Assessing the effect of implementation EFQM model in Gachsaran oil and Gas Company

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Abstract

Nowaday the role of assessment and efficient control in the improvement and excellence quality is completely recognized. Performance assessment in organization has an important in identifying the strong points and weak points in order to use resources and accommodations in the best way. In this regard excellence models as one of the best tools to fulfill this need in organizations have been very successful, and have been used to determine the way to achieve the excellence of human resources among these models, EFQM model, as one of the most comprehensive models of performance assessment is known. Present study is a descriptive research which has evaluated Gachsaran Oil Company’s performance based on excellence model (EFQM). In this research a measurement methodology was used and to collect the data questionnaire was used. Data analysis wore by inferential statistic and T test and through statistical software (SPSS).

Keywords: Gachsaran oil and Gas company, performance assessment, EFQM mode.
1) Introduction

Organizational excellence model or business excellent is used as a strong tool in assessment of systems settlement in different organization using these model, in addition to assessment of organization success in improve programs in different time, organization is able to compare its performance with other organizations specially the best one.

Excellence business model is a response to this question: How is an excellent organization? What are the goals and concepts that follow? And what are the criteria governing that organizations?

Nowadays most of the countries based on these models, provided some national and regional award which stimulate organizations and businesses toward. Excellence, development and wealth creation.

Doming award in japan, Beldrig award in United States of America and Eurpoian award of quality which was established by European foundation of quality management and is know as EFQM, are 3 main award in the three important economic powers in the late century. Among these models, EFQM is more general and acceptable all over the world, and was a model for many countries in designing these awards, It's around a decade that in Iranian companies assessment whether in ternal or external, is done based on EFQM model.

A procedure which involved many companies in doing projection this area, and relatively enliven undeveloped management consultation in dustry, in Iran. organization excellence models is introduced in Iran while there are over 70 national excellence model and 90 quality award around the world, and they are generally taken from EFQM model and Baldrig award and have been converged (Najmi; Manoochehr; Hosseini; syroos, 2011)

2) Statement of the problem

Todays, organization excellence models, as a framework for performance assessment and evaluation of organizations success in settling modern managing systems and comprehensive quality management have increasing
applications organizational excellence models on the one hand are a framework for performance assessment, current situation and identifying improvement areas and organization excellence and on the other hand, the map and guide of organizations' act in order to consider all the effective factors, finding strong points and improvement areas. These models, provided the situation to identify the best and most successful experiences, and presented effective factors to convey these experiences and using them in other organizations. Therefore appropriate situation for improving managerial potential in the society and general efficiency is provided. (Mirshafiee, 2004)

EFQM is a comprehensive model [one of the quality management tools] which guarantee success in long term. This model is a self-assessment tool. Organizations use this tool in order to create balance between allocated resources and their business plans. Finding show that this model has been more successful in private sectors than in state-owned organization. (Asare, 2002)

In the recent years, interest in doing internal and external assessment based on EFQM model is increasing in Iranian companies.

A procedure which involved many countries in doing project this area, and relatively enliven undeveloped management consultation industry. This procedure is reminder of not very for past, when ISO 9000 standards had similar situations. Unsuccessful experiences of some organizations in clichés application of these standards, made some managers worried about the repetition of similar problems in organizational excellence project and excellence be sacrificed by faddism.

EFQM model define superior management and excellent organization as eminent and superior management in organization.

And in advance inform those who follow this path, that moving in this path is very difficult, even in the best situation. There is no expectation except for hard working and continues attempt which lead to eminence and difference, especially for Iranian organizations which are new comer in global
competition and develop mentalism. This reminding is promising for organizations which look for short-term interest in applying the name and popularity of excellence model. (Hepko com, 2012)

While this model was implementing in organizations and industries of Iran, Gachsaran' oil and gas implementation company in 2006- began implementation of EFQM model. Although, this project has been finished 5 years ago, it worth evaluating in the mentioned sample, the success or failure of it, to. Determine whether there is dissatisfaction of implementation in quality management systems in the mentioned sample or not?

3) Significance of the study.

According to the current situation , changing needs of customers and all of the interest groups , competitors attempt for successful attendance and new rules which are changing continually , it's not possible to be successful in national and international competition by learning on traditional methods , therefore it's necessary to use patterns that while evaluate the current situation of organizations , and identify strong points and improvable area , provide an appropriate basis for strategic planning . In the same run, organizational excellence models benefit from a strong tool to fulfill this organization need and have been able to apply in a wide range in organization pathology and determining the movement path in order to reach human resource excellence. Increasing competition in production and service leads to necessity of presence of indices and patterns for assessing performance of themselves. Rise of such need and lack of efficiency in measurement systems with traditional performance, lead to creation of new models of performance assessment in organizational environment.

In Iran after approval of EFQM since 2004, this model was implemented in subsections of oil ministry.

In 2006 Gachsaran oil and Gas Production Company implemented this model. Due to the importance of the mentioned subject, it's necessary to consider it from different aspects.
Gachsaran oil and Gas Production Company is one of the important subsections companies of national Iranian south oil company, which produce around 740000 barrels of crude per day. Therefore, it has a critical role in providing economic income of Iran.

Central office of this company is located in kohkilooyeh and Boyer Ahmad province, but facilities of the company are located in Khuzestan’s, Boosheher and kohkilooyeh and Boyer Ahmad and Fars provinces. This characteristic has raised this company as an important company among other companies (http://gsogpc.nioc.ir)

Evaluating the success of this model in Gachsaran oil and gas industries is of great importance, because of important status of this company.

4) Primary objective of the research:

Main objective of the research: evaluating success of excellence model in improving composing. Elements of this model in Gachsaran oil and gas Production Company.

4-1) Secondary objective

Evaluating the effect of implementation of EFQM on improving key results of performance in organizations.

Evaluating the effect of implementation of EFQM on improving the employee results in Gachsaran oil and Gas Company.

Evaluating the effect of implementation of EFQM model on improving the customer results in Gachsaran oil and Gas Company.

Evaluating the effect of implementation of EFQM model on improving results of society in Gachsaran oil and Gas Company.

5) Theoretical framework of the research

Each research requires a theoretical framework. theoretical framework is a basic for doing research theoretical framework is a logical , developed ,
described and complete network among variables which are provided through procedures like interview, observation and review of literature. (khaki, 2004) Therefore, after identifying appropriate variables, researcher should compile a network of relationship among variables, in order to create related hypothesis and then test them. Therefore, theoretical framework is an important step in research procedure. (Sokaran, 2007)

In this research success or failure of implementation of EFQM model in Gachsaran oil and Gas production company which was done in 1996-1997 is evaluated in order to determine whether there is dissatisfaction in implementation of management systems in sample or not.

![Figure (1-1): Conceptual model of research](image)
According to this model, evaluation criteria are as follow:

1. Leadership  
2. Policy and strategy  
3. Employees  
4. Partnership and resources  

5. Process  
6. Customer results  
7. People results  
8. Society results  

9. Key Performance results (Najmi, Manoocher; Hosseini; syroos, 2012)

6) Research hypothesis

Primary research hypothesis: implementation of EFQM model, improves Performance of Gachsaran oil and Gas Company.

Secondary hypothesis: I participants believe that, implementation of EFQM model has improved key Performance results in Gachsaran oil and gas company.

II. Participants believe that, implementation of EFQM model, has improved the people’s results in Gachsaran oil and Gas Company.

III. Participants, believe that, implementation of EFQM model, has improved customer results in Gachsaran oil and Gas Company.

IV. Participants believe that, implementation of EFQM model, has improved society results in Gachsaran oil and Gas Company.

7) Review of literature

Performance assessment of Raja trains has been done by Maryam Rahmati based on organization excellence model EFQM, this assessment was done in 2011 in Mazandaran University and under the supervision of Dr. Hassan Ali Aghajan:

In this research, researcher has done performance assessment in Raja trains company in order to evaluate and identify organizational excellence model,
sample size in this study consists of 60 employees, which 15 case were selected as sample, findings of the research has shown that performance score is out 1000. This score shows weak performance of Raja Company in different areas. (Rahmati, 2011)

Evaluation, determination and prioritization of improvement project based on excellence mode in Yazd regional power company has done by Mohammad saleh oliia assistant professor of Industrial Engineering College of Yazd University, in this paper, among different methods of performance assessment, organizational excellence model was used. Therefore in order to fulfill this objective, performance declaration in 2010 in regional power company of Yazd was done, and document on the basis of determined criteria by power ministry were collected. Then semi. Island method based on organizational maturity and evidences was chosen. In the next step, by using scoring matrix, the scores of each sub criteria were given and strong point and improvable areas, total score of organization and comparison between criteria and sub-criteria's score were determined.

Application of empowering factor in EFQM model in managing higher education institutes, by Arthur kalmura et, al; in economical and business college of sevil university of Spain in 2006 was done.

Research objective was analyzing completing relationships between empowering factors of EFQM model and implementation of this model as a framework for quality control management in higher education institutes. This research consists of 8 hypotheses. PLS method has been used to test these hypothesis and all of them were confirmed.

Sample size of this study consisted of 111 national college center in Spain.

8) Methodology

This research regarding its objective is applied and from the methodological point of view it's descriptive survey. Because, in addition to describing the current situation, test the hypothesis based on predictive relations and tries to determine effectiveness of variables by using inferential statistic and
specially T test – moreover, since the expected results of this study can be applied in order to improve organizations and companies’ performance, it is considered an applied research.

9) Population and sample

In the present study, administrative personnel of Gachsaran oil company which consists of 75 members, from sample size of the research.

According to Morgan table sample size was estimated 63.

At last, 65 questionnaires were distributed and 50 questionnaires were considered in final analysis.

10) Validity date collection tools.

Reliability means how reliable, stable, equivalence, predictable and accurate are the data. In general situation, reliable is referred to someone whom you can rely on, their behavior is predictable and their statements are accurate.

Cranach's $\alpha$ coefficient is a good index of reliance and internal agreement (Sokaran, 2010, 384).

In this method, if $\alpha$ coefficient is less than 0.60, it is considered unreliable. 0.70 is acceptable and more than 0.80 is good. (ibid, p.385) In this research Cranach's $\alpha$ coefficient was calculated by SPSS software. According to this method, an introductory study and 30 employee and by SPSS software, validity of the research was 0.87, which is an of acceptable and appropriate rate.

11. Data to analysis method.

In order to analysis the data, collected from questionnaire, descriptive and inferential statistic methods were chosen. To describe the response in questionnaire, frequency distribution table and average percent of related responses to each question were used. To show statistics coherently, bar graphs were used and at inferential level T test student was used to test research hypothesis.
Table (1): T-Test The main hypothesis of the research

<table>
<thead>
<tr>
<th>Test Value = 3</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11.102</td>
<td>49</td>
<td>.000</td>
<td>.42200</td>
<td>.3456 to .4984</td>
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Table (2): T-Test The first hypothesis of research

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<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
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</thead>
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<td>10.244</td>
<td>49</td>
<td>.000</td>
<td>.55360</td>
<td>.4450 to .6622</td>
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Table (3): T-Test The second hypothesis of research

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<th>Test Value = 3</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
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<td>10.763</td>
<td>49</td>
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<td>.58800</td>
<td>.4782 to .6978</td>
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Table (4): T-Test The third hypothesis of research

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<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
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</thead>
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<td>4.444</td>
<td>49</td>
<td>.000</td>
<td>.25120</td>
<td>.1376 to .3648</td>
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</table>

Table (5): T-Test The fourth hypothesis of research

<table>
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<th>Test Value = 3</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
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<td>7.584</td>
<td>49</td>
<td>.000</td>
<td>.17820</td>
<td>.1310 to .2254</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examination of the primary research hypothesis: implementation of EFQM model has improved performance of Gachsaran oil and Gas Company.

This hypothesis was tested through 50 questions about the effect of implementation of EFQM model on improvement of oil company performance

Result of data analysis shows that: sig = /000<0/05. Therefore 95% reliability Ho is rejected and H1 is confirmed. We can conclude that implementation of EFQM improve performance of Gachsaran oil and gas company

Secondary hypothesizes

1. Respondents believe that, implementation of EFQM improve key results performance in Gachsaran oil and gas company.

This hypothesis was tested in 7 questions, (48 to 54), results of data analysis shows that sig = /000<0/05. Therefore with 95% reliability Ho is rejected and H1 is confirmed. So we can conclude that implementation of EFQM model has improved key results performance in Gachsaran oil and gas company.

2. Respondents believe that, implementation of EFQM improve people's results in Gachsaran oil and gas company.

This hypothesis was tested in 5 questions, (40 to 44) and success rate in implementation of EFQM model which improve people's results was examined. Results of data analysis show. That sig = /000<0/05.

There fore with 95% reliability Ho is rejected and H1 is confirmed. So, we can conclude that implementation of EFQM has improved people's results in Gachsaran oil and gas company.

3. Respondents believe that, implementation of EFQM model improve customer's results in Gachsaran oil and gas company.

This hypothesis was tested in 9 questions, (31 to 39), success rate in implementation of EFQM model which improve customer results was examined. According to statistical data analysis we can conclude that sig =
/000<0/5. So, with 95% reliability Ho is rejected and H₁ is confirmed, it means that implementation of EFQM model has improved customer results in Gachsaran oil and gas company.

4. Respondents believe that, implementation of EFQM model improve the society results in Gachsaran oil and gas company.

This hypothesis was tested in 3 questions, (45 to 47) success rate in implementation of EFQM model which improve society results was examined. According to statistical data analysis sig = /000<0/05. So, with 95% reliability, Ho is rejected and H₁ is confirmed, it means that implementation of EFQM model has improved society results in Gachsaran oil and gas company.

12) Conclusion

Following table illustrate results of hypothesizes related to rejection or confirmation of them.

Table (5): The overall results of hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesis Title</th>
<th>Sig</th>
<th>Confirmation or rejection</th>
</tr>
</thead>
<tbody>
<tr>
<td>The main hypothesis</td>
<td>Implementation of EFQM model, improves Performance of Gachsaran oil and Gas Company.</td>
<td>0.0</td>
<td>Confirmed</td>
</tr>
<tr>
<td>The first hypothesis</td>
<td>Participants believe that, implementation of EFQM model has improved key Performance results in Gachsaran oil and gas company.</td>
<td>0.0</td>
<td>Confirmed</td>
</tr>
<tr>
<td>The second hypothesis</td>
<td>Participants believe that, implementation of EFQM model, has improved the people’s results in Gachsaran oil and Gas Company.</td>
<td>0.0</td>
<td>Confirmed</td>
</tr>
<tr>
<td>The third hypothesis</td>
<td>Participants, believe that, implementation of EFQM model, has improved customer results in Gachsaran oil and Gas Company.</td>
<td>0.0</td>
<td>Confirmed</td>
</tr>
<tr>
<td>The fourth hypothesis</td>
<td>Participants believe that, implementation of EFQM model, has improved society results in Gachsaran oil and Gas Company.</td>
<td>0.0</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>
Implementation of EFQM model has improved Performance in Gachsaran oil and Gas Company.

1. Implementation of EFQM model has improved customer results in Gachsaran oil and Gas Company.

2. Implementation of EFQM model has improved people's results in Gachsaran oil and Gas Company.

3. Implementation of EFQM model has improved society results in Gachsaran oil and Gas Company.

4. Implementation of EFQM model has improved key performance results in Gachsaran oil and Gas Company.

In this study primary hypothesis and 4 secondary hypotheses were confirmed. It shows that organizational excellence model (EFQM) in Gachsaran oil and gas company has been performed appropriately.

13) Suggestions

In the present research suggestions are provided to fulfill 2 objectives

A: suggestions related to results of the research.

Since results of the research illustrate that implementation of EFQM model has improved performance of Gachsaran oil and Gas Company, for more improvement in performance of Gachsaran Oil Company based on organization excellence model following solution are presented:

1. Collecting, analyzing and improving key performance results:

Organizations' key performance results are achievement that stockholders' expect.

To achieve these expectations following solutions are proposed:

1. Economizing expenses including office accessories or consumed power and water charges
2. Appropriate use and on time service of equipments and computers.

3. Contributing to researches and collecting and analyzing results in order to improve performances

2. Plan and improve partnership and encourage and praise employees to improve employees partnership in organizational decision making following point are proposed:

1. Presence of a friendly relationship between employees and managers, and mutual confidence between them.

2. Employees should be completely aware of organization and customers.

3. Measuring and achieving the eminent results related to customers.

Excellent organizations comprehensively measure eminent results related to their customers and achieve them. Customer’s perception of organization is known and try to satisfy customer by using some indices. In this regard following solution is proposed:

1. Using different circular letters to fulfill customers need.

2. Appropriate behavior with customer especially in the first call.

3. Transparency in communication and replying to customers.

4. Attempt to make customers familiar with unique services and superiorities over other rivals.

4. Measuring and achieving the eminent results related to society.

Excellent organizations, consider them selves a member of society and to prove their citizenship role in society, they do some activities to identify expectations of them and perform required activities to preserve society. In this regard following solution is proposed:

1. Accurate informing about service type and companies superiority indices over rivals
2. Taking society feed backs about bank performance and considering them in future plans. And transactions.

B. suggestions for future researchers

1. In the present research performance based on organizational excellence model EFQM was examined, so we propose other researchers to examine performance based on other models and patterns.

2. For better and more accurate conclusion, it's better to be sure about familiarity of your population with EFQM model and participants should have passed educational courses related to EFQM

3. Since it is common in different countries including Iran to use EFQM model for assessing and pathology of performance of organizations, it's better to use this model in other researches to pathologically evaluate other organizations

4. It is suggested that performance assessment be presented with more details in an independent research and appropriate solutions be presented to identify organizations' strong points and improvable areas to achieve organization excellence.
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