Available online at www.alphanumericjournal.com



alphanumeric journal

The Journal of Operations Research, Statistics, Econometrics and Management Information Systems

Volume 2, Issue 2, 2014



2014.02.02.STAT.01

IMPLEMENTING SIMPLE SLOPE TECHNIQUES TO INTERACTION OF WORK VARIABLES*

Aydem ÇİFTÇİOĞLU *

Özer ARABACI ‡

PhD, Uludag University, Faculty of Economics and Administration, Business Administration Department PhD, Uludag University, Faculty of Economics and Administration, Econometrics Department Received: 19 June 2014 Accepted: 30 October 2014

Abstract

The purpose of this study is to investigate the effects of different levels of Organizational Identification (OI) and Education variables as moderators on the relationship between Percived External Prestige (PEP) and Organizational Commitment (OC). Study carried out among 206 white collor employees who were working automotive industry firms in Bursa/Turkey. In related literature some researchers displayed that PEP association with OC by moderetor role of Organizational Identification. Thus we accepted this model and investigate the impact of diffrent level of moderator variable(s) on focal predictor .For this purpose, we used best subset regression procedure and simple slope tecniques for identify the different levels effects of moderator variables. The results showed that Education and OI were not only basic moderators but also their different levels have produced remarkable and various impacts on PEP and OC relationship.

Keywords: Simple Slope, Organizational Identification, Education, Percived External Prestige, Organizational Commitment Jel Code: C31, D23, M12, L25

Özet

Bu çalışmada Algılanan Örgütsel Prestij ile Örgütsel bağlılık arasındaki ilişkide Örgütsel özdeşleşme ve eğitim değişkenlerinin moderatör etkisini ortaya koymak amaçlanmaktadır. Bu kapsamda Bursa'da otomotiv endüstrisinde faaliyet gösteren bir firmanın 206 beyaz yakalı personeli üzerinde bir saha araştırması yürütülmüştür. İlgili yazında Algılanan Örgütsel Prestij (PEP) ile Çalışanların Örgütsel Bağlılıkları (OC) arasında Örgütsel Özdeşleşmenin (OI) aracı bir rol üstlendiği belirtilmektedir. Yazındaki bu model kabul edilerek farklı düzeylerdeki moderatör değişkenin etkisi incelenmiştir. Bu çerçevede tüm olası altküme regresyon modeli ile özel eğilim analiz (best subset regression procedure and simple slope tecniques) teknikleri kullanılarak moderatör değişkeninin farklı düzeylerinin söz konusu modelde yarattığı etki analiz edilmeye çalışılmıştır. Yürütülen analizler Algılanma Örgütsel Prestij ve Örgütsel Bağlılık ilişkisinde, eğitim ve örgütsel özdeşleşme değişkenlerinin temel moderatör olmalarının ötesinde ilgili moderatör değişkenlerinin farklı düzeylerinin söz konusu ilişkiyi çarpıcı ve farklı şekillerde etkiledikleri sonucuna ulaşılmıştır.

Anahtar Kelimeler: Özel eğilim (Özel kesme), Örgütsel Özdeşleşme, Eğitim, Algılanan dışsal prestij, Örgütsel Bağlılık Jel Kodu: C31, D23, M12, L25

[†] aydemaydemir@uludag.edu.tr (Corresponding author)

[‡] ozerarabaci@uludag.edu.tr

^{*} This paper was presented at international congress which was 6th International Confrence on Business, Management and Economics, 7-9 October 2010, Çeşme İzmir, 160-173. and 1and a prize "Honorable Mention Award in field of Business Administration & Organization"

1. Introduction

The type and degree of attachment that individuals manifest toward their employing organizations is a topic that continuous to be of interest to researchers and practitioners alike. Thus it is important for managers and academicans to find new approaches for hold talent individuals inside the organizations. In this framwork recent researches based on social identity theory mentioned that favorable reputation or prestige perception among employees fosters positive attitude toward organization and attached individuals to organizations (Mael and Ashforth 1992; Dutton and Duckerich 1991; Dutton et. al, 1994; Smitdt et al 2001). Hence researchers assumed that employees' reputation perception about working organization will be new intangible assets of organizations for establishing emotional bonds between employees and their working organizations. In this context, this study examines the interaction between employees' prestige perceptions about working organization and their attachment to it. This research also presents new perspective to researchers, to analyse different level effects of moderator(s) on models for understanding variables interaction deeply which is considered as the limitation of behavioral science.

2. Literature Review

Perceived external prestige (PEP) defined as degree of organizational prestige when compared organization with other relates (Mael and Ashforth 1992). Concept also revealed as individual level interpretation and evaluation of organizational prestige based on employee's own information.(Bergami and Bagozzi, 2000; Smithd's et al., 2001). On the other hand organizational attachment was defined as an individual's psychological and behavioral involvement in a social group or unit of which he or she exist as a member (Tsui et. al 1992:554) In this framework Organizational identification was "perception of oneness with or belongingness to some human aggregation, (Mael and Ashforth, 1992) process of incorporating the perception of oneself as a member of a particular organization into one's general self-definition (Dutton et. al., 1994; Pratt, 1998; Herrbach, 2006) where commitment defined as, employee's emotional to, identification with and involvement in the organization thus individuals who commit their organization based on affective tone, remains in organization because they "want" to stay. (Meyer et al., 1990; Meyer and Allen 1991; Meyer et. al., 1993; Meyer and Allen 1997). Recent studies suggested that people's group-based status or prestige judgments have an impact on both their feelings about themselves and their behaviors toward their group (Ellemers, 1993; Tyler and Blader, 2002; Riordan et al., 1997; Oliver and Mignonac 2004). Based on Social Identity Theory (SIT) assumptions individuals tend to looking for positive social identity and self image for social approval. (Turner et. al 1979; Dutton et. al, 1994) Thus when members beliefs that outsiders see their organization in a positive light, organizations become more attractive for them and they proud to be part of and being a member of it (Cialdini et.al., 1976; Mael and Ashforth 1992; Dutton and Duckerich 1991; Dutton et. al, 1994; Smitdt et al 2001). Based on this assumptions empirical researches findings confirmed that PEP and organizational attachment have interaction where PEP has positive association with organizational identification (Mael and Ashforth 1995; Bhattacharya et al 1995; Smitdts et.al 2001; Dukerich et.al. 2002; Liponnen et al. 2005; Carmeli et al. 2006).

Researchers also mentined that affective commitment was tends to be stronger in more positively evaluated groups based on these groups contribute more to a positive social identity (Ellemers, 1993; Ellemers et al., 1999: 373). Boezemon and Ellemers found that pride and respect from the organization predicts organizational commitment among volunteers. Also Carmeli and Freund cited that PEP and organizational commitment are related under concept of organizational effectiveness (Carmeli and Freund, 2002: 61–62; Freund, 2006; 78–79) where Mayer and Schorman results noted direct relationship between value commitment and organizational prestige (Mayer and Schorman, 1998). Consequenly result empirical and theorical determinations indicated

that PEP has significant and positive effects on individuals organizational commitment (Herrbach et.al, 2004; Carmeli and Freund, 2002; Carmeli, 2005a; Carmeli, 2005b; Freund, 2006).

Based on theoritical assumptions and empirical findings cited above, this research was investigated the interactions effects between employees' prestige perception, organizational commitment and identification. In related literature although there has been limited research have been focus on variables interaction, some researches were found that identification and commitment effected differently by PEP, group formation (Selfselected/assigned group membership) and group size (Ellemers et al., 1999:372), and they noted that PEP was associated affective commitment with moderator role of organizational identification (Bergami/Bagozzi, 2000:570).Similar model have been found by Carmelli and his friends, where results also cited that demographic variables such as education level have statistically significant effect on variables interaction (Carmelli et. al., 2006: 100). However those researches only cited that organizational identification has moderating role between PEP and organizational commitment relation as a cognitive component of multible identification conceptualization of Tajfel and Turner (1979). And they did not explain different level effect of organizational identification as moderator on PEP and organizational commitment relationship. On the other hand the different level effect of moderator variables would be produced differences between focal variable impacts on dependent variable. Thus researcher must be take into consider of this issue in to their studies. Limitation of related behavioral literature that did not take into consider of deeper analysis on effects of moderator variable on focal predictor, this study was investigated effects of different levels of moderator variable on the relationship between PEP and organizational commitment. In this framework we used best subset regression analysis to get best equation among all possible regression models and used simple- slope techniques in order to determine the effect of different levels of moderators on indepented variable.

3. Metod

3.1. Participants

The data used in this study taken from automotive industry firms in Turkey which were stand first on the Bursa Chamber of Commerce and Industry's annual ranking of Bursa's Most Admired 250 Companies list on 2007. Questionnaires send to 400 white collar employees who were worked as a manager and 206 usable questionnaires was received. Participants' 83 percent were male, 51.2 percent held a B.A degree and 12.6 percent an MA degree. Respondents' organizational tenure range from 1 to 16 year, with 23.2 percent between 4-7 year, 37.7 percent between 8 and 15 year, 18.4 percent were over 16 year. Both of them are full-time employees and 75 percent of participants are married.

3.2. Measures

Organizational Commitment: Affective commitment to organization was assessed with the six-item affective commitment instrument which was developed by Meyer et. al (1993) and used by other researcher in related issues for measuring affective tone of commitment (Carmeli 2005, Carmeli et.al 2006, Freund 2006) It has used confirmatory factor analysis to determined affective commitment measure. (Jöreskog, 1993) Four item were loaded on a single factor(58,72) Here by the results analysis prove the validity of the scale. (α =0.75; GFI= 0.99; AGFI= 0.99; CFI=1; RMSR=0.01; RMSEA: 0.01)

Organizational Identification: We used six-item scale of Mael and Ashforth (1992) in order to assess the organizational identification. This six –item scale was tested before (Tak, Aydemir 2004) on Turkish (N=425, $\alpha = .88$) sample. Sample item "when someone critizes my organization it feels like personal insult". For this

study single factor loading scale(58.7)confirmatory factor analysis results are $\alpha = 0.75$; GFI= 0.94; AGFI= 0.80; CFI=0.90; RMSR=0.07; RMSEA: 0.08.

Perceived External Prestige: This measure is based on Fortune magazine's Annual Survey of "American's Most Admired Corporations" Index 8 attributes an measure has been used by numerous scholars, including Fombrun and Shanley (1990), Fryxell and Wang (1994), Carmelli (2002,2005a, 2005b,2006,2004). The eight attributes were lined up as quality of management, quality of product, innovativeness, long-term investment value, financial soundness, develop and retain talent people, community and environmental responsibility and use of corporate assets. For this study overall index has been used but we divided "develop and retain talent people" attribute to two component part for avoiding misunderstanding. We asked respondents to assess their firm HRM policies by "My Company has a reputation among its key competitors for having better investment to his members" and "My Company has a reputation among its key competitors for having high level of employee quality". We have found using factor analysis nine items were loaded on a single factor. ($\alpha = 0.86$; GFI= 0.94; AGFI= 0.89; CFI=0.95; RMSR=0.04; RMSEA: 0.06)

Control variables: The respondents were asked to indicate their age, sex, marital status and education level. Those demographic variables were used to control the relationship between the independent variable and the dependent variable.

3.3. Methodology

In this paper a two-step procedure has been used in order to analyses the data set. In first stage, we used all possible regression procedure to add the most appropriate demographical factors to regression equation (1). After determining the best subset regressors, we estimated the model with full interaction terms and used simple slope and simple intercept procedures in order to deeper analyses of moderation effects.

Following the above-mentioned literature we assume,

$$OC = \beta_1 PEP + \beta_2 OI + \beta_3 (PEPxOI) \tag{1}$$

In order to add most appropriate demographical factors (age, education, martial status, sex) to equation (1), all possible regression procedure has been used. In that process, PEP, OI and their interaction term (OIxPEP) treated as fixed predictors for all models, and intercept term, age, education, martial status and sex treated as free predictors. Finding an appropriate subset of regressors for the model is called the variable selection *problem* because this process involves two conflicting objectives. Researchers want to use as many regressors as possible so that the information content in these factors can influence the predicted value of dependent variable on the other hand researcher want to use as few regressors as possible because the variance of the prediction increases as the number of regressors increases (Montgomery and Peck 1992). All possible regression procedure is a computational technique for variable selection and it requires estimating all the regression equations involving all possible subsets of the pool of potential predictors and identifying for detailed examination a few good subsets according to some criterion (Neter et al., 1996).

We used three criteria for evaluating subset regression models. Our first criteria is the Adjusted R^2 statistic which allow us to avoid the problems of interpreting R^2 . We choose the model that has a maximum adjusted R^2 statistic. The second evaluation criteria that we used is residual mean square (MS_E),

$$MS_E = \frac{SS_E}{n-p}$$
 where, SS_E denotes the residual sum squares, n and p denotes number of observations and

number of regresors in the model respectively. It is clear that SS_E decreases when p is increases, so when p

increases, MS_E initially decreases, then stabilizes, and finally increases (Montgomery and Peck 1992). We choose the model, which has a minimum residual mean square. Our third criteria is Mallow's C_p statistic which allow us to determine the regression equation with little bias (Rencher, 1995). We choose the model that has a minimum C_p statistic.

After determining the best subset regressors, we estimated the regression equation with full interaction terms and used simple slope and simple intercept procedures. An interaction occurs when the magnitude of the effect of one independent variable on a dependent variable varies as a function of other independent variable(s) (Preacher et. all, 2006). This is also known as a moderation effect. Simple slope and simple intercept procedures are allow us to understand the nature of the conditional relation (Akien and West, 1991). If the interaction term is found to be significant at a given significance level, the regression of dependent variable on a focal predictor is typically probed across values of the moderator(s).

Let us, following equation is determined as best subset regression at the end of all possible regression procedure.

$$OC = \beta_0 + \beta_1 PEP + \beta_2 OI + \beta_3 EDUC + \beta_4 (PEPxOI) + \beta_5 (PEPxEDUC) + \beta_6 (OIxEDUC) + \beta_7 (PEPxOIxEDUC)$$
(2)

here, if β_7 is statistically significantly different from zero, and taking into consideration the literature behind equation (1), one can claim that PEP is focal predictor and OI and EDUC are moderators. In this case, it is possible to write

$$OC = [\beta_0 + \beta_2 OI + \beta_3 EDUC + \beta_6 (OIxEDUC)] + [\beta_1 + \beta_4 (OI) + \beta_5 (EDUC) + \beta_7 (OIxEDUC)]PEP$$
(3)

where,

 $[\beta_0 + \beta_2 OI + \beta_3 EDUC + \beta_6 (OI \times EDUC)]$ called as simple intercept

and

 $[\beta_1 + \beta_4(OI) + \beta_5(EDUC) + \beta_7(OIxEDUC)]PEP$ called as simple slope

Therefore, it is clear that we are interested in the regression of OC (dependent variable) on PEP (focal predictor) at *particular values* of OI and EDUC (moderators). By using equation (3) and by choosing specific values of moderators, one can obtain four different equations. For dichotomous moderators, these specific values assume as values of the dichotomy (usually 0 and 1) (Preacher et. all, 2006). For continuous moderators, if there is no any theoretically meaningful values, one standard deviation below from mean and one standard deviation above from mean values of moderators can be used as specific values (Cohen and Cohen, 1983). By choosing specific values of moderators we can write,

$$OC_{1} = [\beta_{0} + \beta_{2}OI_{low} + \beta_{3}EDUC_{low} + \beta_{6}(OI_{low}xEDUC_{low})] + [\beta_{1} + \beta_{4}(OI_{low}) + \beta_{5}(EDUC_{low}) + \beta_{7}(OI_{low}xEDUC_{low})]PEP$$

$$OC_{2} = [\beta_{0} + \beta_{2}OI_{high} + \beta_{3}EDUC_{low} + \beta_{6}(OI_{high}xEDUC_{low})] + [\beta_{1} + \beta_{4}(OI_{high}) + \beta_{5}(EDUC_{low}) + \beta_{7}(OI_{high}xEDUC_{low})]PEP$$

$$OC_{3} = [\beta_{0} + \beta_{2}OI_{low} + \beta_{3}EDUC_{high} + \beta_{6}(OI_{low}xEDUC_{high})] + [\beta_{1} + \beta_{4}(OI_{low}) + \beta_{5}(EDUC_{high}) + \beta_{7}(OI_{low}xEDUC_{high})]PEP$$

$$OC_{4} = [\beta_{0} + \beta_{2}OI_{high} + \beta_{3}EDUC_{high} + \beta_{6}(OI_{high}xEDUC_{high})] + [\beta_{1} + \beta_{4}(OI_{high}) + \beta_{5}(EDUC_{high}) + \beta_{7}(OI_{high}xEDUC_{high})]PEP$$

These four equations makes it clear that, by using simple slope and simple intercept procedures, moderator effect can be examined deeply. Additionally, these four simple slope and simple intercept are statistically different from each other because the coefficient of interaction term β_7 in equation (2) is statistically significantly different from zero. In other words, testing β_7 in equation (2) statistically different from zero is equivalent to testing these four simple slope and simple intercept are statistically different from each other. On the other hand, testing each one of the simple slope is statistically different from zero, can be tested by a t test but in this case, standard errors of the simple slopes must be determined as follows,

$$\begin{split} s_{b} &= sqrt[s_{11} + (OI)^{2}s_{44} + (EDUC)^{2}s_{55} + (OI)^{2}(EDUC)^{2}s_{77} + (2OI)s_{14} + (2EDUC)s_{15} \\ &+ (2OI)(EDUC)s_{17} + (2OI)(EDUC)s_{45} + (2EDUC)(OI)2s_{47} + (2OI)(EDUC)^{2}s_{57}] \end{split}$$

where, S_{ij} 's can be obtained from the asymptotic covariance matrix of regression coefficients.

4. Analysis and Results

4.1. Factor Analysis

In order to get factor scores of scales (Organzational Commitment, Organzational Identification, Percieved External Prestige), we applied confirmatory foctor analysis and explanotary factor analysis to our data set. Following Table1-3 show GFI, AGFI, CFI, RMSEA, α and factor loadings of items.

GFI : 0.99 AGFI : 0.99, CFI:1.00, RMSR: 0.01, RMSEA: 0. 00, α= 0.757	Means	Std.dev	Factor Loadings
I would very happy to spend the rest of my career with this organization.	4	0.87	0.769
I really feels as if this organization's problems are my own.	4	0.79	0.803
This organization has a great deal of personal meaning form me.	3.79	0.92	0.800
I do not feel like "emotional attachment" to this organization (R)	3.80	0.99	0.685
Total Scale	3.9	0.685	
Total variance			58,72

Table 1. Organzational Commitment Scale

GFI : 0.94, AGFI : 0.80, CFI:0.90 , RMSR: 0.07 , RMSEA: 0, 08, α= 0.756	Means	Std.dev	Factor Loadings
When someone criticizes my company, it feels like a personal insult	3.69	0.99	0.695
I am very interested in what others think about my company	3.73	0.98	0.763
This company's successes are my successes	4.17	0.78	0.735
When someone praises this company, it feels like a personal compliment.	4.05	0.85	0.859
Total Scale	3.91	0.69	
Total variance			58.7

Table 2. Organzational	Identification Scale
------------------------	----------------------

Table 3. Percieved External Prestige			
GFI : 0.94 AGFI : 0.89 , CFI:0.95 , RMSR: 0.04 , RMSEA: 0. 06, $\alpha {=} 0.86$	Means	Std.dev	Factor Loadings
My Company has a reputation among its key competitors for having better management quality.	3.71	0.86	0.781
My Company has a reputation among its key competitors for having better product and service quality.	4.07	0.75	0.808
My Company has a reputation among its key competitors for having better community and environmental responsibility.	4.21	0.72	0.652
My Company has a reputation among its key competitors for having better financial soundness.	3.82	0.72	0.706
My Company has a reputation among its key competitors for having better innovativeness.	3.91	0.80	0.807
My Company has a reputation among its key competitors for having high level of employee quality	3.97	0.76	0.731
My Company has a reputation among its key competitors for having better investment to his members.	3.71	0.93	0.747
Total Scale	3.91	0.59	
Total Variance			56.21

According to results of Factor Analysis, each of the unique scales loaded on a single factor. So that, as mentioned methodology section, we assumed the valid model which is accepted in related literature that Organizational Identification has mediating role between Percieved External Prestige and Organizational Commitment is as followig,

$$OC = \beta_1 PEP + \beta_2 OI + \beta_3 (PEPxOI)$$

In order to determine this model's efficiency, we also consider to add demographical factors to equation (1). For this purpose, based on the methodology section, we used all possible regression procedure. Here by results of analysis in table 4.

(1)

Model	Intercept	Age	Education	Mar. Stat	Sex	R-Sq(adj)	C-p	MSe
1	Х		Х			49.1	2.8	0.49338
2	Х			Х		48.8	3.9	0.49476
3	Х				Х	48.7	4.3	0.49528
4	Х	Х				48.6	4.5	0.49553
5	Х		Х	Х		49	4.2	0.49398
6	Х		Х		Х	48.9	4.6	0.49437
7	Х	Х	Х			48.8	4.8	0.49462
8	Х			Х	х	48.6	5.6	0.49572

Table 4. Summary of All Possible Regression for Best 8 Model (Independent variables in equation (1) are fixed predictors in all models)

Consider evaluating to table IV, Model I which, has intercept term and education factor, have higest adjusted R^2 , lowest Mollow's C-p and minumum MS_E statisites, selected as best subset regression equation.

After determining the best subset regressors, we estimated the regression equation with full interaction terms. Thus we reached following model as our final model

$$OC = \beta_0 + \beta_1 PEP + \beta_2 OI + \beta_3 EDUC + \beta_4 (PEPxOI) + \beta_5 (PEPxEDUC) + \beta_6 (OIxEDUC) + \beta_7 (PEPxOIxEDUC)$$
(2)

Table 5 shows estimation results of Equation (2). Following Preacher et. all (2006), one can claimed that interaction occurs when the magnitude of the effect of one independent variable on a dependent variable varies as a function of other independent variable(s), this is also known as a moderation effect. In our case, interactions occur when the magnitude of the effect of PEP on OC varies as a function of OI and EDUC. As can be seen in Table 5, all coefficients are statistically significant at %5 significance level in our final model. Moreover, model has adj. R^2 tatistic 0.51 which is a considerable explanatory level. If we compare this result with Adj. R^2 statistic of Model 1 which is presented in Table 4. our final model's variance explanation power is increased %2. Final model's Covariance matrix can be seen in Table 6.

4.2. Simple Slope And Simple Intercept Analysis

Estimation results of equation 2 and variance covariance matrix can be seen on Table 5 and VI respectively.. Table 5. Estimation Results for Equation 2

Dependent Variable: OC					
Included observations:	206				
	Coef.	Std. Err.	t-Stat.	Prob.	
Intercept	1.94	0.04	48.50	0.00	
PEP	0.13	0.07	1.99	0.04	
OI	0.63	0.06	10.09	0.00	
EDUC	-0.22	0.11	-1.98	0.04	
PEPxOI	-0.01	0.00	-2.25	0.03	
PEPxEDUC	0.38	0.20	1.94	0.05	
OIxEDUC	-0.29	0.14	-2.11	0.04	
PEPxOIxEDUC	0.24	0.11	2.17	0.03	
R-squared	0.52		F-statistic	30.24	
Adjusted R-squared	0.51		Prob (F-stat)	0.00	
S.E. of regres.	0.48		Sum squared resid	47.36	

Alphanumeric Journal

The Journal of Operations Research, Statistics, Econometrics and Management Information Systems ISSN 2148-2225

					1			
	С	PEP	OI	EDUC	PEPxOI	PEPxEDUC	OIxEDUC	PEPxOIxEDUC
С	0.001612	-6.54E-05	-9.73E-05	-0.001543	-0.000999	6.54E-05	9.73E-05	0.000999
PEP	-6.54E-05	0.004901	-0.002511	6.54E-05	-4.70E-05	-0.005635	0.002511	4.70E-05
OI	-9.73E-05	-0.002511	0.003610	9.73E-05	0.000468	0.002511	-0.003949	-0.000468
EDUC	-0.001543	6.54E-05	9.73E-05	0.012113	0.000999	0.004066	-0.004644	-0.012414
PEPxOI	-0.000999	-4.70E-05	0.000468	0.000999	0.000021	4.70E-05	-0.000468	-0.004683
PEPxEDUC	6.54E-05	-0.005635	0.002511	0.004066	4.70E-05	0.042054	-0.032843	-0.005054
OIxEDUC	9.73E-05	0.002511	-0.003949	-0.004644	-0.000468	-0.032843	0.019601	0.013716
PEPxOIxEDUC	0.000999	4.70E-05	-0.000468	-0.012414	-0.004683	-0.005054	0.013716	0.012101

Table 6. Variance Covariance Matrix for Equation2

Our final model also can be written as equation 3 as follow;

33

$$OC = [1.94 + 0.63OI - 0.22EDUC - 0.29(OIxEDUC)] + [0.13 - 0.01(OI) + 0.38(EDUC) + 0.24(OIxEDUC)]PEP$$
(3)

By using this equation (3) and by choosing specific values of moderators we investigated the magnitude of the effect of PEP on OC varies as a function of OI and EDUC. EDUC is a dichotomous variable and OI is continuous variable therefore, we used 0 and 1 for EDUC and one standard deviation below from mean and one standard deviation above from mean values of OI are used as specific values. This process allows us to examine the moderators effect extensively. By using those specific values of moderators in equation (3), we reached the following sub-equations, which were; allow us to understand the impacts of low and high levels of moderators on the relationship between PEP and OC.

These four sub-equations can be shown in Table 7 below,

No	Specific Values of Moderators	Sub-Equations			
	Education Low	OC = 1.51 + 0.14 PEP			
1	OI Low	(25.17*) (1.94**)			
	Education Low	OC = 2.37 + 0.12 PEP			
2	OI High	(39.50*) (1.76**)			
	Education High	OC = 1.48 + 0.35 PEP			
3	OI Low	(9.87*) (1.68**)			
	Education High	OC = 1.95 + 0.67 PEP			
4	OI High	(17.73*) (3.84**)			

t tests are given in the paranthesis,

*, **, *** represent 1%, 5%, 10% significiance levels.

According to table VII, When PEP is zero, the mean value of OC for the group, which includes individuals who are Low educated and have Low OI scores, is equal to 1.51. If Education and OI are fixed in those low levels, every 1 unit increases in PEP will causes 0.14 unit increases in OC scores (see Model No1 in table 7.).

When PEP is zero, the mean value of OC for the group, which includes individuals who are Low educated and have High OI scores, is equal to 2.37 and every 1 unit increases in PEP will causes 0.14 unit increases in OC scores for that group (see, model no 2 in table 7).

When PEP is zero, the mean value of OC for the group, which includes individuals who are High educated and have low OI scores, is equal to 1.48 and every 1 unit increases in PEP will causes 0.35 unit increases in OC scores for that group (see, model no 3 in table VII).

When PEP is zero, the mean value of OC for the group, which includes individuals who are High educated and have High OI scores, is equal to 1.95 and every 1 unit increases in PEP will causes 0.67 unit increases in OC scores for that group (see, model no 4 in table VII).

5. Discussion

In thes sub section we compared four different groups which can be shown on Table 7.

If one compares Model no 1 and Model no 2 he can claim that while education is fixed in its low level, a change in OI scores from their low level to high-level causes 0.86 unit increases when PEP is equal to zero. Although there is statistically significantly differences between the slope parameters of the models no1 and no2 in table VII, differences of the impact of slopes is so close (0.02). So, a change in OI scores from its low level to its high-level, when education set low level, causes very small effect to magnitude of the effect of PEP on OC. If ecucation is low the direct effect of OI on OC is remarkable, the moderating effect on PEP would be neglected.

While education is fixed in its high level, a change in OI scores from its low level to its high-level causes 0.47 unit increases when PEP is equal to zero. In that case, every one unit increases in PEP will cause additional 0.32 unit increases in OC scores. So when education is high, a change in OI scores from their low level to high-level, the magnitude of the effect of PEP on OC drastically increases (see model no. 3 and 4). Thus if education is high; not only direct effect of OI on OC but also moderating effect of OI on PEP dramatically increases. Hence, we could say that, high educated employees were more carry weight to prestige perception that low educated ones.

On the other hand, OI scores are fixed their low level (models no1 and no3), a change in education from its low level to its high-level causes statistically significant but small decreases (0.03) when PEP is equal to zero. In that case, every one unit increases in PEP will cause additional 0.21 increases in OC scores in. Therefore, when OI scores of individuals are low, if education level moves from low to high, the magnitude of the effect of PEP on OC drastically increases. Thus, one could say that, when set OI in low level, direct effect of education on OC is not considerable. However, while moving education low to high, its produced conspicuous increases on moderating effect on the relationship between PEP and OC.

While OI scores are fixed in its high level, a change in education from its low level to its high-level causes again decreases (but this time considerable amount, 0.42 units) when PEP is equal to zero. In that case, every one unit increases in PEP will cause additional 0.55 unit increases in OC scores (see, model no2 and no4). When OI is fixed in its high level, a change in education from its low level to its high-level causes drastically increases on the magnitude of the effect of PEP on OC.

6. Conclusion

In this research, we accepted PEP association with OC by moderetor role of Organizational Identification model and investigate the impact of diffrent level of moderator variable(s) on focal predictor. Then we used best subset regression procedure and simple slope tecniques for identify the different levels effects of moderator variables. This process allows us to examine the moderators effect extensively. The results showed different

levels of moderators have produced remarkable and various impacts on the relationship of focal predictors on dependent variables. The most screaming result of this study is that: High educated employees' who were high indentification with their organization, give high weight to their organization prestige where this prestige perception causes remarkable increases on thier organizational commitment level.

REFERENCES

- [1]. Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks: Sage
- [2]. Ararat M. and C. Goceneoglu (2006). Drivers for Sustainable Corporate Responsibility. Retrieved August 5, 2006 from http://info.worldbank.org/etools/mdfdb/docs/wp_UJRCS.pdf
- [3]. Aycan Zeynep, Kanungo Rabindra, Mendonca Manuel, Yu Kaicheng, Deller Jurgen, Stahl Günter, Kurshid Anwar (2000) Impact of Culture on Human resource Management Practice: A 10 Country Comparison, Applied Psychology : An International Review, 49 (1), 191-221
- [4]. Bergami, Massimo, Richard P. Bagozzi (2000) Self-Categorization, Affective Commitment And Group Self-Esteem As Distinct Aspects Of Social Identity In Organization, British Journal of Social Psychology, 39, 555-577
- [5]. Boezeman Edwin j., Ellemers NaomI(2008) Pride and respect in volunteers' organizational commitment European Journal of Social Psychology, 38, 159–172
- [6]. Boyacigiller NA, Adler NJ(1991) Parochial dinosaur :organizational science in a global context., Academy of Management Review, 262-290
- [7]. Carmeli A.(2005b) Exploring determinants of job involvment an empirical test among senior executives, International Journal of Manpower, Vol 26, No 5, 457-471
- [8]. Carmeli Abraham, Anat Freund,(2002) "The Relationship Between Work and Workplace Attitudes and Perceived External Prestij", Corporate Reputation Review, Vol 5, No1, 51-68
- [9]. Carmeli, Abraham, Gerson Gilat, Jocob Weisberg (2006) "Perceived External Prestige, Organizational Identification and Affective Commitment: A Stakeholder Approach", Corporate Reputation Review, Vol 9, No 1, 92-104
- [10]. Carmeli, Abraham,(2004) "The Link Between Organizational Elements Perceived External Prestige And Performance", Corporate Reputation Review, Vol 6, No4, 314-331
- [11]. Carmeli, Abraham,(2005a) Perceived External Prestige, Affective Commitment And Citizenship Behavior, Organizational Studies, Vol 26, No 3, 443-464
- [12]. Cialdini R.B., R.J. Borden, A. Thorne, M.R. Walker, S. Freeman, L.R Sloan, (1976) Basking In Reflected Glory: three (football) field studies, Journal of Personality and Social Psychology, 34, 366-375
- [13]. Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). Applied multiple regression/correlation analysis for the behavioral sciences, 3rd ed. Hillsdale: Erlbaum
- [14]. Dukerich, J.M., Golden B.R., Shortell S.M.(2002) Keeping An Eye On The Beholder: The Impact Of Organizational Identification, Identity And Image On The Cooperative Behaviors Of Physicians, Administrative Science Quarterly, 47, 507-533
- [15]. Dutton, J.E, J.M Dukerich (1991)"Keeping An Eye On The Mirror: The Role Of Image And Identity in Organizational Adaptation", Academy Of Managenet Journal, 34, 517-554
- [16]. Dutton, Jane E., Janet M. Dukerich, Celia V. Harquail(1994) "Organizational Image and Member Identification", Administrative Science Quarterly, Vol 39,Issue 2, 239-263
- [17]. Ellemers, Naomi, Paulien Kortekaas, Jaap W. Ouwerkerk, (1999)"Self-Categorization, Commitment To The Group And Group Self-Esteem As Related But Distinct Aspects Of Social Identity", European Journal of Social Psychology, 29, 371-389
- [18]. Fombrun, Charles, Shanley Mark (1990) "What's In A Name? Reputation Building and Corporate Strategy", Academy Of Management Journal, Vol 33, No 2, 233-258
- [19]. Freund, Anat (2006) "Work and Workplace Attitudes on Social Workers: Do They Predict Organizational Reputation?", Business And Society Review, 111:1,2006, 67-87
- [20]. Fryxell, Gerald E., Jia Wang,(1994) "The Fortune Corporate "Reputation Index: Reputation for What?", Journal of Management, Vol 20, No1, 1-14
- [21]. Herrbach, Oliver (2006), "A Matter of Feeling? The Affective Tone of Organizational Commitment and Identification", Journal of Organizational Behavior, Vol 27, 629-643

- [22]. Hofstede Greet, Cultural Dimention In Management And Planing, Asia Pasific Journal Of Management, Vol 1, Issue 1, 1984 81-99
- [23]. Joreskog, K.G. (1996), Testing Structural Equation Models. Bollen K., Scott, L. (Der.), Sage Pub: London
- [24]. Mael, Fred, Blake E. Ashforth,(1992) "Alumni and Their Alma Mater: A Partial test of the Reformulated Model of Organizational Identification", Journal of Organizational Behavior, Vol 13, 103-123
- [25]. Mayer Roger C., F.David Schoorman(1998) Differentiating Antecedents of Organizational Commitment : A test of March and Simon's Model, Journal of Organizational Behavior, Vol 19, 1998, 15-28
- [26]. Meyer, John P., Natalie J Allen, Catherine A. Smith(1993) "Commitment To Organizations and Occupations: Extension And Test Of A Three-Component Conceptualization", Journal Of Applied Psychology, Vol 78, No 4, 538-551
- [27]. Meyer, John P., Natalie J. Allen (1991) A Three-component Conceptualization Of organizational Commitment, Human Resource Management Review, Vol 1, Number 1, 61-89
- [28]. Meyer, John P., Natalie J. Allen(1997) Commitment in Workplace, Theory Research and Application, Sage Publication, California
- [29]. Meyer, John P., Natalie J. Allen, Ian R. Gellatly (1990) "Affective And Continounce Commitment To the Organizations: Evaluation of Measures And analysis Of Concurrent And Time-Lagged Relations", Journal Of Applied Psychology, Vol 75, No 6, 710-720
- [30]. Montgomery, C., M. & Peck, E., A. (1992). Introduction to Linear Regression Analysis 2nd ed., John Wiley & Sons, INC, New York.
- [31]. Neter, J., Kutner, M., Nachtsheim, C., & Wasserman, W. (1996), Applied Linear Statistical Models., McGraw-Hill Companies, Inc., NY
- [32]. Pratt, Michael G.(1998) "To Be or Not To Be? Central Questions in Organizational Identification", Identity In Organizations Ed: David A Whetten, Paul C. Godfrey, Sage Publications, California.
- [33]. Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. Journal of Educational and Behavioral Statistics, 31, 437-448.
- [34]. Rencher, A. C. (1995), .Methods of Multivariate Analysis., John Wiley & Sons Inc., New York, New York.
- [35]. Riordan, Christine M., Robert D. Gatewood, Jadi Barnes Bill(1997) "Corparate Image: Employee Reactions and Implications for Managing Corporate Social Performance", Journal Of Business Ethics, Vol 16, 401-411
- [36]. Smidts, Ale, Ad Th. H Pruyn, Cees B.M Van Riel(2001) "The Impact Of Employee Communication And Perceived External Prestige On Organizational Identification", Academy Of Management Journal, Vol 49, No 5, 1051-1062
- [37]. Tak B, Aydemir B. A. "Örgütsel Özdeşleşme Üzerine İki Görgül Çalışma, 12.Ulusal Yönetim ve Organizasyon Kongresi, Bursa, 2004, Turkey
- [38]. Tsui, A. S., Egan, T. D. and O'reilly, C. A., Being Different: Relational Demography and Organizational Attachment, Administrative Science Quarterly, Vol:37, 549-579, 1992.
- [39]. Turner J.C, R.J Brown, H. Tajfel(1979) "Social Comporison And group interest in ingroup favoritism", European Journal of Social Psychology, Vol 9, 187-204