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An Empirical Analysis on Effect of Cost Efficiency in Indian Industrial Banks

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Abstract – This study assesses cost efficiencies in the Indian banking industry for the period 2007 to 2011. Observational effects show that add up to cost and additionally working cost of a bank is absolutely identified with the measure of the bank characterized as far as holdings and deposits. This study demonstrates that sum cost and working cost builds not exactly proportionately to build in holdings and deposits since 2009, which indicates economies of scale with reference to stakes and deposits. Results likewise show that possession structure of a bank assumes a part in confirming economies of scale in the Indian banking industry. Cost builds in the private sector banks have been not exactly proportionate to builds in stakes and deposits all around the example period.

The present paper analyzes the cost efficiency of Indian commercial banks by utilizing a non-parametric Data Envelopment Analysis Technique. The cost efficiency measures of banks are analyzed under both differentiate and normal boondocks. This paper likewise experimentally looks at the effect of mergers on the cost efficiency of banks that have been united throughout post liberalization period. The present study taking into account lopsided board information over the period 1990-91 to 2007-08. In this paper to test the efficiency distinctions between public and private both parametric and non-parametric tests are utilized. The discoveries of this study prescribe that over the whole study period normal cost efficiency of public sector banks discovered to be 73.4 furthermore for private sector banks is 76.3 percent. The discoveries of this paper prescribe that to some degree merger programme has been fruitful in Indian banking sector.

The Government and Policy producers ought not advertise merger between solid and bothered banks as an approach to advertise the premium of the depositors of upset banks, as it will have unfavorable impact upon the possession nature of the stronger banks.

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INTRODUCTION

The banking industry in India has come a long way from the nationalization of its banks in 1969 to the liberalization of the financial system since 1991. During the reform process that started in 1991, the banking sector was opened up with the objective of improving the efficiency of the banking system in India through increased competition from private and foreign banks. With this view, the government initiated the process of removing interest rate controls. The government also introduced capital adequacy requirements and other safety norms to ensure a sound banking system. The objective is to strengthen banking supervision and increase competition through licensing of private banks and foreign banks. The ultimate goal is to integrate Indian banks into the global financial system.

Although the amount of assets and deposits managed by the Indian banking industry has increased several folds, empirical research on economies of scale and cost efficiencies in the Indian banking industry are still limited. The issue of economies of scale and cost efficiencies in the banking industry is important for several reasons.

Firstly, the Indian economy is the second fastest growing economy in the world after China. Since these nations represent an engine of growth for the world economy, a large amount of capital is flowing to the stock markets of these nations. Banks, as financial intermediaries, are playing a crucial role by bringing enhanced liquidity and promoting market efficiency by facilitating smooth transfer of funds between borrowers and lenders that will promote capital mobility among nations. A sound and efficient banking system is essential for a smooth integration of Indian financial markets with the rest of the world, because banks play a crucial role in facilitating transfer of funds between borrowers and lenders. Therefore, the size of the banking system is bound to grow further.

Secondly, previous studies show that a country's financial sector influences future economic growth. The banking sector is the most important part of the financial markets. If the Indian banking sector is sound and efficient, it will have a positive impact on India's growth.

Thirdly, we examine the cost efficiencies of Indian commercial banks during the period 2007 to 2011. This time period covers before crisis and during crisis time. Findings from this study will highlight the reaction of cost efficiencies in the Indian banking sector during and after the global financial crisis.

This study will also help the banking industry as well as regulatory agencies such as the Reserve Bank of India (RBI) get a better understanding of the impact of growth of a bank on bank's expenses and its benefits to bank shareholders in the form of higher returns and increased shareholder wealth.

Banks as financial intermediaries play a significant role in economic growth, provide funds for investments, and keep the cost of capital low. During the last few decades, structure of banking sector has turned from a controlled system into liberalized one. The efficiency of banks, which reflects the ability of banks in transforming its resources to output by making its best allocation, is essential for the growth of an economy. However, due to the major role played by banks in the development of economy, the banking sector has been one of the major sectors that have received renewed interest from researchers and economists.

The rapid advances in computer and communication technology have led to the development of new bank services and financial instruments (Shiang, Tai Liu, 2009). Therefore, the economies of world have experienced a revolutionary change in the environment of banking sector.

The competition among banks at domestic and global level has increased and it has compelled the banking industry to improve their efficiency and productivity. Moreover, the government and policy makers have adopted various policies and measures out of which consolidation of banks emerged as one of the most preferable strategy. There are diverse ways to consolidate the banking industry the most commonly adopted by banks is merger.

Merger of two weaker banks or merger of one healthy bank with one weak bank can be treated as the faster and less costly way to improve profitability than spurring internal growth (Franz, H. Khan, 2007) .One of the major motive behind the mergers and acquisition in the banking industry is to achieve economies of scale and scope.

This is because as the size increases the efficiency of the system also increases. Mergers also help in the diversifications of the products, which help to reduce the risk as well (Bhan, Akil, 2009) The issue of impact of mergers on the efficiency of banks has been well studied in the literature. Most of the literature related with the impact of mergers on the efficiency of banks is found in European Countries and US. In India, literature on bank merger is very scarce. Very few studies have been conducted with the motive to examine the impact of mergers on the performance of Indian Commercial banks.

INTRODUCTION TO INDIAN BANKING INDUSTRY

In India, the Reserve Bank of India acts as a central bank of the country. Banking system has a wide mix, comprising of scheduled and non-scheduled banks, coperative sector banks, post office saving banks, foreign and exchange banks.

Table provides a brief detail of the structure of Indian commercial banks as on the end March 2008. As on March 2008, the number of commercial banks is 79 comprise of 28 PSBs, 23 private sector banks and 28 foreign banks. It is evident from the table that public sector banks dominate the commercial banks in India. It has been observed that the market share of public sector banks in terms of investment, advances and assets is near about 70 percent.

The Public sector banks are the biggest players in the Indian banking system and they account for 70 percent of the branches of commercial banks in India. As on March 2008, private sector banks accounts for nearly 21.7 percent while foreign banks constitutes 8.41 percent share in total assets of commercial banks.

During last few decades, the environment under which Indian banking sector has operated witnessed a remarkable changes. India embarked on a strategy of economic reforms in the wake of a serious balance of payment crisis in 1991(Mohan, Rakesh 2005). In Indian banking sector, the policy makers adopted a cautious approach for introducing reform measures on the recommendation of Narishmam Committee I (1991), Narishmam Committee II (1997) and Verma Committee (1999). The main objective of the banking sector reforms was to improve the efficiency of banks and to promote a diversified and competitive financial system. One of the outcomes of such reforms was the consolidation of the banking industry through mergers and acquisitions.

Technological progress and financial deregulation have played an important role in accelerating the process of merger and acquisition in Indian banking industry.

Due to technological progress, the scale at which financial services and products are produced has expanded which provide an opportunity for the banks to increase their size and scale of production. At that, time mergers of banking institutions emerged as an important strategy for growing the size of banks. Size of the bank plays a significant role to enter the global financial market.

	Numbers			Amount in Rs. cr			
Bank group	No. of Banks	Branches	No. of Employees	Investments	Advances	Assets	Deposits
I. Public sector banks (a +b)	28	55018	715408	799841	179400	3021924	2453867
Market Share (%)		69.9%	78.8%	67.9	72.6%	69.9%	46.1%
a. State Bank of India Group	8	15814	249008	263823	593722	1010959	773874
Market Share (%)		20.1%	27.4%	22.4	24.0%	23.4	14.6%
b. Nationalized Banks	20	39204	466400	536018	1203678	2010965	1679993
Market share (%)		49.8%	51.4%	45.5	48.3%	56.5	31.5%
II. Indian private sector Banks	23	8294	158823	278578	518402	940144	2675033
Market share (%)		10.5%	17.5%	23.7	20.9%	21.7	50.3%
III. Foreign banks in India	28	279	33969	98910	161133	364099	191161
Market share (%)		0.35%	3.74%	8.4	6.5%	8.41	3.6%
IV. Total Indian private and foreign banks(II + III)	51	8573	192792	377488	679535	1304243	2866194
Market share (%)		10.9%	21.2%	32.1	27.4%	30.1	53.9%
V. Total commercial banks (I b IV)	79	78666	908200	1177330	2476936	4326166	5320062
Market share (%)		100%	100%	100%	100%	100%	100%

Table : Structure of Indian Banking Sector (As on March 2008)

Bank Ownership Wise Evaluation of Efficiency of Financial institutions

Table presents the bank ownership wise analysis of normal cost efficiency scores of Indian commercial banks along with its two segments specialized efficiency (TE) furthermore allocative efficiency (AE).

It is apparent from the table that cost efficiency of private sector banks is 76.3 for every penny emulated by 73.4 percent of public sector banks throughout the whole study period.

This shows that the private sector banks have the potential for cost sparing by 23.7 for every penny or as such, private sector banks have could utilize just 76.3 for every penny of assets really utilized to transform the given level of yield.

The table likewise demonstrates that public sector banks can cut their costs by 26.6 for every penny to wind up completely effective banks and to catch the position of best practice boondocks.

The discoveries of this study reported that private sector banks have performed superior to public sector banks in cost funds with the given state of engineering .the decay of CE into its two parts unmistakably demonstrates that in every year allocatively inefficiency is dependably higher than specialized inefficiency.

It suggests that the overwhelming wellspring of cost inefficiency around Indian commercial banks is allocative inefficiency as opposed to specialized inefficiency.

It infers that supervisors of Indian banks are generally great in utilizing the base level of inputs at a given level of yields however they were bad in selecting the optimal blend of inputs at given costs.

	Cost Efficiency			Technical Efficiency			Allocative Efficiency		
Year	PSBs	PVTs	CBs	PSBs	PVTs	CBs	PSBs	PVTs	CBs
1989-90	0.787	0.813	0.802	0.913	0.880	0.898	0.865	0.924	0.893
1990-91	0.792	0.792	0.796	0.931	0.931	0.920	0.853	0.853	0.866
1991-92	0.669	0.728	0.697	0.865	0.838	0.853	0.767	0.872	0.816
1992-93	0.781	0.649	0.709	0.895	0.889	0.892	0.867	0.713	0.789
1993-94	0.595	0.825	0.704	0.851	0.916	0.882	0.686	0.900	0.787
1994-95	0.632	0.720	0.680	0.819	0.830	0.825	0.764	0.851	0.81
1995-96	0.594	0.415	0.496	0.797	0.803	0.800	0.744	0.515	0.618
1996-97	0.735	0.799	0.770	0.839	0.893	0.869	0.868	0.895	0.883
1997-98	0.744	0.754	0.750	0.877	0.920	0.903	0.845	0.817	0.830
1998-99	0.757	0.817	0.790	0.885	0.895	0.891	0.851	0.909	0.882
1999-00	0.762	0.821	0.795	0.883	0.889	0.887	0.86	0.919	0.892
2000-01	0.820	0.769	0.795	0.901	0.895	0.887	0.917	0.862	0.881
2001-02	0.763	0.815	0.791	0.892	0.896	0.894	0.851	0.907	0.881
2002-03	0.985	0.798	0.764	0.909	0.901	0.905	0.799	0.882	0.842
2003-04	0.723	0.816	0.772	0.918	0.904	0.911	0.786	0.899	0.845
2004-05	0.775	0.737	0.756	0.934	0.873	0.903	0.831	0.842	0.837
2005-06	0.796	0.763	0.779	0.924	0.883	0.904	0.860	0.859	0.859
2006-07	0.751	0.826	0.790	0.946	0.930	0.939	0.799	0.889	0.840
2007-08	0.492	0.842	0.649	0.945	0.919	0.934	0.513	0.911	0.693
Average	0.734	0.763	0.741	0.891	0.889	0.889	0.807	0.854	0.829

Table : Bank Ownership Wise Average Cost Efficiency of Commercial Banks

CONCLUSION

After years of financial repression because of overwhelming government administrative controls, the approach creators presented a comprehensive banking reforms programme in the year 1992 based on the suggestions of the Committee on the Financial System. The banking reforms process was further strengthened after the acknowledgement of the greater part of the proposals of the Board on the Banking Sector Reforms by Reserve Bank of India in the year 1998. The push of banking reforms was not just on the change of cost efficiency through instilling the soul of rivalry around Indian banks additionally on fortifying the stun absorptive limit of the banking system through the appropriation of internationally acknowledged prudential regulations.

In this paper, we have measured the cost efficiency (CE) of 27 PSBs throughout the postderegulation period traversing from 1992/93 to 2007/08. Specifically, we expect to research if the wonder of □□- and □□-meeting in CE levels has occurred in Indian public sector banking industry throughout the post-deregulation years or not. To fulfill the errand of measuring CE scores for distinct PSBs, we have utilized the expanding well known philosophy of information envelopment analysis (DEA).

Applying, a non-parametric DEA approach, this paper inspect the cost, specialized what's more allocative efficiency of Indian banks over the period 1990-91-2007-08. This paper likewise examined the impacts of mergers and obtaining on the cost efficiency of Indian Banks that have combined throughout 1991-92 to 2007-08. The discoveries of this study propose that over the whole study period normal cost efficiency of public sector banks discovered to be 73.4 and for private sector banks is 76.3 percent.

Generally speaking, comes about show that mergers prompted more elevated amount of cost efficiencies for the combining banks. The disintegration of cost efficiency into its parts prescribes that specialized efficiency has been principle wellspring of efficiency increases from merger instead of allocative efficiency. Merger between bothered and solid banks did not yield any huge efficiency increases to taking part banks. Nonetheless, the compelled merger around these banks succeeded in securing the premium of depositors of frail banks however stakeholders of these banks have not displayed any increases from mergers.

The experimental discoveries of this study prescribe that pattern of merger in Indian banking sector has so far been limited to rebuilding of powerless and financially upset banks. The Government ought not be seen merger as a method of safeguarding of powerless banks. The exact discoveries further infer that solid banks ought not be consolidated with feeble banks, as it will have unfavorable influence upon the holding nature of the stronger banks. The need of great importance is that the solid banks ought to be consolidated with solid banks to rival remote banks and to enter in the worldwide financial market. The Indian financial system requires extremely huge banks to retain different dangers that have been risen up out of working in nearby and worldwide market.

The prime considers for prospective mergers in Indian banking industry incorporated the Basel nature's turf, tests of free convertibility and necessity of expansive speculation banks. In this way, the Government and strategy creators ought to be more careful in pushing merger as an approach to procure economies of scale and scope.

On the whole, the results of this study signify that the level of competitive practices andtechnology in the Indian banking industry during the post-reforms years served as a catalyst to improve cost efficiency and to bring convergence across PSBs in terms of their efficiency levels.

This suggests that banking reforms initiated in 1992 provided a strong economic incentive to the bankers for organizing inputs in the manner that minimized their waste as well as the cost of production. In sum, the banking reforms process in India has achieved the desired results to a large extent and, thus, offers a success story that may be emulated by other developing economies that are undergoing banking reforms not only because an ascent in the cost efficiency of PSBs has been observed in majority of PSBs but also their cost efficiency levels have converged over time. In the light of empirical findings, the future reforms in the banking sector should be directed towards strengthening competitive and market-oriented policies.

REFERENCES

- Casu, B., Girardone, C., (2002), "A comparative study of the cost efficiency of Italian bank conglomerates", *Managerial Finance*, Vol. 28, pp. 3-23.
- Akhavein, J.D., Berger, A.N and Humphrey, D.B (1997) "The Effects of Bank Mergers on Efficiency and Prices: Evidence from the Profit Function". Review of Industrial Organization 12 : 95-139.
- Das, A. (1997) "Measurement of Productive Efficiency and its decomposition in Indian banking firms" .Asian Economic Review, 39 (3):422-39.
- Casu. B, Girardone C (2002), "A Comparative Study of the Cost Efficiency of Italian Conglomerates," Managerial Finance 23: 3-23
- Lang, G. and Welzel, P. (1999). "Mergers among German Cooperative Banks: A Panel-based Stochastic Frontier Analysis". Small Business Economics,13, : 273-286.
- Ferrier, G.D and C.A.K. Lovell (1990), "Measuring Cost Efficiency in Banking: Econometric and Linear Programming Evidence." Journal of Econometrics, 46 : 229-245.
- Ram Mohan T.T and Ray , S. (2004) " Productivity growth and efficiency of Indian banking : a comparison of public , private and foreign banks, working paper No 2004/27, Department of Economics , University of Connecticut , Store ct.
- Humphrey, D.B. (1993), "Cost and Technical Change: Effects from Bank Deregulation." Journal of Productivity Analysis 4: 9-34.
- Maudos, J., and Pastor, J. M., (2003), "Cost and profit efficiency in the Spanish banking sector (1985–1996): A non-parametric approach", *Applied Financial Economics*, Vol. 13, No.1, pp. 1−12.
- Humphrey, D.B., (1993), "Cost and technological change: effects from bank deregulation", *Journal of Productivity Analysis*, Vol. 4, pp. 9-34.
- Farrell, M.J., (1957), "The Measurement of productive efficiency", *Journal of the Royal Statistical Society*, Series A, Vol. 120, No. 3, pp.253-281.