Proposing an Integrated Model of BSC and EFQM and Analyzing its Influence on Organizational Strategies and Performance
The Case of Isfahan Municipality Complex

Arash Shahin
Associate Professor, Department of Management, University of Isfahan, Isfahan, Iran
E-mail: arashshahin@hotmail.com

Hosein Rezaei Dolatabadi
Assistant professor, Department of Management, University of Isfahan, Isfahan, Iran
E-mail: ho.rezaie@gmail.com

Milad Kouchekian
Master of Business Administration, Department of Management, University of Isfahan, Isfahan, Iran
E-mail: miladkouchekian@yahoo.com

Abstract

Among business excellence models and frameworks, Balanced Score Card (BSC) and model of European Foundation for Quality Management (EFQM) have had more chance to be selected by many companies and businesses around the world. In this study an attempt has been made to demonstrate a general perspective of these two models and to examine the feasibility of their integration. After recognizing the weaknesses and strengths of each model, the possibility of using them simultaneously has been evaluated and the influence of the integrated model on implementation and evaluation of organizational strategies and performance have been investigated. For this purpose, 139 questionnaires have been distributed among experts in the field of Strategic Management and Total Quality Management in Isfahan municipality units. Finally the data has been analyzed by SPSS and AMOS software. Findings imply that integration of the two models is feasible and has a positive influence on implementation and evaluation of organizational strategies and performance.

Keywords: Balanced scorecard (BSC), European Foundation for Quality Management (EFQM), Organization Strategies and Performance
1. Introduction

In recent years, fast growing of global progresses which caused by technological and informational developments And also enhancing of products variation has forced companies to perceive importance of continuous improvement process to get operational effectiveness and also to create core competence to sustain in the competitive environment (Kaplan and Norton, 2008) So the organizations are trying to choose the best methods to identify their weakness and strengths, improve them and adopt them with the organization strategic objectives in order to yield the best achievements in performance (Lttner and Larker, 1998). Recent researches have examined that the traditional frameworks and tools of performance measurement which entirely was based on financial measurements is not compatible. Most companies that used financial measures focused on short-term results. Non-financial measures have been perceived to be more forecast of future performance and more beneficial in controlling performance. (Crabtree and Debusk, 2008). For instance, Ghalayini and Nobel (1996) identified eight general limitations of traditional performance measures, based on a traditional cost management system as use lagging metrics; are not incorporated into strategy; are difficult to implement in practice; tend to be inflexible and fragmented; contradict accepted continuous improvement thinking; and neglect customer requirements.

They have also identified some limitations related to traditional manufacturing system and its strong focus on enhancing productivity, reducing cost and increasing profit, which may somehow deflect attention from developing quality, credibility and delivery and also establishing short lead time, flexible capacity and efficient capital extension. At the result of these limits, new measurement systems have appeared in two main groups. the first group have a main goal of operational effectiveness and the second one aime to yield a proper strategic position. so many tools, framework and models have been designed and suggested by the experts in each group like Deming Prize and Malcolm Baldrige Award (Jacob et al., 2004) but European Foundation for Quality Management (EFQM) framework in first and BSC in the second more extensively has accepted by the organizations. The balanced scorecard (BSC) is a multi-criteria evaluation concept that highlights the importance of performance measurement (tseng, 2010). Many studies have been conducted to compare these two models and analyze the similarities and mutual point of BSC and EFQM in order to examine the possibility of using these two at the same time and some integrated models have been suggested to achieve this goal. Shulver and Lawrie (2007) by comparing two models stated that these two models have come from different backgrounds so they acquire different infrastructures to be implemented properly. Wanggrassamee et al. (2003) introduced these two models as powerful models in getting competitive advantage. Anderson et al. (2000) proposed an integrated framework of two models and announced that this model make better opportunities to improve performance achievements. Lamotte and Carter (2000) shown the characteristics of two models and stated how the organizations can use these abilities together.
This study aims to propose an integrated model of BSC and EFQM based on the modern strategic management system and investigate the influence of the integrated model on implementation and evaluation of organizational strategies and performance improvement. The rest of this study is divided into three major sections. The first section provided a brief history and description of the concepts and design of each model and also the modern strategic management system. The second section presents a short comparison between two models and also proposes the integrated model and the final section highlights the main benefits and results of the integrated model and investigates the influence of using this model on implementation and evaluation of organizational strategies and performance improvement.

2. Literature Review

2.1. Balanced Score Card (BSC)

The balanced scorecard (BSC) is one of the most highly accepted performance management tools today (Lussier, 2006), (Staff, 2002), (Atkinson, 2000), (Kaplan & Norton, 2001). The Balanced Scorecard Approach has been developed at Harvard Business School by Kaplan and Norton since the early 1990s. It is a beneficial multi-dimensional approach to performance measurement and management that is linked deliberately to organizational strategies (Otley, 1999) and a large number of organizations are extensively using it. An investigation have shown that almost 50 percent of Fortune 1000 companies in North America and 40 percent in Europe uses a version of the BSC (Field, 2001). BSC offer that as well as financial performance measures, more attention should be paid to support the customers, business processes and so longer-term tolerability. By this concept four areas of performance are defined labeled as financial, customer, internal business and learning and growth, and it is conducted achievable and suitable measures of performance should be designed and developed in each four areas (Figure 1) (Otley, 1999). The BSC is now being named as a valuable methodology along with cost-benefit analysis and return on investment. it is being used to help organizational change their traditional approaches and several organizations have reported that had improved operational efficiency and also profitability as an achievement of using the BSC (Eskildsen, 2000; Atkinson, 2000). The main strength of the balanced scorecard is its emphasis on linking performance measures to organization strategies. this approach suggested in 1996 by Kaplan and Norton under the concept of strategic management system (Figure 2). This appears to be a very weak area in many organizations and the suggested technique provides a practical approach to tracking this issue (Otley, 1999). The framework of the four perspectives of the BSC helps to translate strategy into objectives and specially measures. The four perspectives are financial, customer, internal process, and learning and growth (Kaplan & Norton, 1996). The critical success factors created in each of the four perspectives are balanced between long term and short term, as well as internal and external factors that contribute to the business strategy (Otley, 1999). The Balanced Scorecard is thus a significant powerful tool by which strategic managers can be encouraged to follow the fundamental issue of effectively developing an organization’s strategic intent. It seriously focuses on organizing links between strategic objectives and performance measures.
In a brief conclusion, the BSC helps an organization in the following six ways (Otley, 1999):

1. Promotes growth; due to focus on long-term strategic outcomes, not just short-term operational results.
2. Tracks performance; individual and collective results can be tracked against targets in order to correct and improve.
3. Provides focus; when measures are aligned to a few critical strategies, the BSC provides focus on what is important to the company.
4. Alignment to goals; when you measure what is truly important to success; the measures become linked and support each other. Alignment occurs across the organization.
5. Goal clarity; the BSC helps respond to the question, "How does what I do daily contribute to the goals of the enterprise?"
6. Accountability; individuals are assigned as owners of metrics in order to provide clear accountability for results.

Developing balanced scorecard continued by Kaplan and Norton and they conducted four generations of BSC from 1992 to 2008. Within these developments they introduce the concepts of focused-strategy organizations, strategy maps and strategy alignments. The last generation of balanced scorecard includes linking the strategy to operation by the modern strategic management system. Many strategists such as Porter and Hammer suggested that without excellent operational processes, any strategy and also the best formulated strategies can’t be properly performed in the organization in one hand and in the other hand without a suitable
designed strategic vision, operational excellence is not adequate for success alone (Kaplan and Norton, 2008).

Figure 2. Linking Strategies To Operations By The Modern Strategic Management System (Kaplan And Norton, 2008)

2.3. European Foundation for Quality Management (EFQM)

The EFQM Excellence Model was introduced at the beginning of 1992 as the framework for evaluating organizations for the European Quality Award (Santos, 2007). The EFQM Excellence Model is generally based on the accepting and continuous realizing in everyday practice “Eight Basic Rules of Excellence” that is adapted to the European conditions, the principles of the Total Quality Management (TQM), which implemented in the strategic management process guarantee the success of the organization, its development and enhancing of the market position (Figure 3) (Michalska, 2005).
The EFQM Excellence Model is a non-prescriptive framework based on nine criteria as shown in Figure 4. Five of these criteria are “Enablers” (leadership, people, policy strategy, partnership and resources, and processes) and the other four are ‘Results’ (people results, customer results, society results and key performance results) (Santos, 2007). Organizations can use the model and the process of self-assessment to improve their performance. The framework is so flexible so it can be applied to organizations of any size, in the public and private sectors. It is now the most extensively used organizational framework in Europe (Michalska, 2008) and has become the resource for the majority of national and regional Quality Awards. The Excellence Model takes a holistic view of an organization and, when used as a diagnostic tool, it allows your organization to find out its strengths and areas for improvement in detail using nine key areas.
The EFQM Excellence Model is an exactly practical tool that offers holistic advantages from the empirical research perspective, as do other Quality Awards (Santos, 2007):
1. The model is regularly updated and revised, incorporating the contributions of EFQM consultants.
2. It supports an extensive set of sub-criteria to detail the exact meaning of each criteria.
3. EFQM is designed to be instrument for comparing an organization with its Competitors in the competitive environment in order to achieve and/or maintain competitive advantage.

2.4. Comparison Of BSC And EFQM

The Balanced Scorecard and the European Foundation for Quality Management (EFQM) Business Excellence Model are tools that apply measures of an organization’s performance to achieve organizational improvements, generally by focusing on current shortfalls in performance, in areas of particular concern or interest to management groups (Shulver and Lawrie, 2007).

By taking the first view these two models are very similar to each other. Similarities appeared in common goals, common strategies, both of them are Behavioral evaluating models and are trying to improve behaviors and are also base on cause and Effect and etc. but in spite of these similarities, it is essential to know that the two approaches come from different backgrounds and are designed and used applying different processes, further, their spirit and history are so different and each of them creates different profits for the organization. Table 1 shows the brief comparison of BSC and EFQM based on five general aspects (Otley, 1999).

**Table 1. Comparison of BSC and EFQM**

<table>
<thead>
<tr>
<th>EFQM</th>
<th>BSC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Helping manager to establish changes by the TQM principles – increasing efficiency in decision making and leader capabilities assessment of organization situation by 9 values.</td>
<td>Key aim of justified behavior with the strategy of organization.</td>
<td>Objectives</td>
</tr>
<tr>
<td>No direct suggestion for selecting strategy and plan is given to organization. Just help organization to recognize the field for analyzing EFQM.</td>
<td>Using strategic plan to explain organization strategies in 4 aspect of BSC.</td>
<td>Plans and Strategies</td>
</tr>
<tr>
<td>Aiming is not stirringly mentioned and the man offers aim base on the situation.</td>
<td>Aiming is not considered but the cause and effect is the strategic way for this purpose.</td>
<td>Targets</td>
</tr>
<tr>
<td>In 1999 version reward was paid attention as a part of assessment.</td>
<td>Rewards and the exams should be adapted with each other.</td>
<td>Reward</td>
</tr>
<tr>
<td>It is the major part of this model. Results of four aspects can be considered as information feedback.</td>
<td>Obvious need to the process of learning.</td>
<td>Feedback</td>
</tr>
</tbody>
</table>
According to Table 1 and recent studies, as a final analysis it is somehow proved that EFQM is a framework designed to provide opportunity for organizations to achieve business excellence through constant improvement in the management by deploying designed processes to engender wider use of best practice activities. It can enable the calculation of scores against a number of criteria that can be used for either internal or external “benchmark” comparisons. It is hoped that the results of these relative comparisons will lead to increase focus on improving key process performance, and so create “business excellence” (Shulver and Lawrie, 2007), while BSC is a tool that expresses an organization’s strategy as a set of measurable goals from the perspectives of owners/investors, other external stakeholders, and the organization itself. If these goals and associated measures, and targets are deliberately chosen, the Balanced Scorecard will help managers focus on the actions required to achieve them, helping the organization achieve its overall strategic goals and realize its strategic visions (Kaplan and Norton, 1996). Moreover, EFQM drives continuous improvements in processes within an organization versus BSC focuses management agenda on achieving strategic goals and supports two way communications of strategic priorities and organizational performance (Shulver and Lawrie, 2007).

3. Methodology

3.1. Possibility Of Using EFQM And BSC As An Integrated Model

By considering previous researches mentioned in 2.4 finally we assume that the feasibility of integrating EFQM and BSC and using them together is possible. To test this hypothesis, the feasibility is measured by its 12 elements that mentioned below.

Both two models:

- Has financial performance measurement approach and special emphasis on non-financial performance measurement approach moreover.
- Has feedback-focused approach by the means of enablers and results criteria.
- Has process-focused approach
- Has cause and effect relation between enablers and results criteria.
- Need infrastructure of strategy to be implemented.
- Has special emphasis on learning in order to achieve the identified results.

But:

- EFQM prominently focuses on self assessment and reflexes the current condition and specially operations of the organization and BSC focuses more on the future of the organization.
- The focus of BSC on changing and un-stable external environment is more than EFQM.
- EFQM main goal is organizational excellence and BSC final goal is achieving a unique strategic position.
• EFQM view to organization stake holders are more comprehensive than BSC's.
• EFQM main output is improvement projects and BSC key output is to give strategic view to these projects.
• integrating these two models in strategic and total quality management fields improve organization performance management.

3.2. The Integrated Model

As mentioned in 2.1, the last generation of balanced scorecard suggested by Kaplan and Norton, includes linking the strategies to operations by the modern strategic management system. Strategy and operation are both important but their performance are different so the final goal in the last generation of balanced scorecard is to make an alignment between operational improvement activities with strategic priorities so the Total Quality Management (TQM) and continual improvement tools must support the strategic objectives to yield strategy proper achievements (Kaplan and Norton, 2008). According to this approach, in this study we use EFQM as a popular and extensively accepted total quality management model to integrate it with modern strategic management system in order to yield what Kaplan and Norton conducted in their researches. The proposed integrated model of this study is demonstrated in Figure 5.
3.3. The Influence Of Integrated Model On Organizational Strategies And Performance
According to previous studies of Kaplan and Norton from Strategy-focused organization (2001) to Execution premium (2008) we assume that using balanced scorecard and specially strategic management system has a strong influence on implementing and evaluating strategies.
improvement (Kaplan and Norton, 2004) and also this achievement will also improve the organization performance (Kaplan and Norton, 2001). In "Execution premium" (2008), Kaplan and Norton matured their theory and conducted linking strategy to operations concept that explained in 3.2. Finally the integrated model (Figure 6) is designed on the basis of their last theory. In order to test these two hypotheses, the influence is measured by its 6 factors extracted from the 6 of 8 stages of the integrated model that are the new achievements of the integrated framework and are not mutual in two models.

Figure 6. Conceptual Model

H1: Using EFQM and BSC together as an integrated model is feasible.
H2: Implementing the integrated model has a positive influence on evaluation of strategies improvement.
H3: Implementing the integrated model has a positive influence on organizational performance improvement.
3.4. Sampling And Measurement

To test the main hypothesis of this research, 2 questionnaires were conducted. The first one was designed to examine the feasibility of two models integration and using them together. The second one was designed to investigate the influence of using this integrated model on improvement of Implementation and Evaluation of Organizational Strategies and Performance. The questionnaires dispersed among 139 experts in Isfahan. And all questionnaires were ready for analyzing. The first questionnaire assessed variable of feasibility of two models integration via 12 questions. The second questionnaire assessed variables of influence of using this integrated model as a dependent variable on the Implementation and Evaluation of Organization Strategies and Performance as independent variables via 15 questions. All questions were rated on a five-point Likert scale from "strongly disagree" (1) to "strongly agree" (5).

3.5 Case Study

Using Performance measurement tools specially BSC and EFQM are being used in average and high level organizations in Iran and because of their significant application and high values for the organizations, their usages are growing fast nowadays. But shortage of adequate organizational knowledge about these two models and also lack of proper experience in implementing them, all because of their new emerged condition in Iran specially in Isfahan, has made limitations to find an organization that uses both models properly and have suitable experience about them. So Isfahan municipality complex was chosen for this study based on their long-term researches in BSC, EFQM and other performance frameworks. Therefore 139 experts include performance managers in the field of strategic and total quality management selected from this society. Most respondents considered themselves as knowledgeable of all the areas of our study.

4. Findings

In this study, we used Structural Equation Modeling (SEM) for data analysis. The conceptualized model of research ran as a structural model to test three main hypotheses in Isfahan municipality. The method of maximum likelihood estimation in Amos Graphics 18 software was used to analyze data and hypotheses testing.

To assess the fitness of the proposed model, the overall model Cmin or chi-square, the Tucker – Lewis index (TLI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA) and goodness of fit index (GFI) were used (Byrne, 2010). After refining the initial structure model, all of the goodness of fit indexes was found within acceptable range indicating that the model of the research has a good fitness (Byrne, 2010). In order to test the hypotheses and casual path, the maximum likelihood methods is used (Table 2).
In analyzing the results of the structural model, we found that all proposed relationships received strong support. Standard regression weights of all hypothesized paths are presented in Figure 7. The good fitness of the total model is confirmed.

**Table 2. Goodness Indicates Of The Structural Model**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>CFI</th>
<th>GFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>0.963</td>
<td>0.959</td>
<td>0.043</td>
<td>0.968</td>
<td>0.002</td>
</tr>
</tbody>
</table>

**Non-financial approach**

**Feedback-focused approach**

**Process-focused approach**

**Cause and effect relation**

**Infrastructure of strategy**

**Special emphasis on learning**

**Self assessment/future approach**

**External environment-focused**

**Excellence/ unique strategic position**

**Stake holders focused**

**Improvement projects/ strategic view**

**Strategic management/ total quality management**

**Implementation and Evaluation of Strategies**

**Performance**

Figure 7. Fitness Of The Proposed Integrated Model
As we assumed in hypothesis 1, using EFQM and BSC together as an integrated model is feasible (C.R. = 6.98, \( \beta = 0.83 \), p<0.05). To measure this hypothesis we consider 12 elements as explained in part 3.1. The good regression weight of this relationship indicates that these two models can be integrated properly. In figure 6 the regression weights of 12 elements of the integrated model is presented. All these elements are confirmed as proper elements of the integrated model with \( \beta = 0.65 \) to \( \beta = 0.93 \). In the other hand, this hypothesis proves that these 12 elements are sufficient and suitable for being the integrated model elements. To have stronger confirmation we can consider that the proper regression weight should be higher than 0.7, then we can omit elements with regression weights of less than it. In such case the elements of special emphasis on learn and stake holders focused will be omitted. In the otherwise, the elements of infrastructure of strategy, external environment-focused and Strategic management/ total quality management are strongly expanded the integrated model by regression weights of more than 0.9.

As we predicted in hypothesis 2, the integrated model has a positive effect on implementing and evaluation of strategies (C.R. = 11.26, \( \beta = 0.78 \), p<0.05). To measure this hypothesis we consider 6 stages of integrated model. The good regression weight of this relationship confirms that the factors which were put in the integrated model can properly affect on implementing and evaluation of strategies.

As mentioned in hypothesis 3, the integrated model has a positive effect on organizational performance (C.R. = 9.89, \( \beta = 0.82 \), p<0.05). To measure this hypothesis we consider 6 stages for the integrated model. The good regression weight of this relationship confirms that the factors which were put in the integrated model can properly affect on organizational performance.

5. Discussion

The first objective of conducting this research was to investigate the feasibility of integrating BSC as a strategic management model and EFQM as a total quality management framework. In the detail and more especially this hypothesis of the study conducted that by comparing these two models by applying defined variables two models can be used at the same time and finally the feasibility was proved. The research was focused on Isfahan municipality complex where have two excellence and strategic approaches in performance management and have lots of good experiences and also adequate knowledge in them so this hypothesis was proved in this environment that perceive the integrated framework as a new tool to cover their lags between these two models and also their applications as Anderson et al. (2000) and Lamotte and Carter (2000) shown the advantages of using these two frameworks at the same time. The second and third objective of the research was to investigate the influence of implementing the integrated model on implementing and evaluating strategies and organization performance improvement. finally these hypothesis were proved in Isfahan municipality complex where they have seriously focused on performing and evaluating their strategies and also assessing their performance as Previous studies conducted this results (Kaplan and Norton, 2004) and (Kaplan and Norton, 2001).
implementing the integrated model is not a superficial and fantasy approach but also an applicable structure that helps organization to achieve better results in performance and facilitate the path for attaining these achievements. The results in Isfahan municipality complex shown that the integrated model is one of the best tools to link strategic approach to operations and can cover the gap between current organizational condition and what organization have planned for future and conducted that achieving proper results in performance requires focusing on both the operational and strategic levels of the organization.

6. Conclusion

This study was aimed to show the real path to organizations which have separated approaches in strategic and total quality management, in order to get the framework to apply strategic and operational activities with using BSC and EFQM as the best tools in each one. The research proved the feasibility of integrating these two famous models and brought them together as an integrated model and suggests organizations to use it in order to get improvements in implementing and evaluating strategies and performance by proving these hypothesis in Isfahan municipality complex which is totally similar to municipalities all over the world using up to dated performance tools and frameworks. So the feasibility of the integration and the influence of using this model on improvements in implementing and evaluating strategies and performance were proved.

This research has limitations which should be considered when interpreting the results. it should mention this fact that when the organization can use this integrated model or is it really suitable to use the model in everywhere in organizational life cycle so one of the most important matters that left un-mentioned in this study was the infrastructures of implementing each BSC and EFQM models and also the overlapping ones. It's essential for organizations to find and analyze their position in organizational life cycle and then decide to which models are suitable for them so using this integrated model is profitable when the organization have experienced the strengths and weaknesses and all characteristics of two models and recognize the advantage of using the integrated framework. Therefore for further studies, investigating the infrastructures and conditions of implementing the integrated model is suggested.

References


