SYNOPSIS OF THE THESIS

PROBLEMS AND PROSPECTS OF BANK COMPUTERISATION – A STUDY
OF SELECTED CO-OPERATIVE BANKS IN PUNE

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INTRODUCTION

For the past three decades India’s banking system has several outstanding achievements to its credit. The banks are the main participants of the financial system in India. The banking sector offers several facilities and opportunities to their customers. The bank also offers investment and insurance products. As a variety of models for cooperation and integration among financial industries have emerged, some of the traditional distinctions between banks, insurance companies, and security firms have diminished.

Before the establishment of banks, the financial activities were handled by money lenders and individuals. At that time the interest rates were very high. Again there were no security for public savings and no uniformity regarding loans. So as to overcome such problems the organized banking sector was established, which was fully regulated by the government.

Indian banking sector is divided into different components from which co-operative banking sector is one. Co-operative banking is retail and commercial banking organized on a co-operative basis. Co-operative banking institutions take deposits and lend money in most parts of the world. Co-operative banks have completed 100 years of existence in India. They play a very important role in the financial system. The history of co-operative
banks goes back to the year 1904. In 1904, the co-operative credit society act was enacted to encourage co-operative movement in India. But the development of co-operative banks from 1904 to 1951 was most disappointing one. The structure of co-operative bank consists:

- Primary co-operative credit society
- Central co-operative banks
- State co-operative banks
- Land development banks
- Urban co-operative banks

**Objectives of the Study**

Following are the objectives of the present study:-

1. To study the concept of bank computerisation.
2. To ascertain the progress made by selected co-operative banks in the context of bank computerisation.
3. To study the reactions of bank customers of computerised co-operative banks.
4. To study the reactions of bank employees about computerisation.
5. To study the different software available for banking.
6. To study the problems faced by computerised co-operative banks, in implementation of computerisation systems and to suggest remedial majors.
7. To forecast the prospects of computerisation in co-operative banks in particular and computerisation in all other banks in general.

**Hypotheses of the study**

In consistent with the objectives following hypotheses were formed by the researcher:

1. Computerisation improves the quality of service in banking sector.
2. There are more problems faced by senior citizens than that of youngsters, while availing e-banking services.
3. Process of bank computerisation is of recent origin. The computerisation of banks other than the co-operative banks is a common phenomenon. But the co-operative banks are slow in adopting the process of computerisation.

4. As some banking software is costly, some co-operative banks have not adopted them.

5. A number of problems in the application of computerisation are faced by co-operative banks.

Scope of research

Aim of this research is to study technological developments (extent of bank computerisation) in co-operative banks, different aspects affecting development of co-operative banks, problems and prospects of bank computerisation, views of bank employees and customers on bank computerisation, and different software solutions available for bank computerisation.

The scope of the research is limited only to the co-operative banks in Pune city. From Pune city 18 co-operative banks have been selected for the purpose of this study. The banks have been selected on the basis that their working exists in Pune city.

As per the norms of RBI the computerisation is compulsory for organized banking sector. Computerisation in banking has its own importance. It is time saving, efficiency oriented and practically convenient process of modern banking. The co-operative banks have limited area of operation. However these are the segments of modern Indian banking system and hence cannot function independently on traditional method as it brings failure to them in new era of competition after globalization. Therefore this study focuses on technological development in co-operative banks.
Importance of the study

The Financial Institutions are the backbone of the Indian economy. Today Indian banking industry is in the midst of an IT revolution. Nowadays nearly all nationalized banks have implemented IT based solutions for their day to day transactions. The applications of IT in banks have reduced the scope of traditional or conventional banking with manual operations. IT and the communication networking systems have revolutionised the functioning of the banks and other financial institutions all over the world. The Banks are using new tools and techniques to find out the needs of the customer and accordingly offering tailor made products and services. IT has enabled the banking industry to not only come out with new products and services but also enhanced the turn around time by bringing efficiencies in the backend processes. The impact of automation in the banking sector is difficult to measure.

Review of the literature shows that different researchers and experts in the fields of banking have discussed various aspects of the bank computerisation. It has been observed that none of the studies addresses the issues such as technological developments (extent of computerisation) of co-operative banks, different aspects affecting development of co-operative banks, problems and prospects of bank computerisation, responses of the employees and customers on bank computerisation, and different software solutions available for bank computerisation. Therefore, this study is an attempt to address these issues.

RESEARCH DESIGN

In order to ensure that the study remains focused, it was necessary to decide the time frame for the study. Data related to co-operative bank computerisation is not available easily, because banks do not publish any data related to bank computerisation. The annual report of the bank contains only financial and other information. RBI bulletin publishes the overall report on bank computerisation but not a separate report or chapter
covering the co-operative bank computerisation area. The researcher has selected the five years time frame for the study from the year 2003 to the year 2008.

In Pune, total 55 co-operative banks are in existence. Out of total 55 banks, 10 are well established and have implemented core banking solution (CBS) to provide automated services to their customers. 25 banks have implemented total branch automation (TBA). 20 banks have not yet implemented TBA or CBS systems. For the detailed study researcher has selected 18 (33%) co-operative banks out of 55 co-operative banks in Pune city. The primary data for the study is collected from selected 18 co-operative banks in the Pune city. For the collection of primary data researcher has designed the structured questionnaire to study the computerisation related aspects of the banks. For finding out the problems faced by banks’ regarding the bank computerisation the researcher has used interview method. The secondary data is collected from annual reports of selected co-operative banks, RBI bulletins, journals, magazines, and from various authenticate web sites. The thesis is organized into six chapters. The brief contents of each one are as follows:

Chapter 1

An overview of the banking sector

This chapter is divided into two parts from which PART – I covers the overview of banking system in India in brief, Need of the Banks, History of Indian banking system, Types of banks in India, Services provided by banking organizations in general.

PART – II of this chapter covers the introduction of Co-operative Banking in India, history of co-operative banks in India, RBI policies for co-operative banks, types of co-operative banks, their functions and problems of co-operative banks etc.

Chapter 2

Research Methodology

This chapter explains the need of the research, importance of the study, objectives, hypotheses and research design of the study. It also discusses the details about study
period, the reason for selection of co-operative banks, data collection method, data analysis and chapter scheme of the thesis.

Chapter 3

Literature Review
A review of the literature is taken in the third chapter. This chapter provides the basis for the present study. Such literature available to the researcher on the application of information technology in Indian banks is classified according to the related topics as mentioned below.

1. Technological development in banking
2. Application of IT in banking
3. IT framework for Indian banking
4. Technological developments in co-operative banks
5. Indian banking sector: challenges and opportunities

However, it is a fact that the researcher has not come across the research work on the topic selected for the study.

Chapter 4

Bank Computerisation
Chapter 4 covers the important aspects related to computerisation process of banking sector. This chapter covers introduction about computerisation, IT and banks, types of bank computerisation, and also covers the computerised services provided by banking organizations.

Nowadays, Banks are increasingly adopting IT based solutions, for providing better services to their customers at a minimal cost. The role of IT has become so integrated and pervasive with banking that it is impossible to think of banking processes without an effective IT system in place. Many banks in India have introduced IT for several reasons:

- Adoption of information technology in financial institutions and IT based new services offered by them
• Rising competition in banking industry
• Globalisation in banking
• To meet the growing demand of customers for mobility, speed, efficiency and economy through various technology based services
• A technological revolution in Indian economy

From the IT perspective, the banking industry can be classified into three categories:-

• Banks where all the processes are automated.
• Banks that are in the process of implementing core banking software and setting up their networking infrastructure.
• Banks that are in the process of identifying the core solutions

Chapter 5

Problems and prospects of Co-operative banks computerisation in Pune

This chapter is based on twin objectives as given below:-

a) To study the problems faced by the co-operative banks in implementing the computerised system and to suggest the remedial measures.
b) To forecast the prospects of the computerisation in all different banks in general and in co-operative banks in particular.

The researcher has analyzed the primary data in this context and presented it in the following three parts of this chapter.

Part I : Computerisation of co-operative banks in Pune
Part II : Views of the co-operative banks employees regarding the bank computerisation.
Part III : Views of the co-operative banks customers regarding computerised banking services

PART I: Computerisation of co-operative banks in Pune

Part – I covers the detail information about selected co-operative banks in Pune city. This section covers the information about the establishment year of banks; number of branches, total deposits and advances of banks. The researcher has selected 18 co-operative banks in Pune for the purpose of study. This section also discusses about
traditional banking transactions and computerised transactions for banking services, customer reactions regarding bank computerisation, advanced e-banking services provided by the banks and mainly problems faced by co-operative banks while implementing different types of computerisation techniques namely back office application, total branch automation and core banking solution. In this chapter researcher also covers the available software for electronic services. This chapter also stated the year wise implementation process of bank computerisation.

Researcher has interviewed Heads of the IT departments / EDP Incharge of the respective co-operative banks in Pune. The primary data were collected from these respondents by serving them the structured questionnaire. In this section the researcher has also discussed the available banking software for computerised transactions.

**PART II: Views of the co-operative banks employees regarding the bank computerisation**

**PART – II** of chapter 5 covers the reactions of 100 employees of 18 co-operative banks for the purpose of study. The researcher has collected information from employees by serving them a structured questionnaire and has interviewed them personally for additional information regarding their problems.

There is maximum number of 53 male employees as against 47 female employees. Out of these 100 employees 55 bank employees are in the age group of 31 – 45. Further, 27 bank employees are in the age group of 46 – 58, and other 18 bank employees are below 30. Maximum numbers of 65 bank employees are graduates. This is the minimum qualification for a clerical job or supervisory job in a bank. However, 28 bank employees are post graduate. There are only 6 employees who have passed SSC and only 1 employee is below SSC.

Mainly, this part of chapter 5 covers the reactions of bank employees regarding bank computerisation, sufficiency of training provided by banks, problems of bank employees due to computerised services.
PART – III: Views of the co-operative banks customers regarding computerised banking services

PART – III discusses the views of customers regarding bank computerisation. Bank has adopted computerised system for the reason that it is economical and it is labour saving device. The researcher has classified the customers of the bank in 5 categories. Considering 18 co-operative banks the researcher has selected sample of 40 respondents from each category on the basis of purposive sampling method.

Out of 200 customers total 111 male customers as against 89 female customers. Maximum numbers of 86 bank customers are in the age group of 26 – 50. Further, 63 customers are in the age group of below 25, and other 51 customers are above 50.

The customer visits a bank for depositing his/her savings or withdraws or enquiry about balance. The researcher has made an attempt to analyze the transactions of the customers of selected banks. These transactions are either traditional transactions or computerised transactions. In this section researcher studied that how many customers visit their banks for banking transactions (i.e. how many customers are using traditional way of banking) and how many customers use computerised services for their banking transactions?

This section also discusses the e-banking services used by customers and the transaction wise convenience to customers with e-banking services. The researcher also covers the reactions of the bank customers regarding bank computerisation. To study this, researcher has considered three aspects namely reduction in waiting time for any transaction, security about computerised transactions and increased service efficiency.

Finally this section also covers the problems faced by customers regarding e-banking services. This research highlights mainly on the problems faced by the banks, its employees and the customers regarding bank computerisation. These problems are listed below.
Problems of the banks

Problems faced by the banks while implementing back office application are as follows:

1. Duplication of work
2. No benefit to customers
3. Limited functions covered with this application like SD(Savings Deposits) / TD(Term Deposits) interest calculation payroll etc.

Problems faced by the banks while implementing total branch automation (TBA) are as follows:

1. Human nature or tendency of staff resist changes
2. Communist movement problem
3. Unemployment problem
4. Y2K technical problems
5. Data back up problems
6. Antivirus updation problem
7. Limited services provided by the bank
8. Lack of computer knowledge to staff

Problems faced by the banks while implementing core banking solution (CBS) are as follows:

1. Huge investment infrastructure
2. More dependability on outside service provider
3. Very complex hardware and software used in CBS
4. Highly qualified professionals are to be employed and hence salary burden increase.
5. Difficulty to detect problem from number of stages
6. Customers are not ready to use CBS
7. Health Problems

Problems of the bank employees

Problems of the bank employees regarding bank computerisation are as follows:

1. Lack of thorough knowledge of technology
2. Lack of confidence in handling automated transactions
3. No direct interactions with the customers
4. Fear about job security

Problems of the customers

Problems of the customers regarding bank computerisation are as follows:
1. Limited scope for personal advice on banking transactions
2. No direct communication with the bank employees
3. Sometimes problematic for transactions
4. Fear about security of the transactions
5. Lack of knowledge about computerised transactions

In this study, researcher mainly concentrated on fear about transaction security and lack of knowledge problem related to bank customers.

Chapter 6
Findings and Suggestions

Based on the study, the researcher has come to certain conclusions and had offered some recommendations for improving the working process of co-operative banks. Some of the important findings are listed below.

1. The present co-operative banking scenario is far from the anywhere and any time banking. This is mainly because the system reengineering for anywhere and anytime banking demands use of high level of technological tools on one hand and strengthening the infrastructural facilities like communication system, networking etc. on the other hand. The reasons for non implementation of anywhere and anytime banking in the co-operative banking sector are listed as follows:-
   1. Lack of awareness amongst the customers about their rights to various banking facilities
   2. Lack of necessary computerised systems and tools
   3. Lack of proper communication system required for such facilities
   4. Requirement of the funds for investment on computer and communication system
5. Lack of knowledge and skills of the employees of the banks
6. Lack of IT literacy of the customers who are to use the technology to avail
   themselves of the facilities
7. Resistance against change in the system by all levels of the employees and
   management including top executives of the banks
8. Delay in framing rules and regulations for electronic transactions

2. Cosmos Co-operative Bank Ltd. Pune is the oldest co-operative bank established in
   1906 and the latest co-operative bank is Udyam Vikas Co-operative Bank Ltd. which
   established in 1989. Maximum numbers of 9 co-operative banks were established in the
   period 1971-80, followed by 3 co-operative banks in 1911-20. There are 2 co-operative
   banks established in 1941-50, and other 2 in 1981-90. This leads us to conclude that
   maximum numbers of 13 (72.22%) co-operative banks were established after
   independence.

3. Most of the co-operative banks in Pune have adopted computerisation according to
   their financial capacity. About 18.19% co-operative banks have adopted core banking
   solutions (CBS) to provide centralised services to their customers out of which only
   7.27% banks are providing all types of high class services with electronic channels to
   their customers. Whereas 45.55% co-operative banks have implemented total branch
   automation (TBA) and 36.26% co-operative banks are still working on the back office
   application (BOA). Website is the basic requirement of all financial institutions, but still
   out of selected 18 co-operative banks 55.60% co-operative banks do not have their
   website whereas only 44.40% co-operative banks have their website. Out of the selected
   18 co-operative banks only 6 banks provides CBS services to their customers, 11 banks
   have implemented TBA out of which 4 banks are thinking about implementation of CBS,
   one bank still works on back office application.

4. Banks have faced different problems during the computerisation process. The
   problems faced by the banks at different stages of the bank computerisation are listed
   below.
• Problem faced by the banks during implementation of back office application: More than 10 banks faced the problems like duplication of work in daily banking transactions and limited services to the customers.

• Problem faced by the banks during implementation of total branch automation: The major problems faced by the banks were: daily/monthly/weekly data back up, anti virus updating problem and resistance from staff to computerised working process.

• Problem faced by banks during implementation of core banking solution: The major problems faced by the banks were:
  o Huge investment in infrastructure
  o Complex hardware and software infrastructure
  o Dependability on outside service provider due to lack of knowledge about technology
  o Difficulty in problem detection etc

5. Although technological developments and infrastructural improvements are coming up very fast, it needs a huge amount of investment for any individual bank in order to have the full benefit of such developments/improvements. Many of the co-operative banks are not in a very sound financial position as profitability of those banks going down. Thus many co-operative banks may not be in a position to invest huge amount in the technological areas, although it is highly necessary for their survival as the private sector banks and the foreign banks are posing stiff competition to them particularly in the areas of customer service, business growth and profitability.

6. About 68.50% of the customers are using e-banking services and particularly ATM service for their day to day banking transactions, where as 26.50% of the customers make use of internet banking services. There are 16.00% of them who are accustomed to mobile banking. Finally there are 20.50% of the customers who are still using traditional banking system for their banking transactions. It is therefore suggested that banks should take the responsibility to make the customers aware of e-banking services.
7. Since the banking system becomes different from the traditional one due to more use of the technological tools, the customers face difficulty in handling banking transactions, particularly at the initial stage. In the age group of 26 – 50, 30.50% of the customers agree that they have problems with e-banking services and also fear about the security in the transaction, but 12.50% do not agree to this opinion. In the age group of above 50 years, 19.50% of the customers agree that lack of knowledge about the computerised transactions is the real problem. This is followed by 17.00% of the customers in the age group of below 25, who fear about the security in the banking transaction. They do not feel that the computerised transactions are secured transactions. Due to the above problems 50% customers still use traditional transaction system for banking services. Senior citizens do not accept any kind of change in the current situation, but youngsters are always willing for a better change.

8. Different banks use different types of software for their banking transactions according to the requirement of the bank and cost of the software. The most useful software are OMNI, OMNI SETU, Electra, Finacle etc. The Cost of OMNI software which is used for core banking solutions is above 15 crore and hence it is beyond financial capacity of these banks. The software namely FINACLE, Electra star switch, HMA starware, Electra ATM are also used for CBS transaction but the cost of these software is also above 10 crore which is not affordable by small size or middle size banks.

9. Maximum number of 84 bank employees (84.00%) expressed that lack of thorough knowledge of technology is their problem in implementing computerised system in the bank. Other 16 bank employees (16.00%) did not have this problem. It is followed by 40 banks employees (40.00%) who have no confidence in implementing the computerised system. And other 60 bank employees (60.00%) are confident to implement the computerised system. Further there are 15 bank employees (15.00%) who are under pressure to loose the job because of computerisation. But remaining 8 employees (08.00%) are worried about loosing the contact with the customer by implementing computerised system. But 92 bank employees did not thing in that way.
10. Even though banks have introduced computerised system, the customers are still accustomed to the traditional method of banking transactions. They have a common purpose of depositing the amount or withdrawing it, either by cash or cheques and always visit their banks to enquire about their balance. There is still scope for each customer to use the computerised transaction system for deposit cash or cheque, money transfer, repayment of loan, demand draft and investment.

11. According to the views of the customers following are the main advantages of the bank computerisation:
   (a) Computerised transactions reduce waiting time for banking transactions.
   (b) Computerised transactions are secured transactions.
   (c) Computerised transaction has increased service efficiency.

12. In the changing environment the customer prefers anywhere, anytime banking and rarely visits their bank branches. Thus the banks need not open so many offices and they can very well do their business from a few offices using IT tools. Thereby the cost of maintenance of the offices can be reduced considerably.

13. In anywhere and anytime banking, the banks have to perform the job of consolidation of data at one of the branches, known as Master branch. At this master branch all the transactions are merged and reports are generated and collected at one point and such reporting system is simpler. Thus, reports, particularly the management information system (MIS) reports will be available to the senior management more quickly, accurately and systematically. This will help them to take important decisions. Thus, decision making of the bank will be quicker and more accurate.

**Suggestions based on the research**

Information technology has transformed the business environment all over the world. It has had a major impact on banking sector with the introduction of number of e-channels like ATMs, ECSs, EFTs, credit cards, internet banking, mobile banking, telebanking etc. It has bridged the gaps in terms of the reach and coverage of the systems, and enabled
better management of banking business. But with information technology based banking business, banks should keep some important aspects in mind. These aspects are:

1. **Computer literacy of customers:** In case of core banking a very high level of technology is used at both the branch and customer level. The customers may not be familiar with the level of IT. In such cases, the customers may not feel comfortable in handling business transactions with their banks. The banks have to play an important role in educating their customers in this area.

2. **Training to employees:** In some cases, the employees of the banks may not be in a position to handle such sophisticated level of technology because of lack of knowledge or skill. This is more so in case of Indian banks. Therefore, the top management of the banks should take the necessary steps to provide adequate training to their employees in the IT area so that the employees feel more comfortable in handling high technology based transactions.

3. **Optimum use of services of bank employees:** With the use of technology most of the bank work can be computerised. Manual intervention of various banking jobs will not be needed. At the same time, since the customers will mostly do the banking transactions from their own place, their visit to the bank branches will be reduced considerably. Thus, the counters of the bank branches will be less crowded resulting in minimisation of the workload in the branches. Thus, the employee will get more and more free time. The management of the banks will have to decide about how the employees can be optimally utilized for various banking jobs other than the traditional banking functioning. For example, Bank employees can be utilized for marketing purposes which can be beneficial for banks to increase their business.

4. **Introduce new technology:** Physical location of the bank branch will be less important and possibly irrelevant as new technologies such as ATMs, internet banking, mobile banking etc. provide wider access to a broad range of new facilities/service.
5. **Co-operation rather than competition among banks:** Despite competition amongst various banks, a greater degree of co-operation amongst them will be forthcoming which will benefit all the banks. For example, an ATM placed at a centralised location of a city may be shared by many banks. This will simplify operational complexities and at the same time be cost effective for all the banks. Similarly, network may be shared by various banks to make it cost beneficial. Thus, competition will not prevent co-operation and collaboration amongst various banks to provide all kinds of service/facilities through strategic alliance.

6. **Preventive measures to avoid interruption in computerisation:** The database of the banks will be accessed by so many customers and as such there is more possibility of the database getting corrupted because of virus or some other reasons. In such eventualities the whole system will be stalled. Therefore, the banks have to take abundant precautionary measures against occurrence of such incidents and such measure should be taken on preventive basis at regular intervals.

7. **Cyber crime:**
   - Misuse of the system by the customers due to ignorance may be a common feature in the Indian context. For example, while using ATM or Point of Sale (POS) terminal, the customers are to use their customer index number. In case the customers give a wrong number thrice or so, the system will capture the cards. The banks are to be very careful in returning those cards to the genuine customers in order to prevent frauds.
   - Some customers / non customers having the terminal at their places may be very knowledgeable about computer and communications. Some of them may try to decipher secret codes of the database or encrypted messages for ulterior motives which may lead to serious type of frauds of higher magnitude or frauds with serious implications. The banks should therefore take steps for adequate logical security to prevent such frauds.
8. **Optimal use of IT tools:** Owing to their sound capital base private, public and foreign banks can invest huge funds for technological developments; use the IT tools optimally to their benefit. In comparison with this, the cooperative banks are falling behind in this area due to their poor capital base. In order to cope with this tough situation, the weaker of the co-operative banks may consolidate themselves by going for a merger so that the merged unit becomes a bigger one with sound financial base and a stronger force to reckon with. This will enable them to invest funds on technological developments which are essential for extending anywhere and any time banking to the customers.

9. **Enrich knowledge of employees:** The banks should also take steps for enhancing the level of knowledge and skill of their employees at all levels including top executives by imparting training in IT. The employees of all categories should be motivated through training on behavioural science so that there is perceptible change in their attitudes about the new technologies they are going to handle in the future.

**Contribution made to the body of knowledge on the subject**

Indian banking structure is divided into different banks such as – RBI, scheduled banks, non-scheduled banks, nationalized banks, co-operative banks etc. Co-operative banking structure emerged as the result of co-operative act 1904, initially to cater the credit needs of farmers and to protect them from the clutches of money lenders, traders and landlords.

Co-operative act 1918 paved the way for the establishment of co-operative banks. The urban co-operative banks are established as an outcome of the need of local trading community, middle income earners and professionals.

These urban co-operative banks have lion’s share in the banking transactions of a particular locality. They do undertake the banking function similar to the functions of nationalized banks and scheduled banks. But co-operative banks are lagging behind nationalized and scheduled banks in accepting the computerisation.
This study is undertaken to find out the real problems of these co-operative banks about process of computerisation. The prospective of the bank officers and the outlook of the customers are worth considering. The reality about the acceptance of e-banking system at the co-operative bank level is ascertained by the researcher.

The contribution of this research is definitely significant as it is a micro level study based on primary data. The problems highlighted in the field work may be of general nature but create serious problems when they are to be faced at the bank level.

Suggestions for the improvement of the functioning of co-operative banking in general and e-banking at the co-operative bank level in particular are based on the investigation made by the researcher. Most of the suggestions are of practical nature. If they are brought in practice the co-operative banks may go online like other commercial banks using e-banking services.

The contribution of this research is in the form of suggestions are most important. There may be some type of discrepancy in implementing the ordinance / orders of RBI. It is also the responsibility of the banking system especially RBI to take care of these co-operative banks along with other scheduled banks.

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