Abstract

Title: Evaluation of the Key Performance Indicators of an Information System in Indian Banking Sector

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Keywords: Banking Sector, Effectiveness, Effectiveness Scorecard, Evaluation, Failure Factors, Information System, Key Performance Indicators (KPIs), Evaluation Model, Success Factors, Strategic, Functional, Technical Integration

The thesis centers on the need for one evaluation model based on Key Performance Indicators (KPIs) that gives as well as promotes the extent of IS effectiveness. The evaluation model brings out the effectiveness score of IS at the strategic level, functional level, technical level and as a composite or integrated metric also.

There is a need of constant monitoring and control system of IS with respect to business needs. Measuring and evaluating performance is a very critical factor for ensuring the success of any business organization and indeed for making IS payback. The Objectives of the Study are:

- 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 Banking sector
- To study the factors or causes of success and/or failure of IS in Banking sector

The literature was reviewed in five different categories. i.e., Studies related to information systems usage in the bank, Information systems usage in other similar Organizations, Performance of the bank, Impact of technology on working of the bank, and other related studies which could help in research work.

The present work is undertaken at the industry level in Chandigarh region inclusive of Chandigarh, Mohali and Panchkula tricity. Primary data was collected by questionnaire carrying 40 variables and personal interviews method from the randomly selected managers working at various levels in the banks chosen. Bank branches were chosen using stratified random sampling method. SPSS Package was being applied to compile and analyze the data collected from field survey.

The KPIs were identified by applying factor analysis tool on the data collected through the questionnaire. After applying factor analysis it was found that 12 factors came out as a result of the study. 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.

This study discussed a model that satisfies the needs for Evaluation of IS in post implementation scenario of IS in the bank; provide an integrated approach for evaluation of IS; an easy way to facilitate continuous / regular monitoring. The Model has been named as SFTI Model (Strategic-Functional-Technical Integration Model). Design of the model satisfies all the important aspects such as: Easy to Use; Modular; Flexible; Integrated; Generic. The model with its feature of flexibility can be applied to any organization in any segment. It represents 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. Each factor can be expressed and studied with the help of SFTI Model, Questionnaire, Steps for IS Effectiveness Evaluation.

Further the model is tested and checked for the validity and applicability for evaluation. Various statistical measures like weighted means, standard deviation, correlation, two-tailed t-tests have been applied. The comparison of evaluation score of Key Performance Indicators or factors contributing to effective performance of IS in various banks, was studied with the help of two tailed t-test. The data of Public Sector and Private Sector banks was compared for finding whether the evaluation score of various factors was different or not for two types of banking sectors. It could be concluded that at Strategic, Functional and Technical level the performance of Public and Private Sector banks was at par. It implied that the Public and Private Sector banks were performing at par with each other at overall IS effectiveness level.

Factors of Success or Failures of Information Systems in various banks are calculated on the basis of formula devised for contribution of each factor or KPI and applied with the help of SFTI model. Any factor or KPI would behave differently in different banks. So it is implied that success or failure factors would be different for different banks. They are studied on the basis of evaluation model. The findings brought out that the effectiveness of Information System in the Indian banking industry in the tricity region of Chandigarh was comparatively good. Statistically, there was no significant difference in effectiveness score of Public and Private Sector banks. The study could help the banks to focus on development of IS with respect to Strategic, Functional, and Technical perspective. It could help banks to identify properly their success, limiting, and failure factors, and further improve upon them.

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