PERFORMANCE GAP ANALYSIS OF IREC BASED ON EFQM EXCELLENCE MODEL

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ABSTRACT

Excellence models are frameworks with a holistic approach for assessing organizations and their processes from different aspects and identifying the strengths, areas of improvement and appropriate corrective actions in a comprehensive system. The present research has sought to find an appropriate response in relation to the way of conducting gap analysis and reducing the given gap between the desired and current situations in Isfahan Regional Electric Company (IREC) based on EFQM excellence model. This study is applied, in terms of purpose; field survey, in that of data collection method; and descriptive-inferential, in that of data analysis method. The research findings at the outset indicate that people management, resources and partnership, customer results, society results and key performance results have a significant gap with the desired situation. Afterwards, the importance of all weaknesses associated with the five aforementioned indicators is determined; in this regard, analyses show that these indicators have no significant differences in terms of their degree of importance, that is to say there are slight differences among them. Finally, eight highly important weak points are extracted based on their degree of importance (Coefficient of Variation) and then improvement strategies are subsequently presented to remove these weak points and thereby close the existing gap.

Keywords: Gap Analysis, EFQM Excellence Model, Isfahan Regional Electric Company.

INTRODUCTION

Economic institutions in our country have been traditionally looking for models followed by successful business organizations, i.e. those who meet the basic needs of the society in the best way as the leading actors of this arena and know how to operate to achieve growth, sustainable survival, and superiority in this competitive environment. Identifying the status of various systems, methods and techniques in the organization and their interconnectedness; determining the weaknesses and strengths; and ultimately improving the performance of organizations have been the issues of interest for the managers of most governmental and nongovernmental organizations over recent decades. The performance management system can be considered as the process of assessing and comparing the extent and way of achieving the desired situation and ultimately improving the performance. Indeed, performance appraisal is deemed to be a futile task without identifying weaknesses and strengths and providing solutions to remove weak points. Therefore, following one of the Regional Electric Companies in industrial megacities that has made significant progress in the field of electricity generation and distribution as a role model, the research aims at identifying the factors causing a gap and measuring their importance, and also providing strategies to close the extant gap by studying the current

performance of IREC based on EFQM excellence model. Observing the current state and comparing it with the desired situation may inspire the top managers of Isfahan Regional Electric Company to implement the proposed recommendations in the hope of achieving the desired situation and remove the existing gap.

Statement of the Problem

Any organization, regardless of its type of activity, size, structure, or degree of success in meeting its organizational goals, needs a model for measuring its progress in achieving its business ideals and strategies. Organizational excellence model is a tool to help organizations measure their success in moving towards excellence and balanced growth. These models may contribute organizations to identify differences and root causes by comparing the status quo with the desired situation, and hereby develop and implement strategies to improve the current situation (Yousefian, 2008).

The EFQM excellence model is a tool that can be used to identify the strengths and areas of improvement through periodic self-assessment. Applying this model to evaluate the situation, may provide organizations with three main outcomes mentioned as follows:

1. Identification of their strengths
2. Identification of areas need to be improved to achieve excellence
3. Identification of the projects and programs whose implementation will lead organization to excellence (Mirhosseini and Mohebhouri, 2012).

Regarding the remarks outlined above and also the benefits of deploying quality management system, this study tries to evaluate the current situation of Isfahan Regional Electric Company in terms of the organizational excellence model criteria and its distance from the desired situation. The study also tends to identify the factors causing this gap as well as their degree of importance, and then provide solutions to close this gap. The attempt is also made to inspire the top managers of Isfahan Regional Electric Company to implement the proposed strategies to achieve the desired situation and reduce the existing gap by comparing the current situation with the desired one.

The Significance of the Study

Lack of a comprehensive evaluation system imposes heavy costs on organizations per year. Being aware of weaknesses, facing reality, and accepting responsibilities are considered the first steps in altering the status quo and changing the existing undesired trend in this highly competitive world. Today, excellence is no longer a secondary or promotional task for organizations but a necessity for their survival; therefore, even if a part of the goals are met, it will be a big victory for organizations and companies (Khalili, 2003).

Establishing appropriate performance appraisal and control systems is what an organization needs as a very prerequisite to understand the desirability and quality of its activities, the outcomes of its performance, and finally the extent of its goals (defined in the mission of the organization) fulfillment in this complex and dynamic environment. Absence of such a system in organization, i.e. lack of interaction with the internal and external environments, may ultimately result in the decline of open, dynamic and active organizations as well as society (Rafizadeh, 2009).

On the other hand, continuous improvement of performance fails to be achieved without: understanding the extent of progress towards goal achievement, identifying challenges facing research institutes, receiving feedback, and identifying areas of serious improvement. Hence, organizational performance appraisal may not only provide a comprehensive picture of the

performance of a center but also a platform for identifying strengths and feasible improvement areas, and achieving continuous quality improvement, resulting in organizational excellence (Movafagh, 2012).

Isfahan Regional Electric Company as one of the largest companies in the region at the national level has extensive activities in the field of power generation and protection of power transmission channels and also plays an important role in providing essential services. Therefore, periodic and comprehensive evaluation of this center is of particular importance to optimize the activities and services provided. Accordingly, by examining and evaluating this center based on the EFQM excellence model, the study tends to shed light on the current situation and its distance from the desired state and recommend solutions to bridge the gap between the current and desired situations.

This assessment can also inform the managers, authorities, and employees about the status quo, and provide them with the information required for future measures. This information, along with the weaknesses and strengths identified, may allow them to plan for optimal management and eliminate the existing gap and thereby enhance the quality of their services.

Therefore, due to the lack of such information and insufficient knowledge of the existing situation and the potential gap between the desired and current states, a research evaluating the current performance of this center as one of the country's most prominent regional companies, revealing the strong and weak points, identifying the factors causing this gap, providing solutions to improve the performance, and helping managers, officials, employees, etc., to make rational decisions, seems to be necessary.

Theoretical Frameworks of the Research

• Measurement and its Nature

Measurement is a procedure used symbolically to illustrate the facets of the facts in the analytic world of the scholar (Cosenza, 2001). Measurement can lead to curiosity, question, and challenge in terms of the way activities are carried out; this, in turn, will guarantee the complete understanding, strong focus on, and accreditation of criteria. From the management perspective, measurement as one of the hallmarks of scientific attitude and one of the most important management activities deals with the quantification of variables relationships and key criteria for analyzing, planning and controlling the management activities and decisions (Hughes, 2004).

• Different Views on Performance Appraisal

From traditional perspective, performance appraisal is a means of judging and reminding performance and its main purpose is to control activities and reduce deviations from the defined programs, while in the modern viewpoint (since late twentieth century), evaluation system is mainly oriented to the growth and development. Additionally, contrary to the traditional view, content, elements, and indicators of the evaluation system are neither constant nor permanent in the modern view (Bayar, 2008).

• Organizational Excellence Definition

Excellence model is a management structure that paves the way for progress and improvement by relying on the basic principles and concepts and taking into account the core criteria of Total Quality Management (TQM) and Self-Assessment System. Excellence model is a guide to: measure the extent of systems deployment in the organization and determine which direction managers have to be headed to achieve performance improvement (Najmi, 2006).

- *What is EFQM?*

National Productivity and Excellence Award was launched in early 1992 as a framework for evaluation in the European Quality Award. This model was used as a widespread organizational framework in Europe and turned into a basis for a series of national, local, and quality awards. Despite the importance of quality awards from the vantage point of some customers, the value of EFQM excellence model is in its use as a management system and an important factor in self-assessment prevalence in organizations. This model is applicable for all types of organizations regardless of their size, structure and various parts. It is, indeed, an organizational excellence model that will tell you where you are on the path towards excellence by using appropriate tools. It, then, highlights the gap between the current state and the ideal situation and ultimately creates the required sensitivity for providing appropriate solutions (Najmi, 2006).

- *The Nine Criteria of EFQM Excellence Model*

Organizations need unique appropriate tools equipped with managerial structure to evaluate themselves and compare their state with others; in this regard, excellence models seem to be suitable options. As mentioned earlier, excellence model is based on nine criteria divided into two groups: five enablers (namely leadership, policy and strategy, employee (people) management, resources and partnership, and processes), and four results (namely customer results, employee (people) results, society results and key performance results).
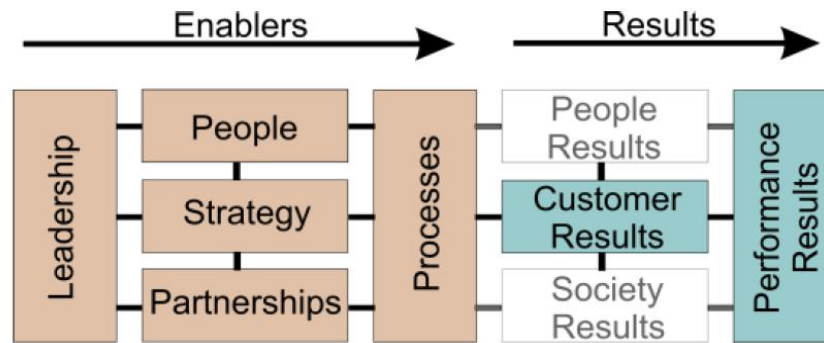

Figure 1. The nine criteria of EFQM excellence model (Hemsworth, 2016)

Criterion (1): Leadership
Excellent leaders formulate the mission and vision of the organization and facilitate their way of realization. They create the values and systems required for the continuous success of the organization and implement them with their proper behaviors and actions.

Criterion (2) Policy & Strategy
Excellent organizations realize their mission and ambition by: establishing a strategy, focusing on the interests of the stakeholders, and taking into account the market particularly the sector in which they operate. In such corporations, policies, programs, goals, and processes are developed to efficiently implement the defined strategies.

Criterion (3): People
Excellent organizations manage, develop, and release the full potential of their people at both individual and organization-wide levels. They promote justice and equality, involve employees in tasks, and delegate authority to them.

Criterion (4): Resources & Partnership

Excellent organizations organize and manage their external partnerships, suppliers, and internal resources to support policy and strategy and implement their processes efficiently.

Criterion (5): Processes

Excellent organizations design, manage, and improve their processes in order to achieve full satisfaction and generate increasing value for their customers and other stakeholders.

Criterion (6): Customer Results

Excellent organizations comprehensively measure the critical results related to their customers. This criterion may shed light on the results achieved by organization in relation to its external customers.

Criterion (7): People Results

Excellent organizations comprehensively measure the important results associated with their employees. This criterion highlights the results achieved by organization in relation to its human resources (HR).

Criterion (8): Society Results

Excellent organizations comprehensively measure the important society-related results. This criterion highlights the results achieved by organization in relation to its local, national and international community.

Criterion (9): Key Performance Results

Transcendental organizations comprehensively measure the important results associated with key elements of policy and strategy. This criterion highlights the results achieved by organization in relation to its planned performance (Amiran, 2003).

RESEARCH DESIGN AND METHODOLOGY

- *Research Design in Terms of Purpose*

The present research tends to develop applied knowledge in a specific field and solve specific problems within organizations; in other words, it is an attempt to solve an actual problem in real world. Accordingly, the study is considered to be an applied research in terms of purpose because it provides solutions to bridge the gap between the desired and current situations of Isfahan Regional Electric Company-and also similar communities.

- *Research Methodology*

In general, research methods in behavioral sciences can be grouped based on two criteria: A) the research purpose; and b) data collection method.   .

As it was mentioned earlier, the present research is applied, in terms of purpose, and field survey, in that of data collection method. At the first stage, the gap between the desired and current situations is investigated by a focus group. Afterwards, given the factors causing this gap, a questionnaire is prepared and distributed among the experts of Ministry of Energy and regional power plants to determine the importance of the defined factors, and finally by re-establishing a focus group within the company, appropriate strategies are presented.

In general, questionnaire is selected as the research instrument in the study due to its high speed data gathering, ease of use, and sufficiency of primary basic trainings to commence the work. After reviewing the current situation of the company, an index has to be selected as the so-called Best Practice to allow for a comparison between two situations; accordingly, one of the regional

electricity companies in industrial cities that has made significant progress in the field of electricity generation and transmission was selected to this end. Comparing the company's current situation with the desired one may highlight weak and strong indicators. Then, according to the comments made by the company's expert team, the strengths and weaknesses of the company in terms of the predefined criteria are determined based on the excellence model. In the second stage, another questionnaire dedicated to the importance of the factors causing the gaps in the given indicators is prepared and distributed among the experts inside and outside the company to determine the importance of influencing factors. Subsequently, by reestablishing a focus group, the primary corrective strategies are provided and final solutions will be presented by a group of academic and non-academic experts. The recommended strategies can contribute performance to improve and managers, officials, employees, etc., to make rational decisions; moreover, these strategies can be extended to other similar communities. In short, the research consists of three steps:

1. Formation of a focus group consisting of 4 people within the company to analyze the gap between the desired situation and current state of IREC.
2. Distribution of questionnaires among experts inside and outside the company (Ministry of Energy and regional power plants) and identification of the importance of each factor in causing a gap.
3. Reestablishment of the focus group to provide strategies to close the gap between the desired state and current situation of IREC.

Details of the Second Stage Questionnaire

Table 1. Details of the second stage questionnaire

Research concepts	Research dimensions	Number of weaknesses (gap-causing factors)
Enablers of organizational excellence	People management	15
	Resources and Partnership	15
Results of organizational excellence	Customer results	5
	Society Results	4
	Key Performance Results	3

- *Reliability of the Questionnaire*

After the initial design of the questionnaire, the validity and reliability of the questionnaire are determined. Reliability is tested using Cronbach's alpha method to evaluate the internal consistency of the measuring instruments weighing various characteristics. Therefore, confidence coefficient is estimated using Cronbach's alpha method through SPSS software. Cronbach's alpha coefficient is calculated by the following equation (1):

$$\alpha = \frac{K}{K-1} \left(1 - \frac{\sum_{i=1}^{k} 6_i^2}{6^2} \right) \qquad (1)$$

Here, k refers to the number of questions, 6_i^2 is the variance of each question, and 6^2 is the total variance of questions.

A questionnaire is reliable provided that Cronbach Alpha value is higher than 0.7. That is to say, the closer this number to 1, the more reliable the questionnaire. In the questionnaire, the alpha value for the five indicators of the second stage questionnaire is provided in Table 2.

Table 2. Cronbach Alpha value

criterion	Questions	Cronbach Alpha value
People management	1~15	0.853
Resources and partnership	16~30	0.812
Customer results	31~35	0.768
Society results	36~39	0.754
Key performance results	40~42	0.748

- *Validity of the Questionnaire*

The concept of validity determines how well the instrument measures the given attribute. Notably, without understanding the validity of the measuring instrument, the precision of the data obtained fails to be guaranteed. Validity of the questionnaire is confirmed according to the comments made by academic experts and professors.

Statistical Population and Sample

- *Statistical Population*

The statistical population is a set of individuals, objects, etc., that share at least one attribute. The statistical population refers to the total group of people, events, or things the researcher tries to investigate.

Obviously, in order to gather correct answers to the research questions, the statistical population who can provide required information with more confidence has to be selected. For this reason, in the first and second phases of data collection, all experts of Isfahan Regional Electric Company and Power Industry Professionals (inside and outside the organization) are respectively selected as the statistical population. In the third stage, as in the first, all the experts of the Isfahan Regional Electricity Company are chosen as the statistical population.

- *Sampling Method*

Sample is a smaller group of people that is selected for analysis. By observing the specifications of the sample as a representative of the under-scrutiny community, it is likely to make a definite deduction from the community profile.

Firstly, as only a number of experts are sufficiently qualified to analyze the status quo and as the analyses done by most employees lag far behind the actual condition due to their inadequate information, only a limited number of experts are selected as the sample, hence the sampling is inherently judgment-based. In the second step, there is a cluster random sampling where 20 of the experts inside and outside the company are selected. In the final stage, as the first one, a focus team composed of the initial experts is subjectively selected to offer its strategies.

- *Sample Size Determination*

As noted above, in the first stage, as only a number of experts are sufficiently competent to analyze the status quo and the analyses done by most employees lag far behind the reality due to their inadequate information, only a limited number of experts (4 people) are selected as the sample to collaboratively analyze the current state. In the second phase, 20 experts inside and outside the company are selected as the sample. And again, in the final stage, the initial focus team is reestablished to provide the appropriate strategies.

DATA ANALYSIS METHODS

Data analysis is generally conducted in two levels of descriptive and inferential statistics using

Excel and SPSS software. In relation to data analysis techniques, qualitative and inferential methods are respectively used in the first and second stages. To this end, descriptive statistics techniques such as gap analysis (radar and column charts, etc.) as well as center-oriented, diffusion, and coefficient variation analyses are used, and then inferential analysis tests such as Ratio test and Friedman test are applied; and finally the results yielded are interpreted.

The First Stage

- ### Current State of Isfahan Regional Electric Company

According to the research entitled "Performance Evaluation of Isfahan Regional Electric Company Based on EFQM Excellence Model" carried out by Haerizadeh et al. in 2017, the current situation of IREC was determined based on EFQM excellence model. In this research, four experts are subjectively selected from among the statistical population consisting of all electrical experts of the company. The results of the EFQM questionnaire participatory completed by the selected sample highlight the current state of IREC in nine criteria of organizational excellence model.

Table 3. The current state of IREC

Criterion	Current progress (%)	Current score	Ideal score
Leadership	48.8	48.8	100
Policy and strategy	50.25	40.2	80
Employee (people)management	6.6	5.92	90
Resources and partnership	13.4	12.06	90
Processes	42.85	59.99	140
Customer results	25.77	51.54	200
People results	39.8	35.82	90
Society results	33	19.8	60
Key performance results	14.14	21.21	150
Total	~~~~~~~~	295.36	1000

- ### Best Practice of IREC

Best Practice (desired state) is a method or state that has shown results superior to those achieved with other means/states, hence it is used as a benchmark. Nevertheless, the best possible method is likely to look up thanks to different improvements.

After highlighting the current state of the company, the desired state is tended to be illustrated to allow for a comparison between these two states. Yazd Regional Electricity Company is considered as the 'best practice'. Industry in Yazd province accounts for 47.8% of the total employment in the region. Yazd province is among the nine developed industrial provinces selected by Ministry of Industries and Mines and Management and Planning Organization (MPO) of Iran. According to the Chamber of Commerce, Mine & industry sector of Yazd province is in third place in terms of launching industrial investment. According to the Ministry of Energy in 2016, Yazd province ranked third out of electricity distribution companies.

Given the high similarity of Yazd and Esfahan Regional Electric Companies in terms of geographical location, power generating plants, and management pyramid, and more importantly, due to the fact that Yazd Regional Electric Company was evaluated in 2005 in a study entitled "assessment improvement in EFQM model by fuzzy method and prioritization of improvement projects by AHP and OR methods", and also regarding the fact that considerable progress has been made in the field of electricity production and distribution- thanks to performing improvement projects and corrective measures- Yazd Regional Electricity Company

is known as a model of excellence and thereby a preferred option (both theoretically and practically) in this regard.

In the research conducted in 2005, the final score of Yazd Regional Electric Company was 157; however, over the past decade -thanks to the improvement projects and corrective actions- better results (as shown in Table 4) were yielded for EFQM model criteria by an assessment conducted last year.

Table 4. The scores of IREC criteria based on EFQM excellence model

	Key performance results	Society results	People results	Customer results	Processes	Resources & Partnership	People management	Policy & Strategy	Leadership	Criterion
	۳۸۲/۳	۴۷/۱	۲۹/۱	۳۶/۲	۶۱/۳	۵۵/۸	۳۲/۱	۳۳/۳	۳۸/۳	۴۹/۱	Score

- *The Comparison of Current and Desired States of IREC*

Table 5. The comparison of current and desired states of IREC

Criterion	Desired score	Current score	Variation (%)	Ideal score
Leadership	49.1	48.4	% 0.61	100
Policy and strategy	38.3	40.2	0	80
People management	33.3	5.94	% 82.16	90
Resources and partnership	32.1	12.06	% 62.42	90
Processes	55.8	59.99	0	140
Customer results	61.3	51.54	% 15.92	200
People results	36.2	35.82	% 1.04	90
Society results	29.1	19.8	% 31.95	60
Key performance results	47.1	21.21	% 54.96	150
Total	382.3	295.36	~~~~~~~~~~	1000

After comparing the current and desired states, criteria with a relatively high disparity to the desired state are identified. These criteria, by the order of importance, are as follows:

1. People Management
2. Resources and partnership
3. Key performance results
4. Society Results
5. Customer Results

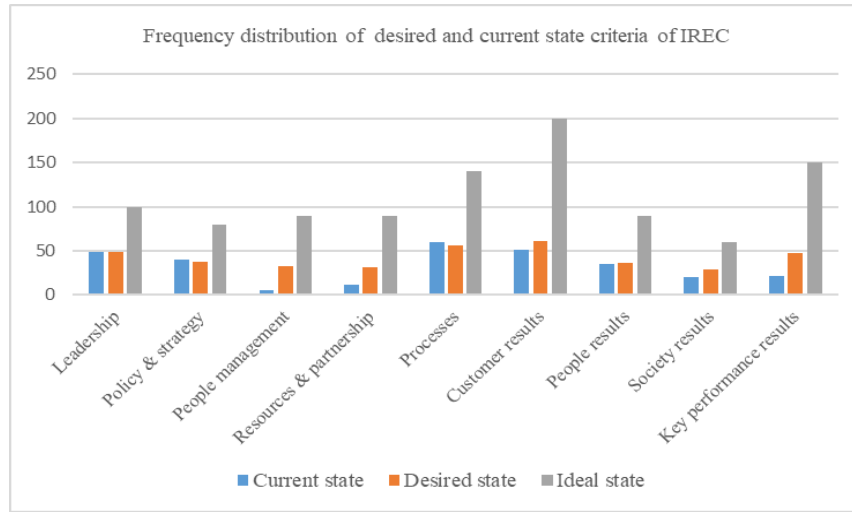- *Column chart of current and desired states of IREC*

Figure 2. Frequency distribution of desired and current state criteria in IREC

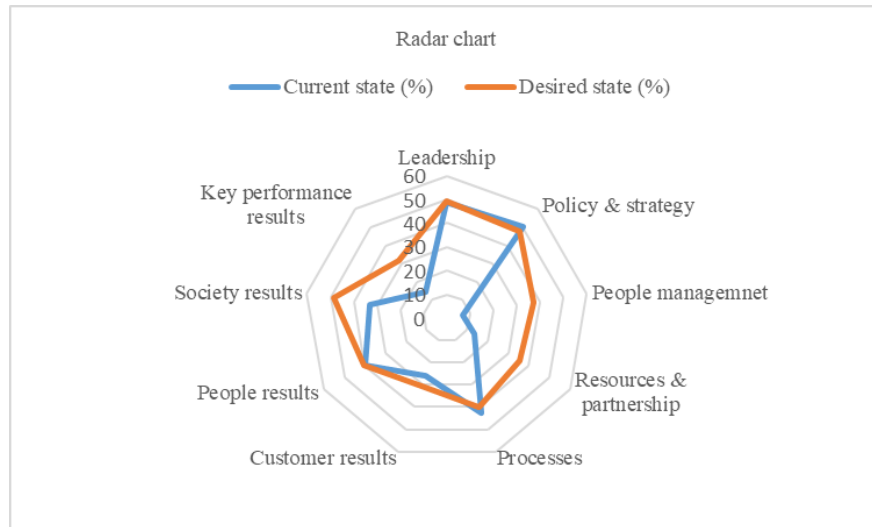- *Radar chart of current and desired states of IREC*

Figure 3. Radar chart of current and desired states of IREC

As noted earlier, and as visible in the above chart, there are significant gaps in people management, resources and partnership, key performance results, society results and customer results indicators. Accordingly, there is a need to consider the root causes of these gaps. Investigations carried out by the focus group, charter of the company, precise examination of the current and desired situations of the company, and also data provided by previous research (through the review of the EFQM standard questionnaire) all reveal the weaknesses and strengths of criteria having a significant gap with the desired state. Therefore, the second stage questionnaire is prepared based on weaknesses (factors causing gap) of the five determined criteria (viz. people management, resources and partnership, key performance results, society results, and customer results) to identify the importance of each criterion in causing the gap.

Second Stage

- *Second Stage Questionnaire (related to the importance of weaknesses)*

The questionnaire is completed based on the information provided by 20 experts of power industry (both inside and outside the organization). In fact, people who have full knowledge of the power industry can well provide the information asked in this questionnaire. As demonstrated in Table 1, the questionnaire consists of 5 parts, each belongs to one of the criteria having considerable gap with the desired state. The first part is dedicated to the people management and includes 15 weaknesses, the second part covers resources and partnership and includes 15 weaknesses, the third part relates to the customer results and includes 5 weaknesses, the fourth part is associated with the society results and includes 4 weaknesses, and finally, the fifth part deals with the key performance results and includes 3 weaknesses. Data analysis is performed by SPSS software (V.22).

- *Data description of second stage questionnaire*

Descriptive characteristics including average, standard deviation (SD), coefficient of variation (CV), minimum and maximum scores of criteria are presented in Table 6.

Table 6. Descriptive characteristics of IREC performance criteria

Criterion	Questions	Number of weaknesses	Average	SD	CV	Min	Max
Employee management	1~15	15	3.6	0.856	0.238	2.13	4.6
Resources and partnership	16~30	15	3.55	0.853	0.240	2.33	4.93
Customer results	31~35	5	3.57	0.961	0.269	2	5
Society results	36~39	4	3.71	0.859	0.232	2.75	5
Key performance results	40~42	3	3.57	1.066	0.299	1.33	5

- *Normality Testing of Research Variables*

The normality of research variables is tested using Shapiro and Wilk (1965) prior to statistical and inferential tests.

Table 7. Normality testing of research variables

Criterion	Test statistic	P-value	Result
Employee management	0.896	0.035	Abnormal
Resources and partnership	0.934	0.181	Normal
Customer results	0.941	0.246	Normal
Society results	0.861	0.008	Abnormal
Key performance results	0.946	0.312	Normal

Given that P-value is higher than 0.05 for resources and partnership, customer results, and key performance results, these variables have a normal distribution. In relation to other variables, as P-value is less than 0.05, they are abnormal at a significant level of 5%; therefore, nonparametric tests such as ratio test are used in their analysis. It should be noted that as the sample size is less than 30, T-test is not preferred due to its low statistical power for small samples, hence nonparametric likelihood ratio test is used instead.

- *Inferential Analysis*
  - ✓ *Investigating the Importance of People Management in IREC*

In order to evaluate the importance of people management in IREC, the number of responses less than or equal to 3 (average) are compared with the number of responses more than 3 to estimate the average score of employee management. Afterwards, the significance of difference between the ratio of values more than three with 0.5 is determined using ratio test (Binomial).

Table 8. Investigating the importance of people management IREC

Criterion	The number of values less than or equal to 3	The number of values more than 3	The ratio of values less than or equal to 3	The ratio of values more than 3	P-value
People management	6	14	0.3	0.7	0.115

As we know, responses less than 3 and more than 3 are respectively representative of the low and high importance of employee management. The ratio of values more than 3 in the scores of employee management is 0.7. The insignificance of the ratio test at the 95% confidence level indicates that the ratio of values more than 3 for the average response of participants to the questions related to this criterion fails to be significantly different from 0.5. Therefore, it can be concluded that the importance of people management criterion in IREC is moderate (nor low, nor high) because the ratio of values more than 3 (oriented to "very important" response) is not significant compared to 0.5 (P-value ≥0.05).

  - ✓ *Investigating the Importance of Resources and Partnership in IREC*

Like the first criterion, here also the results were derived from ratio test (Table 9).

Table 9. Investigating the importance of resources and partnership in IREC

Criterion	The number of values less than or equal to 3	The number of values more than 3	The ratio of values less than or equal to 3	The ratio of values more than 3	P-value
Resources and partnership	7	13	0.35	0.65	0.263

Considering the reasons mentioned earlier, it can be concluded that the importance of resources and partnership in IREC is moderate because the ratio of values more than 3 (oriented to "very important" response) is not significant compared to 0.5 (P-value ≥0.05).

  - ✓ *Investigating the Importance of Customer Results in IREC*

Like the first criterion, here also the results were derived from ratio test (Table 10).

Table 10. Investigating the importance of customer results in IREC

Criterion	The number of values less than or equal to 3	The number of values more than 3	The ratio of values less than or equal to 3	The ratio of values more than 3	P-value
Customer results	7	13	0.35	0.65	0.263

Considering the reasons mentioned earlier, it can be concluded that the importance of 'customer results' criterion in IREC is moderate because the ratio of values more than 3 (oriented to "very important" response) is not significant compared to 0.5 (P-value ≥0.05).

  - ✓ *Investigating the Importance of society results in IREC*

Like the first criterion, here also the results were derived from ratio test (Table 11).

Table 11. Investigating the importance of society results criterion in IREC

Criterion	The number of values less than or equal to 3	The number of values more than 3	The ratio of values less than or equal to 3	The ratio of values more than 3	P-value
Society results	8	12	0.4	0.6	0.503

Considering the reasons mentioned earlier, it can be concluded that the importance of society results in IREC is moderate because the ratio of values more than 3 (oriented to "very important" response) is not significant compared to 0.5 (P-value ≥0.05).

✔ *Investigating the Importance of key performance results in IREC*

Like the first criterion, here also the results were derived from ratio test (Table 12).

Table 12. Investigating the importance of key performance results in IREC

Criterion	The number of values less than or equal to 3	The number of values more than 3	The ratio of values less than or equal to 3	The ratio of values more than 3	P-value
Key performance results	7	13	0.35	0.65	0.263

Considering the reasons mentioned earlier, it can be concluded that the importance of key performance results in IREC is moderate because the ratio of values more than 3 (oriented to "very important" response) is not significant compared to 0.5 (P-value ≥0.05).

✔ *Ranking of Performance Indicators in IREC*

In the previous sections, the importance of all given criteria, i.e. people management, resources and partnership, customer results, society results, and key performance results, in IREC was examined. Here Friedman test is used to rank the aforementioned indicators.

Table 13. Friedman test to rank the performance indicators in IREC

Hypothesis	Test statistic	P-Value
All performance indicators of IREC are equally important	2.646	0.619

Considering the fact that P-value is more than 0.05, the research hypothesis, i.e. all performance indicators of IREC are equally important, is confirmed at a significance level of 5%, that is, the importance of these indicators is not significantly different. Note worthily, in Friedman test, the criteria failed to be ranked according to Mean Rank. Therefore, the higher the average and the mean rank of an indicator, the more the importance of that indicator. Table 14 shows the mean values of indicators. According to the presented values, 'society results' and 'resources and partnership' have, respectively, the highest and the least importance, but according to the results derived from Friedman test, the importance variation among performance indicators of IREC is not significant.

Table 14. Ranking of IREC performance indicators

Performance criteria	Mean Rank	Rank
society results	3.48	1
employees results	2.98	2
customer results	2.97	3
key performance results	2.83	4
resources and partnership	2.75	5

The Third stage

- ### Recommended Strategies to Remove Weaknesses

By analyzing the second phase questionnaire, it was found that 8 out of total 42 weaknesses (15 for people management, 15 for resources and partnership, 5 for customer results, 4 for society results, and 3 for key performance results) are more important than others (cv <0.25). According to this level of importance, the proposed strategies to remove the important weaknesses (CV <0.25) and bridge the gap in the company –and thereby improve the company's performance- are provided by the focus group.

Table 15. Highly important weaknesses and their coefficient of variation (CV)

Weakness	Respective criterion	CV	Importance rank
There are no long-term human resources plans.	People management	0.214	3
Performance appraisal system has failed to be evaluated in terms of effectiveness in improving people performance.	People management	0.248	8
There is no structured strategy to develop group activities and encourage employees to participate in team works.	People management	0.199	1
Despite the establishment of Supreme Committee for Protection and Safety, employees awareness of health, safety and environmental issues is not evaluated.	People management	0.239	6
There is no specific way to determine the existing needs in relation to information and knowledge.	Resources and partnership	0.202	2
There is neither a targeting strategy for improvement of results nor a rationality for targeting.	Customer results	0.243	7
There is no logical survey based on sociological (inferential) indicators and the trend of changes in public opinion is not clarified.	Society results	0.234	4
There is no targeting strategy for the improvement of society-related results.	Society results	0.235	5

For each of the highly important weaknesses, recommended strategies are provided by focus group, and following consulting a number of academic and non-academic experts, final solutions are presented.

✓ *There are no long-term human resources plans (related to people management criterion)*
Recommended strategies
Establishing a strategic HR plan derived from the organization vision, mission, and strategic plan. This plan should be developed based on internal policies and regularly reviewed according to environmental changes.

Planning should be carried out by taking competitors, trends, and partners into account and analyzing the internal environment as well as the external environment (e.g. competitors, information and objectives). Admittedly, analysis of external factors should be relied on the human factors required for creating a competitive and flexible organization in the future and guarantee the organization survival and its continuous improvement. This will definitely be achieved by relying on the mission and vision of the organization. To that end, it is necessary to use effective recruitment, training, maintenance and withdrawal systems in the field of human resources and pave the way for transmission of organizational knowledge from experienced and retired employees to the newly-arrived staff.

✓ *Performance appraisal system has failed to be evaluated in terms of effectiveness in improving people performance (related to people management criterion)*

Recommended strategies

Establishing an up-to-date performance appraisal system such as 360-degree feedback, and applying employees' feedback in this system, and notably, encouraging their further participation as a key to improve their motivation.

Using practical indicators in the field of performance appraisal and avoiding any ideal and utopian index to this end.

Considering the fact that evaluation process always reflects the training needs of managers and employees; therefore, establishing evaluation centers as the permanent units in the organization, periodically evaluating the employee and manager performance, and connecting the results of this very process to the upgrading and compensation systems are highly recommended.

✓ *There is no structured strategy to develop group activities and encourage employees to participate in team works (related to people management criterion)*

Recommended strategies

Shifting the employee assessment system from individual-based to group-based, delegating tasks to groups rather than individuals, and demanding reports from groups rather than individuals. For this purpose, group development and group encouragement systems should be substituted for individual-based systems, and subsequently organizational activities should turn into a range of processes and projects requiring diverse and distinctive specialties. However, members in these groups have to constantly attend in training programs as well as specialized skills development to enhance their capabilities. To this end, it is recommended to use diverse team-building techniques and group trainings, and dedicate final minutes of the working hours to the problems of the current day and their solutions.

In long-term approaches, it is necessary to make employees believe teamwork and foster spirit of teamwork in them by gradually shifting organizational culture from individualism to collectivism.

✓ *Despite the establishment of Supreme Committee for Protection and Safety, employees' awareness of health, safety and environmental issues is not evaluated. (Related to people management criterion)*

Recommended strategies

Developing training programs focusing on HSE and ISO 14000 to encourage employees to learn about their health, safety and professional rights; inform them of their individual and collective responsibilities to the environment; and convince them to deploy Corporate Social Responsibility management system toward environment, their colleagues, and even their rivals in the market. It seems that moving towards the development of professional ethics indicators can be effective in this trend.

✓ *There is no specific way to determine the existing needs in relation to information and knowledge (related to resources and partnership criterion)*

Recommended strategies

Establishing necessary processes in the field of organizational knowledge management; transforming tacit and hidden knowledge into the explicit one; documenting the organization's procedures, processes and current affairs at different levels; and using experienced and skilled employees for newly arrived staff training through so-called teacher-student relationship.

Creating a knowledge-based organizational culture and respecting skilled and experienced employees by offering them various bonus schemes such as higher wages, higher welfare benefits, and special privileges to encourage new staff in the organization to have better performance.

Establishing new organizational processes and infrastructures supporting creativity and innovation in creating new ways of doing affairs, and offering incentive schemes as paying commission of the productivity resulted from the respective innovative thinking.

✓ *There is neither a targeting strategy for results nor a rationality for targeting (related to customer results criterion).*

Recommended strategies

In general, it seems that organizational goals have failed to be set based on the vision and mission of the organization. Therefore, they need to be seriously revised and reset subject to what defined in the mission and vision of the organization. A point deserves mentioning is that, these goals must be objective and achievable rather than utopian and impractical. Moreover, the redefined goals need to be evaluated and revised annually taking into account environment changes. Accordingly, defined goals have to be aligned with customers' expectations and their initial needs. Indeed, customers' needs should be considered as one of the main pillars of the total quality management, and the company's infrastructure has to be equipped with strategies focusing on customer results improvement.

✓ *There is no logical survey based on sociological (inferential) indicators and the trend of changes in public opinion is not clarified. (Related to the society results criterion)*

Recommended strategies

Utilizing corporate social responsibility management system and institutionalizing it in the organization, applying proper indices in corporate social responsibility system, and notably making public aware of: the company and its commitment to environmental and social issues, the products and services provided, and the company considerable role and share in removing social problems.

Providing detailed information on the products and services provided by the organization; clarifying the competitive capability of the organization products in meeting the specific needs of customers; and finally explaining the main value of the products and their competitive advantage.

✓ *There is no targeting strategy for the improvement of society-related results (related to society results criterion)*

As mentioned in the previous sections, it appears that organizational goals generally failed to be defined in line with its vision and mission. Therefore, organizational objectives need to be seriously revised and reset subject to what defined in the mission and vision of the organization. A point deserves mentioning is that, these goals must be objective and achievable rather than utopian and impractical. Moreover, the redefined goals need to be evaluated and revised annually.

Accordingly, it is imperative to study community as an indicator affects and is affected by the company, and more notably as the environment in which the company operates. Community as an environment encompassing customers and competitors must be under the influence of the company's products and services in accordance with the principles of quality management. Organizational goals should be developed in such a way that palpably demonstrate the social

effect of the company on the society and thereby bring benefits for the company as well. Furthermore, by deploying corporate social responsibility management system, targeting should be consistent with different elements of the society and the move towards development.

CONCLUSIONS AND RECOMMENDATIONS

In this study, firstly, by presenting the theoretical discussions, the attempt was made to provide an opportunity for depicting the concept of organizational excellence. Given the expanded complexity of the goals, processes, and infrastructures, only organizations meeting the expectations and demands of the customers and stakeholders have a chance to survive. To this end, EFQM excellence model was introduced as one of the supreme 'excellence models' for IREC. After reviewing the current state of the company and introducing Yazd Regional Electric Company as the best practice, the gap between the current and desired situations was determined. According to the results, people management, resources and partnership, customer results, society results, and key performance results were identified to have a significant gap with the desired condition.

Following the identification of strengths and weaknesses of the aforementioned indicators and distributing the questionnaire, the study sought to find the importance of these weaknesses- and consequently, that of the forgoing indicators. According to the analyses, it was revealed that indicators are not significantly different in terms of the degree of importance that is each has its moderate importance, indicating that all weaknesses have their own particular role in causing a gap. However, regarding the overall score, the respective criteria were ranked as follows: society results, people management, customer results, key performance results, and resources and partnership. Finally, the primary focus group was reestablished to provide initial solutions to address highly important weaknesses. Then, after analyzing the recommended solutions and taking into account the comments made by experts, final strategies to address these weaknesses were presented. Moreover, in an attempt to improve current situation, the following recommendations are provided:

1. The company is highly recommended to draw more attention to issues related to employees (as one of the main criteria in the EFQM Excellence Model) such as absence, illness, recruitment, accident rate, the number of employees' complaints, etc., and regularly observe these factors and take appropriate measures subsequently.

2. Regarding the studies done on different models, it seems better to develop a national model (similar to American Customer Satisfaction model) in this regard and apply it, whether annually or seasonally, on all industries. This model can: have manifold advantages, identify the state of companies based on different indicators - like the EFQM excellence model - and create an appropriate competitive advantage for the organization by identifying the weaknesses and strengths (most developed nations enjoy such a model).

3. Before comparing the organization at issue with the 'Best Practice' based on the EFQM excellence model, inter alia, economic, political, and operational indicators are firmly recommended to be considered. And finally, it is suggested to prioritize the solutions to improve the organization's performance by considering different infrastructures and indicators at any given time.

References

Amiran, H. (2004). Step by Step Guide of Organizational Excellence Model based on EFQM / INQA. Tehran.

Bayar, Ali (2008). Strategic Management. New York: Harper Collins Publication.

Cosenza, David (2001). Business Research for Decision Making. London: Champan & Hall.

Haerizadeh, M., Kazazi, A., & BamdadSoufi, J. (2017). Performance Evaluation Based on the EFQM Excellence Model (case study: Isfahan Regional Electric Company), International Human Science Research Conference, London, UK.

Hemsworth, David (2016). An Empirical Assessment of the EFQM Excellence Model in Purchasing, International Business & Economic Research Journal, July/Agust, Vol 15, No 4.

Hughes, Thomas (2004). Measurement and Control Basis. Washington Dc: Research Triangle Park: TSA.

Khalili, M. (2003). The role of Organizational Excellence in Rescuing the National Economy, Journal of Entrepreneurship. No.28, March 2003, p.25.

Mir Hosseini, Z. & MohebHouri, SH. (2012). Evaluation of the performance of the National Library and Archives of the Islamic Republic of Iran, based on the EFQM organizational excellence model, Journal of Management Future Studies, First Year, No. 1.

Movafagh, A. (2012). Performance Evaluation of the Information and Documentation Center of Iranian Research Institute for Information Science and Technology (IRANDOC) Based on the Excellence Model of the European Quality Management Foundation (EFQM), Allameh Tabataba'i University, Tehran.

Najmi, M. (2006). EFQM Excellence Model from Idea to practice, Romance Publication, Tehran.

Rafizadeh, A. (2009). Appropriate Model for Performance Management in the Public Sector; Tadbir. Journal. No. 205, pp.23-28.

Yousefian, N. (2008). Literature review of organizational performance evaluation report (hospital centers). Management and Resources Development Department, Center for Management Development and Administrative Transformation, Ministry of Health and Medical Education.