CHAPTER 4
# CHAPTER 4
## RESEARCH METHODOLOGY

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CHAPTER - 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Research methodology is a way to solve the research problem systematically. It may be understood as a science of studying how research is done scientifically. Research Methodology includes the assumptions and values, which is useful for interpreting data and reaching to conclusions. The process used to collect information and data for the purpose of making business decisions. The methodology may include publication research, interviews surveys and other research techniques and could include both present and historical information.

4.2 RESEARCH BACKGROUND:

Banking industry has been changed after reforms process. The government has taken this sector in a basic priority and this service sector has been changed according to the need of present days. Banking sector reforms in India strive to increase efficiency and profitability of the banking institutions as well as brought the existing banking institutions face to face with global competition in globalization process. Now, there has been a rapid expansion in the number of banks including new private sector and foreign banks. At present, public sector banks, old private banks, new private banks and foreign banks are playing on equal field with the important role. Considering the performance of 2001-2002, all the banks are remarkable. These different types of banks differ from each other in terms of operations efficiency, productivity, profitability and credit efficiency. The objective of this study is to identify this difference within banking groups with reference to public sector and private sector.
4.3 REVIEW OF LITERATURE:

The articles published on different facets of Indian banking reforms are restrictive in nature and have been found wanting in terms of the assessment of the impact of the reforms on the banking sector. A brief review of some of them is as follows:

- **Reddy and Yuvaraja (2001)** were of the view that the adoption of international capital adequacy standards, deregulation of interest rates and entry of private and foreign banks underlined that the speed and sequencing of the financial sector reforms should be as per the requirements of the Indian economy.

- **Rao (2002)** concluded that the international regulations are forcing the Indian banks to adopt better operational strategies and upgrade the skills. The system requires new technologies, well-guarded risk and credit appraisal system, treasury management, product diversification, internal control, external regulation as well as skilled human resources to achieve the international excellence and to face the global challenges.

- **Muniappan (2003)** focused on two areas - firstly, challenges faced by the Indian banks and secondly, the management of these challenges. Every aspect of the banking industry, be it profitability, NPA management, customer service. Risk management, HRD etc., has to undergo the process of transformation of aligning with the international best practices. He concluded that the future of Indian banking system needs a long-term strategy, which should cover areas like structural aspects, business strategies, prudential control systems, integration of markets, technology issues, credit delivery mechanism and information sharing, etc.

- **Ghosh and Das (2005)** highlighted the ways how market forces may motivate banks to select high capital adequacy ratios as a means of lowering their borrowing costs. If the effect of competition among banks is strong, then it may overcome the tendency for bank capitalization. If systemic effects are
strong, regulation is required. Empirical tests for the Indian public sector banks during the 1990s demonstrated that better capitalised banks experienced lower borrowing costs.

- **Mohan (2006)** focused on the changes in efficiency and productivity in Indian banking and stated that the patterns of efficiency and technological change witnessed in Indian banking can be viewed as consistent with expectations in an industry undergoing rapid change in response to the forces of deregulation. In reaction to evolving market prospects. A few pioneering banks might adjust quickly to seize the emerging opportunities, while others respond slowly and cautiously.

- **Sharma and Nikadio (2007)** presented an analytical review of the capital adequacy regime of the banking sector in India and concluded that in the regime of Basel I, Indian banking system performed reasonably well, with an average CRAR of about 12 per cent, which was higher than the internationally accepted level of 8 per cent as well as India's own minimum regulatory requirement of 9 per cent. Fred, Stephen and Arthur (2009) used a multivariate discriminate model to differentiate between low efficiency and high efficiency community banks (less than $1 billion in total assets) based upon the efficiency ratio, a commonly used financial performance measure that relates non-interest expenses to total operating income. The discriminate model was applied using data for 2006-2008 and also included the periods of high performance as well as the deteriorating industry conditions associated with the current financial crisis. The model's classification accuracy ranges approximately from 88-96 per cent for both original and cross-validation data sets.

- **Dwivedi and Charyulu (2011)** analyzed the impact of various market and regulatory initiatives on efficiency improvements of Indian banks with the help of Data Envelopment Analysis (DEA) and found that national banks, new private banks and foreign banks have showed high efficiency over a period of time than the remaining banks.
• **Uppal (2011)** analyzed the performance of major banks in terms of productivity and profitability in the pre and post e-banking period and concluded that performance of all the banks under study is much better in post-e-banking period and further foreign banks are at the top position, whereas the performance of the public sector banks is comparatively very poor.

• **Ghosb and Gbosh (2011)** emphasized on management of non-performing assets in the perspective of the public sector banks in India under strict asset classification norms. use of latest technological platform, recovery procedures and other bank specific indicators in the context of stringent regulatory framework of the Reserve Bank of India and concluded that the reduction of non-performing asset is necessary for improving the profitability of banks and to comply with the capital adequacy norms as per the Basel Accord(s).

• **Thiagarajan, Ayyappan and Ramachandran (2011)** analysed the role of market discipline on the behaviour of commercial banks with respect to their capital adequacy and concluded that the commercial banks are well capitalized and the ratio is well over the regulatory minimum requirement. The private sector banks show a higher percentage of tier-I capital over the public sector banks. However the public sector banks show a higher level of tier-IT capital. The study also indicated that market forces influenced the banks' behaviour to keep their capital adequacy well above the regulatory norms. The Non-Performing Assets influenced the cost of deposits for both public and private sector banks in a significant manner. The return on equity had a significant positive influence on the cost of deposits for private sector banks. The public sector banks can reduce the cost of deposits by increasing their Tier-I capital. Induced by the forgoing revelations, an attempt is made to analyze the performance of selected public and private banks in India on the basis of parameters recommended in CAMEL Model, i.e. C-capital adequacy, A- asset quality, M-management efficiency, E-earnings quality and L-liquidity. Which is divided into four sections. First
section includes a brief review of some of the earlier studies. Second section covers the scope, objectives, hypotheses and research methodology of the study. Third, fourth, fifth, sixth and seventh section, an attempt is made to analyze the capital adequacy, asset quality, management efficiency, earnings quality and liquidity of six banks in all selecting 3 banks from each category i.e. State Bank of India (SBI), Punjab National Bank (PNB) and Bank of Baroda (BOB) from public sector and ICICI, HDFC and AXIS from private sector banks in India.

4.4 RESEARCH STATEMENT:
“Financial Performance Appraisal of Indian Banking Sector-A Comparative Study of Selected Public and Private Sector Banks In Gujarat.”

4.5 RESEARCH DESIGN:

4.5.1 SAMPLE DESIGN:

In this study, selected banks from the public sector and private sector in Indian banking sector are covered. The three banks selected for the research purpose in each sector are the largest three banks in their respective sector. The selected banks in Indian banking sector are divided in following two groups from the year 2004-05 to 2013-2014:

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<thead>
<tr>
<th>Sr. No</th>
<th>Public Sector Bank</th>
<th>Private Sector Bank</th>
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<tr>
<td>1</td>
<td>State Bank Of India</td>
<td>ICICI Bank</td>
</tr>
<tr>
<td>2</td>
<td>Bank Of Baroda</td>
<td>Axis Bank</td>
</tr>
<tr>
<td>3</td>
<td>Punjab National Bank</td>
<td>HDFC Bank</td>
</tr>
</tbody>
</table>

4.5.2 THE PERIOD OF THE STUDY:

The study is covered for ten years from the year 2004-05 to 2013-14. This period is selected by the researcher for the study because it is a period after the submission of The Narsimha committee report II. The second phase of reforms process can be covered during this time period.
4.5.3 SCOPE OF THE STUDY:

This study is based on selected private and public banks of India for the period of ten years from 2004-05 to 2013-14. It covers the evaluation of financial performance regarding profitability, credit efficiency, operational efficiency and productivity of banks. The study is limited for only financial performance covering nineteen ratios. The tool for appraisal of financial performance is ratio analysis. So, the scope of the study is still very wide.

4.5.4 RESEARCH GAPS:

The following are the research gaps i.e. the gaps between the earlier researches conducted and the present research conducted by the researcher:

A. This research covers the period from 2004-05 to 2013-14. Other researches conducted are of earlier periods. Here the latest period is considered which is considered as the period of technology and innovations and where the banking is much more than traditional banking process of accepting deposits and lending money.

B. The research is based on six selected banks, three each from public and private sector. Three banks selected from each sector are the top three banks in their respective sector. Other researches conducted are not exactly on these six selected banks.

C. The research has been based on the financial performance appraisal of the selected banks on the basis of variables based on CAMEL model. Other researches are mostly based on profitability and liquidity performance. Capital adequacy, earnings quality, management efficiency and asset quality were mostly unexplored.

4.5.5 RESEARCH QUESTIONS:

This study focuses the functional aspects of the banks as well as it cleans the financial consideration for efficiency measurement. Through this study, operational efficiency and commercial viability is considered by the researcher. The researcher would like to address the following questions:
A. Either the banking sector in India is operationally efficient or not.
B. Either the profitability of both the groups of banks is consistent and different or not.
C. Either there is any difference in productivity of both the groups or not.
D. Either the Asset quality differs within the banking groups or not.
E. Either the liquidity between both the groups differs or not.
F. Either the efficiency of management between both groups differs or not.

4.6 OBJECTIVES OF THE STUDY:

The present study is conducted to achieve the following objectives:
A. To study the present position of capital adequacy of selected public and private sector banks.
B. To study the asset quality of selected public and private sector banks.
C. To study the management efficiency of selected public and private sector banks.
D. To study the earnings quality of selected public and private sector banks.
E. To study the liquidity of selected public and private sector banks.

4.7 HYPOTHESIS:

To achieve the above objective of the study, the following hypothesis have been formulated and will be tested:
A. H01: There is no significant difference in the bank/group-wise capital adequacy of the selected public and private sector banks.
B. H02: There is no significant difference in the bank/group-wise asset quality of selected public and private sector banks.
C. H03: There is no significant difference in the bank/group-wise management efficiency of selected public and private sector banks.
D. H04: There is no significant difference in the bank/group-wise earnings quality of selected public and private sector banks.
E. H05: There is no significant difference in the bank/group-wise liquidity of selected public and private sector banks.
4.8 DATA COLLECTION:

This study is based on secondary data. For this purpose, the researcher has accessed the capital line software as well as money control website to get the data for the years 2004-05 to 2013-14. The survey published in financial express for top banks and other related websites were also used. Moreover, RBI bulletins, banking journals, articles, reports and surveys have been referred.

4.9 DATA ANALYSIS:

CAMEL model has been used for the purpose of analysis to find out the relationship between variables between banks and among the group as a whole. For the comparison between the groups, some statistical tests have been used according to the nature and objectives of the study. The collected information are suitably classified and tabulated with the help of statistical tools. Various types of parametric and non parametric tests were used for this purpose. Each variable of CAMEL model i.e. Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality and Liquidity is studied using the various related ratios.

4.10 SIGNIFICANCE OF THE STUDY:

The results that are obtained from the present study is helpful to the policy makers, depositors, investors and other stakeholders to take decisions about the capital adequacy, asset quality, management efficiency, earnings quality and liquidity of the selected public and private sector banks in India. The results of the study will also help banks to increase their financial and operational efficiency.

4.11 LIMITATIONS OF THE STUDY:

The present study has covered the performance analysis of selected public and private sector banks (only three banks from each category) in Gujarat State for a period of 10 years only, therefore results drawn cannot be universally
applied to the banking sector as whole for the entire period especially after the reforms. Availability of time and lack of experience on the part of the researcher may be considered a stumbling block in achieving the objectives of the study. The research is based on the financial information of the banks. So the outcomes depend upon the genuineness of the financial information. Over and above the financial statements has its own limitation which affects the outcomes of the study.

4.12 THESIS OUTLINE:

The thesis has been divided into the following chapters:

4.12.1 OVERVIEW OF THE INDIAN BANKING SECTOR:

This chapter considers the origin and developments that have taken place in the Indian Banking Industry as a whole. It also gives a brief description of banks working and their performance as well as profitability variations.

4.12.2 THE CONCEPT OF PERFORMANCE APPRAISAL

This chapter describes the concept of performance appraisal. It also states the need and importance of performance appraisal in the context of the Indian banking sector. It further elaborates on the various indicators that can be used to test the performance appraisal in the banking sector.

4.12.3 SURVEY OF LITERATURE:

This chapter describes the various studies that have been done on this particular topic. It studies the various contributions made by different researchers concerning the problem. In this chapter various Ph.D. thesis, research articles, research papers etc. have been studied to know the outcomes and conclusions of study as regards the financial performance of Indian banking sector.
4.12.4 RESEARCH METHODOLOGY:

This chapter discusses the research approach and the methods undertaken in this thesis. In this chapter the details of the main study that compromises the primary research components of this thesis including research instruments, analytical tools, research samples and data collection are discussed. As a result, various parametric and non parametric tests were performed to present the cause and affect relationship between different variables.

4.12.5 ANALYSIS OF CAMEL MODEL VARIABLES:

This chapter describes the various variables as per the CAMEL model. The analysis of the performance of individual banks between each other and among the group as a whole is studied. The five variables of the CAMEL model i.e., C: Capital Adequacy, A: Asset Quality, M: Management Efficiency E: Earnings Quality and L: Liquidity are analyzed in this chapter. Under each variable different ratios related are obtained and each ratio has been analyzed using different parametric and non parametric test as suitable to the analysis.

4.12.6 SUMMARY, FINDINGS AND SUGGESTIONS:

This chapter presents the summary of the research conducted in this thesis. The novel contributions as well as the conclusions derived from the findings will also be reported in this chapter. It highlights the limitations of this work and discussed the potential for further investigations.