



A Comparative Analysis of Operational Efficiency in Public and Private Sector Banks in India

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Abstract

Banking sector witnessed a paradigm shift with the introduction of neo-liberal policies during 1991. In the post-liberalization period, there was an urgent need to bring about structural changes in the Indian banking system so as to make it economically viable and competitively strong. Several new private sector banks such as UTI Bank Ltd. (now Axis Bank Ltd.), HDFC Bank Ltd., IDBI Bank Ltd., ICICI Bank Ltd. etc. started their functions after the second phase of banking sector reforms. In this context the present study makes an attempt to understand the operational efficiency of select public sector and private sector banks in India after the introduction of economic liberalization. The study period is 2006–07 to 2016–17. The study observed that public sector banks have shown greater efficiency compared to the private sector banks. But public sector banks have recorded greater variability compared to the private sector banks.

Keywords: ATMs, Operational Efficiency, Yearly Business

1. INTRODUCTION

Banking sector witnessed a paradigm shift with the introduction of neo-liberal policies during 1991. In the pre-reform period banking sector was dominated by public sector banks. Major share capital was with the public sector banks. Liberalization of banking sector started with the encouragement to expand capital base with equity participation by the private investors. The share of public sector banks in the aggregate assets of the banking sector has come down from 90 percent in 1991 to around 75 % in 2004.

In the post-liberalization period, there was an urgent need to bring about structural changes in the Indian banking system so as to make it economically viable and competitively strong. A High Level Committee under the chairmanship of Mr. M. Narasimham, a former Governor of RBI was set up to examine all aspects relating to the structures, organizations, functions and procedures of the financial system. Based on the recommendations of the Narasimham Committee, the first phase of Financial Sector Reforms was initiated in 1991. The second phase of Banking Sector Reforms was initiated in 1998. Improving the allocative efficiency of resources through operational flexibility, improved financial viability and institutional strengthening were the objectives of banking sector reforms. Several new private sector banks such as UTI Bank Ltd. (now Axis Bank Ltd.), HDFC Bank Ltd., IDBI Bank Ltd., ICICI Bank Ltd. etc. started their functions.

In this context the present study makes an attempt to understand the operational efficiency of select public sector and private sector banks in India after the introduction of economic liberalization.

2. REVIEW OF LITERATURE

In their paper on "A Comparative Study of Efficiency of Public and Private Sector Banks" **Poonam and Gupta** (2017) analyzed the efficiency of various public and private sector banks during the period (2013-17). The analysis revealed that the efficiency of private sector banks is better in comparison to public sector banks. This difference can be due to differences in private and public sector services. **Ashokan and Menon** (2016) in their article on "A Study on Operational Efficiency of Public and Private Sector Banks in India" studied the operational efficiency of commercial banks in India. The objectives of the study are analyzing the comparative performance of public and private sector banks, profitability position of different sectors in relation to number of employees and challenges faced by public sector banks in Indian banking scenario. The study finds and concludes that the private sector banks have to improve on their branch expansion and employee strength. It is evident that the internal management and employee efficiency of nationalized banks are far better than other sectors of commercial banks. It is found that in terms of physical performances and business growth parameters nationalized banks were at the top position. The present study has also revealed that business per employee and profit per employee is maximum in case of nationalized banks during the study period.

Agrawal, and Yadav (2015) in their research work titled " A Comparative Study of the Public and Private Sector Bank with Special Reference to Punjab National Bank and HDFC Bank" showed a comparative study between the Growth rate in Punjab National Bank and HDFC Bank during a period of 10 years from 2004 to 2014 The main parameters of growth in banks are Net profit growth, Net assets growth, ROA (Return on Assets) and NPA (Non performing assets). The study concluded that growth in private sector (HDFC) banks is better than public sector (PNB) banks.

Mohapatra, Lenka and Pradhan (2015) in the article "A Study of Operational Efficiency of Commercial Banks in Indian Financial System" analyzed the operational efficiency of commercial banks in India with the objectives of analyzing the comparative performance of different sectors of commercial banks, profitability position of different sector in relation to number of employees and challenges faced by public sector banks in India. The present study is an evident that the internal management and employee efficiency of foreign banks are far better than other sectors of commercial banks. Maximum workers are working with public sector banks due to out-dated technology and improper employee management whereas foreign sector banks which are less in number but using latest technology to render the services to their customers have very less staff. The paper shows that public sector banks are lagging behind regarding various financial parameters in comparison with other sector banks.

A study by **Cesar and Pearline** (2014) observed that the major issues in the modern banking services are security, safety and the lack of trust especially on ATM machines.

Kumar and Reddy (2013) in their research work titled" Efficiency of Public and Private Commercial Banks in India A Comparative Study" attempted to empirically observe the efficiency of public and private commercial banks considering interest income to total asset ratio, total income to total asset ratio, interest expended to total asset ratio and total expenditure to total asset ratio taken as input and output for the banks and using non – parametric technique (Data envelopment analysis) which evaluates efficiency of bank through multiple output and input.

They observed that large banks have a less control over the operations in industry and therefore small size banks are efficient and controlling their operations in the forms of providing the modern banking and financial services and updating technological services. Private sector banks are providing more advance and generating revenue from non-traditional methods and services.

Khan and Fozia (2013) in their article titled "Growth and Development in Indian Banking Sector" showed the growth in Indian banking sector; the technological development in Indian banking sector and computerization in the banking sector. The study observed that technology increased access to the banking system, increased cost effectiveness and makes small value transactions possible. Technology allows transactions to take place faster and offers unparalleled convenience through various delivery channels. Technology enhances choices, creates new markets, and improves productivity and efficiency. The authors proved that effective use of technology has a multiplier effect on growth and development.

Goel and Rekhi (2013) in their paper "A Comparative Study on the Performance of Selected Public Sector and Private Sector Banks in India" showed that segmentation of the banking sector in India was done on bank assets size. They conclude that new banks are more efficient than old ones. The public sector banks are not as profitable as other sectors. The study observed that efficiency and profitability are interrelated. The key to increase performance depends upon Return on Asset (ROA), Return on Equity (ROE) and Net Interest Margin (NIM).

Dhanabhakyaam and Kavitha (2012) in the paper "Financial Performance of Public Sector Banks in India" evaluated the financial performance of six selected public sector banks in India. The selected banks performed well on the sources of growth rate and financial efficiency during the study period. The old and new private sector banks played a vital role in the marketing of new type of deposits and advances schemes.

Varadi, Mavaluri and Boppana (2006) in their article entitled "Measurement of Efficiency of Banks in India" observed that the public sector banks are having high efficiency in terms of productivity, profitability, financial management and asset quality, whereas the private banks are having a very high inefficiency levels during the study period in the different indicators but foreign banks seem to be more efficient than the private banks. Public sector banks are having high possibility to fulfill corporate and social responsibilities towards all stakeholders. In order to improve the efficiency both private and foreign banks should maintain their financial standards properly.

Kumara de (2004) in his paper titled "Technical Efficiency, Ownership, and Reforms: An Econometric Study of Indian Banking Industry" tried to estimate time-invariant and time-variant technical efficiency of the banks in the Indian banking industry. The results show that the efficiency of the banking industry has not improved after liberalization and the foreign-owned banks as a group has the highest efficiency regardless of the choice of the output measure.

3. OBJECTIVES OF THE STUDY

The main purpose of this study is to examine the efficiency of public sector and private sector banks between 2006-07 and 2016-17. The objectives of this paper are.

1. To analyze the trends in growth of banking sector in India.
2. To compare the efficiency levels of public and private sector banks in India.

4. RESEARCH METHODOLOGY

The study is primarily based on secondary data. The data for the study were drawn from the Reserve Bank of India (RBI) publications, government reports, moneycontrol.com, journals and websites of individual banks. The study period is 2006– 07 to 2016–17. Eleven important public sector and eleven private sector banks are selected purposively for the analysis.

Growth in banking sector is analyzed with the increase in bank branches and numbers of ATMs of each bank. Efficiency of the banks is analyzed by calculating operational efficiency using the following formula.

$$\text{Operational Efficiency} = \frac{\text{Operational Expenses}}{\text{Yearly Business}} \times 100$$

$$\text{Yearly Business} = \text{Deposits} + \text{Advances.}$$

Average operational expenses and the yearly business were calculated for the selected banks. Average operating efficiency for the period from 2006- 2017 and the Variability was calculated for the selected banks and presented in tables. Coefficient of variation was calculated to understand the variability.

5. GROWTH IN BANKING SECTOR

Banking sector has witnessed a considerable expansion since nationalization of 19 major banks took place in 1969.

Trends in the expansion of bank branches in India since the nationalization period is presented in table 1.

Table1: Growth of Banking Sector in India (lakhs)

Year	No. of Branches in Public Sector Banks	No. of Branches in Private Sector Banks	Total Branches
1969	0.07	0	0.08
2002	0.6	0.05	0.66
2003	0.61	0.05	0.66
2004	0.61	0.05	0.67
2005	0.62	0.06	0.68
2006	0.48	0.06	0.7
2007	0.5	0.07	0.72
2008	0.53	0.08	0.77
2009	0.56	0.09	0.8
2010	0.59	0.1	0.86
2011	0.63	0.11	0.91
2012	3233	1678	4911
2013	3490	1789	5279
2014	3772	1916	5688
2015	3997	1987	5984
2016	4143	2043	6186
2017	4240	2092	6332

Source: Annual Reports of RBI

The data shows that the real flip for the expansion of bank branches took place only after the introduction of Neo-liberal policies with structural adjustments in the economy during 1991-92. After the introduction of New Economic Policy there is a greater demand for the banking sector and opportunity for the growth of private sector banks. Therefore, the rapid expansion of bank branches has taken place after 2012 both in public sector as well as private sector. The data shows (Table 1) that the number of branches of public sector banks increased from mere 0.07 lakhs in 1969 to 3233 lakhs by 2012 and they further increased to 4240 lakhs branches by 2017. The same trend could be observed in the case of private sector banks also. The branches of private sector banks increased to 2092 lakhs by 2017 from 0.05 lakhs in 2002.

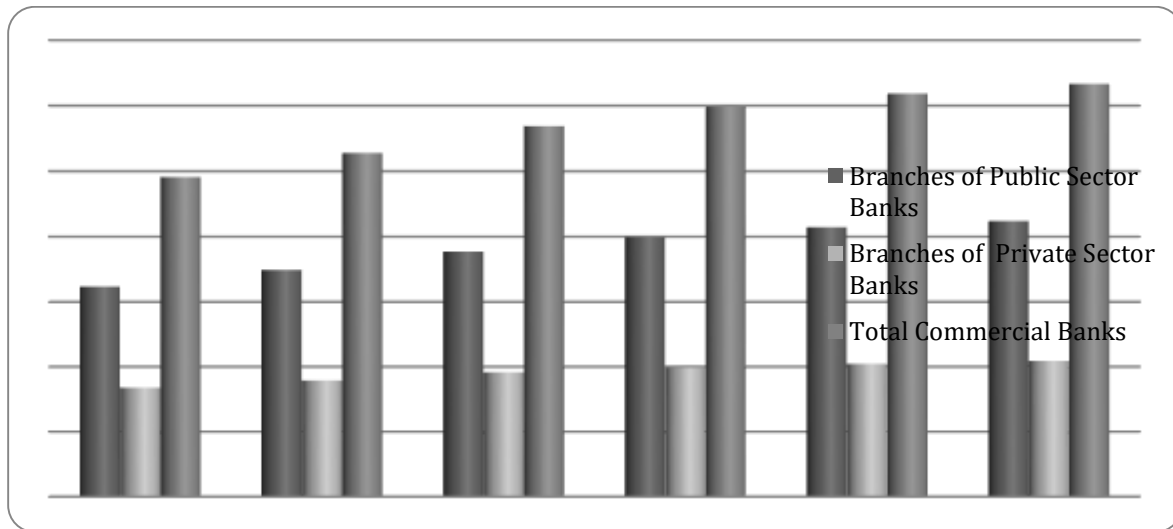


Figure 1: Growth of Banking Sector After Economic Liberalization

6. TRENDS IN THE EXPANSION OF ATMs

The neoliberal policies backed by technological changes in the usage of Information Communication Technology (ICT) resulted in the usage of technology in banking sector also. Usage of ATM has increased considerably in India and the number of ATMs is an indicator for the usage of ICT technology in banking sector. Data relating to the expansion of ATMs of both public and private sector banks is presented in table 2.

Table 2: Number of ATMs of Public and Private Sector Banks in 2006 and 2017

Number of ATMs							
Public Sector Banks				Private Sector Banks			
Sl No	Name	No of ATMs		Sl No	Name	No of ATMs	
		2006	2017			2006	2017
1	State Bank of India (SBI)	5569	59263	1	Dhanlaxmi Bank	61	373
2	Bank of India (BOI)	314	7717	2	Karnataka Bank	75	1334
3	Canara Bank	815	10519	3	South Indian Bank (SIB)	145	1320
4	Dena Bank	240	1538	4	Karur Vysya Bank (KVB)	291	1748
5	Indian Overseas Bank (IOB)	280	3679	5	AXIS Bank	1891	14163
6	Syndicate Bank	326	3974	6	ICICI Bank	2200	13882
7	Vijaya Bank	128	2031	7	IndusInd Bank	214	1988
8	Union Bank of India	473	7533	8	HDFC Bank	1323	12260
9	Corporation Bank	901	3169	9	Kotak Mahindra Bank	1891	2163
10	Punjab National Bank	700	10681	10	Yes Bank	4	1800
11	State Bank of Mysore	215	N	11	IDBI Bank	377	3537

Source: RBI, Annual Reports of Banks

The data shows that among the public sector banks, state bank of India has the largest number of ATMs and the number increased considerably in 2017 due to branch expansion as well as merging of other state banks into SBI during 2017. Canara bank and Punjab National Bank are the other two banks with more number of ATMs. Similarly in the case of private sector banks ICICI Bank, AXIS Bank and HDFC Banks have more than 10,000 ATMs during 2017. The ATMs of AXIS Bank increased from 1891 in 2006 to 14163 in 2017. While majority of the public sector banks have more than 2000 ATMs, only few of the private sector banks have more than 2000 ATMs.

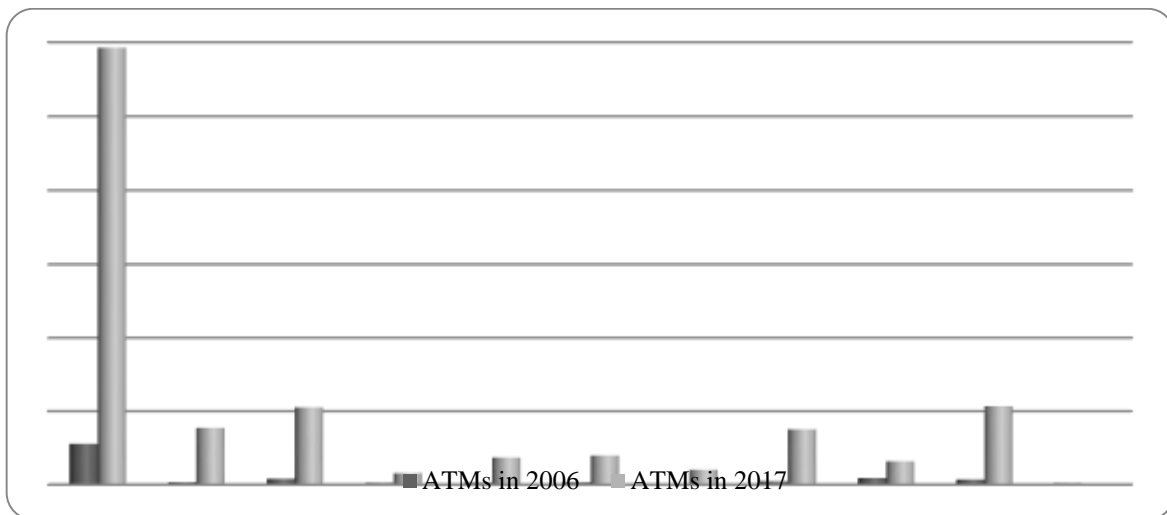


Figure 2: Number of ATMs of Public Sector Banks

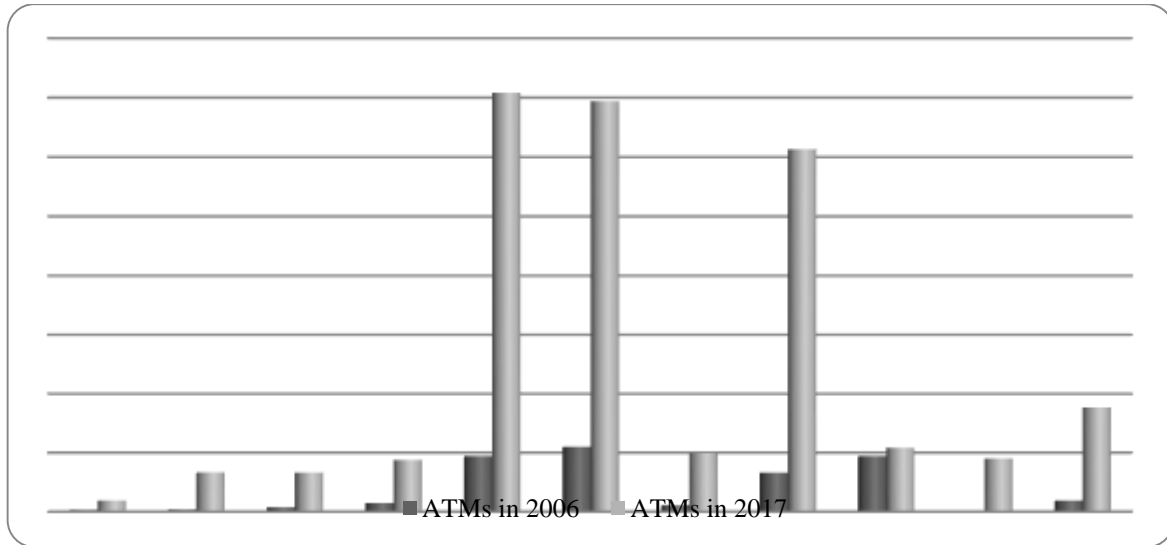


Figure 3: Number of ATMs of Private Sector Banks

7. AVERAGE DEPOSITS AND ADVANCES

The amount of deposits and advances by the banks is one of the indicators for the financial performance of the banks. Average deposits and advances of the selected banks from 2006 to 2017 is presented in tables 3 & 4.

Table 3: Average Deposits of Public and Private Sector Banks During 2006 - 2017 (Rs. in Crores)

Public Sector Banks			Private Sector Banks		
SI No	Name	Average Deposits (2006 - 2017)	SI No	Name	Average Deposits (2006 -2017)
1	State Bank of India(SBI)	10,68,846.31	1	Dhanlaxmi Bank	8,666.24
2	Bank of India(BOI)	3,20,346.23	2	Karnataka Bank	31,431.21
3	Canara Bank	3,06,776.10	3	South Indian Bank (SIB)	34,150.36
4	Dena Bank	72,964.34	4	Karur Vysya Bank (KVB)	29,296.12
5	Indian Overseas Bank(IOB)	1,52,676.10	5	AXIS Bank	2,06,907.35
6	Syndicate Bank	1,60,771.69	6	ICICI Bank	2,86,587.14
7	Vijaya Bank	82,678.85	7	IndusInd Bank	48,796.82
8	Union Bank of India	2,16,385.39	8	HDFC Bank	2,74,568.02
9	Corporation Bank	1,27,894.99	9	Kotak Mahindra Bank	51,862.49
10	Punjab National Bank	3,41,389.16	10	Yes Bank	54,114.95
11	State Bank of Mysore	44,202.04	11	IDBI Bank	1,08,029.53
	Average	2,63,175.56		Average	103128.2
	Variability (%)	108.83		Variability (%)	99.88

Source: Annual Report of Banks and Moneycontrol.com

Average deposits of the public sector banks are much higher than the private sector banks. Average deposits in top 11 public sector banks was Rs 263175 Crores while the same for the top

11 private sector banks was Rs 103128 Crores. SBI (before the merging of other state banks) received highest deposits during the reference period. Average bank deposits of SBI during 2006 -17 stood at Rs 1068846 Crores. The next public sector bank with higher deposits was PNB with as deposit of Rs 341389 Crores. On the other hand the deposits of private sector banks range between Rs 286587 Crores to Rs 8666 Crores. Only two private sector banks have crossed the deposits of Rs 200000 Crores. But, in the case of public sector there is a greater inter-bank variation which is reflected in higher coefficient of variation (108.83%) of public sector banks. Variability is 99.88 % in the case of private banks. The variation is due to high deposits of SBI. There is a considerable difference in the deposits of SBI and the other public sector banks.

Advances also show the same pattern. Average advances of the public sector are considerably higher than those of the private sector banks.

Table 4: Average Advances of Public and Private Sector Banks During 2006 -2017 (Rs. in Crores)

Public Sector Banks			Private Sector Banks		
SI No	Name	Average Advances (2006-2017)	SI No	Name	Average Advances (2006 -2017)
1	State Bank of India (SBI)	8,67,059.36	1	Dhanlaxmi Bank	5,695.27
2	Bank of India (BOI)	2,35,392.73	2	Karnataka Bank	20,720.00
3	Canara Bank	2,14,806.97	3	South Indian Bank (SIB)	24,424.62
4	Dena Bank	49,882.65	4	Karur Vysya Bank (KVB)	22,271.82
5	Indian Overseas Bank (IOB)	1,13,167.85	5	AXIS Bank	1,69,739.83
6	Syndicate Bank	1,23,313.96	6	ICICI Bank	2,79,435.42
7	Vijaya Bank	56,474.21	7	IndusInd Bank	41,704.28
8	Union Bank of India	1,56,792.85	8	HDFC Bank	2,21,077.28
9	Corporation Bank	89,473.32	9	Kotak Mahindra Bank	46,753.21
10	Punjab National Bank	2,53,199.12	10	Yes Bank	44,477.55
11	State Bank of Mysore	34,541.78	11	IDBI Bank	1,48,866.50
	Average	1,99,464.07		Average	93,196.89
	Variability (%)	117.28		Variability (%)	101.71

Source: Annual Report of Banks and Moneycontrol.com

While average amount of Rs 199464 Crores was advanced by the public sector banks during the period from 2006 to 2017, an amount of Rs 93,196 Crores was advanced by the private sector banks during the same period. Highest amount of advances were provided by State Bank of India (Rs 867059 Crores). The advances range from Rs 867059 Crores to Rs 34542 Crores. In the case of private sector banks, highest advances were made by ICICI Bank. The bank made an average advance of Rs 279435 Crores during the period 2006 to 2017. The other three banks with higher advances are HDFC Bank, AXIS Bank and IDBI Bank. Inter- bank variation in advances is more in public sector banks compare to the private sector banks.

8. OPERATIONAL EXPENSES OF THE BANKS

Analyzing operational expenses of the banks provides an understanding of the efficiency of the banks. Average operational expenses per bank of the selected banks were calculated for the year 2016 and the results are presented in table 5.

Table 5: Operational Expenses of Public and Private Sector Banks (2016)
(Rs. in Lakhs)

Sl No	Name	Operatio nal Expenses	No of Branches	Operatio nal	Sl No	Name	Operatio nal Expenses	No of Branches	Operatio nal
1	State Bank of India (SBI)	41782.36	16784	2.49	1	Dhanlaxmi Bank	380.90	266	1.43
2	Bank of India (BOI)	9341.55	5077	1.84	2	Karnataka Bank	991.20	725	1.37
3	Canara Bank	7491.93	5849	1.28	3	South Indian Bank (SIB)	1147.84	1184	0.97
4	Dena Bank	2268.25	1846	1.23	4	Karur Vysya Bank (KVB)	1252.75	1643	0.76
5	Indian Overseas Bank (IOB)	5025.50	3397	1.48	5	AXIS Bank	10100.82	2102	4.81
6	Syndicate Bank	5242.12	3766	1.39	6	ICICI Bank	12683.56	2561	4.95
7	Vijaya Bank	2085.82	1863	1.12	7	IndusInd Bank	3672.10	3020	1.22
8	Union Bank of India	6302.21	4200	1.50	8	HDFC Bank	16979.70	3479	4.88
9	Corporation Bank	2879.60	2440	1.18	9	Kotak Mahindra Bank	5471.52	3938	1.39
10	Punjab National Bank	9972.45	6760	1.48	10	Yes Bank	2976.37	4397	0.68
11	State Bank of Mysore	1673.90	1037	1.61	11	IDBI Bank	4129.58	4856	0.85

Source: Annual Reports of Banks and Moneycontrol.com

The operational expenses per bank of the public sector banks during 2015-16 ranges between Rs 1.12 Lakhs in Vijaya Bank to Rs 2.49 Lakhs for SBI. Majority of the banks have reported operational expenses of around Rs 1.5 Lakhs per branch. But there is a greater variation in the operational expenses of private sector banks. While ICICI and HDFC have reported operational expenses of Rs 4.95 Lakhs/Branch and Rs 4.88 Lakhs/Branch respectively, four banks have reported operational expenses of less than Rs 1Lakh /Branch. Yes Bank reported least operational expenses of Rs 0.68Lakh/Branch.

9. OPERATIONAL EFFICIENCY

Operational efficiency of each bank was calculated by taking the ratio of operational expenses to yearly business. Average efficiency between 2006 and 2017 for each bank and the variability has been calculated and presented in table 6. Operational efficiency being calculated as a percentage of operating expenses, lower percentage reflects greater efficiency.

Table 6: Operational Efficiency of Public and Private Sector Banks (2006 -2017)

Public Sector Banks				Private Sector Banks			
SI No	Name	Average Efficiency	Variability (CV)	SI No	Name	Average Efficiency	Variability (CV)
1	State Bank of India(SBI)	1.42	13.14	1	Dhanlaxmi Bank	1.84	14.82
2	Bank of India (BOI)	0.98	17.27	2	Karnataka Bank	1.13	10.73
3	Canara Bank	0.95	11.95	3	South Indian Bank (SIB)	1.10	22.89
4	Dena Bank	1.07	19.03	4	Karur Vysya Bank (KVB)	1.20	17.76
5	Indian Overseas Bank (IOB)	1.14	16.35	5	AXIS Bank	1.46	6.38
6	Syndicate Bank	1.07	28.92	6	ICICI Bank	1.55	4.74
7	Vijaya Bank	1.11	24.71	7	IndusInd Bank	1.66	18.18
8	Union Bank of India	1.10	10.83	8	HDFC Bank	1.94	11.22
9	Corporation Bank	0.87	20.56	9	Kotak Mahindra Bank	2.63	20.33
10	Punjab National Bank	1.17	14.62	10	Yes Bank	1.31	17.65
11	State Bank of Mysore	1.33	27.47	11	IDBI Bank	0.78	22.54

Source: Annual Reports of Banks and Moneycontrol.com

The data shows that public sector banks show greater efficiency compared to the private sector banks. Out of the total eleven public sector banks, three have achieved efficiency of less than one percent. But in the case of private sector banks only one bank achieved the efficiency level of less than one percent. However there is greater variability in the case of public sector banks. It ranges from around 11 percent in Union Bank of India to 29 percent in the case of Syndicate Bank. But in the case of private sector banks the range is between 4.74 percent in the case of ICICI Bank to 23 percent in South India Bank. Among the public sector banks Corporation bank achieved highest operational efficiency, but with a variability of 20.56. On the other hand State Bank of India is showing least operational efficiency due to higher operational expenses. SBI has shown highest operational expenses of Rs. 2.49 lakhs per branch. Among the private sector banks Kotak Mahindra Bank has shown least efficiency between 2006 and 2017.

10. CONCLUSIONS

With the liberalization of the banking sector the number of private sector banks and the associated ATMs has increased considerably. The study observed that while majority of the public sector banks have more than 2000 ATMs, only few of the private sector banks have more than 2000 ATMs.

It is observed that the average deposit of the public sector banks is much higher than the private sector banks. But, in the case of public sector there is a greater inter-bank variation which is reflected in higher coefficient of variation (108.83%) of public sector banks.

Average advances of the public sector are considerably higher than those of the private sector banks. But this is accompanied with higher inter- bank variation in advances in public sector banks compare to the private sector banks.

As far as efficiency is concerned, public sector banks show greater efficiency compared to the private sector banks. But public sector banks have recorded greater variability compared to the private sector banks.

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