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Ranking the Lack of Proper Conclusion of Employees' Criteria by FAHP Method (Case Study: Iran Khodro Diesel Company)

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ABSTRACT:

Introduction: human resource plays a very important role in the success or failure of a company. The weakness in conclusion of criteria of model EFQM (Employee's criteria and results) using FAHP method (Fuzzy Analytical Hierarchy Process) will be discussed here as Iranian organizations are usually weak in their results field.

Method: the present study is an applied research. Procedure of doing this study was carried out in six main steps: in the first step, a questionnaire was distributed in a two- time sections, initial and final, among experts. In the second step, a graphic display of the subject is in form of hierarchy in which purpose, criteria and sub criteria are shown. In the third step, the obtained data from the experts was converted to pair matrix.

In the forth step, incompatibility is calculated. In the fifth step, relative weight of criteria and sub criteria was measured and in the last step, final weight of criteria and sub criteria was measured.

Findings: sub criteria of human resources which most affect the lack of proper conclusion for employees' criteria of results in model EFQM are as follow:

- ✓ Lack of proper assignment
- ✓ Decrease in attention and applying good knowledge management
- ✓ Low consideration to motivational systems proportioned to employee's groups
- ✓ Weakness in beliefs and support by superior management systems and performance management

The most effective sub criteria of employee's results are:

- ✓ Weakness in measurement of motivational indices
- ✓ Lack of sufficient attempts to absorb trust of employees toward the organization (social capital)

Results: Employees' criterion influences the lack of proper conclusion of employees' results in EFQM more than Employee's results criterion.

Keywords: *FAHP (Fuzzy Analytical Hierarchy Process), EFQM, Employees results criteria, Employees' criterion*

INTRODUCTION

EFQM was introduced to reach total Quality Management by European Foundation for quality which is used to self evaluate and unified improve in all aspects in an organization. EFQM excellence model is an application tool to aid organizations for their success in global markets.

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Competitiveness model is a non-prescribed model contained 9 criteria. These criteria are heart and core of the model and considered as the basis of evaluation in an organization. Schematic model (EFQM, 2010) of EFQM version 2010 is shown in figure 1.

Fundamental concepts show purposes that a competitiveness organization should achieve them. Purposes and aims are usually ambitious. Thus, if organizations want to know how to work and act practically to achieve the aims, they need criteria which their performance in an organization will cause reaching the aims. EFQM model contains 9 main criteria (of which the first five ones are named empowerments; leadership- human resources- strategy- participations, resource-processes, products and services) and the remaining four are named results (human resources results- customers' results-society results and key results). 50% of the weights are relates to the excellence model EFQM, but in Iranian organizations, it is tried to get weights relating to empowerment section in order to quality reward and most Iranian companies have problems in reaching ideal weights relating to the results criteria.

In the past researches, EFQM model has been studied based on fundamental concepts of organizational excellence model using FAHP method. But no research has been done in the field of lack of proper conclusion of employees' criteria and employees' results in model EFQM. In this paper, effective factors on lack of proper conclusion for employees result criteria have been studied. To do so, first using employees criteria and employees result criteria in model EFQM, criteria and sub criteria of the research model have been determined, then using FAHP method and experts opinions, importance and ranking rates of criteria and sub-criteria in Iran Khodro Diesel Company will be specified.

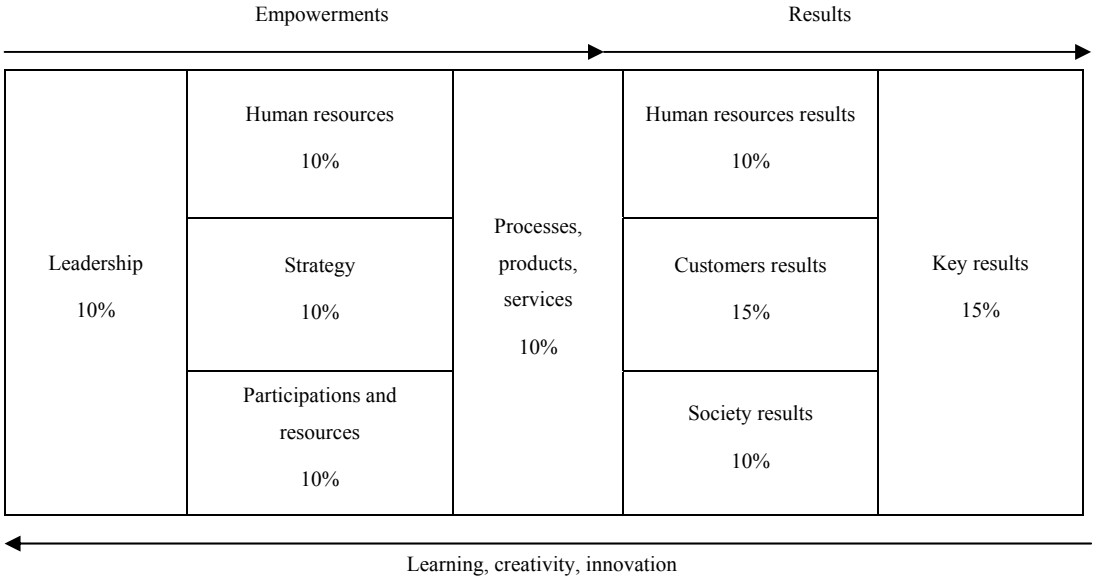

Figure 1: Schematic model EFQM version 2010

Literature Review

In 1988, in Brussels (Conti, 2007), Coaland steel community EFQM signed by 14 founding fathers (companies Bush, Renault, Fiat, Boul, BT, Elecrolux, KLM, Nesstele, Oliotti, Philips, Soulers, Folks Wagen, Razalt an Ciba) , members of European future commission and strategy mission of an organization was approved. In 1989, in Montreux its structure was formally founded. The first EFQM model awards were presented in 1992. Since the planning of the model, many literatures and researches have been reported to complete the model. For instance, in 1999 (Bou and Llusar) EFQM describes Radar Rationa, recognized as the heart of excellence model. In 2000 (EFQM, 2000), EFQM considered installation and review and evaluation aspects in Radar Rationa. In 2003 (EFQM, 2003), a new version of the model provided which had significant changes in comparison with the previous model in sub criteria and guide notes. The newest version of the model provided which had some changes in criteria, sub criteria and guide notes in 2010.

In fact(EFQM, 2010), EFQM is an excellence organizational model which will tell the organization through appropriate tools, where it is located in the path of organizational excellence, then determines distance between current and ideal conditions and finally creates required sensitivities to provide appropriate resolutions.

From 2002 (Hosseini, 2003), Iran ministry of industries and mines (organization of development and reconstruction of Iran industries), determined European Foundation Award (EFQM) for quality management by means of new experts, as the superiority pattern base for Iran industries. Although (Rezayatmand, 2006) some directions of organizations have not acquainted with the features and characteristics of the model, positive initial works have been accomplished to develop the use culture of EFQM.

In Europe, European Quality Award (EQA) has changed the name as EFQM excellence Award or EEA (EFQM, 2010). What had happened was to provide version 2010 of EFQM excellence model by European quality management foundation. Taking a look at the provided reports and papers related to the organizational excellence model shows that even getting valuable awards such as Deming, Baldridge and EFQM can't guarantee survival of the organization. Among organizations bankrupted are some organizations which have met requirements to get the Quality Award, acceptably. In intense competition market of today world, result-orientation (Wallenius et al., 2008) is of the main factors of competition or even survival in the market.

Hang (Hung, 2009) could provide strategies to improve Inconsistency Index of pair comparison matrices for decision makers by studying human resource management and by using fuzzy AHP method. Saizarbitoria (Saizarbitoria, 2006) could provide solutions to improve product and service quality based on Delphi method, by studying methods of effectiveness of the well known models of European quality control during the recent years (EFQM & ISO 9000 models).

Ehrlich (Ehrlich, 2006) has studied the effective factors in getting a suitable result for EFQM workers result criteria and the ranking of these factors by AHP method. By studying how employee criteria affect employee results, it was shown that organizations are weak in suitable conducting of employees' criteria scales, in order to improve employee motivations for the employees' results index. In this study, by limiting EFQM model to one of the indices of this model and studying it, only on the basis of human resource and using fuzzy AHP (Gungor, 2009) method and by studying background of studied researches in this field, effective factors on lack of a suitable concluding of employees result criteria in model EFQM and ranking these factors by fuzzy using AHP method were studied. while the descriptions of verbal variables used are complicated, traditional and typical modeling techniques usually do not contain complicate system natures; specially when these systems include methods, relation and human communications(Heo and Kyung, 2010). On the other hand, fuzzy sets and fuzzy reasons are effective tools in lack of exact information for complicate business or management systems.

Buckley (Buckley, 1985) found the relationship between the fuzzy theory and AHP method in 1985 which is called FAHP.

This matter resulted in ability of calculation of integration matrix coefficient. Buckley

studied fuzzy assumption test by certain data. Fuzzy theory is combined with other discussions such as statistics, linear programming, stock control, quality control, decision making theory, production management AHP; it helps experts in these fields. AHP (Laarhoven, 1983) methods is extensively used as a suitable tool by MCDM or is applied as a technique to estimate weights in different fields such as employee selections programming evaluation, development, decision making, prediction and so on. Traditional AHP needs certain judgments.

Despite lack of certainty and complexity in the real world of decision making, the decision maker sometimes makes more insurance about certain comparisons by fuzzy judgments. Different methods are provided to compare fuzzy comparisons. For example, Researchers (Lee, 1988) suggested Logarithm Least Square Method (LLSM) to obtain triangle weights of fuzzy comparative matrix.

Wang (Wang, 2008), presented LLSM modified fuzzy method. Buckley presented geometric average method to measure fuzzy weights. Chang established analysis method which is used to change certain weights to fuzzy comparative matrix.

Xu (Yi Wu, 2009) presented superiority of fuzzy least squares. Some studies (Vaidiya, 2006) developed preference programming method which derives certain weights from preference matrix. Buckly introduced lambda – max method which is a direct fuzzy making from the well known tmax method. They defined a fuzzy methodology to improve quality of preferences of employees financial measurements criteria. Gungor (2009) introduced employee selection system based on fuzzy AHP and compared the obtained results with weighted goals method of Yager. He also presented computer system of decision maker support to gain more information & making better decision by managers by using fuzzy results. For the common AHP, fuzzy triangle numbers was introduced to combine with decision maker coefficient.

Research Questions

Questions studied in this paper are:

1. What are effective factors on the lack of proper conclusion of human resources in model EFQM?

2. How much is the effectiveness rate of each factor on the lack of proper conclusion for human resource results in model EFQM?

RESEARCH METHOD

Regarding to this fact that studying criteria of employees' and employees' results of model EFQM includes four levels, that on its first level the main problem is located and on the second, third and forth levels, the research purpose criteria are located.

The research has a hierarchical structure. The other important note is that comparative criteria and sub criteria are qualitative and inaccurate and the experts have to use their own judgments in the evaluation process; thus, experts' opinions should become integrated. Consequently, in this study, FAHP method has been used to decrease problems and answer the requirements mentioned, in order to evaluate criteria. In order to do the project, following stages were carried out:

First Step: Experts Selection

According to the viewpoint of experts and managers of Iran Khodro Diesel Company, a questionnaire was distributed among experts within two initial and final time sections. Because of the experts view, the initial questionnaire was to study and omit a number of hierarchical second level sub criteria and was planned without studying criteria and sub criteria of model EFQM. The final proper conclusion for employees results in criterion in model EFQM (case study Iran Khodro Diesel) in respect to the obtained weights by the Company experts' suggestions.

Experts of Iran Khodro Diesel Company were in the organization positions such as director, manager, supervisor, etc. The number of 25 experts was selected. Experts of national institute of utilization relate to those employees of the organization who work in EFQM part of it and their number is 10 people. In the second distribution of the questionnaire, only the experts of Iran Khodro Diesel Company were referred as the case study. Experts of different parts of Iran Khodro Diesel Company are as follow:

a) Quality department including: general department of systems, quality assurance

b) Head of development and planning department (director of excellence organization and the experts)

c) Human resources department including: general department of training, human resource planning, staff department, general department of security (Pedar), general department of administrative services and strategic studies office.

Second Step: Hierarchical Creation

The first step in FAHP is to create a graphic display of problem in which the aims, criteria and options are shown. Table1 shows hierarchical way of effective factors in the lack of proper conclusion for employees' criteria in model EFQM. First level of hierarchy shows the aim and in the subsequent levels, criteria and sub- criteria are specified.

Table 1: Hierarchy process relating to lack of proper conclusion for employees results model EFQM

Weakness in belief and superior management support from EFQM / competitiveness model	Weakness of planning and management of human recourse improvement	Weakness of employees criteria	Lack of proper conclusion for employees results of model EFQM
Weakness of human recourse position in business strategy			
Lack of appropriate approach to select And employ people related to the required competences			
Weakness in alignment of benefits and individual and organization purposes			
Weakness of common mechanisms of employees to determine the strategy			
Weakness in employees knowledge alignment and organizational needs	Weakness of identification of knowledge and competence in employees and its development and maintenance		
Weakness in training courses and employees development			
Weakness in team work in a systematic form			
Weakness in evaluation and performance management systems			
Lack of proper assignment	Weakness in partnership and empowerment of employees in organization problems		
Problem in training course of managers relating to organization needs			
Lack of attention to and application of proper knowledge management	Weakness in mutual talking between organization and employees		
Lack of proper and continuous learning from superior organizations (Benchmark)			
Lack of mutual interaction between companies and people under supporting of employees			
Lack of good acknowledgement relating to the organizational needs	Weakness of encouragement acknowledgement and attention to the employees		
Lack of attention to cultural difference of employees			
Lack of attention to motivational systems relating to desirability of employees groups			
Weakness in measuring motivational criteria	Weakness in motivational criteria	Weakness of Employees results criteria	
Weakness in measuring satisfaction criteria			
Lack of sufficient attempts to absorb trust of employees toward the organization	Weakness in functional criteria		
Weakness in proper feedback of employees results			
Lack of proper effects of employees results on the organizational performance improvement			

In this study, expert choice software was used to measure relative weights of main and sub criteria. The other point to note is how to combine expert suggestions. Since Azel and Saaty (Saaty, 1994) have shown that geometric average is the best method to combine judgments in group FAHP, to combine opinions of the expert, this method is used aiding certain numbers. In geometric average method, each line elements are measured and the obtained vector is normalized, consequently the weight vector will be obtained. To determine criteria and sub criteria final weighs, the following steps will be accomplished:

Third Step: Forming Fuzzy Pair Comparative Matrix

Fuzzy theory was designed to obtain possible conclusions from inaccurate information and fuzzy triangle numbers is one of the main components of fuzzy theory. According to Laarhoven and Pedrycz definition, a triangle fuzzy number or triangle number is defined as follow with a membership function of μ A(X) on R:

$$\mu_{\tilde{A}}(x)=\begin{cases}\frac{x-l}{m-l} & l \le x \le m\\ \frac{u-x}{u-m} & m \le x \le u\\ 0 & \text{other points}\end{cases}$$

Where L indicates lower limit and U indicates upper limit of fuzzy number A, and m is an average value. A triangle fuzzy number can be indicated as A = (L, m, u). Human decision is with inaccurate concepts. And these concepts are expressed in a verbal manner. Fuzzy logic defines sets on the basis of fuzzy theory sets which preserves human argument and use them. Figure 3 shows the expression method is applied to compare options of EFQM model in terms of different indices by five verbal expressions in from of certain preference, very strong preference, essential preference, weak preference and identical preference, regarding to the five fuzzy scales.

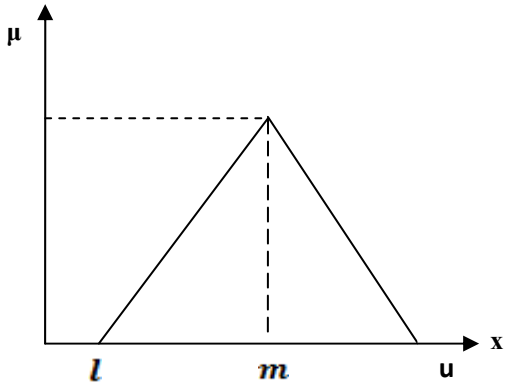

Figure 2: Fuzzy triangle number

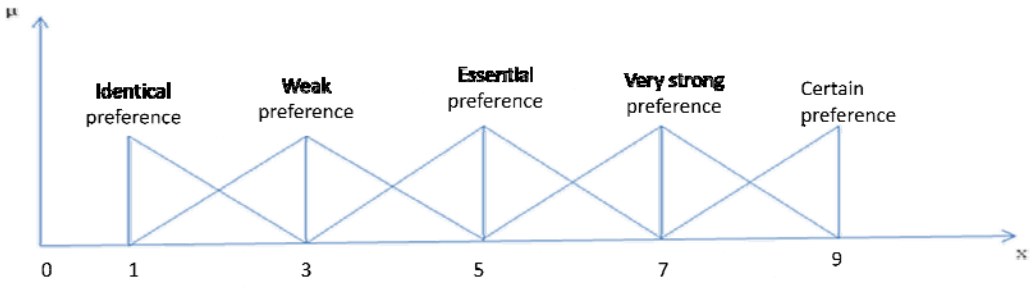

Figure 3: Membership function of verbal scale from 1 to 9

Table 2. shows membership function of verbal and numerical fuzzy scale in a hierarchical structure.

FAHP process, Laarhoven and Pedrycz method was used which is described as follow. Fuzzy judgment matrix is in form of pair comparative matrix between options and evaluating criteria, in a hierarchical level.

Assignment of verbal expressions to the pair comparative scales by means of which criteria is more important is a follow:

$$\tilde{A}=\begin{bmatrix} 1 & \tilde{a}_{12} & \cdots & \tilde{a}_{1n} \\ \tilde{a}_{21} & 1 & \cdots & \tilde{a}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{a}_{n1} & \tilde{a}_{n2} & \cdots & 1 \end{bmatrix} = \begin{bmatrix} 1 & \tilde{a}_{12} & \ldots & \tilde{a}_{1n} \\ \frac{1}{\tilde{a}_{12}} & 1 & & \tilde{a}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \frac{1}{\tilde{a}_{1n}} & \frac{1}{\tilde{a}_{2n}} & \ldots & 1 \end{bmatrix}$$

At first, the obtained values from the questionnaire conducted by each expert are converted to a pair comparative matrix. Final questionnaire information was converted to fuzzy numbers manually, and in the next step, sixteenth root of fuzzy multiply of the obtained 16 questionnaires was measured by Matlab software, for example, table 3 Shows fuzzy pair comparative matrix of sub criterion variables 3c (weakness in participation and enabling the employees to solve organization problems).

Forth Step: Measuring Incompatibility Rate

A matrix might be compatible or incompatible. Measurement of incompatibility rate is very important. Saaty provides 0.1 as the acceptable limit and believes that if incompatibility rate is more than 0.1 it is better to review the judgments and opinions. Measurement of incompatibility rate was done by expert choice software and regarding to priorities of the software, referring to the expert ideas, one of the values is modified and then weights will be measured for an example of expert choice software calculations, incompatibility rate measurement of sub criteria 3a (weakness in planning and management and improvement of human resources) which equals to 0.05, has been shown in table 4.

Table 2: Verbal and numerical fuzzy scale

Fuzzy verbal scales	Fuzzy numerical scales
Identical preference	(1,1,3)
Weak preference	(1,3,5)
Essential preference	(3,5,7)
Very strong preference	(5,7,9)
Certain preference	(7,9,9)

Table 3: Fuzzy pair comparative matrix of sub criteria variables

3c	Duty assignments	Managers training
assignment	(1,1,1)	(0.74,1.2,2.22)
training	(0.45,0.83,1.35)	(1,1,1)

Table 4: Comparison of relative importance of sub criteria 3a factors regarding to the employees criteria

	Management support	Position	Selection	The same mind goals	partnerships
Management support		2.489	(1.051)	1.275	1.03
Position			1.054	(1.017)	(1.7)
Selection				(1.184)	1.779
The same mind goals					1.773
partnerships	Inconsistency:0.05				

Table 5: Relative weight of criteria and sub criteria

	Criterion and sub criterion	Relative weight			Incompatibility Rate
3	Weakness of employees criterion	0.47	0.64	1.07	0
7	Weakness of employees results criterion	0.19	0.35	0.44	
3a	Weakness of planning and management of Human resource improvement	0.05	0.12	0.28	
3b	Weakness of identification of knowledge and competence in employees and its development and maintenance	0.07	0.16	0.37	
3c	Weakness in partnership and empowerment of employees in organization problems	0.15	0.33	0.71	4
3d	Weakness in mutual talking between organization and employees	0.11	0.25	0.54	
3e	Weakness of encouragement acknowledgement and attention to the employees	0.07	0.15	0.34	
7a	Weakness in functional criteria	0.34	0.59	0.91	0
7b	Weakness in motivational criteria	0.27	0.41	0.72	

Fifth Step

Fuzzy weights modified by Buckley have been defined as follow:

$$\tilde{r}_i = (\tilde{a}_{i1\times}\tilde{a}_{i2\times}\tilde{a}_{i3\times} \dots \tilde{a}_{1n})^{\frac{1}{n}} \forall i = 1,2,\dots,n$$

$$\widetilde{w}_i = \frac{\tilde{r}_i}{\tilde{r}_1 + \cdots + \tilde{r}_n}$$

Where ãij is the fuzzy comparative value from index i to index j, so ri is the geometric average of fuzzy comparative value from index i to index j and ŵi is the weight of i. The calculations related to the relative weight and inconsistency rate and also criteria and sub criteria are shown in table 5.

Relative weights of measured options (second level of sub criteria) by FAHP method are shown in table 6.

Table 6: Relative weight of criteria and sub criteria

	criteria and sub criteria	Relative weight			Incompatibility Rate
3a-1	Weakness in belief and superior management support from EFQM / competitiveness model	0.12	0.25	0.52	
3a-2	Weakness of human resource position in business strategy	0.06	0.13	0.28	
3a-3	Lack of appropriate approach to select and employ people	0.09	0.22	0.43	5
3a-4	Weakness in alignment of benefits and individual and organization purposes	0.1	0.22	0.47	
3a-5	Weakness of common mechanisms of employees to determine the strategy	0.07	0.18	0.39	
3b-1	Weakness in employees knowledge alignment and organizational needs	0.09	0.17	0.36	
3b-2	Weakness in training courses and employees development	0.11	0.22	0.42	2
3b-3	Lack of good acknowledgement relating to the organizational needs	0.15	0.3	0.61	
3b-4	Weakness in evaluation and performance management systems	0.15	0.31	0.63	
3c-1	Lack of proper assignment	0.33	0.55	0.97	0
3c-2	Problem in training course of managers relating to organization needs	0.25	0.45	0.74	
3d-1	Lack of attention to and application of proper knowledge management	0.19	0.39	0.7	
3d-2	Lack of proper and continuous learning from superior organizations under supporting of employee	0.19	0.35	0.72	0.006
3d-3	Lack of good acknowledgement relating to the organizational needs	0.14	0.26	0.51	
3e-1	Lack of good acknowledgement relating to the organizational needs	0.12	0.21	0.44	
3e-2	Lack of attention to cultural difference of employees	0.17	0.34	0.63	4
3e-3	Lack of proper effects of employees results on the organizational performance improvement	0.23	0.44	0.81	
7a-1	Weakness in measuring motivational criteria	0.29	0.46	0.84	0
7a-2	Weakness in measuring satisfaction criteria	0.29	0.54	0.84	
7a,b-1	Lack of sufficient attempts to absorb trust of employees toward the organization	0.28	0.5	0.94	4
7a,b-2	Weakness in proper feedback of employees results	0.12	0.23	0.43	
7a,b-3	Lack of attention to motivational systems relating to desirability's of employees groups	0.14	0.27	0.5	

Sixth Step: Final Weight Measurement

In this step, each criterion is multiplied by its sub criteria and the result is also multiplied in the option and the options related to two sub criteria, separately are multiplied by their relate sub criteria and the two products obtained are summed together.

The questionnaire result for each index will be a fuzzy number. Hence, the obtained fuzzy numbers should be removed from fuzzy level during the prioritization process (or Defuzzification) In this study the fuzzy mean and spread method was used to Defuzzyficate which is as follow:

$$x(\tilde{U}_1) = \frac{(1 + m + u)}{3}$$

The final weight of criteria and sub criteria of certain FAHP method are shown in table 7.

Table 7: Final weight of criteria and sub criteria

	Criterion and sub criterion	The final fuzzy weight		The final weight	
3	Weakness of employees criterion	0.47	0.64	1.07	0.73
7	Weakness of employees results criterion	0.19	0.35	0.44	0.33
3a	Weakness of planning and management of Human resource improvement	0.05	0.08	0.29	0.14
3b	Weakness of identification of knowledge and competence in employees and its development and maintenance	0.03	0.1	0.4	0.18
3c	Weakness in partnership and empowerment of employees in organization problems	0.07	0.21	0.76	0.35
3d	Weakness in mutual talking between Organization and employees	0.05	0.16	0.58	0.25
3e	Weakness of encouragement acknowledgement and attention to the employees	0.03	0.09	0.36	0.16
7a	Weakness in functional criteria	0.06	0.2	0.4	0.22
7b	Weakness in motivational criteria	0.05	0.14	0.32	0.17

Final weight of options (second level of sub criteria) in certain FAHP method is shown in table 8.

Table 8: Final weight of options (second level of sub criteria)

	criteria and sub criteria	The final fuzzy weight			The final weight
3a-1	Weakness in belief and superior management support from EFQM / competitiveness model	0.006	0.01	0.15	0.058
3a-2	Weakness of human resource position in business strategy	0.003	0.01	0.08	0.032
3a-3	Lack of appropriate approach to select and employ people	0.005	0.01	0.12	0.05
3a-4	Weakness in alignment of benefits and individual and organization purposes	0.005	0.02	0.14	0.054
3a-5	Weakness of common mechanism employees to determine the strategy	0.004	0.01	0.12	0.045
3b-1	Weakness in employees knowledge alignment and organizational needs	0.002	0.02	0.14	0.054
3b-2	Weakness in training courses and employees development	0.003	0.02	0.17	0.064
3b-3	Lack of good acknowledgement relating to the organizational needs	0.004	0.03	0.24	0.093
3b-4	Weakness in evaluation and performance management systems	0.005	0.03	0.25	0.096
3c-1	Lack of proper assignment	0.022	0.11	0.74	0.29
3c-2	Problem in training course of managers relating to organization needs	0.017	0.09	0.57	0.22
3d-1	Lack of attention to and application of proper knowledge management	0.009	0.06	0.40	0.15
3d-2	Lack of proper and continuous learning from superior organizations under supporting of employee	0.009	0.05	0.41	0.16
3d-3	Lack of good acknowledgement relating to the organizational needs	0.007	0.04	0.29	0.1147
3e-1	Lack of good acknowledgement relating to the organizational needs	0.004	0.02	0.16	0.062
3e-2	Lack of attention to cultural difference of employees	0.005	0.03	0.23	0.089
3e-3	Lack of proper effects of employees results on the organizational performance improvement	0.008	0.04	0.29	0.114
7a-1	Weakness in measuring motivational criteria	0.02	0.09	0.34	0.15
7a-2	Weakness in measuring satisfaction criteria	0.02	0.11	0.33	0.154
7a,b-1	Lack of sufficient attempts to absorb trust of employees toward the organization	0.03	0.17	0.68	0.29
7a,b-2	Weakness in proper feedback of employees results	0.01	0.08	0.31	0.31
7a,b-3	Lack of attention to motivational systems relating to desirability's of employees groups	0.01	0.09	0.36	0.16

Table 9: Resolutions of 3a criterion

Resolutions	Options	Sub criterion
Meritocracy based on competence model Performance management system and evaluation of managers performance	Weakness in belief and superior management support from EFQM / competitiveness model	Weakness of planning and management of human recourse improvement
Development of connecting channels Establishment of partnership systems	Weakness of common mechanisms of employees to determine the strategy	
Effective absorbance system Supply management and demand of human forces	Lack of appropriate approach to select And employ people related to the required competences	
Enhancement of connecting channels Organizational culture	Weakness in alignment of benefits and individual and organization purposes	
Special attention to human resources management	Weakness of human recourse position in business strategy	

RESULTS AND DISCUSSION

Regarding to the opinion of experts, sub criterion 3a guidelines are shown in the following table 9.

Weakness of beliefs and lack of superior management support from model EFQM/ competitiveness models

One of the suggested methods (Noori, 2008) to remove this weakness is meritocracy system based on competence model. Meritocracy leads to resolve problems such as lack of belief and support of superior management from EFQM model, by selection of managers (mental, physical and… competences) on the basis of organizational requirements. Because of continuous changes and non stabilization in management posts of organizations, efficiency approaches of the managers is short time and is consequently in contrast to strategic approach such as EFQM mode. Therefore, one of the important factors in positive performance of managers and their all aspects support from a model like EFQM is the stabilization in managers. Approach of performance and performance evaluation of managers which considers internal and external control of managers necessarily does not lead to an appropriate belief among them. But can cause commitment of the managers to do their duties toward subjects such as support from EFQM model.

Weakness in mechanisms of employees' participation to determine strategies

By establishment of suggestion system and removing in appropriate connection channels, weakness in mechanisms of employees' participation to determine the strategy can be also removed.

Lack of appropriate approaches to select and employ competent persons with required competencies

Effective absorption system is vital to absorb required employees of the organization. Of the factors can be considered in the effective absorption system is the method of determining

human force number and estimation of human force and imaginative guide lines considering resources to provide human force and etc….

Weakness in alignment of benefits and individual or organizational purposes

Clarifying the purposes, benefits and etc…. Of the organization is very important for the employees. Strengthening of connection channels (especially in downward direction) which improves relationship between superior manager and other employees should be considered. Also, by changing mental model of individuals toward inappropriate and unfair multiplexing of benefits, weakness in alignment of benefits and personal and organizational purposes can be removed easily.

Non significant situation of human resources subject in business strategy

In order to (Saadat, 2006) find a specific and good situation for human resources in business strategy, some important and essential steps should be done such as managers train, selection of competent managers, development of human resource management in business strategy, attempts of founders and specialists in human resources in the field of improvement of human resource in business strategy.

Research and studies in the field of human resource management will cause perception of increasingly importance of human resources management situation among today organizations.

Guidelines relating to 3d sub criteria are shown in table 10.

In order to remove weakness in systematical team work, culture of team work should be considered. To achieve this aim, task oriented can be changed in to process oriented operation. Also, project-oriented (which leads to a more exact scientific possibility, budget, factors of a plan, time and…) in an organization can lead to practice a useful team work among the employees of an organization. Formation of committee structures such as model EFQM is also effective in improvement of weakness in systematical team works. For example in an improved organizational culture, to establish a proper training unit, a coherent committee including guard, supervisor and … seems necessary.

Table 10: Resolutions of 3b criterion weakness in systematical team work

Resolutions	Options	Sub criterion
Culture of teamwork	Weakness in employees knowledge alignment and organizational needs	Weakness of identification of knowledge and competence in employees and its development and maintenance
Establishment of efficiency evaluation	Weakness in training courses and employees development	
Planning and development of empowerment of human factors	Weakness in team work in a systematic form	
Step by step execution of training process		
Proportion between job and employee	Weakness in evaluation and performance management systems	
Establishment of knowledge management		
Review of selection process according to the needs		
Selection and improvement of people according to the needs		
Re-planning of training and course programs		

Weakness in evaluation systems and performance management

Without an optimum performance evaluation system, people don't know what management want them. Establishment of performance evaluation system can result in clarifying indices, expectations, standards, contentment of employees and a development- oriented approach. And surveying the problems of performance evaluation can be effective on positive and negative feedbacks of performance.

Weakness in training plans and employees development

Step by step (Noori, 2008) execution of training process stages, with surveying the stages of training process and also execution of improvement initiations can be useful to remove current problems in the field of knowledge recognition and employees competence and its development and maintenance. Different stages of training process are suggested as follow:

Recognition of training needs- determination of training aims- selection of training method- planning to hold training courses- evaluation of training course.

Planning and execution of empowerment of human forces (such as opportunity to continue education, scientific conference) can also improve current problems in the field of knowledge recognition and employees competence and its development and maintenance. Among sub criteria of employees' criteria, guidelines about sub criteria 3c is studied in table 11.

In table 12, sub criterion 3d (weakness in mutual talking between employees and the organization) is studied to provide guidelines:

Table 11: Resolutions of 3c criterion

Resolutions	Options	Sub criterion
Development of leadership style (infrastructures) Managers training (codifying managers programs)	Lack of proper assignment	Weakness in partnership and empowerment of employees in organization problems
Planning of managers training Meritocracy in selection and appointment of managers Less movement of managers	Problem in training course of managers relating to organization needs	

Table 12: Resolutions of 3d criterion

Resolutions	Options	Sub criterion
Codifying and application of knowledge strategies/Superior organizations Holding and applying knowledge management course	Lack of attention to and application of proper knowledge management	Weakness in mutual talking between organization and employees
Application of learner organization approaches. Up to date researches about superior organizations on mutual talking	Lack of proper and continues learning from superior organizations (Benchmark)	
Planning of sessions with people under supporting Development of relationship channels Clarifying of relations of work and workers	Lack of mutual interaction between companies and people under supporting of employees	

Decrease in consideration and appropriate use of knowledge management

Recognition of knowledge focus which is the people of the organization and creation of a good relation with their hidden knowledge can be useful to improve the decrease in consideration and proper application of knowledge management.

Decrease in mutual interaction of companies with the staff and people under sponsorship

In this term, committee of working relations (from ministry of work) is related to the lawful relation between workers and employer (hiring, complains) and its origin is rule of work. Clarifying the working relations and employees and development of connection channels and planning for various meetings with the people under sponsorship can result in improving the decrease in consideration and proper application of knowledge management.

Guidelines related to sub criterion 3e is shown in table 13.

Lack of attention to the motivation systems proportioned to the desirability of employees groups

To perform the justice effectiveness service compensation system, some cases such as justice-oriented, special groups' desirability, competence, variation in payments (educational scholarship), etc should be considered. For example, attention to the base of bonus such as: membership rank in the organization, participation rate in the organization, way of performance, seniority years right, skills, difficulties of the work, judgment and decision (the more doing the work needs to make decision or innovation, the more organization payments should be paid) can also improve the lack of attention to motivation systems related to the desirability of employees groups.

Lack of attention to cultural differences in employees

Performing improvement projects (Zade, 2006) of organizational culture such as language, sexuality, job level, education level, religious beliefs, kinds of production saloons can be effective in improvement to remove the lack of attention to the cultural differences of employees. For example, sexuality can affect the patterns of human resources management in which sexuality, female or male, affect the management method of human resources, in such way that most of male managers tend to control-oriented management method and most of female managers tend to commitment – oriented management methods. As an another example, bus production hall of Iran Khodro Diesel Company includes the staff of Iran Khodro and truck production hall includes the staff of Iran Khodro Diesel, too. Programs of organizational cultural development can improve the problem of the lack of attention to cultural differences in employees, interfering in language, sexuality, job level, educational level, religious beliefs, and kinds of production halls and so on.

Lack of acknowledgement programs proportioned to the organization needs

Acknowledgement systems (Zade, 2006) to appreciate the bests are performing in Iran Khodro Diesel Company which contains mechanisms of recognition, evaluation, support, leading (invention register and etc.). For example, studying and scientific performing of an effective bonus system can remove lack of acknowledgement, encouragement and attention to employees regarding to the organization needs. Properties of an effective bonus system can be stated as: importance of bonus, flexibility of bonus, abundance (frequencies), evidence, fair distribution and appropriate costs.

Guidelines of sub criterion 7a (weakness in motivational indices) are shown in table 14.

Because of complication in nature of human impressionable perception to measure impressionable indices (satisfaction) and complication of impressionable indices (motivation) to measure motivational indices, there are some weak points and one of its guidelines can be definition of obvious indices of employees' perception. First, some variables of satisfaction or motivation such as satisfaction with colleagues, direct supervisor, work environment, advantages (compensation of services), individual growth, the company services (lunch, transportation services etc.), cultural programs, work security and etc. are defined. The main problem is to convert quantity

to quality. For example, finding behavioral indices or permeation to the individuals to get correct and effective information are the problems to measure motivational indices. Table 15 shows the suggested guidelines about sub criteria variables 7 a,b.

Table 13: Resolutions of 3e criterion

Resolutions	Options	Sub criterion
Performing system of fair service compensation/effective	Lack of attention to motivational systems relating to desirability of employees groups	Weakness of encouragement acknowledgement and attention to the employees
Performing project to improve organizational culture Cultural development programs	Lack of attention to cultural difference of employees	
System of acknowledgment of the superiors Definition of encouragement relating to the organization structure	Lack of attention to motivational systems relating to desirability of employees groups	

Table 14: Resolutions of 7a criterion

Resolutions	Options	Sub criterion
Definition of obvious indexes from employees perception	Weakness in measuring motivational criteria Weakness in measuring satisfaction criteria	Weakness in motivational criteria

Table 15: Resolutions of 7a,b criteria

Resolutions	Options	Sub criterion
Development of social capital	Lack of sufficient attempts to absorb trust of employees toward the organization	Weakness in functional criteria
Improvement of performance evaluation Planning to provide managers presentation about feedback	Weakness in proper feedback of employees results	
Strategy review Individual and organization alignment in aims	Lack of proper effects of employees results on the organizational performance improvement	

Lack of sufficient attempts to absorb trust of employees toward the organization (social capital)

Factors (Verheul, 2003) such as carefulness in appointment of managers and supervisors, organizational talking substrates, (on the basis of respect), clarification of information, justice-oriented method in payments which leads to the trust of individuals toward the organization, can create social capital. Important factors of social capital effects on organizational efficiency are: lower exchange costs, lower rate of personnel displacement, division of knowledge and innovation, risk receivership and product quality improvement.

Weakness in appropriate feedback of employees' results

Performance evaluation system includes aspects such as expectations, evaluation and feedback which can be effective in improvement of feedback of employees' results by focusing the feedback on improvable and strong points aspects.

One of the reasons of weakness in proper feedback of staff results in organizations can be the focus on negative aspects of individual efficiencies and this issue decreases self confidence in employees and consequently their satisfaction, however for example, in schools of Germany first positive aspects and then negative ones are emphasized in the students. Researches show that human resources management in Finland has problems in employees evaluation because of lack of required human resources and good and interactional internal relations upward and downward until 2006, although this country has advanced employ organizations and lack of required training course.

The main reason is that although the managers show feedback to their employees, because of lack of enough time of managers, problems meet in proper feedback of employees' results.

Lack of proper effect of employees results on improvement of organization performance

At present, in Iran Khodro Diesel Company, Kirkpattrick model which includes fuzzy interaction, learning, behavior and organizational results, is performing.

To become interested in interaction fuzzy by employees (because of good space, teacher, self enjoyment and etc) will cause occurrence of the next fuzzy (learning) and as follows, other phases occur, respectively. Thus need to further researches in the field of lack of proper effect of employees results on organization efficiency improvement is obvious. For example lack of rational relation between satisfaction and sale indices specifies that way of atmosphere of engineering unit has been such that workers couldn't have been able to have a positive effect on quality or television interview of the company assistant decreased the organization popularity in customers minds. Also, in terms of studying human resources challenges align with globalization, studying effective factors in this term is useful. The following factors can be noted as the main effective factors in the procedure to globalize human resource management:

Variation in professions which needs different skills and specialties with different trends in majors, in the current competitive conditions, but in the past educational majors were considered more; market competition and lack of skillful labor are the subjects more observed in industrial countries, so that very suitable conditions are provided to absorb specialist work forces from countries like Iran. Growth of part time forces, studying the racial differences, study of age differences, providing a balance between work and family aligned with the aims of individuals and the organization, for example, good behavior with them and will cause a good and suitable behavior with the customers and consequently increase in sale.

After ranking stage of criteria and sub criteria, some guidelines provided by experts to improve the current conditions in order to achieve more desirable results in the field of human resources and its main factors are; improvement in communications (11 guidelines), review in strategy (8 guidelines), management improvement (8 guidelines), training improvement (7 guidelines), improvement in selection and appointment processes (5guidelines), improvement in encouragement, acknowledgement and attention to the employees (5 guidelines), evaluation improvement (4 guidelines), improvement in culture (4 guidelines).

CONCLUSION

In this study and in the first section, totals about EFQM was studied (which introduced for comprehensive quality management by European quality foundation and is used for self-evaluation and integrated improvement in all history relating to this study was explained. In the third section, performing stages of the study to perform this research was explained in such way that human resources criteria and human resources results of model EFQM were studied and then, by opinions of experts through FAHP methods. This study led to a ranking of criteria and sub criteria and variables of the model resulted from EFQM in the field of lack of proper criteria conclusion for employees' results of the model. Using FAHP method, it was specified that second level sub criteria which have the most effects on lack of proper conclusion of employees' results criterion of model EFQM, in the field of human resources are:

Weakness in beliefs and support of superior management from EFQM model/competitive models, weakness in evaluation and performance management systems, lack of proper assignment, decrease in attention to motivational systems related to the employees group desirability's, also the most effective second level sub criteria of employees results are: Weakness in measurement of impressionable indices and lack of sufficient attempts to absorb trust of staff toward the organization (social capital), respectively.

After ranking effective factors on lack of proper result for employees results criteria, guidelines were introduced by the experts to improve in the field of human resources results which are: improvement in management, improvement in training, improvement in selection and appointment process, improvement in encouragement, acknowledgement, and attention to employees, improvement in evaluations and improvement in culture.

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