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TECHNICAL EFFICIENCY OF PRIVATE SECTOR BANKS IN POST GLOBALISATION PERIOD

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ABSTRACT

In the post globalization period, with concerns about financial stability emerging to the forefront of policy changes it is being increasingly realized that promoting efficient banking is a crucial prerequisite. A research study on Technical efficiency of private sector banks in post globalization period was based on data relating to advances, investments, deposits, borrowings, fixed capital, number of employees compiled from Trend and Progress of Banking from 1991-2001

A Stochastic frontier function is used to measure technical efficiency. LIMDEP software programme Frontier version 4.1 is used to estimate the parameter of the frontier production function. The study found that the minimum technical efficiency increased from 33.57 percent in 1991 to 40.19 percent in 2001. The large sized private sector banks were having technical efficiency of 56.60 percent and small private sector banks were having lower technical efficiency of 46.73 percent.

INTRODUCTION

In the post globalization period, with concerns about financial stability emerging to the forefront of policy changes it is being increasingly realized that promoting efficient banking is a crucial prerequisite. A major element of banking sector reforms in India has been a set of prudential measures aimed at achieving efficiency of the banking system as well as ensuring safety and soundness through greater transparency and public credibility (Jain, 1999). The Reserve Bank of India Report on Currency and Finance (2000), which is making a case for greater competition has pointed out that ever since new private sector banks came into operations, more importance had been assigned for the attainment of efficiency.

The deregulation of the financial sector and the increased competition are expected to enforce banking firms to be more efficient. The banking industry has come to be characterized with intense competition, declining margins on traditional banking business, increased cost pressures and greater risks. While banks have ventured into new lines of business, increased competition has brought in its wake increased reliance on cost minimization and improvement in efficiency.

Technical efficiency refers to the ability to produce as much output as possible per unit of input or use as little input as possible to provide one unit of output. Technical inefficiency has been observed to be the key factor behind weak performance of bank. As such, a research study on "Technical efficiency of private sector banks in post globalization period" was undertaken with the following objectives;

A. To estimate technical efficiency of various private sector banks in post globalization period; and

B. To compare technical efficiency of different size groups of private sector banks.

METHODOLOGY

The required data relating to advances, investments, deposits, borrowings, fixed capital, number of employees were compiled from Reserve Bank of India Bulletin and Report on Trend and Progress of Banking and the study covered the time period from 1991-2001

ECONOMETRIC MODELING

As per econometric approach a stochastic frontier function is used to measure technical efficiency.

The frontier production function is

$$\hat{Y} = \beta_0 X_1^{\beta_1} X_2^{\beta_2} X_3^{\beta_3} e^{\mu}$$

Where \hat{Y} is frontier level of output. Frontier production is derived from Cobb-Douglas production function and estimated by maximum likelihood method

LIMDEP software programme Frontier version 4.1 is used to estimate the parameters of frontier production by maximum likelihood method.

The formulated frontier production function is

$$\ln \hat{y} = \beta_0 + \beta_1 \log L + \beta_2 \log K + \beta_3 \log F + \mu$$

where $\log Y$ = Natural logarithmic of output (deflated values of total advances and investments measured in millions of rupees)

L = Number of employees

K = Amount of fixed capital (deflated value of fixed capital measured in millions of rupees)

F = Amount of aggregate funds (deflated value of deposits and borrowings measured in millions of rupees).

β_0 = intercept

$\beta_1, \beta_2, \beta_3$ = Estimated regression co-efficient and

μ = Error term.

Technical efficiency is estimated as Y/Y^{\wedge}

Where Y = actual output and Y^{\wedge} = Potential output

FINDINGS OF THE STUDY

A. Estimation of technical efficiency of Indian private sector banks in the post globalization period.

Estimated coefficient of labour was positive in majority of the years of post globalization period. Similarly the estimated co-efficient of fixed capital and funds were positive in many years of post globalization period and they were statistically valid as indicated by t-value. .

The magnitude of technical inefficiency had increased in the post globalization period. In 1991 η value was 1.19 but in 2001 it was 2.42 and hence the extent of discrepancy between frontier output and actual output due to technical inefficiency increased from 1991-2001.

In many years of the post globalization period the variance of one-sided error η^2_u was larger than variance of random error η^2_v . This implies that variation in actual production in private sector banks in the post reform period arise mainly from differences in inputs rather than from random variability.

B. Estimation of bank specific technical efficiency in the post globalization period.

Based on the estimates of frontier production function the current study had estimated the technical efficiency of different private sector banks in the post globalization period. In 1991, the technical efficiency was the highest for Vysya bank (71.58 percent), while it was the lowest for Lord Krishna bank (33.57 percent). In 1995, the technical efficiency was the highest for Vysya bank (60.33 percent) and lowest for Ratnakar bank (35.92 percent). In 2001, the technical efficiency was the highest for Vysya bank (77.88 percent) and it was the lowest for Lord Krishna bank (40.19 percent).

The highest technical efficiency of Vysya bank might be due to the fact that the bank provides more amount of loans and advances to the customers. It provides various types of loans such as Industrial finance loans, small scale Industrial loan, hypothecation loan, vehicle loan, overdrafts, housing loan and personal loan.

Based on the estimates of bank specific technical efficiency current study had calculated the frequency distribution of efficiency of Indian private sector banks in the post globalization period. Table 3 represents the frequency distribution of efficiency of Indian private sector banks in the post globalization period.

Financial sector reforms had a favorable impact on technical efficiency of Indian private sector banks. The minimum technical efficiency increased from 33.57 percent in 1991 to 40.19 percent in 2001. Similarly the maximum technical efficiency increased from 71.58 percent in 1991 to 77.88 percent in 2001.

In 1991, 30 percent of Indian private sector banks were having technical efficiency in the range of 40-50 percent. In 1991 only 25 percent of private sector banks have the technical efficiency of 60-70 percent. But in 2001, 45 percent of private sector banks have secured technical efficiency above 70.

C. Comparison of size specific technical efficiency of Indian private sector banks in the post globalization period;

The current study tried to find out whether there exists association between the size of private sector banks based on the assets and technical efficiency. Table 4 represents the estimated technical efficiency of different size groups of Indian private sector banks in the post globalization period.

In the post globalization period the large sized private sector banks were having technical efficiency of 56.60 percent and small private sector banks were having lower technical efficiency of 46.73 percent. Hence in the post globalization period, as the size of private sector banks in terms of assets increases, there is an improvement in technical efficiency. As such the technical efficiency of Indian private sector banks is not scale neutral and large banks were more efficient.

CONCLUSION

Globalization had created favorable impact on technical efficiency of Indian private sector banks between 1991-2001 for majority of private sector banks there had been increase in technical efficiency. Among the different private sector banks, Vysya bank was having the highest technical

efficiency and Nainital bank was having the lowest technical efficiency and In the post globalization period, technical efficiency of Indian private sector banks was not scale neutral. The large sized private sector banks are more efficient and hence as the size increases technical efficiency also increases

RECOMMENDED MEASURES

To improve technical efficiency of Indian private sector banks the study recommends the following measures

A supervisory system comprising of onsite inspection, offsite monitoring and control systems based on capital adequacy, asset quality, earnings, liquidity etc should be formulated and

There should be strategic planning in all banks at corporate level and zonal level and a performance budgeting system should be integrated with strategic planning

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Three things are necessary to make every man great, every nation great.

1. Conviction of the powers of Goodness.
2. Absence of jealousy and suspicion.
3. Helping all who are trying to be and do good.

- Swamy Vivekanandha