0.33	16.4	0.34	-43.05	0.64	12.63	1.94	-0.57	3.26	-4.37
1999-2000	0.40	21	0.41	20.87	0.84	31.08	2.63	35.02	4.28	31.34
2000-01	0.52	29.4	0.52	26.76	0.99	17.5	3.04	15.95	5.07	18.56
2001-02	0.67	28.34	0.58	11.6	1.59	61.66	3.52	15.55	6.36	25.42
2002-03	0.76	13.95	0.67	15.42	1.78	12.03	4.43	25.86	7.64	20.19
2003-04	0.87	14.59	0.79	17.49	2.09	16.96	4.13	-6.78	7.87	3.03
2004-05	1.12	28.33	1.02	30.25	2.01	-3.82	4.38	6.05	8.53	8.32
2005-06	1.47	31.38	1.43	39.33	2.87	42.77	4.65	6.16	10.41	22.07
2006-07	1.92	30.62	1.88	32.08	2.97	3.66	4.54	-2.36	11.31	8.68
2007-08	2.45	27.29	2.39	26.94	3.28	10.32	4.87	7.27	12.98	14.75
2008-09	3.11	26.99	2.75	15.22	3.26	-0.48	5.46	12.18	14.58	12.34
2009-10	3.75	20.52	3.21	16.59	3.59	9.94	5.88	7.74	16.42	12.63
2010-11	4.67	24.61	3.52	9.65	3.65	1.73	6.99	18.87	18.82	14.63
2011-12	5.35	14.61	4.11	16.79	4.51	23.65	8.85	26.65	22.82	21.24
2012-13	5.77	7.85	4.65	13.15	4.98	10.43	10.36	17.04	25.76	12.88
2013-14	6.27	8.6	5.31	14.11	5.34	7.14	11.73	13.23	28.64	11.17
MEAN	1.78		1.59		2.02		4.18		9.57	
S.D	2.02		1.57		1.67		3.02		8.16	
C.V (%)	113.72		98.90		82.40		72.29		85.28	
CAGR	18%		14%		19%		14%		15%	
AGR	20.81%		14.73%		18.67%		12.47%		15.15%	

Source: Compiled from Performance Highlights of Banks, IBA, Various Issues

Business Per Employee

Total business of a bank comprises of the sum total of deposits raised and advances and its ability to maximize productivity from each employee. Business per employee = Total business / Number of employees. Higher the value of this ratio, higher is the productivity and vice versa. The table 4 shows that among all the bank groups, the mean business per

employee is highest in case of foreign banks (Rs.9.71cr.), followed by private banks (Rs. 4.88 cr.) and Nationalized banks (Rs. 4.39 cr.). Thus, the lowest average was in case of State bank group. (Rs. 3.78 cr.) The average business per employee for the total banking sector as a whole was Rs.22.75cr. for the time period 1991-2013. Also, overall the results reveal an increasing trend in the ratio for the entire

banking sector except for the year 1998-99 and 2003-04, where there is negative growth.

Table 4
Business Per Employee

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)
1991-92	0.44		0.79		0.35		1.99		3.58	
1992-93	0.48	9.30	0.89	12.53	0.45	28.61	2.33	16.85	4.16	16.13
1993-94	0.51	5.60	0.96	7.65	0.55	21.59	2.86	22.88	4.88	17.47
1994-95	0.61	19.65	1.11	16.20	0.74	33.51	3.22	12.43	5.68	16.31
1995-96	0.68	11.00	1.29	15.74	1.00	36.23	3.70	14.79	6.66	17.35
1996-97	0.77	13.61	1.44	11.58	1.31	30.88	4.48	21.19	8.00	20.02
1997-98	0.92	19.53	1.66	15.81	1.68	28.08	4.83	7.91	9.10	13.76
1998-99	1.07	16.88	1.02	-38.42	1.93	14.68	5.03	4.04	9.05	-0.46
1999-2000	1.26	17.80	1.40	36.52	2.55	32.23	6.26	24.53	11.47	26.73
2000-01	1.60	26.50	1.60	14.16	2.96	16.11	7.23	15.50	13.39	16.68
2001-02	1.98	23.51	1.82	13.72	3.91	31.96	8.18	13.14	15.88	18.61
2002-03	2.22	12.30	2.05	12.95	5.25	34.27	10.96	33.99	20.48	28.95
2003-04	2.56	15.19	2.32	13.17	5.27	0.38	9.56	-12.77	19.71	-3.77
2004-05	3.08	20.39	2.84	22.41	5.76	9.30	9.40	-1.67	21.08	6.96
2005-06	3.75	21.75	3.38	18.91	6.78	17.71	10.06	7.02	23.96	13.69
2006-07	4.75	26.92	4.36	28.96	6.91	1.92	13.19	31.11	29.21	21.89
2007-08	5.96	25.29	5.51	26.41	7.54	9.12	10.36	-21.46	29.36	0.52
2008-09	7.48	25.63	6.50	18.11	7.43	-1.46	12.52	20.85	33.93	15.58
2009-10	9.06	21.05	7.36	13.12	7.98	7.40	14.44	15.34	38.83	14.43
2010-11	11.05	22.02	7.93	7.82	8.23	3.13	15.59	7.96	42.80	10.22
2011-12	12.46	12.76	9.12	15.04	9.99	21.39	19.52	25.21	51.09	19.38
2012-13	13.53	8.59	10.10	10.71	10.76	7.71	21.67	11.01	56.06	9.72
2013-14	14.75	9.02	11.51	13.94	12.78	18.77	25.92	19.61	64.96	15.87
MEAN	4.39		3.78		4.88		9.71		22.75	
S.D	4.66		3.34		3.69		6.45		17.86	
C.V (%)	106.22		88.40		75.61		66.39		78.52	
CAGR	17%		13%		18%		12%		14%	
AGR	18.98		13.36		16.96		11.03		13.72	

Source: Compiled from Performance Highlights of Banks, IBA, Various Issues

Total Income Per Employee

This shows how much earning or profits banks are able to make through their employees. Total Income per employee= Total income / number of employees. Higher the value of this ratio, greater is the productivity. The average total income per employee for the total banking sector as a whole was Rs. 1.81 cr. and out of this, the highest average ratio

was in case of foreign banks (Rs.0.96 cr.). This bank group was followed by private banks (Rs. 0.36 cr.) and the lowest average was of State Bank group. Thus, showing low productivity in terms of this indicator in case of public sector banks. From the comparison of compound annual growth rates of different banks it can be said that private banks are at top while foreign banks were at the bottom.

Table 5
Total Income Per Employee

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)
1991-92	0.04		0.04		0.03		0.28		0.39	
1992-93	0.04	2.70	0.05	2.27	0.04	25.00	0.29	3.53	0.41	4.85
1993-94	0.04	5.26	0.04	-2.22	0.04	22.86	0.31	6.48	0.44	6.81
1994-95	0.05	15.00	0.05	18.18	0.06	34.88	0.35	12.50	0.51	15.49
1995-96	0.06	23.91	0.07	25.00	0.11	84.48	0.44	24.22	0.67	31.16
1996-97	0.07	15.79	0.07	12.46	0.12	13.08	0.54	22.94	0.80	19.71
1997-98	0.08	13.64	0.08	5.34	0.15	24.79	0.58	8.21	0.88	10.92
1998-99	0.09	16.00	0.09	19.09	0.17	13.25	0.64	9.48	0.98	11.52
1999-2000	0.10	16.09	0.11	16.68	0.21	24.56	0.76	19.84	1.18	20.04
2000-01	0.13	24.75	0.14	26.17	0.24	12.68	0.84	10.91	1.35	13.79
2001-02	0.15	21.43	0.16	16.30	0.28	18.33	0.94	11.02	1.53	13.83
2002-03	0.17	9.80	0.17	9.55	0.48	70.07	1.09	15.90	1.91	24.69
2003-04	0.18	7.74	0.18	6.98	0.40	-17.81	0.89	-18.32	1.65	-13.62
2004-05	0.19	3.31	0.19	4.35	0.35	-11.59	0.76	-14.66	1.49	-9.82

2005-06	0.21	9.63	0.22	13.02	0.40	13.96	0.83	9.64	1.65	11.10
2006-07	0.25	22.93	0.25	15.21	0.45	11.25	0.90	7.95	1.84	11.56
2007-08	0.34	33.33	0.33	32.40	0.56	24.94	1.06	17.75	2.28	23.60
2008-09	0.43	28.57	0.39	18.13	0.58	4.86	1.49	41.33	2.90	27.17
2009-10	0.49	12.27	0.44	11.25	0.57	-3.09	1.31	-12.21	2.79	-3.56
2010-11	0.57	18.14	0.46	4.83	0.54	-4.96	1.41	7.87	2.98	6.59
2011-12	0.73	27.75	0.58	26.10	0.74	37.62	1.82	28.75	3.86	29.75
2012-13	0.80	8.74	0.62	7.48	0.85	15.56	2.10	15.51	4.37	13.04
2013-14	0.84	5.78	0.70		0.89	4.45	2.39	13.71	4.82	10.42
MEAN	0.26		0.24		0.36		0.96		1.81	
S.D	0.26		0.20		0.26		0.57		1.28	
C.V (%)	98.06		85.29		72.95		59.93		70.45	
CAGR	15%		13%		17%		10%		12%	
AGR (%)	16.23		14.25		15.73		9.12		11.63	

Source: Performance Highlights of Banks, Various Issues, IBA Publication

Total Expenditure Per Employee

This indicator shows the total expenditure (interest and non –interest expenditure) incurred per employee. Higher the ratio less is the productivity. It is observed from the table that the highest average total expenditure per employee was in case of foreign banks (Rs.0.81cr.), thus showing low productivity

where as the lowest average for the entire study period was in case of State Bank group(Rs.0.21cr.), thus showing higher productivity in terms of this indicator. On an average the expenditure per employee for the total banking sector as a whole was Rs.1.58 cr.

Table 6
Total Expenditure Per Employee

(Rs. cr.)

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)
1991-92	0.04		0.04		0.03		0.25		0.36	
1992-93	0.05	42.86	0.04	2.33	0.03	22.22	0.36	42.29	0.49	36.03
1993-94	0.05	-4.00	0.04	-2.27	0.04	24.24	0.27	-23.89	0.41	-16.63
1994-95	0.05	-4.17	0.05	13.95	0.05	26.83	0.30	10.95	0.45	11.08
1995-96	0.06	28.26	0.06	26.53	0.08	55.77	0.39	27.30	0.59	30.60
1996-97	0.06	8.47	0.07	14.52	0.11	34.57	0.49	26.36	0.73	24.45
1997-98	0.07	10.94	0.07	-2.82	0.14	25.69	0.54	10.63	0.82	11.60
1998-99	0.08	18.31	0.09	26.23	0.16	17.52	0.59	8.13	0.92	12.11
1999-2000	0.10	16.07	0.10	14.01	0.19	20.50	0.68	16.92	1.07	17.20
2000-01	0.12	25.13	0.13	28.90	0.22	14.95	0.77	12.87	1.25	15.84
2001-02	0.14	17.21	0.15	13.28	0.26	17.04	0.83	7.38	1.38	10.68
2002-03	0.15	5.59	0.16	7.59	0.44	67.82	0.92	11.22	1.67	20.97
2003-04	0.16	4.64	0.16	5.13	0.36	-18.95	0.73	-20.39	1.41	-15.36
2004-05	0.17	5.06	0.17	4.27	0.31	-12.11	0.64	-12.67	1.29	-8.58
2005-06	0.18	10.24	0.20	14.04	0.36	13.78	0.68	6.71	1.42	9.84
2006-07	0.22	22.40	0.22	14.87	0.40	12.39	0.73	6.87	1.58	11.36
2007-08	0.30	33.04	0.29	31.25	0.50	24.31	0.86	16.96	1.94	23.13
2008-09	0.39	29.19	0.35	18.03	0.52	5.24	1.24	45.50	2.50	28.56
2009-10	0.43	11.17	0.39	11.82	0.49	-5.56	1.14	-8.52	2.45	-2.04
2010-11	0.50	17.76	0.41	6.70	0.46	-7.51	1.14	-0.18	2.51	2.57
2011-12	0.66	31.75	0.52	25.85	0.63	38.82	1.46	28.08	3.27	30.40
2012-13	0.73	10.54	0.56	7.10	0.73	15.01	1.64	12.85	3.66	11.89
2013-14	0.80	8.99	0.66	17.38	0.76	4.12	1.98	20.52	4.19	14.47
MEAN	0.24		0.21		0.32		0.81		1.58	
S.D	0.23		0.18		0.22		0.45		1.07	
C.V (%)	97.55		85.04		70.99		55.35		67.77	
CAGR	15%		13%		16%		10%		12%	
AGR (%)	15.11		13.82		15.35		8.14		10.88	

Source: Performance Highlights of Banks, Various Issues, IBA publication

Establishment Expenses per employee

This represents banks expenditure on human resources for pension, salary, gratuity etc. Lower the establishment expenditure more is the productivity. The mean establishment expenditure per employee was found to be highest in case of foreign banks, as compared to other bank groups. The high expenses in case of foreign banks are primarily due to their lesser number of employees and

more expenditure to grasp more capable force. Bank group wise analysis, on the basis of growth rate reveal that foreign banks have registered highest growth rate (14%), as compared to other bank groups, thus showing more satisfactory growth. The trend analysis shows a fluctuating trend for all the bank groups as well as for the banking sector as a whole (as growth has been negative in some years).

Table 7
Establishment Expenses Per Employee

(Rs. cr.)

Years	Nationalized banks		SBI and Associates		Private Sector Banks		Foreign Banks		Total Sector	
	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)	Value	Growth (%)
1991-92	0.01		0.01		0.01		0.01		0.03	
1992-93	0.01	11.67	0.01	16.67	0.01	12.50	0.02	14.39	0.04	14.02
1993-94	0.01	8.96	0.01	5.19	0.01	-4.76	0.02	32.08	0.04	15.85
1994-95	0.01	28.77	0.01	30.86	0.01	33.33	0.03	20.95	0.05	25.94
1995-96	0.01	24.47	0.01	29.25	0.01	37.50	0.03	31.10	0.07	30.52
1996-97	0.01	2.56	0.01	-0.73	0.01	9.09	0.04	25.2 3	0.08	13.77
1997-98	0.01	16.67	0.01	6.62	0.01	13.33	0.04	-0.72	0.08	5.30
1998-99	0.02	17.86	0.02	17.93	0.02	10.29	0.05	20.77	0.10	18.08
1999-2000	0.02	13.33	0.02	9.36	0.02	24.67	0.06	26.00	0.12	20.79
2000-01	0.03	37.97	0.03	44.39	0.02	-0.53	0.07	9.52	0.14	17.88
2001-02	0.03	0.78	0.02	-12.22	0.02	18.28	0.08	17.39	0.15	8.76
2002-03	0.03	6.15	0.03	10.55	0.03	46.36	0.09	14.81	0.18	17.22
2003-04	0.03	5.07	0.03	13.36	0.03	-6.83	0.08	-12.90	0.17	-5.20
2004-05	0.03	13.45	0.03	9.09	0.03	3.33	0.08	-3.58	0.17	2.77
2005-06	0.04	6.99	0.04	21.60	0.04	16.13	0.09	20.36	0.20	17.32
2006-07	0.04	3.98	0.04	3.55	0.04	2.78	0.11	17.02	0.22	9.68
2007-08	0.04	6.56	0.04	1.47	0.04	18.92	0.12	12.73	0.25	10.70
2008-09	0.05	20.00	0.05	10.87	0.05	4.55	0.16	29.84	0.30	20.65
2009-10	0.05	15.38	0.06	26.36	0.05	10.87	0.17	4.97	0.33	10.78
2010-11	0.08	39.26	0.07	12.76	0.06	10.98	0.19	14.20	0.39	17.53
2011-12	0.07	-1.86	0.08	15.44	0.07	21.55	0.22	14.51	0.44	12.53
2012-13	0.08	5.69	0.08	3.31	0.07	8.43	0.24	6.79	0.47	6.26
2013-14	0.08	7.69	0.10	24.23	0.08	2.68	0.25	6.78	0.51	9.19
MEAN	0.03		0.03		0.03		0.10		0.20	
S.D	0.02		0.03		0.02		0.07		0.14	
C.V (%)	73.73		73.55		71.48		74.18		73.28	
CAGR	13%		13%		13%		14%		13%	
AGR (%)	12.67		12.18		12.89		13.24		12.88	

Source: Performance Highlights of Banks, Various Issues, IBA Publication

Employee Productivity Index

A large number of discrete ratios discussed above have been used to calculate sub indices and finally the overall productivity index. This productivity index have been computed using the statistical technique of normalization Initially the highest value in the series is represented by 1 and rest of values is calculated by dividing the actual values by highest value. It is done so in order to remove the differences in different scales used by different banks. So, in

order to put them on par, the process of normalization has been used. Second step after normalization is to divide the sum of normalized values by the total number of variables, to arrive at the average. Average of all the normalized ratios gives the sub index or index which may be termed as Employee productivity index. So, by using the appropriate metrics, a model has been designed to arrive at a comprehensive productivity index.

Table 8
Banking Group- wise Employee Productivity Index for Commercial Banks in India

Years	Nationalized Banks	SBI and Associates	Private Sector Banks	Foreign Banks	Total Sector
1991-92	0.06	0.07	0.04	0.09	0.22
1992-93	0.03	0.07	0.05	0.11	0.26
1993-94	0.04	0.08	0.06	0.11	0.28
1994-95	0.10	0.09	0.08	0.13	0.39
1995-96	0.05	0.11	0.11	0.16	0.41

1996-97	0.05	0.12	0.13	0.19	0.49
1997-98	0.30	0.13	0.15	0.21	0.79
1998-99	0.07	0.12	0.18	0.22	0.59
1999-2000	0.09	0.14	0.22	0.27	0.73
2000-01	0.11	0.18	0.24	0.31	0.85
2001-02	0.13	0.19	0.30	0.35	0.99
2002-03	0.14	0.21	0.42	0.42	1.22
2003-04	0.16	0.23	0.39	0.36	1.19
2004-05	0.18	0.26	0.39	0.34	1.21
2005-06	0.21	0.32	0.47	0.37	1.41
2006-07	0.26	0.37	0.51	0.41	1.58
2007-08	0.34	0.46	0.60	0.43	1.85
2008-09	0.43	0.52	0.61	0.56	2.11
2009-10	0.50	0.62	0.67	0.58	2.36
2010-11	0.76	0.67	0.69	0.62	2.71
2011-12	0.72	0.79	0.86	0.77	3.12
2012-13	0.94	0.86	0.77	0.86	3.59
2013-14	1.00	1.00	1.33	1.00	4.00
MEAN	0.29	0.33	0.40	0.39	1.41
S.D	0.30	0.28	0.32	0.25	1.10
C.V (%)	102.01	84.82	80.11	64.48	78.33

Source: Calculated from IBA Database in above Tables

In the above table 8, Employee productivity index has been computed by using the normalized values of employee productivity indicators and averaging them. It clearly shows that overall average Employee productivity index for the total banking sector for all the years was 1.41. The lead was taken by private banks with 0.4 (mean employee productivity). This was followed by foreign banks with its index value quite close to that of private banks (0.39). The public sector banks thus have somehow lagged behind in terms of employee productivity as compared to private and foreign banks pointing towards poor utilization of human resources as a factor of production in these banks. Due to their organizational rigidities, nationalized banks were unable to reap the benefits of liberalized regime. Private and foreign banks were thus better performers in employee productivity as they were better able to utilize their human resources as an asset and enhance their productivity in the post reform period.

Conclusion and Suggestions

Thus, in the nutshell it found that much of the productivity growth in Indian Banking sector, at aggregate as well as disaggregate level, took place in reforms period due to multiplicity of reasons. The interbank group comparative analysis reveals that Private sector banks had the highest labor productivity and were best performers. These were followed by foreign banks and thus, public sector banks were least productive. In Public sector banks due to overstaffing, organizational rigidities, priority sector lending and highly centralized decision making, the productivity is low and there is ample scope to improve the same. Privatization and liberalization gave lead to private and foreign banks and generated a competition for public sector banks. Public sector banks thus need to initiate certain measures like diversification, upscale their management capabilities, reposition their competitive strategy, resort to IT infrastructure and increase customer focus. With these measures in practice, PSBs can improve their employee productivity.

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