Proposing A Combination Model Of BSC And EFQM On Basis Of Modern Strategic Management System And Analyzing Its Influence On Implementation And Evaluation Of Organization Strategies And Performance Case Study: Isfahan Municipality Complex

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

Hosein Rezaei Dolat Abadi
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

Growing the competition between organizations in the field of productions and specially services has resulted in using the tools, frameworks and patterns to measure their activities and performance. Emerging these kinds of needs in one hand and inefficiencies of measuring systems with traditional assessment processes in the other hand, has caused to create new models and tools of activities assessment in organizations and also serious care has to be taken to adopt an approach and a tool that will achieve the most successful return on investment. These models generally could be divided in two main groups. The first group is based on self assessment and the second group is based on strategic improvements of the business. Among mentioned models and tools, Balanced score Card (BSC) and European Foundation for Quality Management (EFQM) have had more chance to be selected by many companies and business units around the world. This study has presented total view of these two models and proves the feasibility of combining them in order to conduct the benefits of combining these two frameworks. Moreover, after recognizing the weaknesses and powers of each model, the possibility of using them at the same time has been evaluated and then the influence of combination model on Implementation and Evaluation of Organizational Strategies and Performance has been investigated. In order to gain this significant goal and to investigate this hypothesis 139 questionnaires have been dispersed among specialists in the field of strategic
and total quality management in Isfahan municipality organizations. Finally the data has been analyzed by SPSS and AMOS software. The results have indicated that combining two models is feasible and also using this combination model has a positive influence on Implementation and Evaluation of Organizational Strategies and Performance improvement.

**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 & 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 (Lttnner & 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 & Debusk, 2008). For instance, Ghalayini and Nobel (1996) identified eight general limitations of traditional performance measures, which based on a traditional cost management system:

- 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
- 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 has a main goal of operational effectiveness and the second one aims to yield a proper strategic position. so many tools, framework and models have been designed and suggested by the specialists in each group like Deming Prize and Malcolm Baldrige Award (Jacob, Madu, Tang, 2004) but European Foundation for Quality Management (EFQM) framework in first and BSC in the second more extensively have accepted by the organizations. 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 combination models have been suggested to achieve this goal. Shulver & 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. Wangrassamee, Gardiner & Simmons (2003) introduced these two models as powerful models in getting competitive advantage. Anderson, Lawrie & Shulver (2000) proposed a combination framework of two models and announced that this model make better opportunities to improve performance achievements. Lamotte & Carter (2000) shown the characteristics of two models and stated how the organizations can use these abilities together.

This study aims to propose the combination model of BSC and EFQM based on the modern strategic management system and investigate the influence of combination 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 models and also the modern strategic management system. The second section presents a short comparison between two models and also propose the combination model and the final section highlights the main benefits and results of the combination 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 4 areas (Figure 1 shows the BSC framework) (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 ach 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. 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.

![Balanced Scorecard Diagram](image)

**FIGURE 1: The BSC: a framework to translate a strategy into operational terms**

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 & Norton and they conducted 4 generation 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 on one hand and in the other hand without a suitable designed strategic vision, operational excellence is not adequate for success alone (Kaplan & 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 (See Figure 3) (Michalska, 2005).

FIGURE 3: Eight Basic Rules of Excellence (Whitmore, 2000)

The EFQM Excellence Model, a non-prescriptive framework based on nine criteria as shown in Figure 3. 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.
FIGURE 4: EFQM Framework (Whitmore, 2000)

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 criterion.

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 & 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: BSC and EFQM Comparison

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 & 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 & 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 & Lawrie, 2007).
3. Methodology

3.1. Possibility Of Using EFQM And BSC As A Combination Model

By considering previous researches mentioned in 2.4 finally we assume that the feasibility of combining 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.
- Combining these two models in strategic and total quality management fields improve organization performance management.

3.2. The Combination Model

As mentioned in 2.1, the last generation of balanced scorecard suggested by Kaplan & 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 & Norton, 2008).
According to this approach, in this study we use EFQM as a popular and extensively accepted total quality management model to combine it with modern strategic management system in order to yield what Kaplan & Norton conducted in their researches. The total combination model of this study is demonstrated in figure 5.
Defining Vision
(Define vision, mission & values)

Self Assessing with EFQM
(Define weaknesses & strengths)

Developing Strategy
(Analyze and Formulate strategy)

Translating Strategy
(Design BSCI: Define strategic objectives, goals, measures & initiatives)

Prioritizing Operational plans
(Identify, Prioritize and Improve key processes)

Aligning the organization
(Implement strategy, focused organization)

Monitoring & Learning
(Strategy & Operational reviews)

Testing & Adapting strategy
(Examine strategies & Review external analyses)

FIGURE 5: Combination Model
3.3. Analyzing The Combination Model's Relations With Implementation And Evaluation Of Organizational Strategies And Performance Improvement.

According to previous studies of Kaplan & 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 & Norton, Strategy maps, 2004) and also this achievement will also improve the organization performance (Kaplan & Norton, Strategy-focused organization, 2001). In "Execution premium" (2008), Kaplan & Norton matured their theory and conducted linking strategy to operations concept that explained in 3.2. Finally the combination model (figure 5) 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 combination model that are the new achievements of combination framework and are not mutual in two models.

3.4. Conceptual Model

FIGURE 6: Conceptual Model
H1: Using EFQM and BSC together as a combining model is feasible.
H2: Implementing combination model has a positive influence on evaluation of strategies improvement.
H3: Implementing combination model has a positive influence on organizational performance improvement.

3.5. 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 combination and using them together. The second one was designed to investigate the influence of using this combination model on improvement of Implementation and Evaluation of Organizational Strategies and Performance. The questionnaires dispersed among 139 specialists in Isfahan. And all questionnaires were ready for analyzing. The first questionnaire assessed variable of feasibility of two models combination via 12 questions. The second questionnaire assessed variables of influence of using this combination 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).

3.6. 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 specialists 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).

**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>

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.
Combination Model

Implementation and Evaluation of Strategies

Performance

FIGURE 7: Fitness Of The Total Combination Model

As we assumed in hypothesis 1, using EFQM and BSC together as a combining model is feasible (C.R. = 6.98, β= 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 combined properly. In figure 7 the regression weights of 12 elements of the combination model is presented. All these elements are confirmed as proper elements of the combination model with β= 0.65 to β= 0.93. In the other hand, this hypothesis proves that these 12 elements are sufficient and suitable for being combination 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
managements/ total quality management are strongly expanded the combination model by regression weights of more than 0.9.

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

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

5. Discussion

The first objective of conducting this research was to investigate the feasibility of combining 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 combining framework as a new tool to cover their lags between these two models and also their applications as Anderson, Lawrie & Shulver (2000) and Lamotte & 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 combination 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 & Norton, Strategy maps, 2004) and (Kaplan & Norton, Strategy-focused organization, 2001).

Using and implementing the combination 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 combination 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 the operational and strategic levels of the organization.

6. Conclusion
This study was aimed to show the 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 combining these two famous models and brought them together as a combination 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 combining model 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 combination 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 combination 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 combination model is suggested.

References


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