

Impact of Information Technology on the Profitability of Banking Sector in India

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Abstract: Development in the contemporary context is a process whereby minimum progress at the socio-economic, political and technological level is ensured to fulfill the basic needs of human beings. Economic development, includes the development of agriculture, industry, trade, transport, means of irrigation, power resource etc. It thus indicates a process of development. This sectoral improvement is the part of the process of development, which refers to the economic development. The present study has made a comprehensive research regarding the impact of information technology on the profitability of banking sector in India. A sample of 23 banks from various groups has been selected. The profitability parameters were applied and the result was analyzed.

Keywords: socio-economic, political and technological level, development of agriculture, industry, trade, transport, means of irrigation.

I. INTRODUCTION

Development in the contemporary context is a process whereby minimum progress at the socio-economic, political and technological level is ensured to fulfill the basic needs of human beings. It is also a relative phenomenon based on the comparison between the advanced and the underdeveloped countries.

The key to National prosperity and development lies, in the effective combination of three factors – technology, raw material and capital, of which technology is perhaps the most important, since the creation and adoption of new scientific techniques can, in fact, make up for deficiency in natural resources and reduce the demands of capital.

Role of commercial Banks in Economic Development:

Banking is an important segment of the service providing sector and acts as a backbone of economic progress¹. The banks render vital services to the masses belonging to the various sectors of the economy like agriculture, industry whether small scale or large scale².

The banking system is one of the few institutions that impinge on the economy and affect its performances for better or worse. They act as a development agency and are the source of hope and aspirations of the masses³.

As an economic institution, banks are supposed to be more directly and positively related to the performance of the economy than most non-economic institutions are. Schumpeter, the first modern economist, regarded the banking system as one of the two key agents (the other being entrepreneurship) in the whole process of economic development.⁴

Statement of the Problem

At a time when the world over was undergoing a radical transformation due to the all pervasive influence of information technology one sector that has undergone fundamental changes as a consequence of the application of it has been banking. The present study has made a comprehensive research regarding the impact of information technology on the profitability of banking sector in India.

Objectives of the Study

To assess the profitability of commercial banks before and after the implementation of information technology enabled services.

II. RESEARCH METHODOLOGY

The performance of a bank can be measured by a number of indicators. For measuring the performance of Indian banking industry, various parameters were selected to analyse the profitability and a comparative study is done between partially computerized era and IT enabled era.

Profitability Parameters

For measuring the **profitability** of commercial banks the study employs the following ratios:

- a. Interest earned ratio
- b. Interest paid ratio
- c. Non-interest income ratio
- d. Non-interest expenses ratio
- e. Spread ratio
- f. Burden ratio.
- g. Profitability ratio.

III. SAMPLE DESIGN FOR DIAGNOSTIC STUDY

The universe of the present study is the Scheduled commercial banks of India. The Indian Banking sector has been divided into five groups and a representative sample of 30% has been selected from each group based on its profitability.

i) Nationalized bank Group:

- a. Punjab National Bank (PNB),
- b. Canara Bank (CB),
- c. Bank of India (BOI),
- d. Bank of Baroda (BOB)
- e. Indian Overseas Bank (IOB)
- f. Oriental Bank of Commerce (OBC).

ii) SBI & its Associates bank Group:

- a. State Bank of India (SBI)
- b. State Bank of Indore (SBID).

iii) Old private sector bank Group:

- a. Federal Bank Ltd (FB)
- b. Jammu and Kashmir Bank Ltd (J&KB)
- c. Karnataka Bank Ltd (KB)
- d. South Indian Bank (SIB)
- e. Tamil Nadu Mercantile Bank Ltd., (TMB).

iv) New private sector bank Group:

- a. ICICI Bank Ltd (ICICI)
- b. HDFC Bank Ltd (HDFC).

v) Foreign banks:

- a. Standard Chartered Bank (SCB)
- b. Citibank NA (CIB)
- c. HSBC Ltd (HSBC)
- d. ABN – Ambro Bank NV (ABNB)
- e. Deutsche Bank AG (DB)
- f. Bank of America (BOA)
- g. JP Morgan Chase Bank (JPMCB)
- h. Barclays Bank PLC (BB)

Period of Study

The period under study is divided into two parts. The first period is called as partially computerized era which includes the period from 1998-1999 to 2003-2004. This period is considered to be representative enough to indicate the broad trends of the performance of the banks in the period of partial computerization of Banks in India. The second period is called the Information Technology enabled era which included the period from 2004-2005 to 2009-2010.

Sources of Data

The present study is based upon secondary data. Secondary information have been collected from various relevant issued of statistical Tabled Relating to Banks, Report on currency and Finance, published by the Reserve Bank of India and Database on Indian Banking published by Indian Banking Association. In addition to it, some information is also collected from the different relevant issues of Economic survey published by the Government of India and other books and journals.

IV. FINDINGS OF DIAGNOSTIC ANALYSIS

The findings of diagnostic analysis on “Impact of Information Technology on the profitability of banking sector in India” have been listed under different headings as follows:

1. Thus it was concluded from the ratio analysis of the indicator interest earned ratio that of nationalized bank group (Group 1) the Bank of India had the highest growth rate of 47, in the SBI and its Associates bank group (Group 2) the state Bank of India and the State Bank of Indore had a growth rate of 38 and 33 respectively. In the old private sector Bank group (Group 3), the Tamilnadu Mercantile Bank had a growth rate of 42, in the new private sector Bank group (Group 4), the HDFC Bank had a growth rate of 100, in the foreign Bank group (Group 5) as well, the Bank of America had a growth rate of 100. The correlation analysis revealed that the foreign bank group (Group 5) had the highest positive correlation of, 991 of all the bank groups under study. The paired ‘t’ test analysis with regard to the indicator interest earned ratio revealed that the old private sector bank group (Group 3) had the highest significant ‘t’ value of 1.452.
2. The ratio analysis with regard to interest paid ratio concluded that In the Nationalized bank group (Group 1) the Indian Overseas Bank had the highest CGR of 4.71%. In the SBI & its Associates bank group (Group 2), the State Bank Of Indore had a CGR of 44.54% in the IT enabled era, in the old private sector bank group (Group 3), the Karnataka Bank had the Maximum CGR of 7.15%, in the New Private Sector Bank group (Group 4) the ICICI had a positive growth rate of 7 and a CGR of 7.15%, in the foreign bank group (Group 5) , the JP Morgan chase Bank registered the highest positive CGR of 12.20%. The correlation analysis of the indicator interest paid ratio revealed that the Foreign bank group (Group 5) had the highest correlation co – efficient of .894. An analysis of paired ‘t’ test proved that the nationalized bank group (Group 1) had a significant ‘t’ value of 1.807.
3. Thus it could be concluded that with regard to the indicator non – interest expenses ratio, Thus in the Nationalized bank group (Group 1) almost all banks in its group revealed negative growth rate In the SBI & its Associates Bank group (Group2) the State Bank of India and the State Bank of Indore had negative growth rates of -33 and -59 respectively. In the old private sector Bank group (Group 3) the Jammu & Kashmir Bank had a CGR of 2.09 %, in the new private sector bank group (Group 4) the HDFC Bank exhibited a growth rate of 43%, in the foreign bank group, and the JP Morgan chase Bank had a negative growth rate of 92. The results of correlation analysis revealed that the Nationalized bank group (Group 1), had the highest positive correlation of .878. The paired ‘t’ test at 5% level of significance (Table 4.39) proved that the old private sector bank group (Group 3) had a significant ‘t’ value 3.416.
4. Thus it was concluded from the ratio analysis of the indicator spread ratio that in the nationalized bank group (Group 1), the Bank of Baroda had a growth rate of 200 and a CGR of 14.81%, in the SBI & its Associates bank group (group 2), the State Bank of India and the State bank of Indore revealed negative growth rate of -101 and -84 respectively. In the Old private sector bank group (Group 3), the Federal Bank revealed a growth rate of 28, in the new private sector bank group (Group 4), the ICICI bank had the highest growth rate of 2,800,in the foreign bank group (Group 5), the Bank of Nova Scotia registered the highest CGR of 28.82%. A correlation analysis of the indicator spread ratio revealed that the SBI & its Associates Bank group (Group 2) and Foreign Bank group (Group

- 5) had the highest correlation values of .954 and .950 respectively. The paired 't' test analysis revealed that the old private sector bank group (Group 3) had a significant 't' value of 3.627.
5. It was concluded from the ratio analysis of burden ratio that in the nationalized bank group (Group 1), the Bank of India and the Bank of Baroda exhibited negative growth rate of -125 and -60, in the SBI & its Associates bank group (Group 2), the State Bank of India (-43) and the State Bank of Indore (-50) revealed negative growth rates, in the old private sector banks (Group 3) the analysis revealed that the Jammu & Kashmir Bank had the highest negative growth rate of -400 in its group, in the new private sector bank group (Group 4), the HDFC bank registered a growth rate of 250 in the foreign bank group (Group 5), Standard Chartered Bank had the highest negative growth rate of -225. The correlation analysis revealed that the Nationalized bank group (Group 1) had the highest correlation coefficient of .954. The paired "t" test analysis for the indicator burden ratio revealed that the old private sector bank group (Group 3) had a significant 't' value of 2.845.
6. Thus it was concluded that in the nationalized bank group (Group 1), the Bank of India and the Bank of Baroda exhibited negative growth rate of -125 and -60, in the SBI & its Associates bank group (Group 2), the State Bank of India (-43) and the State Bank of Indore (-50) revealed negative growth rates, in the old private sector banks (Group 3) the analysis revealed that the Jammu & Kashmir Bank had the highest negative growth rate of -400 in its group, in the new private sector bank group (Group 4), the HDFC bank registered a growth rate of 250 in the foreign bank group (Group 5), Standard Chartered Bank had the highest negative growth rate of -225. The correlation analysis revealed that the Nationalized bank group (Group 1) had the highest correlation coefficient of .954. The paired "t" test analysis for the indicator burden ratio revealed that the old private sector bank group (Group 3) had a significant 't' value of 2.845.
7. Thus it could be concluded from the ratio analysis of the indicator profitability ratio that in the Nationalized Bank group (Group 1), the Bank of Baroda had a growth rate of 100 and a CGR of 25.89%, in the SBI & its Associates banks (Group 2), the State Bank of India had a growth rate of -101. In the old private sector Bank group (Group 3), the Federal Bank registered the highest growth rate of 11 and with a CGR of 20.22%. In new private sector Bank group (Group 4) the ICICI bank revealed the highest growth rate of 175 and a CGR of 25.89%. In the foreign bank group (Group 5), the Bank of America registered the highest growth rate of 133 in its group. The correlation analysis of the indicator, the profitability ratio proved that foreign bank group (Group 5) had the highest positive correlation of .999. The results of the paired 't' test revealed that the old private sector bank group (Group 3) had significant 't' value of 3.464.

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