Facilitators and Inhibitors in achieving Sustained Information System Effectiveness in Indian Banks

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ABSTRACT

An information system (IS) is effective when it is successfully implemented, effectively put to use and caters to the needs of the end user community. An example of such an information system is the core banking solution (CBS), which is extensively used by many banks all over the world. A CBS primarily takes care of the core operations of the bank. In the last three decades, Information Systems Effectiveness (ISE) has gained prominence in IS research. Information Systems effectiveness is a multi-stage, multi-dimensional construct and has been represented using *system quality, information quality, system usage, user satisfaction, individual impact* and *organizational impact.* There has been a dearth of research on the organizational impact dimension of information system effectiveness, particularly in the banking vertical. The focus of the existing body of knowledge on organizational impact has been on the "net benefits" that are brought to the organization rather than the "sustained benefits". We argue that information systems should be developed, implemented and managed with an objective of providing sustained benefits to the organization. Sustained IS effectiveness is primarily concerned with those changes which would ensure a continuous flow of benefits to the organizations. Academic research in effectiveness has been mostly "goal-oriented". Most of the research on ISE has been "ERP-centric" and banking systems have received lesser attention. This research is an exploratory study of the overall ISE of IT systems in Indian Banking industry.

The context of the research is the organizational change in the Indian Banking System. Banking Industry leads other verticals as far as IT spending is concerned. Information systems were embraced by Indian Banks way back in the last decade of the 20th century. Despite stiff resistance in the initial period to the use of information systems, these organizations were able to steadily grow in the use of information systems and hence, multiple generations of information systems can be clearly identified in each bank. For instance, starting with the Advanced Ledger Posting Machines (ALPMs) till the core banking solution (CBS), we can clearly identify three distinct types of information systems in the case of most of the banks in India. Over the years, considerable improvements have occurred in the quality of the information systems used. During the period between 2005 and 2010, all major banks implemented the CBS, which paved the way for great changes in the industry. New and innovative products and services were introduced and some of the banks were able to continuously improve their organizational performance. This means that IS benefits were followed by better performance. However, a post-implementation assessment of the organizational performance of these banks with respect to Return of Assets (ROA) presented totally mixed results. Many of the banks who implemented CBS reported poor results. The objective of this research is to understand why some banks were able to sustain their performance in the post-implementation period while many other banks could not. In short, what are those factors which facilitated positive change in the organization and what are the inhibitors?

A qualitative case research methodology is employed to bring out the factors that contribute to the achievement of sustained information systems effectiveness. In the first phase, the case methodology was employed to investigate the post-deployment effectiveness of core banking systems in three Indian banks. Secondary data pertaining to financial results for the last 30 years and ROA data were used to identify the three banks. The thrust was to find out the extent to which Information Systems contributed to the improvement of organizational systems. To obtain a clear picture of organizational impact of information systems, a detailed protocol was designed to understand the pre-implementation state of the banks, the process of information system implementation and the post-implementation changes. The structure of the sustained information system effectiveness construct was brought out through data collected through multiple sources like internal documents, printed material, web sites of the banks, direct interaction with internal customers and observation of the bank premises. The major data collection methods employed were observation and interviews. The case study revealed the organizational and IS characteristics of these banks, the critical events in the implementation process and the subsequent changes in these organizations. The previous state of the organization and the quality of legacy systems were found to be important for sustained effectiveness of information systems. The changes in each of the organizational elements were also brought out through analysis of the various organizational changes during the period. In the second phase, interviews were conducted with carefully selected managers to identify the factors responsible for sustained effectiveness of information systems.

This research brought out a list of factors that would be helpful to IS/business heads to ensure that their information systems continue to be beneficial to their organizations. Marketing efforts of IT products, presence of online banking systems and back office centralization were found to be the important facilitators that ensured sustained IS effectiveness. The inhibitors include an intense feeling of alienation by a section of the employees, disappearance of agricultural communities and groups from the banking arena and deep distrust about the true intentions of the bank managements. This study adds to the theory of information systems effectiveness and has implications for the practitioner community.