

Determining Canonical Variables of Organizational Justice and its Role in Organizational Commitment of the Staff of Iran Oil Industry: The Case of Isfahan Oil Refinery Company

¹Nahid Naderi , ¹Reza Hoveida , ²Arash Shahin, Mohammad ³Reza Naderi

¹Department of Educational Sciences, University of Isfahan, Isfahan, Iran

²Department of Management, University of Isfahan, Isfahan, Iran

³Department of Industrial Engineering, Kharazmi University, Tehran, Iran

nanaderi84@yahoo.com

Abstract: The aim of this survey is to determine canonical variables in organizational justice and organizational commitment of the staff of Isfahan Oil Refinery Company and the relationship among them. The survey method is typically descriptive correlation, and sampling has been performed by random classification method. To collect data, two researcher made questionnaires of organizational justice and organizational commitment have been used. Their validity has been approved by experts and their reliability has been calculated as 0.89 and 0.81, respectively using Cronbach's Alpha coefficient. To analyze the data, correlation test and regression have been used. The results imply that there is a relationship among organizational justice, organizational commitment and procedural justice; and interactive justice and distributional justice predictor variables have respectively relationship with organizational commitment criterion variable. The procedural justice and interactive justice predict affective commitment and normative commitment, and procedural justice has relationship with continuous commitment. There is also significant relationship between the first pair of canonical variables including distributional justice and linear combination of all indicators of organizational commitment.

[Nahid Naderi, Reza Hoveida, Arash Shahin, Mohammad Reza Naderi. **Determining Canonical Variables of Organizational Justice and its Role in Organizational Commitment of the Staff of Iran Oil Industry -The Case of Isfahan Oil Refinery Company.** *J Am Sci* 2012;8(11):74-79]. (ISSN: 1545-1003). <http://www.jofamericanscience.org>. 11

Keywords: Organizational justice, Procedural justice, Organizational commitment, Normative commitment

1. Introduction

Organizational justice has been widely investigated and studied in management, psychology, and organizational behavior fields since 45 years ago; and by determining other important variables in organizational behavior such as organizational commitment, a special place is found in management texts (1). Folger et al. (2005) believed that observing justice in organization is one of the basic moral hypotheses for manifesting normative behaviors (2), and according to Rupp et al. (2007), personal and group norms determine the type of justice and consideration to observe it (3). Organizational justice has three dimensions which are distributional justice, procedural justice, and interactive justice (4). Distributional justice refers to merely outcomes received by an employee like salary and reward (5). According to Rocba (2009) procedural justice refers to the ratio that distributing resources is based on methods, procedures, and approaches (6). Fairness of current norms in decision making will be one of the important causes of increasing motivation for staff's better performance, because the staff being completely informed of procedures like performance assessment, would find out their strengths and weaknesses, and try to strengthen or remove these points and continue their work more encouragingly. Interactive justice

refers to the quality of interpersonal behaviors that one is exposed to before and after making decision (7).

According to Stup (2006), organizational commitment includes a powerful state of dependency or belonging to an organization or place where one is working (8). He believes considering organizational commitment is very important, because committed employees think less about leaving the job or organization, and pursuit more to offer performance in excellent level. Meyer and Allen (1997) refer to three organizational commitments of affective commitment, i.e. including staff's affectionate dependency to be identified by organization and involving in organizational activities (9). This type of commitment refers to dependency of one's feeling to organization. Those people who have strong affective commitment, maintain their membership in organization and continue their activity in organization, and in fact tend to do so; continuous commitment including the commitment that is based on valuing organization and in this respect the employee shares in organization; continuous commitment refers to remaining in organization because of the costs of leaving organization or rewards due to remaining in organization; this type of commitment is definable based on timely and long term investment in organization and do not cause leaving organization

and results in more tendency to remain in organization (10,11); normative (obligation) commitment reflects people's feelings regarding the necessity of remaining in organization or sense of duty to remain as a member of organization (12). Normative commitment refers to people's loyalty to organization, and those who have naturally such commitment, believe that continuing the activity in the organization is their duty. The common point of the three mentioned approaches is that commitment is a mental state that specifies the relationship between employee and organization; and implicitly refers to continuation or discontinuation of one's membership in organization (13).

2. Research background

Madani (2005) reached to the following results by investigating staff's organizational commitment and factors impacting on it in National Refinery Industries Company: organizational commitment (general), affective commitment, normative commitment, and continuance commitment under investigation was higher than medium (14). The organizational justice variable has also had the lowest average. In this survey, one of the factors impacting on organizational commitment was organizational justice, so as organizational justice had indirect impact on organizational commitment (general), affective commitment, and normative commitment, but it has not had any impact on continuous commitment. Behravan and Saiedi (2011) in their survey about factors impacting on organizational commitment ratio of the staff of Khorasan Razavi Province Gas Company in Iran also found that the organizational commitment ratio has positive significant relationship with organizational justice, independency in work, role pressure, opportunities and job promotion, and role ambiguity variables; and organizational justice is regarded as the most important and determinant factor that directly and positively impacts on organizational commitment ratio (15). Masterson et al. (2000) by investigating the relationship between organizational justice and social interaction and different impacts of procedural justice on job relationships also reached to this result that there is a direct significant relationship between procedural justice and organizational commitment, and between interactive justice and organizational commitment (16). Colquitt et al. (2001) by performing a meta-analysis about researches related to organizational justice during the past 25 years reached to this conclusion that positive results due to understanding organizational justice results in increase of cases like job satisfaction, organizational commitment, organizational citizen behavior, and job performance (17). Wharton et al. (2004) in their article entitled as "The issue of social behavior, justice, and commitment in working places" investigated the

relationship of mentioned factors among 625 academic members in American Universities, and concluded that there is a direct and significant relationship among distributional justice, procedural justice, interactive justice and organizational commitment (18). Ponnu and Chuah (2010) by investigating the relationship between organizational commitment and organizational justice in Malaysia found that there is a strong, positive, and significant relationship between organizational justice and organizational commitment (19). Ehsan Malik and Naeem (2011) in their survey of the impact of understanding organizational justice on organizational commitment stated that there is a positive and significant relationship between these two variables (20). Considering the literature, the aim of this survey is to investigate three basic questions of i) to what extent is there relationship between organizational justice (general) and organizational commitment (general)?; ii) to what extent does organizational justice indicators (affective, normative, and continuance) predict organizational commitment and its indicators?; and iii) to what extent is there relationship between organizational justice indicators and organizational commitment indicators?

3. Research methodology

This survey is typically a descriptive-correlation and its statistical population includes all of the managers, supervisors, and official staff of Isfahan Oil Refinery Company in 2008. They operate in administration, operation, maintenance, engineering, commercial, financial and legal fields. The sampling method has been performed by random classification method. First all of the staff, managers, and supervisors according to their field of activity are specified, then 33 people in the field of engineering, 92 in the field of operation, 62 people in the field of maintenance, 11 people in the field of commercial, 7 people in the field of financial and legal, and 21 people in the field of administration are selected as the sample. Out of 216 people, 191 participated in this survey. In this study, two researcher made questionnaires about organizational justice and organizational commitment have been used with five degrees scale. Validity of its content has been approved by managerial experts and industrial consultants of the mentioned company. In the next stage, the final questionnaire for experimental performance and determining its reliability is distributed among 25 people of the desired population. The surveyors after preparing survey proposal and final approval by Isfahan Refinery officials collected the data in cooperation with three departments of training, research and development, and public relations. In this respect, considering the appropriate place and sending invitation to all directors, and

supervisors of various units, the questionnaires have been collected by research and development, and public relations offices.

In table 1, the average and standard deviation of organizational justice and organizational commitment variables are addressed.

4. Findings

Table (1): Average and standard deviation of organizational justice and organizational commitment indicators

Indicators	\bar{X}	S	Indicators	\bar{X}	S
Distributinal Justice	2.55	0.517	Affective Commitment	3.48	0.738
Procedural Justice	2.55	1.019	Normative Commitment	3.47	0.626
Interactive Justice	3.02	0.891	Continuance Commitment	3.05	0.515
Organizational Justice	2.71	0.755	Organizational Commitment	3.33	0.505

Considering the data addressed in table 2, there is a direct and significant relationship between organizational justice and organizational

commitment. Based on 30 percent of determinant coefficient, the variance of organizational justice and organizational commitment has been common.

Table (2): Correlation coefficient between organizational justice and organizational commitment

Organizational Justice	Organizational Commitment			
	r	r ²	P	N
	0.551	0.30	0.001	191

According to the findings of table 3, there is a significant relationship between organizational justice and organizational commitment at $P \leq 0.05$

level. By calculating canonical correlation coefficient in table 6, the ratio of pair correlations between indicators are specified.

Table (3): Matrix correlation between organizational justice and organizational commitment dimensions

Indicators	Distributinal Justice		Procedural Justice		Interactive Justice		Affective Commitment		Normative Commitment		Continuance Commitment	
	r	p	r	p	r	P	r	p	r	p	R	P
Distributinal Justice			0.709**	0.001	0.485**	0.001	0.438**	0.000	0.426**	0.000	0.253**	0.000
Procedural Justice					0.549**	0.001	0.472**	0.000	0.455**	0.000	0.287**	0.000
Interactive Justice							0.410**	0.000	0.405**	0.000	0.194**	0.007
Affective Commitment									0.818**	0.000	0.259**	0.000
Normative Commitment											0.234**	0.002
Continuance Commitment											-	-

Based on multiple regressions results in table 4, the best predictors of organizational commitment are procedural, interactive, and distributinal justice respectively. Based on determinant coefficient, procedural justice solely accounts 26 percent variance of organizational commitment. When the two interactive and distributinal variables enter, the accounted ratio of variance has increased to 29 and 31 percent respectively. The best predictor of affective commitment is procedural justice and interactive justice as well. Based on determinant coefficient, procedural justice solely states 0.223 variance of affective commitment, and when

interactive justice enters, this common variance increases to 0.248. Another result of this table is that the most appropriate predictors of normative commitment are also two procedural and interactive justice indicators. Procedural justice accounts 0.207 common variance of normative commitment, and when interactive justice variable enters, this variance increases to 0.241. The most important predictor of continuance commitment is procedural justice that accounts common variance of continuance commitment based on 0.082 determinant coefficients.

Table (4): Multiple (step by step) regressions between organizational justice and organizational commitment indicators

Criterion	Predictor variable		R	R ²	Square of Justified Correlation	Standard Error	F	P
Organizational Commitment	First Step	Procedural Justice	0.511	0.261	0.257	10.49	66.750	0.001
	Second Step	Procedural Justice	0.543	0.259	0.288	10.27	39.403	0.003
	Third Step	Procedural Justice Interactive Justice Distributinal Justice	0.558	0.312	0.301	10.18	28.211	0.037
Affective Commitment	First Step	Procedural Justice	0.472	0.223	0.219	0.652	54.29	0.001
	Second Step	Procedural Justice	0.506	0.256	0.248	0.640	32.29	0.001
Normative Commitment	First Step	Procedural Justice	0.455	0.207	0.203	0.55	49.28	0.001
	Second Step	Procedural Justice Interactive Justice	0.491	0.241	0.233	0.45	29.89	0.001
Continuance Commitment	Procedural Justice		0.287	0.082	0.077	0.595	16.94	0.000

Based on Beta coefficient in table 5, per unit increase in procedural justice, the organizational commitment increases 0.237 unit; per unit increase in interactive justice, the organizational commitment increases 0.197 unit; and per unit increase in distributinal justice, the staff's organizational commitment increases 0.183 unit. By increasing one unit to procedural justice and interactive justice to the

affective commitment ratio, 0.354 and 0.215 units also increase respectively. Based on Beta coefficient in this table, per unit increase in procedural justice, normative commitment increases 0.33 unit; per unit increase in interactive justice, normative commitment increases 0.22 unit; and per unit increase in procedural justice, continuous commitment ratio increases 0.287 unit.

Table (5): Significant variables in multiple regressions between organizational justice and organizational commitment indicators

Criterion	Predictor variable		Non-Standard Coefficient		Beta	T	P
			β	Standard Error			
Organizational Commitment	First Step	Procedural Justice	6.09	0.74	0.511	8.17	0.000
	Second Step	Procedural Justice	4.64	0.87	0.389	5.30	0.000
		Interactive Justice	0.03	1.00	0.222	3.02	0.003
	Third Step	Procedural Justice	3.25	1.09	0.237	2.98	0.0003
		Interactive Justice Distributinal Justice	2.69 2.96	1.005 1.41	0.197 0.183	2.67 2.09	0.008 0.007
Affective Commitment	First Step	Procedural Justice	0.342	0.04	0.472	7.36	0.001
	Second Step	Procedural Justice	0.256	0.05	0.354	4.69	0.001
		Interactive Justice	0.179	0.06	0.216	2.86	0.005
Normative Commitment	First Step	Procedural Justice	0.27	0.04	0.45	7.02	0.001
	Second Step	Procedural Justice	0.20	0.04	0.33	4.37	0.001
		Interactive Justice	0.15	0.05	0.22	0.92	0.004
Continuance Commitment	Procedural Justice		0.145	0.037	0.287	0.116	0.001

Based on the findings of table 6, the correlation between the first pair of central variables is equal to 0.561. This value shows the existence of a medium linear correlation between organizational justice variables and any combination of organizational commitment variables. There is a correlation between the first pair of organizational justice and organizational commitment indicators. The first value of Chi-square, equals to 71.185, corresponding to Wilks coefficient at $P \leq 0.05$ level is significant

indicating that all correlations in the first pair of conical variables are not equal to zero. The second value, equal to 0.817 at $P \leq 0.05$ level is not significant. For the third value, all of the correlations are equal to zero. Thus, the third question has solely been confirmed in the first pair of central variables. level. By calculating canonical correlation coefficient in table 6, the ratio of pair correlations between indicators are specified.

Table (6): Correlation coefficients between organizational justice and organizational commitment dimensions

Significant level	Degree of Freedom	Chi-square	Wilks
0.001	9	71.185	0.683
0.936	4	0.817	0.996
0.951	1	0.004	1.000

5. Discussion and conclusions

The main aim of this survey was to investigate the relationship between organizational justice and organizational commitment of the staff of Isfahan Oil Refinery Company. Considering the results of table 2, there is a relationship between organizational justice and organizational commitment. This conclusion is compatible with the findings of Madani (2005), Behravan and Saiedi (2011), Ponnu and Chuah (2010) and Ehsan Malik and Naeem (2011) (14,15,19,20). According to table 3, there is a direct and significant relationship between organizational justice and staff's organizational commitment indicators, and regarding table 6, there is a correlation between first pair of organizational justice indicators and staff's organizational commitment. Based on determinant coefficient, 0.31 variance of the first pair of correlation between mentioned indicators is common, and the first Chi-square, equal to 71.185 corresponding to Wilks coefficient at P 0.05 level denotes this correlation as significant. Thus, in the obtained results from calculating canonical correlation coefficient between organizational justice and organizational commitment indicators and Chi-square statistical tests and calculating Wilks coefficient, it was observed that there is a significant relationship between distributional justice and organizational commitment indicators that form a linear relationship. In tables 4 and 5, the predictor factors in organizational commitment and its indicators have been shown. Based on the results of these two tables, the predictors of organizational commitment are procedural justice, interactive justice and distributional justice, respectively. These results are compatible with the survey results of Masterson et al. (2000) (16).

According to the findings, it is essential for managers and supervisors to proportionate payments and rewards with the ratio of endeavor and working load of staff, before distributing them, and also to describe the assessment affairs for the staff while assessing performance. Two procedural justice and interactive justice have also been as two predictor variables in affective commitment. Considering the results of the two tables 4 and 5, it can be argued that making the payments and rewards ratio proportionate with responsibility type, job volume, people's share and experience in the ratio of realizing productivity, cause the staff to be dependent upon the organization and company in affective respect, so as they feel to be a member of organization family and working in such company gives validity to them. Procedural justice and interactive justice were also two predictors of normative commitment respectively. Thus, by observing procedural and interactive justice, the staff would know the problems of organization as their own

personal problems, and even if they find another appropriate job opportunity, they would not leave the organization. On the other hand, observing procedural justice results in increase of continuous commitment in organization. Continuous commitment refers to the reasons of people's continuing job in organization such as proficiency, commitment to colleagues, limitation of job opportunities in other organizations, and not bearing the costs of leaving organization. Therefore, by observing procedural justice, people would participate in the company and the staff would feel liable to organization and would prefer to continue working in the company.

Authors

Nahid Naderi

PhD student of Educational Management, Department of Educational Sciences, University of Isfahan, Isfahan, Iran
nanaderi84@yahoo.com

Reza Hoveida

Associate Professor, Department of Educational Sciences, University of Isfahan, Isfahan, Iran
r.hoveida@edu.ui.ac.ir

Arash Shahin

Associate Professor, Department of Management, University of Isfahan, Isfahan, Iran
arashshahin@hotmail.com

Mohammad Reza Naderi

Master Student of Industrial Engineering – System and Productivity Management, Kharazmi University, Tehran, Iran
pardazeshamar@yahoo.com

References

1. Saunders MNK. Book Review, in J Greenberg and JA Colquitt (eds): Handbook Of Organizational Justice, *Organizational Studies* 206; 27:1911-1916.
2. Folger R, Gropanzano R, Goldman B. What is the relationship between justice and morality? in Greenberg, Jerald (Ed); Colquitt, Jason A (Ed), Mahwah, NJ, US: Handbook of Organizational Justice, Lawrence Erlbaum Associates Publishers 2005: 215- 245.
3. Rupp DE, Ganapathi JG, Aguilera RV, Williams CA. Employee reactions to corporate social responsibility: an organizational justice framework. *Journal of Organizational Behavior* 2007; 27: 537-543.
4. Martineztur V, Peiró JM, Ramos J, Moliner C. Justice perceptions as predictors of customer satisfaction: the impact of distributive, procedural,

- and interactional justice. *Journal of Applied Social Psychology* 2006; 36: 100–119.
5. Moorman R. Relationship between organizational justice and organizational citizenship behaviours: Do fairness perceptions influence employee citizenship. *Journal of Applied Psychology* 1991; 76: 845-855.
 6. Rocba C. Perceive organizational support and employee performance: the mediating role of organizational commitment and organizational citizenship behavior. North American society for sport management conference (NASSM 2008), Toronto, Ontario.
 7. Lang JB, Paul D, Lang JWB, Adler AB. Work gets unfair for the depressed: Cross-lagged relations between organizational justice perceptions and depressive symptoms. *Journal of Applied Psychology* 2011; 96(3): 602-618.
 8. Stup RE. Human Resource Management and Dairy Employee organizational commitment Department of Dairy and Animal science, College of Agricultural science, The Pennsylvania state university 2006; Retrieved from www.cnr.berkeley.edu.
 9. Meyer JP, Allen NJ. Commitment in the workplace, Sage Publications, San Francisco, CA 1997.
 10. Turner BA, Chelladurai, P. Organizational and occupational commitment, intention to leave, and perceived performance of intercollegiate coaches. *Journal of Sport Management* 2005; 19:193-211.
 11. Ehsan Malik M, Nawab S, Naeem B, Danish Q. Job Satisfaction and organizational commitment of university teachers in public sector of Pakistan. *International Journal of Business and Management* 2010; (6): 17-25.
 12. Meyer JP, Herscovith L. Commitment in the workplace, toward a general model, *Human Resource Management Review* 2001;11(6): 299-326.
 13. Alvani M, Pour Ezat A, Sayar A. Investigating the relationship between organizational justice and organizational justice - Case study: Iran Gas Engineering and Development Company 2008; Retrieved from <http://emanage.mihanblog.com/post/56>.
 14. Madani H. Investigating organizational commitment of the staff and factors affecting on it - Case study: National Refinery Industries Company. Proceedings of second conference on development of human resources 2005: 273-259.
 15. Behravan H, Saiedi R. Factors affecting on the level of organizational commitment of the staff of Gas Company 2011; Retrieved from <http://apir.ir/fa/factors-affecting-the-level-of-organizational-commitment-of-gas-employees.html>.
 16. Masterson SS, Lewis k, Goldman BM, Taylor MS. Integrating justice and social Exchange: The Differing Effects of fair procedures and Treatment on work relationships. *Academy of Management Journal* 2000; Retrieved from www.aom.pace.edu/pdf.
 17. Colquitt JA, Conlon DE, Wesson MJ, Porter, C. Justice at the Millennium: A meta review of 25 years of organizational justice research. *Journal of Applied Psychology* 2001; 86: 425-445.
 18. Wharton R, Potter P, Parry LE. Keeping to faculty: issues of socialization justice, and commitment to the workplace. *Journal of Behavioral and Applied Management* 2004; 6(1): 4-20.
 19. Ponnu CH, Chuah CC. Organizational commitment, organizational justice and employee turnover in Malaysia. *African Journal of Business Management* 2010; 4(13): 2676-2692.
 20. Ehsan Malik M, Naeem B. Impact of Perceived Organizational Justice on Organizational Commitment of Faculty: Empirical Evidence from Pakistan. *Interdisciplinary Journal of Research in Business* 2011; 1(9): 92- 98.

12/10/2012