



Presenting a Model for Assessment of Organizational Excellence in Cement Industry

Hamid Maleki M.^{1,*}, Keyvan Shahgholian², N.M Yaghoubi³, Seyyed Ali Banihashemi⁴

^{1,*} Master degree of Industrial Engineering, Zahedan Branch, Islamic Azad University, Zahedan, Iran

² Department of Industrial Engineering, Zahedan Branch, Islamic Azad University, Zahedan, Iran

³ Zahedan Branch, Islamic Azad University, Zahedan, Iran

⁴ Department of Accounting, Qayenat Branch, Islamic Azad University, Qayenat, Iran

ABSTRACT

Existence of long-term strategic plans could be sufficient for achieving success before creation of severe environmental changes. Change and uncertainty in business environment entered the studies and researches of organization and management. Nowadays few organizations can be found not to experience a three to six months or even a year period of changes in their environment. In this study one model which is known as European foundation of quality management or EFQM (organizational excellence model) has been used. Type of this study is survey-practical and its statistical population is all of the managers and experts who have been working during the study in the top-level and middle-level jobs of the company. Volume of sample based on standard table presented by Krejcie and Morgan was obtained to be 66 persons. Analysis of data was performed by SPSS software and t-student test. The results show that the organization from empowerment components aspect is in a favorable condition but from results components aspect does not have an appropriate condition.

KEY WORDS: performance assessment, organizational excellence, EFQM, empowerments.

1. INTRODUCTION

Achieving pre-determined goals in mission statement of organizations is one of important concerns of managers of companies. It is obvious that without assessment of performed actions and determination of strength and weakness points correct planning for future is impossible. In two recent decades, organizational performance management has become one of interesting and attractive subjects and this tendency caused many innovations both in research fields and application fields [1]. This study tries to use this method for fault-finding in Momtazane Kerman Cement Company. According to extensive use of cement in the country, the future of this industry is clear and gaining appropriate profits from internal and foreign markets is possible. Based on intense competition in cement industry and presence of internal and foreign competitors in this industry, it is essential to consider required actions for success and solving possible problems. For this aim, this study tries to investigate the opinions of all experts about every component of organizational excellence model in this company using self-assessment method. Then, present faults are determined from these opinions and some solutions are presented for solving problems.

2. Questions of the study

This study includes four main questions based on the subject of study. These questions are:

- In which situation is Momtazane Kerman Cement Company from empowerment criterion aspect?
- In which situation is Momtazane Kerman Cement Company from results criterion aspect?

3. LITERATURE REVIEW

Complexity of competitive environment of business and increase in expectations of customers makes determination of strength and weakness points of organization and continuous improvement of efficiency necessary. Therefore, today managers are searching to achieve one comprehensive, reliable and flexible solution for performance assessment of their organizations in order to ensure implementation of their strategies and also obtain accurate and sufficient information about their current positions and cause upgrading and improvement of their organizations while considering the future. One assessment method should be able to determine the general situation of organization related to organizational goals (distance to goal) in every moment [2].

*corresponding author : Hamid Maleki M., Master degree of Industrial Engineering, Zahedan Branch, Islamic Azad University, Zahedan, Iran. Email: hamid_mm_pati@yahoo.com

Assessment performance is a process which concerns evaluation, measuring, rating and judging about performance during a specific period. Assessment is a complex matter which is performed to compare obtained results with pre-determined goals of plan. Obtained results of plan can be completely in contrary to what was expected.

As Lee stated performance assessment refers to comprehensive evaluation process of organization performance and is applied in the format of efficiency, effectiveness, significance, empowerment, long term improvement of organization and replication capability under framework of goals [3].

According to above concepts, performance assessment can be briefly defined: “process of quantifying efficiency and effectiveness of operation”. Purposes of managers and organizational specialists for performing performance assessment can be divided to three categories [4]:

- Strategic purposes: which include strategic management and revising strategies
- Communicative purposes: which include controlling current situation, showing future path, presenting feedback and benchmarking from organizations
- Motivational purposes: which include editing reward system and also encouraging improvement and learning

Today most of countries determine some awards in national and local level for maintaining themselves in competition environment. This stimulates excellence, growth and profitability in three big economic centers of last century (Japan, USA and Europe) include: Deming award in Japan, Baldrige award in USA, quality management award in Europe. An award that created by European foundation of quality management called excellence model of organization or in abbreviated form “EFQM” has gained more universality and popularity around the world [5].

One organization in addition to assessment of its success in implementation of improvement plans during different periods can compare its performance with other organizations specially the best ones using this model. Strong systematic view, accurate attention to organizational processes based management and result-oriented model of EFQM is very instructive and executive for Iranian organizations which usually have serious problems in these areas. Continuous definition of self-assessment activities and determining strength and weakness points and performing investigative projects for improving strength points and eliminating deficiencies and faults under support and commitment of organization authorities makes achieving pre-determined vision possible with passing time [6].

3.1 European Quality Award EFQM

This award was initially designed and implemented with purpose of competition with Japanese rivals and increasing the quality of European production commodities. One model that is the basis of European quality management award has nine criteria. Its five criteria are empowerments and other four criteria are results. Empowerment criteria cover what one organization do and results criteria cover what one organization obtains. Results are obtained due to implementation of empowerments and empowerments improve by feedback of results[7].

One of known measurement frameworks which is used extensively is excellence model of organization. This framework includes two separate factors which are generally divided to “empowerments” and “results”. Empowerments are: leadership, employees, policies and strategies, sources, beneficiaries and processes. Also results are: results obtained by persons, results obtained by customers, results obtained by society and key results of performance. One theory produces supports and this framework: empowerments are similar to levers with which managers can achieve future results faster [8].

One weakness point of this model is the problem of making it operation because applied phrases and concepts in this model is such genera that can be interpreted in different ways and each organization can produce different assessment indexes using these titles[9].

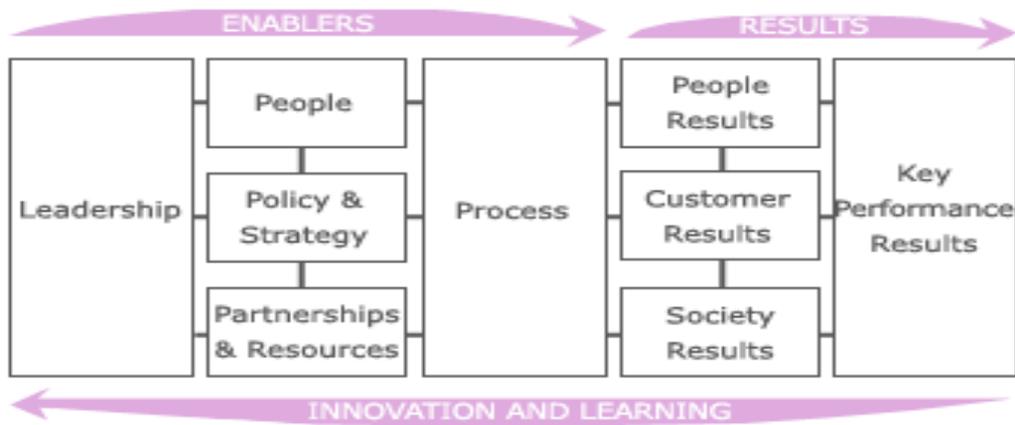


Figure 1: EFQM Excellence Model [10]

4. Data analyses

T-student and Friedman test were used for analysis of data. At first, validity of estimates of study was investigated using t-student test and then the possibility of non-equal preparation of organization in each index was evaluated using Friedman test. It is noteworthy that based on the number of members of statistical population (approximately 87 persons) and considering standard Table; the volume of suggested sample was determined to be 66 persons. Finally, in order to compensate possible incomplete questionnaires, 70 persons were interviewed in this study. For measuring reliability of used questionnaires, 10 questionnaires were completed as Pretest and Cronbach' alpha was measured to be 0.820 using SPSS software. Since this value is more than 0.7, it can be concluded that the questionnaire has enough reliability.

4.1 investigating main estimate number 1: situation of organization from empowerment criterion aspect

In this estimate, the situation of organization was investigated from empowerment criterion aspect. According to mentioned information H_0 and H_1 are defined as following:

| | |
|-------------------|--|
| $H_0: \mu \leq 3$ | Responders believed that the organization is not in an appropriate situation from empowerment criterion aspect |
| $H_1: \mu > 3$ | Responders believed that the organization is in an appropriate situation from empowerment criterion aspect |

For calculating statistic of experiment, the obtained information from questionnaires was given to SPSS software and this software was used to test the estimates. Output information is shown in below Table.

Table 1. The experiment results of current situation estimate of empowerment criterion

| Evaluation basis of estimates is equal to 3 | | | Tested concept | | |
|---|-------------|--------------------|-------------------|-----------|--|
| 95% Confidence interval of the difference | | Average difference | Degree of freedom | statistic | Responders believed that the organization is in an appropriate situation from empowerment criterion aspect |
| upper limit | Lower limit | | | | |
| 0.7699 | 0.5067 | 0.6383 | 66 | 9.635 | |

According to data of Table 1, upper and lower limits both are positive. Therefore, estimate of H_0 is rejected and the estimate of study is confirmed. In another words, it can be concluded that in 95% confidence level Responders believed that the organization is in an appropriate situation from empowerment criterion aspect.

4.2 investigating main estimate number 2: situation of the organization from results criterion aspect

In this estimate, the situation of the organization is investigated from results criterion aspect. According to mentioned information H_0 and H_1 are defined as following:

| | |
|-------------------|--|
| $H_0: \mu \leq 3$ | Responders believed that the organization is not in an appropriate situation from results criterion aspect |
| $H_1: \mu > 3$ | Responders believed that the organization is in an appropriate situation from results criterion aspect |

For calculating statistic of experiment, the obtained information from questionnaires was given to SPSS software and this software was used to test the estimates. Output information is shown in below Table.

Table 2. The experiment results of current situation estimate of results criterion

| 95% Confidence interval of the difference | | Evaluation basis of estimates is equal to 3 | | | Tested concept |
|---|-------------|---|-------------------|-----------|--|
| upper limit | lower limit | Average difference | Degree of freedom | statistic | Responders believed that the organization is in an appropriate situation from results criterion aspect |
| -0.1063 | -0.3516 | -0.22894 | 66 | -3.709 | |

According to data of Table 1, upper and lower limits both are negative. Therefore, estimate of H_0 is confirmed and the estimate of study is rejected. In another words, it can be concluded that in 95% confidence level responders believed that the organization is not in an appropriate situation from results criterion aspect.

4.3 Ranking the current situation of each aspect of organizational excellence model

In this part, the purpose is to determine components that responders believe that have the best situation. For prioritization of factors about which responders have commented Friedman test was used. In this test, one number is allocated to each studied component after required calculations by SPSS software. The more is this obtained number by the test, the better is the situation of studied component in responders view.

Table 3. The results of Friedman test

| Evaluated components | Test results | rank |
|--------------------------------|--------------|------|
| processes | 8.96 | 1 |
| Policy and strategy | 7.32 | 2 |
| employee | 5.19 | 3 |
| Sources and partners | 4.78 | 4 |
| Customers results | 4.02 | 5 |
| Leadership of the organization | 3.93 | 6 |
| Employee results | 3.87 | 7 |
| Society results | 3.31 | 8 |
| Key results of performance | 2.88 | 9 |

According to above information, it can be concluded that responders believed that the organization is in the best situation from aspects of processes and policies and strategies components and is in the worst situation from aspects of society results and key results of performance components.

5. Conclusions

The purpose of this study was investigating and fault-finding of Momtazane Kerman Cement factory using organizational excellence model. For this aim, one 60 question questionnaire was designed after determination of components related to each nine criteria of organizational excellence model and this questionnaire was given to members of statistical population. After completion of questionnaires, the information was analyzed using SPSS software and final results were extracted.

Investigating current situation of each component of organizational excellence model showed that the organization is in a more appropriate situation according to empowerment criteria comparing with results criteria. Among five studied components of empowerment aspect, responders believed that four components are in an appropriate situation and only one component (leadership of organization) is not in an appropriate situation. Reviewing the opinions of responders also showed that the organization did not act well in using its capabilities and facilities and it couldn't obtain appropriate results in each component of results aspect. Only component of customers' results based on descriptive table could become to some extent close to excellence criteria.

Also ranking of current situation of each aspect of organizational excellence model showed that the strength point of the organization is in achieving organizational excellence of processes and policies and strategies. According to record of performing strategic planning in the organization and annual targeting and editing mission statement of the organization, it seems that the organization has a strength point from these two criteria aspects. Also according to the specialized activity of the organization and engagement in a high technology industry, it seems that the organization has an appropriate situation from human resources aspect. On the other hand, the results showed that the organization has neglected monitoring and pursuing its performance results especially in the area of key performance results and society results.

6. Recommendations

Regarding the obtained results, below recommendations are given:

- Studying obtained results in the case of leadership of the organization showed that in contrary to other four cases responders believed that the situation of the organization is not very appropriate in this case. More accurate study and reviewing answers to each leadership aspect question of the organization indicated that a maximum faults are observed in interaction between leaders and employees. It is recommended that for eliminating this fault the distance between managers and employees to be reduced using techniques such as participative management and goal based management.
- It is recommended that due to severe changes in competitive environments one specific plan to be implemented continuously for monitoring changes in construction industry the most important effective factor in existence of the company.
- Results showed that the organization was not successful in coordinating human resources strategies with organizational strategies. For eliminating this fault it is recommended to use the assistance of experienced companies in the area of human resources strategies.

REFERENCES

1. Li, p. (2001). Design of performance Measurement systems: a stakeholder Analysis Framework, The Academy of Management Review. Mississippi State, April
2. Abdollahi, Javad.(2008). Coordination and performance assessment by Balanced Scorecard (BSC) approach in Hamkaran system company, Master of Science thesis, supervised by: Akbar Alam Tabriz, ShahidBeheshti University, faculty of management and accounting.
3. Marr, B. and Neely, A. (2010). Measuring E-business performance", Twelfth Annual Conference of the Production and Operations Management Society, Orlando
4. Neely, A.D., Gregory M., Platts, K.W. (2008). Performance Measurement system Design: a literature Review and Research Agenda, International Journal of Operations & Production Management, Vol.33, No.4, pp. 80-116.
5. Simons J.E, Wongrassamee S. and Gardiner P.D.(2010). Performance Measurement Tools: The Balanced Scorecard And The EFQM Excellence Model; Measuring Business Excellence, Vol. 27, No.4.
6. Asare, Osseo.(2002).The Need Education and Training in the Use of the EFQM Model3 Quality Assurance in Education, Vol. 10, No. 2.
7. Akyüz, A.(2005). Application of EFQM excellence model to the SABANCI university, Technical Services Manager, Sabancı University, IC Tuzla, Istanbul- TURKEY.
8. Davies, J.(2008). Integration: is it the key to effective implementation of the EFQM Excellence Model?, Centre for Organisational Excellence Research, Salford Business School, University of Salford, Salford, UK, International Journal of Quality & Reliability Management, Vol.25, No.4.
9. Richards A.H, Neely, A.D, Mills, J.F., Platts, K.W., Bourne, M.C.S., Gregory, M. and Kennerley. (2009). Performance Measurement system Design: Developing and Testing a process-based Approach, International Journal of Operations & Production Management, Vol.35, No.10, pp19-45.
10. Jacob, R., Christian, N., Madu, Charles Tang. (2004). An empirical assessment of the financial performance of Malcolm Baldrige Award winners, International Journal of Quality & Reliability Management, Vol. 21, Issue. 8, pp.897-914.