CHAPTER 8

SUMMARY
In today’s competitive era, the Information systems can significantly contribute in the activities of the organizations and can enable the organization to handle business dynamics better than their counterparts. The organizations where IS is at maturity level and the operations are data centric, quality of IS should be maintained. The banking industry in India has been one of the early adopters of technology wherein the processes are standardized and mature. Although standardization is there in Indian banks, but the effectiveness of IS would critically affect the performance of banks and create differentiation. The IS effectiveness needs to be monitored holistically and continuously. Since IS in banks depends on people, processes and technology, its effectiveness must be studied in a comprehensive manner by taking into account Strategic, Functional, and Technical considerations. These three views will lead to IS effectiveness. The present study addresses the following research objectives:

- To identify the Key Performance Indicators of an IS for banking sector
- To propose a model for evaluating the Information System in a bank
- To test the proposed model on IS in the banking sector
- To study the factors or causes of success and/or failure of IS in banking sector

A research was conducted to study the Information System in banking industry of Tricity region of Chandigarh, inclusive of Chandigarh, Panchkula, and Mohali. 165 respondents participated in the study. Total 28 banks participated in the study, inclusive of 20 Public sector banks, 7 Private sector banks, and 1 Foreign sector bank. Correlation and Factor analysis were applied for analysis of data collected.
The performance of IS in banks was measured by using 40 assertive statements measured on Likert scale. These 40 statements represented 40 variables for evaluating the performance of IS in Indian banks.

The research work conducted measures the IS effectiveness as Strategic, Functional, and Technical integration of IS with operations or processes of banks. A model was proposed to evaluate the IS effectiveness. The model represented the various dimensions of effectiveness that further make the whole IS effective. Questionnaire / Instrument had been designed to record the perceptions of the users of IS in the bank. The evaluation was done by converting the subjective scale of perceptions to a distinct objective score on a 5-point Likert scale. This score can provide a composite metric for comparison of various banks in public, private and foreign sector. The proposed model provided a modular, flexible and scalable approach to assess IS effectiveness using measures for partial and complete evaluation. The model also indicated the scope for improvement. The model was tested using the sample data for validity of scale and further applied on banks under study. Major findings are listed below.

8.1 Major Findings

- The findings brought out that the effectiveness of Information System in the Indian banking industry in the tricity region of Chandigarh was comparatively good.
- 12 factors came out as a result of the study. These factors were Data Integrity & Network Security, Long Term Planning, Transactional
Effectiveness, Resource Utilization, Data Management, Flexibility for Data Handling, Cost Control Management, Flow of Information, E-Documentation, Information System Efficiency, Backup Policy, Customer Satisfaction Level. These 12 factors later acted as Key Performance Indicators for the banks to evaluate their IS.

- These 12 factors were further categorized into 3 categories as: Factors contributing in Strategic Integration, Factors contributing in Functional Integration and Factors contributing in Technical Integration of IS in the bank.

- The five Factors contributing in Strategic Integration of IS in the bank were Long Term Planning; Resource Utilization; Flexibility for Data Handling; Cost Control Management and Customer Satisfaction Level.

- The four Factors contributing in Functional Integration of IS in the bank were Transactional Effectiveness; Data Management; Flow of Information and System Efficiency.

- The three Factors contributing in Technical Integration of IS in the bank were Data Integrity & Network Security; E-Documentation and Backup Policy.

- A model was proposed in Chapter 5 for representing 12 KPIs or factors and their influence on working of banks. This model represented the contribution of each factor by reflecting its strength or weakness in form of arrow line thickness that connected the KPI with its goal of effectiveness. The contribution of each factor was measured by evaluating score of each
variable based on questionnaire filled by respondents. A formula had been devised for this purpose.

• 20 Public sector banks participated in the study and majority of them had good score over 12 Key Performance Indicators. The performance of KPIs for various Public Sector banks was shown in Table 66. It indicated that total effectiveness score for two Banks i.e. Allahabad Bank and Syndicate Bank was lower than 4.00. It implied that these two banks were not performing up to the mark on overall basis in respect to IS.

• Eighteen out of Twenty Public Sector Banks were having an overall effectiveness score above 4.00. It implied that 90% of Public Sector Banks were performing overall well in respect of IS. It reflected upon the maturity of IS processes in data critical operations in Public Sector Banks.

• High effectiveness scorers in Public Sector Banks were Bank of Baroda and Oriental Bank of Commerce. The score of these two banks was above 4.50 which reflected upon the most effective usage of IS in the bank.

• The performance of KPIs for various Private Sector banks was shown in Table 74. The Private Sector Banks were performing better than Public Sector banks on the effectiveness score card of IS in the bank.

• It could be seen from the data available, that all Private Sector banks were mature enough in their IS processes, as their overall effectiveness score was above 4.00.

• It was also found that individual aggregate score of each Private Sector bank did not surpass the score of 4.50 that two of Public Sector banks had got.
8. Summary

- The average effectiveness score of all seven private sector banks was 4.29, which was higher than average effectiveness score of 4.24 of all twenty Public Sector banks.

- It could be concluded that Private Sector banks were performing marginally better than Public Sector banks in totality.

- It could be seen from the data available through Table 108 that Foreign Sector bank(s) were not perfect enough in their IS processes, at least in Indian operations, as their overall effectiveness score was below 4.00.

- It was also found that individual KPI scores’ of six factors of effectiveness in Foreign Bank did not surpass the score of 4.00 that reflected upon the under usage of IS in the bank. It is contradictory to the general perception about the IS effectiveness in Foreign sector banks. It may be because of the fact there were only 3 respondents under this category.

- The Overall or average effectiveness score of KPIs in Foreign Bank was 3.92, which was lower than average effectiveness score of all twenty Public Sector banks of 4.24, and average effectiveness score of all seven Private sector banks of 4.29.

- It could be concluded from the research done in Chandigarh region that Foreign Sector bank(s) was / were performing poorer than Private Sector banks and Public Sector banks in totality.

8.2 Recommendations for the Practitioners

After the analysis of data and its interpretation based on the model applied, the following important points were recommended for consideration of the banks:
• The IS in the bank should be evaluated in a comprehensive way, by taking into consideration the interest of all the stakeholders of the IS in the bank.

• As IS was lifeline of any data critical organization so the evaluation of IS must not be neglected or delayed for any reasons. It should be done in a regular and positive manner in order to sustain the effectiveness of IS with respect to business needs.

• The Key Performance Indicators or Factors suggested in the research must be applied in banks for evaluation of IS. The nomenclature of these suggested factors could be changed as per the need of various banks.

• The evaluation Parameters may change according to changing business dynamics. So evaluation process in the bank should be customized according to the changing parameters in model of evaluation.

• As all stakeholders of IS in banks were affected by its performance, so feedback about the IS should be consistently done, at all levels.

• Proper developmental modules could be designed for changing the mindset and skill set of bank employees. Trained manpower in the bank would contribute in effectiveness of IS usage in bank.

• The bank personnel using IS should be encouraged to interact more with the cross functional managers to increase their own understanding of the overall IS and its usage effectively.

8.3 Limitations of the Study

The study was conducted in banks operating in Chandigarh region only. It might not reflect the scenario of IS in banking Industry in India in general.
Only one foreign bank in the region participated in the study. So the data collected on this bank might not indicate upon the true perspective of employees working in foreign banks in India.

The model proposed integrative evaluation of IS on the basis of Strategic, Functional and Technical areas. All the levels of employees of bank were acting as respondents. Same questionnaire was administered to all the respondents that carried statements related to Strategic, Functional, and Technical issues together. It might be there that certain lower level respondents might not be able to handle the statements related to strategic issues in questionnaire with right perspective, as others were doing. Nevertheless, this form of the integrative model offered a stepping stone for further works.

8.4 Contributions of the Study

The contribution of the work done could be enormous if properly managed. The study could help the banks to evaluate its Information System in a comprehensive manner. The study could help the banks to focus on development of IS with respect to Strategic, Functional, and Technical perspective. The banks could do introspection by doing SWOT Analysis after thorough evaluation through IS evaluation model. It could help banks to identify properly their success, limiting, and failure factors, and further improve upon them. This could be satisfying for various stakeholders of IS in the banks. The regular and continuous evaluation of IS could be done in a regular and positive manner in order to sustain the effectiveness with respect to
business needs, and stay ahead of the competitors. The model suggested could be applied or tested for its applicability across various organizations of different domain and could help in setting the standards for others to follow.

8.5 Directions for Further Research

The model once applied on a particular bank could provide data that might be relevant for that particular time frame. It would be a thorough and time consuming process. But to apply the model more frequently, it is possible to automate the evaluation process by getting responses or feedback of users online and expediting the application part. It would help users to give feedback on regular intervals. Bank would get readily feedback on IS effectiveness.

The three areas of IS effectiveness are working in tandem, that is still needed to be established. This is to say, if strategic effectiveness is improved or deteriorated, its expected impact on functional and technical effectiveness needs to be understood. The synergy between three classifications to get complete IS effectiveness need to be studied further at detailed level.