Presents a model for Performance Evaluation of Business Process Management

Motadel Mohammadreza¹ and Esfandyari Fard Ghaffar²

1- Faculty Member of Islamic Azad University Central Tehran Branch
2- Master of Information Technology Management
   Department of Information Technology Management,
   Electronic Branch, Islamic Azad University, Tehran, Iran

Abstract: In the present study a mathematical model has been presented to evaluate the Business process management (BPM) in the inspection departments of Iran MelliBank. In the bank units BPMs are used in order to manage the operations of users and to offer related reports to relevant managers. There are some indicators in the organization that can evaluate BPM Performance. Beside these factors, we will see the effective indicators which can assess the BPM. We will focus on Input and output variables for discussing them according to banker point of view by using Data Envelopment Analysis. [Motadel Mohammadreza and Esfandyari Fard Ghaffar. Presents a model for Performance Evaluation of Business Process Management. Life Sci J 2013;10(7s):193-197], (ISSN: 1097-8135), http://www.lifesciencesite.com, 31

Keywords: Business Process Management, Data Envelopment Analysis, Critical Success Factors, Effective Indicators

1. Introduction
Enhancement of efficiency in the banking system strongly effects on the dynamics of the economy, reducing inflation, unemployment, social turmoil and etc. Banking system reform and implementation of useful systems is one of the best ways for improving economic sphere. Data is needed to evaluate the business processes management in various organizations and agencies, until to be done action on it and the results obtained. In the banking system and especially in the field of inspection, due to the importance of the subject and the classification of information, researchers need to focus on the basis of qualitative data. DEA method would be an appropriate method to solve the above issue. After the introduction, the second section reviews previous studies. This section presents the critical success factors of BPM, maturity models and effective indicators. The third part sets the input and output and criterions for assessment of the business processes Management, the fourth part uses DEA method to measure the efficiency units of Iran Melli Bank, and finally the result will be expressed.

2. Review literature
2-1- The core elements for the success of business processes
Many researchers have found that Strategic Alignment, Governance, Methods, functions, technology, People, and Culture are the Critical Success Factors of BPM [1,2,3].

¹Rosemann, Michael
²De Bruin, Tonia
The Six critical success factors are as follows [4]:

1. Strategic Alignment: The continual tight linkage of organizational priorities and enterprise processes, enabling the achievement of business goals.
2. Culture and leadership: The collective values and beliefs that shape process-related attitudes and behaviors.
3. People: The individuals and groups who continually enhance and apply their process-related expertise and knowledge.
4. Governance: Relevant and transparent accountability, decision making and reward processes to guide actions.
5. Methods: The approaches and techniques that support and enable consistent process actions and outcomes.
6. Information Technology: The software, hardware and information management systems that enable and support process activities.

The core elements of BPM are presented by Rosemann and De Bruin [11]. The underlying model in Figure 1 shows process success and business success factors.
2-2- Gartner Business Process Management Maturity Model

Nowadays, there are several models of the BPM Maturity. An example is the maturity model of economic institutions and processes that formed by Hammer [1,12,13]. Gartner business process management maturity model are presented in six steps. These stages include six phases of business process management maturity. These phases show organization conditions with CSF in the framework of BPM maturity [1].

Phase 0: Acknowledge Operational Inefficiencies
Phase 1: Become Process Aware
Phase 2: Establish Intraprocess Automation and Control
Phase 3: Establish Interprocess Automation and Control (Between processes)
Phase 4: Establish Enterprise Valuation Control
Phase 5: Create an Agile Business Structure

Business process management maturity model depends on trust senior management to achieve effective business structure in the organization. Each new phase is created by previous phase, and each phase causes the growth of the previous phase. Generally, there are other important aspects of maturity in six phases, so that they should make a balance between and within phases. Figure 2 shows the six Critical Success Factors that an organization is involved in each phase.

![Figure 2: Six phases of business process management maturity](image)

2-3- Effective factors in performance evaluation

By reviewing of literature of IT, we can say IT can be the reason of changing process in the organizations. For convert multi-faceted approach to process improvement model, four factors (cycle time, Process limits, Cycle cost, Measure exploitation of resources) are considered [14]. In the process of measuring the activity level, several Cases would be considered. Applications are used in specific Processes, and may not be used in other processes [15]. There are some components in the business processes management. By using these indicators, Performance Measure of business process management would be evaluated. Processes operating in the organization will be measured by time, cost, productivity, quality and capital indicators [16].
New indicators are used for performance evaluation of the process. These indicators are success factors of each process, provided, the average time taken to process determined by quantity [17].

Using expert opinions, the importance of these indicators were studied in inspection units of the Iran Melli Bank. In inspection units of the Iran Melli Bank the time, cost, productivity and quality indicators are more important, and are considered in the evaluation.

3. Determine the inputs and output criteria for measuring BPM

Table 2: Inputs and outputs to determine the Bank efficiency

<table>
<thead>
<tr>
<th>Bank</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Governance</td>
</tr>
<tr>
<td></td>
<td>Strategic Alignment</td>
</tr>
<tr>
<td></td>
<td>Methods</td>
</tr>
<tr>
<td></td>
<td>Information Technology</td>
</tr>
<tr>
<td></td>
<td>People</td>
</tr>
<tr>
<td></td>
<td>Culture</td>
</tr>
<tr>
<td></td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
</tr>
</tbody>
</table>

4. Use of the DEA method for measure the efficiency of Iran Melli Bank units

In this study, due to classification information of inspection units, we didn’t use quantitative information, we used qualitative information instead. After getting advice and consulting with experts and those who involved in the inspection and IT field we called: Inputs $x_1, x_2, x_3, x_4, x_5, x_6$ are considered as Governance, Strategic Alignment, Methods, IT, People and Culture, and outputs $y_1, y_2, y_3, y_4$ include Time, Quality, Cost and Efficiency are used. According to table 2 for obtaining total efficiency rate, we used 6 inputs and 4 outputs.

After getting advice and consulting with experts and those who involved in the inspection and information technology, Critical Success Factors (CSF) of BPM selected as input and Effective factors in the performance evaluation of BPM selected as output for evaluation Iran Melli Bank units. Each input and output is evaluated by experts in inspection units. The results of each evaluation will be determined and after evaluation of all units the overall evaluation be done.

Some bank units, due to being far from the center, limited resources, and having limited professional resources, as well as not having IT infrastructure, do not have enough sufficient performance as well as well organize units. But according to the area’s facilities, the bank sees favorable results. The far units can cover the Bank’s objectives, therefore those units can be considered such as effective units.

Resources
3) Rosemann, M., de Bruin, T., Freeze, R. & Kulkarni, U. (2005) Understanding the Main Phase of Developing
8) P. Harmon, Business process change(2003), A Manager's Guide to Improving, Redesigning, and Automating Processes. Amsterdam, Boston: Morgan Kaufmann
17) Peter Trkman (2009). The critical success factors of business process management