

# THE EFFECT OF THE PEOPLE CRITERION ON THE PEOPLE RESULT CRITERION BASED ON THE EFQM EXCELLENCE MODEL IN TURKISH PUBLIC INSTITUTIONS

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## ABSTRACT

*There is an obvious need for guidance to satisfy the public institutions' requirements for the assessment and development of human resources in EU adaptation process. The object of this paper is to analyze the effect of people criterion on the people result criterion based on the EFQM in Turkish public institutions trying to establish a framework model that helps to show the relationship between the inputs and the results of people management Data used for the study has been aggregated from the self-assessment studies of the Turkish Institute for Industrial Management (TUSSIDE) between February 2001-April 2006.*

**Keywords:** Self Assessment, EFQM, Turkish Public Institutions

## INTRODUCTION

For the organizations in the pursuit of excellence, effective management of people is critical. Organizational excellence models, EFQM, Baldrige, place great emphasis on people management activities. Towards European Union (EU) membership, Turkey is in an adaptation endeavor with all its institutions and organs while the majority of Turkish public institutions are still in serious need of improvement in people management context. This paper tries to assess strong and open-to-improvement areas with using the surveys applied to an adequately large and diverse set of subjects. The other major concern and the motivation of this study is about the situation with the criteria concerning employees in EFQM excellence model. There has been a major criticism for the EFQM model that it does not say which precise organizational measures in people management criterion lead to which better results regarding people results criterion (Ehrlich, 2006). This paper establishes a framework model to find out major variables and describe the relationships among the inputs and the outputs of people management factors in Turkish public Institutions.

In this section, a brief description of the study and Self Assessment Experiences in Public Institutions and Differences with Private Sector in People Management Context will be highlighted in order to show the need for and importance of the study.

## I.A. Description of the Study

Assessment of an effective people management can be employed by using an organizational self-assessment tool as well as for any other management aspects. Self-assessment can be applied with several different ways, however, a validated questionnaire is one of the strongest and most commonly used methodologies with its less resource and time requirement.

Turkish Institute for Industrial Management (TUSSIDE) is an institute of The Scientific and Technological Research Council of Turkey (TUBITAK), offering training, consultancy, research and publication services through collaborative organizational projects in management area. Since April 2000, it has been applying self-assessment surveys with the employees of its clients for the purpose of needs assessment. Because the applied self-assessment tool is based on the excellence model of European Foundation for Quality Management (EFQM), the great amount of data, created in these projects was studied to serve useful information, especially for the institutions in the European Union (EU) adaptation endeavor.

This study is a self assessment of people management with a questionnaire, particularly based on EFQM excellence model. The data worked for this study have been accumulated from a great deal of self assessment experiences of a management institute(TUSSIDE, 2006). Although the self assessment questionnaire comprises all management criteria of the model, this thesis focuses on the part that quest people management

related activities and conditions. Additionally, because it intends to serve public management, the thesis uses only the data which is pertaining to public institutions. The self assessment questionnaire is applied to employees from all levels and positions of public organizations. The variables of the study are concerning two important criteria of the EFQM model: "people" and "people results". The study seeks the answer of which specific enabler factors of people management influences which results concerning people. Therefore, independent variables will be consisting of people management factors.

In this study, the data from a professional, continuously reviewed questionnaire is used. It has been applied to 14,274 employees from 115 public institutions. Following the application, data is gathered in an SPSS file and factor analysis is applied for both people and people results items. Model actually constitutes from these new variables derived from factor analysis. Furthermore, reliability levels of new variables are assessed by alfa coefficients (Cronbach, L. J., 1951). In order to assess strengths and improvement areas of public institutions, basic descriptive analysis are provided. The relationships among the new variables are presented and a regression formula is developed.

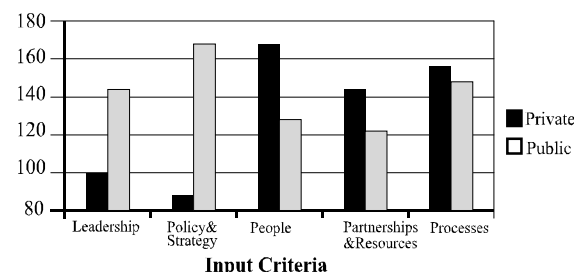
## I.B. Self Assessment Experiences in Public Institutions and Differences with Private Sector in People Management Context

The experience in Denmark that empirically clarifies the public sector difference in self assessment was done about EFQM criterion weights (Eskildsen et al.,

2004). In EFQM excellence award process, organizations are scored according to nine criteria. EFQM proposes weighting for criteria(Exhibit 1), however, organizations practicing self-assessment may select percentages more appropriate to the particular features of their own organization.

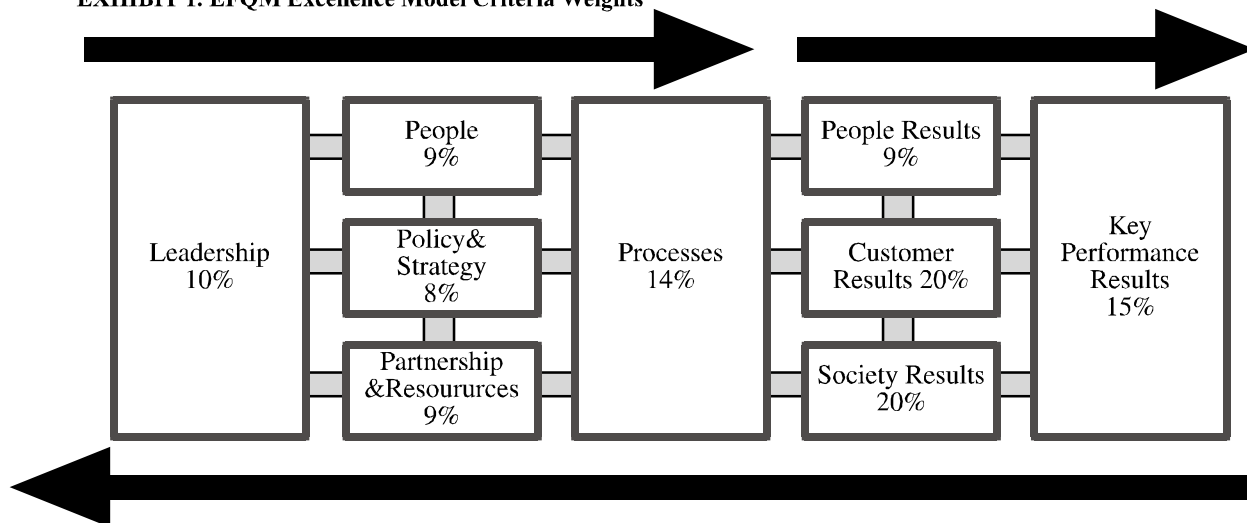
When presenting the importance of criteria, a 1000 points scale are assessed according to percentages. This is simply called criterion weights. In Eskildsen's study, an assessment is done from the perspectives of public and private sector criterion weights. As seen in Exhibit 2, public and private sector put different emphasis on input criteria in the framework of EFQM excellence model's input criteria.

**EXHIBIT 2.**  
**EFQM Excellence Model Criteria Weights**

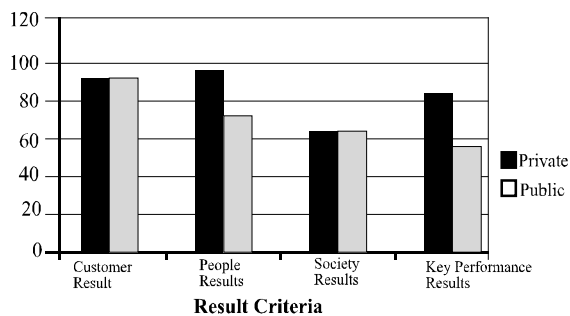


It is obviously consistent with the previously given literature that the "Leadership" and "Policy & Strategy" criteria have much less emphasis in public sector. In a similar manner, the differences are significant in result criterion weights as well (Exhibit 3).

**EXHIBIT 1. EFQM Excellence Model Criteria Weights**



**EXHIBIT 3.**  
**EFQM Excellence Model Criteria Weights**



As we study assessment of people management, the differences for the emphasis of "People" and "People Results" catch attention easily. Both in inputs and results graphs, people criteria had more emphasis for the public side. It can be inferred from various examples that effective people management becomes more important and essential when studying with a public institution.

In the last few years, there has been an important tendency towards quality management applications. Tens of them started the initiatives of quality award process both national and international level. According to KalDer, Turkish National Partner Organization of EFQM, the number of quality award applications of public institutions and NGOs together almost reaches the number of private organizations every year (KalDer, 2006). This tendency shows a steady motivation of public sector to possess a widely accepted and a reliable management system. Perhaps, current improvement needs are inciting organizations' leaders and employees towards such a process.

There is a valuable example of an EFQM application from a Turkish public institution that worth mentioning here. Marmara University Faculty of Engineering (MUFE) has been the first applicant to The European Quality Award of EFQM in public category from Turkey. MUFE experienced a successful application process ending up with being also the first finalist in award process as a Turkish public institutions in 2000 (MUFE, 2002). However, in the following years, the quality efforts were observed to be faded down with the change of management.

From the experiences of Turkish public institutions, it can be inferred, firstly, that the endeavor of Turkish public institutions towards quality management is still at the very beginning levels and there is a long way to cover. Secondly, the leadership effectiveness is very

much critical in quality improvement in Turkish public institutions. Although this inference, at first glance, seems to contradict the results of Eskildsen's study, the leadership effectiveness is required as an initiative factor. It does not have to be a critical requirement after setting the organization on an excellence model. Eskildsen's study indicates the locus of emphasis of management areas not the management itself.

## II. GENERAL DISCUSSION AND LITERATURE REVIEW ABOUT VARIABLES OF THE STUDY

In order to clarify the focus of the study and to better feel the boundaries of existing theoretical knowledge, some background information concerning people management and EFQM's people criteria is provided.

### II.A. Theoretical Background about Dimensions of People Management and Relational Models

Today, the success of an organization depends on the intellectual assets and system capacity than physical assets. As it is mentioned earlier, people are most basic driving factor in achieving excellence. In order to define which precise enablers in people management lead to successful results concerning people, the possible links between enabling dimensions of people management and results need to be explained. In the Hackman and Oldham's Work Design Model (WDM) (Exhibit 4), the outcomes are created by the three critical psychological stages that are influenced by the core job characteristics.

There are some moderating variables that can have both a positive and a negative effect on the influence of the core job characteristics on the psychological stages and, finally, on the outcomes from the five core job characteristics it is clear that both the quality of work and employee satisfaction can be enhanced if the job design incorporates empowerment and involvement (task significance), process ownership (autonomy), job enlargement/rotation (skill variety and task identity) and feedback about performance (Eskildsen 2000a, Evans & Lindsay, 1996).

The EFQM model's "people" criterion includes the areas of empowerment, involvement and recognition that directly cover "task significance", one of Hackman

and Oldham's five core job characteristics. This criterion also concerns how the organization uses innovative organization methodologies, which have an impact on the core job characteristics "task identity" and "skills variety". Furthermore, this criterion also covers the moderating variables from the WDM. It is through people that the organization can influence "knowledge and skills", "growth need strength" and the "context satisfactors". There is, however, one major conceptual difference between "outcomes" and "people results" and this relates to the last element in "outcomes", namely: "high work effectiveness". This is not included in the "people results" criterion but in another criterion, which means that "high work effectiveness" is not a part of this frame of reference for employee satisfaction. On the other hand, "people results" has a more "enabler-like" character than "outcomes" since it also includes things like the scope of the results.

In the Eskildsen and Nüssler's study, people management definition is operationalized in the context of HRM subsystems based on the subsystems theory of Glasl and Lievegoed. According to this theory, organization consists of the following three subsystems: the cultural subsystem, the social subsystem and the technical subsystem (Eskildsen, 2000b; Glasl and Lievegoed 1997).

The cultural subsystem consists of the identity and the overall policies of the organization. This comprises values or cultural characteristics that guide the way people are being treated within the organization, and whether or not these are explicit or implicit. This subsystem may comprise the policy development as well as recognition and care parts of EFQM's people management sub-criteria. The social subsystem is the structure of the organization, knowledge and skills as well as span of control/responsibility. This corresponds to everything related to the formal management system as well as the competence and style of the individual managers in the organization. This subsystem may comprise the competency development, communication, involvement sub-criteria of EFQM. The third and last subsystem deals with the technical side of the organization. This includes such things as individual processes and physical and financial assets. These are the activities usually associated with the older terms "personnel administration". This includes all the contractual issues between the employer and the employee. Although related partly with HR panning, actually, this part is covered mainly by people results in EFQM model. The suggested causal model of Eskildsen and Nüssler is given in Exhibit 5.

Every aspect that has to do with the influence that the job has on the employee as well as the perception that the employee has of the job and/or organization is included in the definition of employee satisfaction. Employee loyalty is a more action-oriented concept since it deals with the behavior of the employees This includes such things as whether or not employees are committed and assume personal responsibility for their work, and whether or not they feel inclined to look for another job (Eskildsen, 2000b). Employee satisfaction is assessed in people results criterion of EFQM Model but loyalty is not. Instead, motivation and some other indicators are assessed by people results.

Martensen and Gronholdt (2001) has ended up with a quite similar model, however, they defined drivers of employee satisfaction differently. Definitions of top management and daily leadership are characterized by some other enabler criteria of EFQM model. Working conditions, people relations and competency development are comprised in people management criterion. Bearing resemblance with Eskildsen J.K. (2000b), model measures commitment in addition to satisfaction and loyalty. Martensen and Gronholdt also indicates the strength of relationships in the model, however, only the relationships are contented in this figure.

Research on HRM dimensions relying on factor analysis did not yield similar patterns, partly because of the inclusion of different applications to reflect the constructs under study and partly because of the application's target audience. HRM practices can be grouped into dimensions that augment employee skills, motivation of employees, and organizing the workforce by Huselid, (1995). Oakland and Oakland (2001) define people management dimensions as: strategic alignment of human resource management policies, effective communication, employee empowerment and involvement, training and development, teams and teamwork, review and continuous improvement.

Tari and Sabater (2006) assess HRM practices as selection, training, appraisal and recognition, career development, employee involvement, and affects of the quality system. Fey and Bjorkman's empirical evidence from Russia revealed three factors as "development", "feedback", and "pay/organization"(Fey and Bjorkman, 2001). Their result points out a clearly defined factor of development and a feedback factor, but combined items related to payment and organization into a single factor. Therefore, according to literature, there are from at

least three to at most five dimensions of HRM activities: training and development, communication, compensation, and workforce structure. One of the possible reasons for this variance in applications of HRM activities is perhaps the influence of cultural values on the practices of HRM (Ngo et al., 1998). This situation, even more, emphasizes the need for identifying the HRM dimensions in context and with the desired audience which this paper studies.

## **II.B. Definitions of Sub-Criteria Pertaining to EFQM "People" and "People Results" Criteria**

The nine main criteria of EFQM Model are further divided into 32 sub-criteria. As stated earlier, Criterion 3 (people) has five sub-criteria and Criterion 7 (people results) two sub-criteria. Because the relationships among the inputs and the results of people management factors are under the study, two divisions are dealt with differently like EFQM model suggests.

Criterion 3 is defined as, "Excellent organizations manage, develop and release the full potential of their people at an individual, team-based and organizational level. They promote fairness and equality and involve and empower their people. They care for, communicate, reward and recognize, in a way that motivates staff and builds commitment to using their skills and knowledge for the benefit of the organization" (EFQM, 2003a).

According to the model, "People" sub-criteria are stated as 3a. People resources are planned, managed and improved, 3b. People's knowledge and competencies are identified, developed and sustained, 3c. People are involved and empowered, 3d. People and the organization have a dialogue, 3e. People are rewarded, recognized and cared for. EFQM Model defines Criterion 7 as, "Excellent organizations comprehensively measure and achieve outstanding results with respect to their people" (EFQM, 2003a). "People Results" sub-criteria are stated as 7a. Perception measures and 7b. Performance indicators.

## **III. METHODOLOGY OF THE STUDY**

### **III.A. The Instrumentation**

Filling out the EFQM's self assessment questionnaire gives valuable feedback on the overall effectiveness of an organization, approaches and processes and the result can be used as a strategic map allowing to create a fact-based list of prioritized improvement

actions (EFQM 2006). Besides the official self assessment questionnaire of EFQM is being freely available for its members, organizations and researchers develop their own questionnaire sets either by translating, reviewing literature, reducing or expanding it in order to create their unique tools according to their specific needs.

### **III.A.1. Development of The Questionnaire**

Turkish Institute for Industrial Management (TUSSIDE) has a very professional self assessment questionnaire that has been developed by several quality management and statistics professors, continuously reviewed and improved, employed on hundreds of organizations for more than six years. Since this questionnaire is compiled from the self assessment experiences of MUFE (Marmara University Faculty of Engineering) during its European Quality Award application process, it can be deemed as an advanced tool. In Yang (2001), each clause in sub-criteria (inferior criteria of EFQM's main criteria) is called as sub-sub-criterion. Each item of the questionnaire used in this study is derived from sub-sub-criteria that is stated in "people" and "people results" chapters of MUFE's self assessment application book (MUFE, 2002). Turkish version of this book published in 2002 but self assessment application document, which TUSSIDE benefited from, had been prepared well before this questionnaire shapes. The development of the questionnaire of TUSSIDE is a continuous process. Reviewed continuously, some items have been changed with new ones, however, the basis for today's questionnaire is self assessment experiences of MUFE and sub-sub-criteria of people and people results in the EFQM model.

The questionnaire was generated from the sub-criteria of 3rd and 7th criterion of EFQM model. After Item Evaluation and Selection process, which is described in the Analysis section, the initial set of 86 items reduced to 44, 32 of which are "people" (3a, 3b, 3c, 3d, 3e) and 12 of which are "people result" (7a, 7b) items. Each of 32 people items assesses one of five sub-criteria of people criterion. Exhibit 7 shows which items correspond with which of the five "people" sub-criterion. Items are provided as codes and "P" at the beginning of each item code indicates the scale of "people management".

Actually, the self assessment in question is being used as a part of management improvement projects and generally utilized in the context of a specific project.

The questionnaire set has been exposed to changes as it is applied to different organizations. This is because the main objective of the questionnaire was to serve as a needs assessment tool for specific projects. This differentiation in the questionnaire sets, although slightly, may cause to some minor shifts of contextual understandings by the subjects. Namely, the same question may not be understood and evaluated in exactly the same meaning when given in different lines. This situation may have been influential on the reliability.

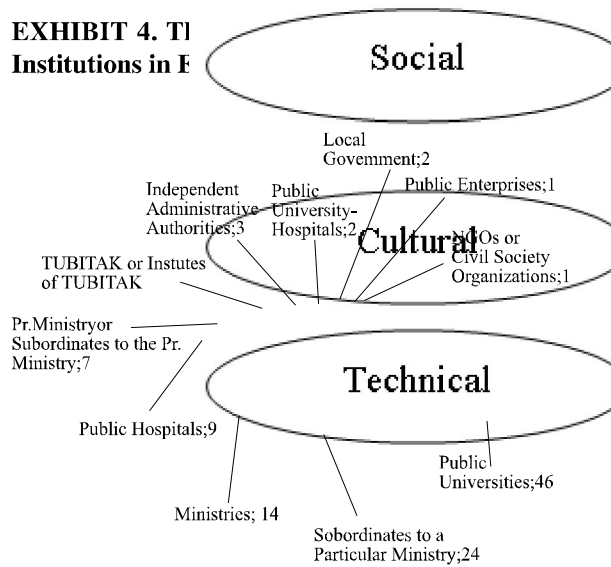
### III.B. The Sample Design and Size

Since this study is after perceptual assessment of people management in Turkish public institutions, subjects are employees of Turkish public institutions, either having a management responsibility or not. Totally, the data gathered from 115 different public institutions is utilized. Public institutions are tried to be grouped with public management organization type classified according to structure (Guler, institutions from

Glasl and Lievegood (1997)

Self Assessment of Turkish Public Institutions

EXHIBIT 4. TI Institutions in F



Public Institution Classification	Number of Subjects	Percentages of Subjects
Independent Administrative Authorities	196	1,4
Local Governments	401	2,8
Ministries	462	3,2
NGOs or Civil Society Organizations	88	0,6
Pr. Ministry or Subordinates to the Pr. Ministry	368	2,6
Public Enterprises	740	5,2
Public Hospitals	645	4,5
Public Universities	521	3,6
Public University-Hospitals	4,738	33,2
Subordinates to a Particular Ministry	2,969	20,8
TUBITAK or Institutes of TUBITAK	3,146	22,0
Total	14,274	100

From representativeness point of view, there are very few public institutions that are not included in the study. If the number of institutions is said to indicate the weights of representativeness, there are some certain types that are influential on the balance of diversity. This is partly because of the basic partnerships (e.g., universities) of TUSSIDE. And partly because

of not being effective in some markets (e.g., local governments, NGOs).

Totally, the data gathered from 14,274 subjects from 115 different institutions is utilized. Exhibit 5 indicates number of subjects from each classification of institutions.

Again, from the weights of representativeness point of view, basic partnerships (e.g., TUBITAK) and some niche markets (e.g., Public University-Hospitals) have been influential on the balance of the size. In the context of target sample, this assessment questionnaire is applied to employees of "client" organizations of an institute. The natural undesired effect of this weakness is the representation unbalance in sampling for an ideal academic study. Although the number of the organizations and the sample size seems highly satisfactory, the relative balance of the number of organizations in the research is not reflective enough compared to number of organizations in reality.

### III.C. Model and Hypotheses

The initial model proposed in the study basically depends on "people management" and "people results" variables of what EFQM model's 3rd and 7th criteria proposes. As this study is after finding which precise measures are influential on which precise results, the sub-parts of people and people results are assumed to

be the initial variables as the model originally proposes. Normally, the model would propose each "people management" variables had a positive influence on each of "people results" variable.

However, according to factor analysis results, "people management" variables reduced to three, called as CID(Communicating, Involving and Developing HR), EFRRC(Ensuring Fairness, Recognition, Reward and Care), PFB(Providing Fringe Benefits) and "people results" variables reduced to one, called as MSPI(Motivation, Satisfaction and Performance Indicators of HR). According to the model, the following hypotheses are developed and tested: H1 : CID has a significant positive influence on MSPI; H2 : EFRRC has a significant positive influence on MSPI; H3 : PFB has a significant positive influence on MSPI.

## IV. ANALYSIS AND RESULTS

### IV.A. Factor Analysis

Factor analysis is applied for the input items and the result items of the research. Therefore, the number of factors (i.e., variables) for both input and result measures are obtained.

#### IV.A.1 Factor Analysis for "People" Variables

As mentioned earlier in "The Instrumentation" chapter, 32 5-point Likert-type items scale used to assess "people" construct. In the initial inter-item analysis, only one item (P3d3 with 0,285) has been deleted out of the scale. After deletion, remaining 31-items scale's average inter-item correlations turns out to be 0,568 with minimum of 0,472 (P3e2) and maximum of 0,670 (P3e1).

Before conducting factor analysis, some test statistics are applied to confirm whether the data is convenient on factor analysis results (KMO: 0,976, Sig.: ,000). In the process of factor analysis, five successive deletions of items were required (P3a6, P3e6, P3a7, P3a2 and P3c6) and finally 26 items left with three factor components that are explaining 58,353% of variance. The resulting rotated component matrix indicates three components, in each of which items have internal correlation values more than 0,50 (Exhibit 16).

The first inference from the rotated components matrix is that 3b, 3c, and 3d items fit the Component1 because it involves most of the 3b, 3c and 3d items. Item P3b1 took part to assess "appraising performance and help to improve it" in competency development context.

However, it may have been taken into consideration as an assessment of recognition and rewarding, which is not an unexpected result. The item P3b5 took part for its "promoting learning opportunities" in competency development context. However, it may have been taken into consideration as an assessment of rewarding, care or even fairness. The item P3c4 took part for its "encouraging involvement" in involvement context. However, it may have been taken into consideration as promoting awareness and care. From these inferences, the scale seems to need improvement about the wordings of the mentioned critical items.

### EXHIBIT 6. Factor Analysis Results for People Management Scale

(Rotated Component Matrix)

	Component		
	1	2	3
P3e3	,698		
P3d1	,689		
P3c1	,675		
P3d4	,654		
P3b4	,619		
P3a8	,615		
P3d2	,614		
P3c2	,610		
P3c3	,559		
P3b2	,557		
P3a1	,555		
P3c5	,543		
P3b3	,523		
P3a5		,731	
P3e5		,730	
P3a4		,701	
P3b5		,677	
P3e1		,668	
P3c4		,665	
P3e4		,625	
P3a9		,593	
P3a3		,543	
P3b1		,501	
P3e8			,774
P3e2			,665
P3e7			,557

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Secondly, 3a and 3e items partly fit the Component2 because it involves most of the 3a and some of the 3e items. The item 3a1 falls into an involvement-intensive component although it took part to assess "involving employees in HR policy development". Here, there seems to be a conjunction with the wording of EFQM 3rd criteria itself. Both 3a and 3e includes the "involvement" so that it creates a confusion. Item P3a8 is aimed to assess "identification of successful work", however, it fell into Component1, probably because the major part of clarifying the successful work is perhaps not an "identification" problem but a "communication" problem.

Therefore P3a8 fell into a communication intensive component. Item P3e3 is aimed to assess "recognizing people to sustain involvement", however, it may have been taken into consideration as an assessment of supporting involvement. Here, again, there seems to be a conjunction with the wording of EFQM 3rd criteria itself, 3e too, includes the "involvement" so that it creates a confusion too.

Finally, the clearest inference is that a certain part, namely fringe benefits, of 3e items fits well, almost perfectly, with the Component3.

According to the contents of the components and the related literature, if the composition of new variables are to be called: The Component 1 is: "Communicating, Involving and Developing" (CID), The Component 2 is: "Ensuring Fairness, Recognition, Reward and Care" (EFRRC) and The Component 3 is: "Providing Fringe Benefits" (PFB).

## IV.A.2 Factor Analysis for "People Results" Variables

As mentioned earlier in "The Instrumentation" chapter, 12 5-point Likert-type items scale used to assess people results construct. In the initial inter-item analysis, the scale's average inter-item correlation turns out to be 0,527 with minimum of 0,384 (R7b2) and maximum of 0,723 (R7a6). (KMO: 0,933, Sig.: 0,000).

The factor analysis of "people results" was a single step process because all items assess the same component that is explaining 52,742% of variance (Exhibit 18). The resulting component, including both motivational and satisfactional construct (7a) and performance indicators (7b), is called "Motivation, Satisfaction and Performance Indicators of HR" (MSPI).

## IV.B. Findings

The correlation coefficients between CID and MSPI, EFRRC and MSPI, PFB and MSPI variables can provide us the test of hypotheses. Exhibit 7 gives correlations and their significance levels between each independent variable and dependent variable.

**Exhibit 7. Correlations Between Each Independent Variable and MSPI**

Independent Variables	N	Sig.(2-tailed)	Pearson Correlation
CID	5637	,000	,495**
EFRRC	5637	,000	,539**
PFB	5637	,000	,378**

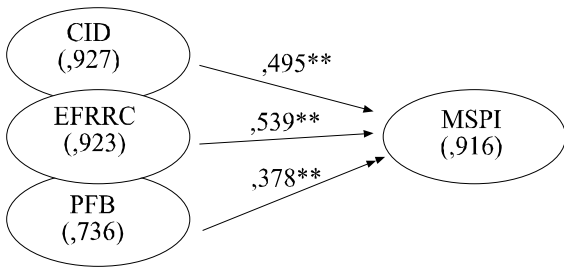
**\*\*Correlation is significant at the 0,01 level (2-tailed)**

All of the three independent variables(CID, EFRRC, PFB) have significant positive correlations with MSPI. The strongest correlation with the people results is established by "Ensuring fairness, recognition, reward and care" variable significantly(495\*\*). At the beginning, within the literature review chapter of the thesis, policy development and planning were said to have much emphasis on compared to other management factors in public institutions(Eskildsen et al., 2004). EFRRC variable, which is on a large scale assessed by "HR policy development and planning" items, is merely consistent with the previous literature.

"Communicating, Involving and Developing" also has a significant positive influence on the results(,498\*\*). When explaining people management in Overall Excellence Process for Turkish organizations, Ersen (2004) emphasizes "involvement" and "continuous development" as stating them functions gained importance in people management in quality management process.

The third variable Providing Fringe Benefits has significant positive influence on the results(,378\*\*) too. Fringe Benefits is an important part of remuneration and it becomes even more important in public management. Because generally in public institutions, remuneration is not based on the capabilities and competencies, it is based on the positions when employees are hired. Therefore it must be modified to a more flexible structure (Okmen, 2005).

**Exhibit 8. The Correlations (Bivariate) Between Independent and Dependent Variables of The Study**



In this part of the thesis, a model is established to explain the "Motivation, Satisfactor and Performance Indicators" as a function of independent variables of the study. Generally, in order to evaluate the relative impact of predictive variables on particular outcomes, regression models are utilized. However, certain assumptions and applicability tests must be fulfilled before establishing the model. The discussion about these conditions and test evaluations are given in the following.

Because the purpose here is predicting the value of one particular dependent variable using a linear function of independent variables(Rencher, 2000), multiple linear regression model is applied. The independent variables of the study are factors of people management in Turkish public institutions, namely Communication, Involvement and Development(CID), Ensuring Fairness Recognition and Reward (EFRRRC) and Providinf Fringe Benefits(PFB). There are various settigns for people management factors in the previous literature. The three factors model is similar with Eskildsen and Nüssler (2000)'s, Glasl and Lievegood (1997)'s and Fey and Bjorkman (2001)'s models. Although their response variables and the models they use to explain those response variables differ, the input factors of people management bear resemblance both in number and in contents of the factors. The paralell aspects and the differences with the stated models are evaluated in the Conclusions and Discussions section.

An important prerequisite before applying the regression analysis is the distinction level of independent variables from each other. Ideally, low correlations are sought among the independent variables of CID, EFRRRC and PFB. These independent variables are formed according to factor analysis results. Because factor analysis constitutes factors based on high "intra"-factor correlations and low "inter"-factor correlations, CID, EFRRRC and PFB have naturally low inter-correlations. Exhibit 9 indicates

the bivariate correlations among the independent variables of the study.

**Exhibit 9. Correlations Among Independent Variables**

Independent Variables		CID	EFRRRC	PFB
CID	Spearman Correlation	1	,044**	,020
	Sig (2-tailed)		,000	,085
	N	7418	7418	7418
EFRRRC	Spearman Correlation	,044**	1	,042**
	Sig (2-tailed)	,000		,000
	N	7418	7418	7418
PFB	Spearman Correlation	,020	,042**	1
	Sig (2-tailed)	,085	,000	
	N	7418	7418	7418

If the multiple linear regression model is applied, the variance in the MSPI can be predicted by the variances in the CID, EFRRRC and PFB and the regression formula should be as follows:

$$Y = \beta_0 + \beta_1.X_1 + \beta_2.X_2 + \beta_3.X_3 \Rightarrow$$

$$MSPI = \beta_0 + \beta_1.CID + \beta_2.EFRRRC + \beta_3.PFB$$

The critical applicability conditions for the regression analysis is F statistics and the significance value. The results shown in Exhibit 10 indicates that F value is sufficiently large and the significance level is convenient(F=3826,757, p=0,000).

**Exhibit 10. Regression Analysis Results**

Independent Variables	Standardized Beta Coefficients ( $\beta$ )	T	Sig. (p)
CID	,486	63,585	,000
EFRRRC	,534	69,843	,000
PFB	,375	49,074	,000

$R^2 = 0,671$      $F = 3826,757$      $p = 0,000$

Another important consideration is about the amount of effects by predictive variables. In the analysiss results, it can be seen that all three variables have adequately great impacts on response variable(Standardized Beta Coefficients). And R2 value, which is a measure of how much variance in dependent variable can be explained with the variance in independent variables, is found to be 0,671. Therefore the variance in the people motivation, satisfaction and indicators of good people management

Finally, the resulting regression formula turns out to be:  $MSPI = 0,065 + 0,489 \cdot CID + 0,534 \cdot EFRRC + 0,375 \cdot PFB$

Therefore, with one unit of increase in CID, 0,489 unit of increase is predicted in MSPI. Similarly, with one unit of increase in EFRRC and PFB; 0,534 and 0,375 units of increase is predicted in MSPI. Namely, if in your organization, for example, communication, involvement and development requirements are fulfilled, general motivation and satisfaction and performance indicators are predicted to be fulfilled to some extent. But most effective fulfillment is realized when you ensure fairness, recognition reward and care for the employees of your organization. One important point is that, these are not single impacts of independent variables (which are already given with correlations), regression formula gives composite impact of all independent variables.

## V. CONCLUSIONS AND DISCUSSIONS

In the literature, input variables of people management are examined in variant numbers of factors. This new composition is basically not consistent with the EFQM's sub-criteria, however, it is mostly consistent with the theory of Glasl and Lievegood (1997) used by Eskildsen and Nüssler (2000). CID fits well to the definition of social subsystem such that knowledge, skills and span of control/responsibility are comprised. It also comprises competence and style of individuals. EFRRC, too, fits well to the definition of cultural sub-system such that it covers policies of the organization as well as it guides the way people are being treated within the organization. PFB only partly fits with the definition of technical sub-system such that it deals with physical and financial assets. However, PFB does not deal with personnel

administration, mainly EFRRC comprises personnel processes.

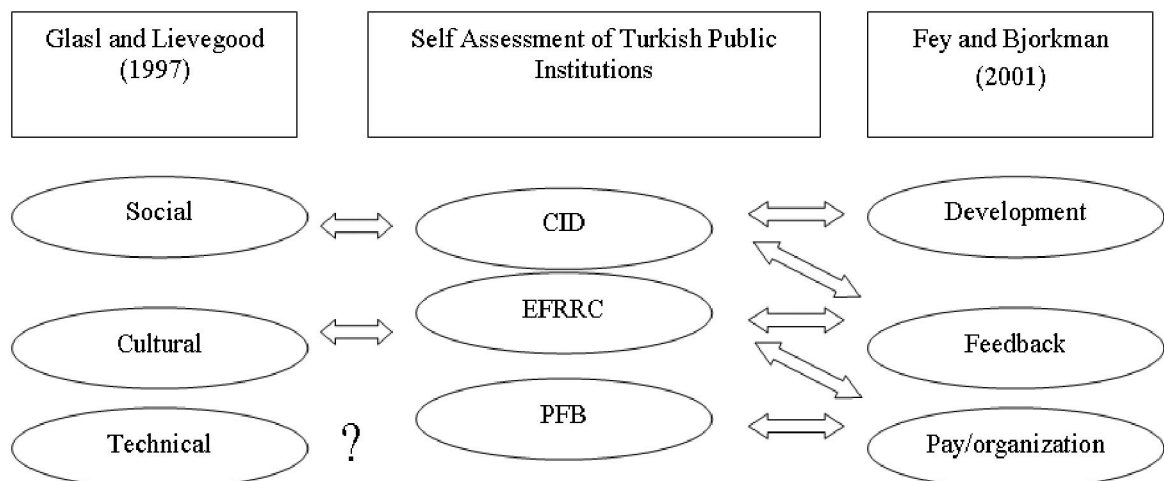
The new composition of factors is also mostly consistent with the findings of Fey and Bjorkman (2001). CID mostly fits to definition of "Development", CID and EFRRC together fits to the definition of "Feedback", finally PFB and EFRRC together fits to the definition of "Pay/organization". Exhibit 11 indicates the common parts of this study's factor analysis with both the Glasl and Lievegood (1997)'s HRM subsystems model and Fey and Bjorkman (2001)'s empirical study.

High internal consistency statistics of the three variables (,934; ,924; ,737 respectively) makes them almost a clear and distinctive variables. However in the instrumentation part, the items of P3b1, P3b5 and P3c4 must have been studied more because they might have been caused misunderstandings. On the other hand, there are some wording disorders in the EFQM sub-criteria that cause confusion among variables.

People results are represented with different constructs like loyalty, commitment, morale, satisfaction etc. by several studies. Generally loyalty and effectiveness are considered to be achieved through commitment or satisfaction. In the EFQM model, effectiveness measures are assessed in criteria other than "people results". People results assesses satisfaction and motivation as one factor and performance indicators as the second factor. In this study, people results configured as only one factor comprising motivation, satisfaction and performance indicators (MSPI).

Descriptive statistics gives important clues about strong areas as well as improvement areas of Turkish public institutions. For example, information access, respect

**Exhibit 11. Similarities of Factor Analysis Results with Earlier Studies**



to differences, quality health service and feeling of proud are found to be plus sides while development of unsuccessful employees, performance evaluation-feedback, social activities and a satisfactory salary are found to be areas of improvement.

Because the data is gathered from very different public institution groups, variance analysis applied to give more explanatory descriptive statistics. Analysis of variances are applied for each variable differently. The results of the analysis for all CID, EFRRC, PFB and MSPI exhibit that the mean scores significantly differ from type to type (of institutions). The main reason behind the variations, as implied, the diversity of the institutions applied. The legislations, regulations, human resources policies and even organizational cultures may have been effective on the results. On the other hand, the questionnaire sets and the order of the items in the applications were different. Although the questionnaire sets and the order of the items also might have been affective on the variations, they are not tested in the scope of this study and left for a further research. Besides this, every application is rendered through a certain similar procedure, namely, there are no application differences other than questionnaire sets and items' orders. Instead of analysing difference in applications, for obvious differences among institution types, possible reasonable causes are discussed with the help of applicational examples from the information sources of the types of institutions.

All three variables("Communication, Involvement and Development", "Ensuring Fairness, recognition and Care", and "Providing Fringe Benefits) have significant influence on the dependent variable "Motivation, Satisfaction and Performance Indicators" and they(independent variables) all together can explain a great deal of variance in the dependent variable.

In the process of the thesis study, many interesting research topics in public management areas have been found worth working. For example, the criterion weights for Turkish public institutions can be assessed by using this data or with a further study. These weights can represent relative importance of the criteria in the EFQM model. This study may further contribute to acknowledgement of a unique criterion weight system used by public institutions.

Furthermore, the data used in this study can be combined with the quality improvement projects' application results, particularly on functional human resources management or other organizational indicators. In addition, similar studies can be administered to a highly

human-capital focused organizations specifically, like high-tech organizations or service sector organizations.

With a broder perspective, people management practices can be studied from a leadership and strategic management point of view. EFQM model proposes that excellent results are achieved through leadership driving policies and strategies. By developing this study's questionnaire and adding new applications, the influences of leadership and strategic management can be studied, strength of the relationships can be assessed.

## REFERENCES

- EFQM (2003a), *Introducing Excellence*, 2003 EFQM, Brussels.
- EFQM (2006), *EFQM Newsletter*, November 2006, Brussels.
- Ehrlich, C.(2006). The-EFQM Model-Work Motivation. *Total Quality Management*, 17(2), pp.131-140.
- Ersen H.(2004), *Human Resources&Quality In Overall Excellence Process*, Istanbul Maestro, pp.95-96.
- Eskildsen, J.K, Dahlgaard J.J., (2000a), A causal model for employee satisfaction, *Total Quality Management*, Vol. 11, NO. 8, 2000, 1081 - 1094;
- Evans, J.R. & Lindsay, W.M. (1996) *The Management and Control of Quality* (St Paul, West Publishing Company).
- Eskildsen, J.K, Nüssler M. L., (2000b), The Managerial Drivers of Employee Satisfaciton and Loyalty, *Total Quality Management*, Vol. 11, NO. 4, 2000, 5581 - 5588;
- Glasl, F. & Lievegood, B. (1997) *Development Management* (Hinnerup, Forlaget Ankerhus A/S).
- Eskildsen, J.K, Kristensen, K, Juhl, H. J.(2004), Private versus Public Sector Excellence, *The TQM Magazine*, 16 (1), pp 50-56.
- Fey, C.F. and Bjorkman, I. (2001) 'The Effect of Human Resource Management Practices on MNC Subsidiary Performance in Russia', *Journal of International Business Studies*, 32(1), pp.59-75.
- Guler, B.A. (2005), *Türk Kamu Yonetimi Ders Malzemesi - IV*, Retrieved November 21, 2006, from [http://politics.ankara.edu.tr/~bguler/TKY\\_4.pdf](http://politics.ankara.edu.tr/~bguler/TKY_4.pdf)
- Huselid, M.A. (1995) 'The Impact of Human Resource Practices on Turnover, Productivity, and Corporate Financial Performance', *Academy of Management Journal*, 38(3), pp. 635-72.
- KalDer (2006), *Ulusal Kalite Odulu*, Retrieved November 22, 2006, from <http://www.kalder.org/page.asp?PageID=154>.
- Martensen A., and Gronholdt L., (2001), *Using Employee Satisfaction Measurement to Improve People Management: An Adaptation of Kano's Quality Types*, *Total Quality Management*, 12(7-8), 2001, pp.949-957.
- MUFE (2002), *Kamu Sektörü Kategorisinde Türkiye'den İlk Başvuru*, Marmara University Faculty of Engineering, 2002.
- Ngo, H.Y., Turban, D., Lau, C.M. and Lui, S. (1998) 'Human Resource Practices and Firm Performance of Multinational Corporations: Influences of Country Origin', *International Journal of Human Resource Management*, 9(4), pp.632-52.
- Oakland S.; Oakland, S.J., (2001), *Current People Management Activities in World-Class Organizations*, *Total Quality Management*, 12(6), pp.773- 788.
- Okmen, O. Donmez D. (2005), *Excellency in Public Institutions*, 2005, Istanbul: Kalder, pp. 149.
- Rencher, A.C. (2000), *Linear Models in Statistics*, 2000, New York, John Wiley & Sons, pp 121.
- Tari J.J.; Sabater V., (2006), *Human Aspects in a Quality Management Context and Their Effects on Performance International*, *Journal of Human Resource Management*, 17, pp.484-503.
- TUSSIDE (2006), *Ozdegerlendirme*, Retrieved November 19, 2006, from <http://www.tusside.gov.tr/ozdegerlendirme.asp>.
- Yang J. B.; Dale B. G.; Siow C. H. R., (2001), *Self-assessment of Excellence: An Application of the Evidential Reasoning Approach*, *International Journal of Production Research*, 39(16), pp.3789 - 3812.