



Global Advanced Research Journal of Social Science (GARJSS) Vol. 2(1) pp. 001-011, January, 2013
Available online <http://garj.org/garjss/index.htm>
Copyright © 2013 Global Advanced Research Journals

Full Length Research Paper

An investigation into job satisfaction and organizational commitment of construction personnel

Heyecan Giritli¹, Begum Sertyesilisik^{2*}, Başak Horman³

¹(Prof. at the Istanbul Technical University) Istanbul Technical University, Faculty of Architecture, Department of Architecture.

²(Assoc. Prof. the Istanbul Technical University, and Visiting prof. at the Liverpool John Moores University) Faculty of Architecture, Istanbul Technical University.

³Istanbul Technical University, Faculty of Architecture,

Accepted 01 February, 2013

The purpose of this study is to determine whether feelings of job satisfaction would lead to organizational commitment by construction employees. For assessing job satisfaction and organizational commitment of individuals in the context of construction industry, an electronic questionnaire has been applied to the employees of architecture and construction firms in the Turkish construction industry. Using a 5-point Likert-type format, responses ranged from strongly disagree to strongly agree, with higher scores indicating higher levels of each form of commitment. The measurement scale for job satisfaction was based on the Job Satisfaction Index which considered all facets of the job when measuring job satisfaction, utilizing an 18-item, five-point Likert type scale. The 24-items instrument developed by Meyer and Allen was chosen as the tool to measure organizational commitment in this study. Out of 350 surveys requested, 219 responded yielding a 63% respond rate. The results from the survey on job satisfaction were compared to the results reported for the level of organizational commitment. The research revealed a relatively strong correlation between job satisfaction and organizational commitment.

Keywords: job satisfaction, organizational commitment, construction.

INTRODUCTION

Organizations have to use their limited resources in an efficient way to survive in the competitive environment. In an environment in which all kinds of technology can be duplicated easily, the inimitable and unique factor is the human resources of the organization. Giving priority to the human resources, organizations can expect high performance and great achievements from their

employees. Happiness and motivation of employees are reflected in their performance. Enterprises spend time and money for training their employees so that their employees become more useful for the organization. After a while, they begin to receive the investment paid off. At this point, personal turnover rate constitutes a major problem. Executives need to take steps to increase employees' job satisfaction, and should listen to the employees' expectations. The construction sector takes place with the participation of a wide variety of people who come together with different types of work

*Corresponding Author E-mail: B.Sertyesilisik@ljmu.ac.uk

relationship. As the Turkish construction industry relies heavily on human labour, the employers should consider organizational commitment and job satisfaction issues. Literature review revealed a small number of researches on the subjects of organizational commitment and job satisfaction in the construction industry. For this reason, the main purpose of this study is to examine the relationship between organizational commitment and job satisfaction of employees in the Turkish construction sector.

Organizational commitment and Job satisfaction

Organizational Commitment

Organizational commitment is a psychological situation binding the employee to his organization (Meyer and Allen, 1991). It is the employee's wish to stay in the organization (Mowday, et al. 1979). It is employee's internalisation of his organization's goals, his high effort for the benefit of his organization and his willingness to continue working in his organization (Baysal and Paksoy, 1999). Organizational commitment is employee's integration with the organization to get awards (Balci, 2003). Organizational commitment can enhance: the productivity of the organization (Tinbergen, 1952) and of the country; employee's willingness to work in their organization (Savery and Syme, 1994); employee's tendency to solve the problems in the organization instead of creating them (Savery and Syme, 1994); organization's effectiveness (Bayram, 2005); decrease in the personal turnover rate (Bayram, 2005). Approaches to the organizational commitment have been summarized in the following paragraphs:

- *Becker's approach* is based on continuance commitment. According to Becker (Becker, 1960), individuals perceive that it is imperative to stay in the organization due to their fear that their investments connected to their organization can be wasted and that they can encounter financial losses in case they leave their organization.

- *Mowday, Porter and Steers's approach* defines organizational commitment as employee's identification with the organization and his connection to the organization emotionally (Mowday, et al. 1979). There are three characteristics of organizational commitment: believe in the organization's goals and ideals; willingness to spend efforts for the success of the organization; having a great desire to stay in the organization.

- *O'Reilly and Chatman's approach* has taken organizational commitment as a psychological commitment and examined this topic in 3 stages, namely; compliance, identification and internalization. At the 'compliance' stage, the employees work to ensure compliance with organizational culture to get awards or to avoid penalties. At the 'identification' stage, the

employees are identified with other people in the organization and reflect this identification to their attitudes. 'Internalisation' stage occurs when harmony between the person and the organization's values appears (O'Reilly, 1995).

- *Wiener's approach* focuses on instrumental commitment which is based on the organization's fulfillment of its employees' expectations so that they become beneficial for the organization (Wiener, 1982). According to the Wiener's approach, organizational commitment is the response of the employee to the organization as a result of fulfillment of his expectations by the organization (Wiener, 1982).

- *Kanter's approach* classifies organizational commitment into interrelated 3 types as: the mandatory involvement in which the employee cannot leave the organization due to his investment and sacrifices; the close relationship commitment (i.e. social relations within the organization); and the audit commitment in which the employee has directed his behaviors according to the organization's norms (Ergul, 2010).

- *Etzioni's approach* emphasises three dimensions of organizational commitment: negative, neutral and positive commitment. In the negative of alienating commitment, even if the employee does not feel commitment to the organization, he is enforced to become a member of the organization. In the 'neutral commitment', the employee show the commitment level based on his salary. In the 'positive commitment' the employee wants to stay in the organization primarily due to the fact that he has adopted the organization's objectives (Balay, 2000).

- *Allen and Meyer's approach* suggested that organizational commitment is a psychological dimension shaped by the employer's attitudes. Meyer and Allen suggested a model involving two types of organizational commitment, namely: the 'affective commitment' and the 'continuance commitment'. Then, Weiner and Vardi added a third dimension, the normative commitment, to the model (Wasti, 2000).

- *Affective commitment* is employees' emotional commitment towards their organization, their identification with the organization and their willingness to stay in their organization (Meyer and Allen, 1991). According to Allen and Meyer, the affective commitment factors depend on (Balay, 2000): attraction of the job, role and goal clarity, goal difficulty, administrators' openness to suggestions; harmony among the employees, organizational reliability, equity, importance of the individual, feedback, and participation.

- *Continuance commitment* appears when the employee decides to remain in the organization in order not to lose the status he gained due to his efforts spent to his organization (Yalcin and Iplik, 2005). The main reason why the employees remain in the organization is their need to stay in the organization (Meyer and Allen, 1991). Employees' commitment to

their organization increases in case of limited job opportunities (Allen and Meyer, 1990). The factors affecting the continuance commitment are (Allen and Meyer, 1990): skills, education, individual investment, pension contributions, and options.

- *Normative commitment* is the employee's feeling the need not to leave the organization due to the fact that the organization has spent resources for his education and other investments (Meyer and Allen, 1991). Normative commitment is related with the employee's feelings of responsibility for the organization to stay (Erdheim, et al., 2006). Conceptions of morality vary from culture to culture. In a study conducted in Turkey, the variables that mostly affected the normative commitment have been identified as: norms of loyalty, family influence, collectivistic organizational culture (Wasti, 2000).

In summary, the employees who stay in their organization due to affective commitment are willingly staying in their organization. The ones, who are committed to their organization via continuance commitment, have to stay in their organization. The ones, who are committed to their organization via normative commitment, stay in their organization due to morality.

Factors affecting organizational commitment are (Mowday, et al. 1979): personal characteristics; role and job properties; experience and organization (Yalcin and Iplik, 2005). Organizational commitment increases as the time spent in the organization increases (Allen and Meyer, 1990). There is high positive relationship between organizational commitment and job satisfaction (Boylu, et al., 2007). Organizational commitment affects performance level, absenteeism, and personal turnover rate (Baron, 1986). In a study conducted on Turkish workers, negative correlations between affective and normative commitments and non-correlation between continuance commitment and decision to leave the organization have been revealed (Wasti, 2000). Individuals who do not feel commitment towards their organization can be observed to show psychological or physical withdrawal behaviours.

Job satisfaction

Job satisfaction is "employee's perceived' balance of 'input and output (Adams, 1963). If the employee's expectation on the issues such as his wages, status, rewards is more than the achieved level in the organization, the employee is assumed to be dissatisfied (Marsap, 1995). Once the personnel demands on job satisfaction and job characteristics are compatible with each other job satisfaction takes place (Davis, 1988). There are three components of job satisfaction: values; importance of values; and perception. Job satisfaction is emotional reaction to the job (Weiss, 2002).

Job satisfaction is a result of employees' feelings towards their work. Porteous (1997) collected the factors affecting job satisfaction into two groups, namely: individual factors (age, gender, marital status, race and education level) and work-related factors. Variables influencing job satisfaction can be listed as (Locke, 1979): scope of work, working, earning, promotion opportunities, reputation, social rights, working rights; inspection; colleagues; entity and management.

Job satisfaction is a variable of economics and the main cause of mobility in the labour market (Freeman, 1978). Consequences of job dissatisfaction include: absenteeism (Vecchio, 1995); personal turnover (Luthans, 1995); low productivity (Vecchio, 1995); arriving late to the work, early retirement (Vecchio, 1995); abnormal behaviours (vandalism, theft, ...) (Vecchio, 1995); vandalism in the work area (Wagner, et al. 1998); deterioration in soul and body health (Luthans, 1995); life dissatisfaction (Vecchio, 1995); and low organizational commitment (Wagner, et al. 1998).

Job satisfaction is one of the factors leading to organizational commitment (Yucel, 2006). It influences affective and normative commitments positively, and continuance commitment negatively (Makanjee, et al. 2006).

Organizational commitment and job satisfaction

Literature on organizational commitment and job satisfaction can be grouped into gender, position, age, occupation, and structure of the work related publications as it follows:

- *Gender:* Alniacik, et al., (2012)'s study revealed that gender does not exert any significant association with career motivation which has a positive correlation with organizational commitment and job satisfaction. Clark (1997)'s study revealed the gender satisfaction differential disappears for the young, the higher-educated, professionals and those in male-dominated workplaces, for all of whom there is less likely to be a gender difference in job expectations. On the other hand, Mora and Ferrer-i-Carbonell (2009)'s study focusing on the gender differences in job satisfaction reported by recent university graduates in Catalonia (Spain), revealed that young and highly educated women reported a lower satisfaction with some aspects of their job. Their findings contradicted with Clark (1997)'s expectations. According to Mora and Ferrer-i-Carbonell (2009), the lower reported level can be explained by differences in observable characteristics, notably wages and type of contract.

- *Position:* According to Wang and Armstrong (2004)'s study, PM professionals who have been appointed as Project manager are more committed to their profession than the PMs working in non-project manager positions. Prince (2003)'s study on a blue-collar

unionized sample revealed that perceived role enhancement opportunity (i.e., expanding task complexity and more autonomy in the near future) related positively to attitudinal outcomes historically associated with promotion opportunity (i.e., organizational commitment, work involvement, and career opportunity satisfaction) especially for those who had two or less years of position tenure. Loi, et al. (2012)'s study revealed positive relationships between supervisors' and subordinates' affective commitment, and between subordinates' affective commitment and their task and extra-role performance. Furthermore, Loi, et al. (2012)'s study also revealed the relationship between supervisors' and subordinates' affective commitment was stronger among subordinates possessing low power distance orientation. Theodossiou and Zangelidis (2009)'s study concluded that the job satisfaction of individuals employed in jobs with career prospects is not only higher compared with those who are not, but also that their returns to tenure in terms of job satisfaction are significantly higher.

- *Age:* Strong relationship between idiosyncratic deals and organizational commitment occurred for older workers who had low core self-evaluations (Ng and Feldman, 2010).

- *Occupation:* Yang (2010)'s study revealed that role conflict, burnout, socialization, and work autonomy, but not role ambiguity, significantly predicted job satisfaction, and that job satisfaction significantly contributed to psychological outcomes in terms of organizational effectiveness (i.e., greater affective and continuance commitment and lower employee turnover intentions).

- *Structure of the work:* Wasti and Can (2008)'s research results showed that commitment to organization was predictive of organizational-level outcomes (e.g., turnover intentions), and commitment to supervisor was predictive of supervisor-related outcomes (e.g., citizenship towards supervisor) (Wasti and Can, 2008). Vabdenberghe, et al.'s study with matched data collected from 194 nurses and their immediate supervisors, determined that commitment to the supervisor had a direct effect on job performance and organizational commitment had an indirect effect on job performance through commitment to the supervisor. Prince (2003)'s study on a blue-collar unionized sample revealed that perceived role enhancement opportunity (i.e., expanding task complexity and more autonomy in the near future) related positively to attitudinal outcomes historically associated with promotion opportunity (i.e., organizational commitment, work involvement, and career opportunity satisfaction). Henkin and Marchiori (2003)'s study on faculty members revealed that the level of institutional commitment experienced by the faculty member was associated with the fit between the task, goal or purpose of the job, and the internal standards held by the individual. Leung and Chen

(2011)'s study on the impact of the organizational commitment of cost estimators on their stress levels, revealed that stress is significantly influenced by the degree to which a cost estimator is committed to an organization. Yang (2010)'s study on the employees' in 11 international tourist hotels revealed that role conflict, burnout, socialization, and work autonomy, but not role ambiguity, significantly predicted job satisfaction, and that job satisfaction significantly contributed to psychological outcomes in terms of organizational effectiveness (i.e., greater affective and continuance commitment and lower employee turnover intentions). Theodossiou and Zangelidis (2009)'s study concludes that the job satisfaction of individuals employed in jobs with career prospects is not only higher compared with those who are not, but also that their returns to tenure in terms of job satisfaction are significantly higher. Acuña, et al. (2009)'s paper on the relationships between personality, team processes, task characteristics, product quality and satisfaction in software development teams, revealed the importance of working environment. Their findings are that:

“...the teams with the highest job satisfaction are precisely the ones whose members score highest for the personality factors agreeableness and conscientiousness. The satisfaction levels are also higher when the members can decide how to develop and organize their work. On the other hand, the level of satisfaction and cohesion drops the more conflict there is between the team members. Finally, the teams exhibit a significant positive correlation between the personality factor extraversion and software product quality.” (Acuña, et al, 2009)

Organizational commitment and job satisfaction in construction

There is lack in the literature on organizational commitment and job satisfaction in construction. The construction projects' nature can lead to the difference in the organizational commitment and job satisfaction in the construction sector compared to other industries. The construction projects consist of nonrecurring activities mainly exposed to weather conditions and they are carried out by constantly changing groups. There is lack in the literature search revealed limited number of research on job satisfaction and organizational commitment in construction. A study conducted on project managers of Turkish construction companies revealed that the project managers' motivation are positively correlated with job satisfaction and negatively correlated with job stress (Ildiz, 2009). Yilmaz (1999) conducted a research on architecture offices in Turkey focusing on organizational structure and job satisfaction and revealed strong relationship between job characteristics and job satisfaction, job satisfaction being

one of the factors affecting personal turnover rate. Yi et al. (2009)'s study on foreign employees in the Taiwan construction industry revealed that job characteristics affect organizational commitment and that autonomy of the work positively affects organizational commitment. The study also revealed that organizational commitment has positive affect on job satisfaction (Yi, et al., 2009).

RESEARCH METHODS

The main aim of this study is to examine the relationship between organizational commitment and job satisfaction of white-collar workers (civil engineers and architects) in the Turkish construction sector. Accordingly, this research had the following objectives:

- to understand whether the scales of organizational commitment and job satisfaction show a significant difference by gender in the construction industry
- to understand whether there is a significant difference between organizational commitment and job satisfaction of employee working in the position of worker and manager in the construction industry
- to understand whether the job satisfaction level differs according to the age groups
- to understand whether the organizational commitment scales and job satisfaction levels indicate significant difference according to the occupational groups
- to understand whether there is any correlation among organizational commitment types, job satisfaction level, satisfaction from colleague, satisfaction with the superiors, and satisfaction with the promotion opportunities
- to understand whether there is significant correlation between job satisfaction and organizational commitment types.
- to understand whether there is any significant correlation between organizational commitment types and financial gains
- to understand whether the satisfaction with the general structure of the job and the superiors as well as employees' working duration in the company have influence on organizational commitment

The electronic questionnaire has been applied to a sample consisting of 350 white-collar employees (architects, civil engineers and other) in the Turkish construction sector. In total 219 questionnaires were evaluated. The questionnaire consists of 78 questions and 3 parts. The first part of the questionnaire aimed at gathering data on respondents' background and characteristics. The second part assessed the organizational commitment based on Meyer et al. (1993)'s 14-item organizational commitment scale, and

10 cultural expression generated by Wasti (2000). This part included 5-likert scale type questions covering three types of organizational commitment (affective, continuance and normative commitments). The third part assessed job satisfaction based on the short version of the Job Description Index (Wasti, 2000) consisting of 9 statements related with general structure of the work; colleagues; superiors; financial gains, and promotion opportunities. The respondents have been provided three answer alternatives ('yes'; 'unsure'; 'no') for each question.

Statistical analysis, T-test and ANOVA and Pearson correlation analyses have been conducted on the data using SPSS 16.0 for Windows software program. The Cronbach's Alpha reliability analysis revealed the Cronbach's alpha value to be higher than 0.70 in all sections. Independent t-test analyses have been carried out for the first and second research objectives. ANOVA has been carried out for the third and fourth research objectives. The fifth, sixth and seventh research objectives have been answered via pearson correlation analysis. Hierarchical multiple regression analysis has been carried for the eighth research question.

RESULTS AND DISCUSSION

The respondents consisted of 107 women (49% of the respondents) and 112 male (51% of the respondents) aged between 22 and 62. The majority of respondents had 1-4 years of experience. 35% of the sample constituted of the managers. 137 of the respondents were architect (63% of the respondents), 58 were civil engineer (26% of the respondents), while 24 respondents (11% of the respondents) were in different occupational groups. 119 of the respondents (54% of the respondents) had undergraduate level education, whereas 89 of the respondents (40% of the respondents) had graduate level, and 6 had (2% of the respondents) the PhD degree.

63.5% of the architects were female, whereas 81% of civil engineers are male. 41 architects (30% of the respondent architects), 25 civil engineers (43% of the respondent civil engineers) were working in managerial levels whereas 96 architects (70% of the respondent architects) and 33 civil engineers (57% of the respondent civil engineers) were working as employee in the technical level. 50.4% of the respondent architects and 53.4% of the respondent civil engineers had between 1-4 years of experience. 51.1% of the respondent architects had undergraduate level, while 46% had graduate level education. 67.2% of the respondent civil engineers had undergraduate level education, while 31% of them had master's degree.

Table 1. Independent samples t-test – gender

	<i>Male (Avr.) N=112</i>	<i>Female (Avr.) N=107</i>	<i>T</i>	<i>df</i>	<i>P (2-tailed)</i>
Affective commitment	3,4	3,3	1,437	217	,152
Continuance commitment	3,1	3,0	,763	217	,446
Normative commitment	3,2	3,0	1,685	217	,093
Satisfaction on the work	1,9	1,6	2,364	217	,019*
Satisfaction with the colleagues	2,0	2,0	,287	217	,774
Satisfaction with the superiors	1,9	1,8	,828	217	,409
Satisfaction with the salaries	1,5	1,4	,439	217	,661
Satisfaction with the promotion opportunities	1,2	0,9	2,650	217	,009**

*p<0,05, **p<0,01

Table 2. Independent sample t-test - employee / manager.

	<i>Employee (Avr.) N=143</i>	<i>Manager (Avr.) N=176</i>	<i>T</i>	<i>df</i>	<i>P (2-tailed)</i>
Affective commitment	3,2	3,6	3,431	217	,001**
Continuance commitment	3,0	3,2	2,266	217	,024*
Normative commitment	3,0	3,2	2,011	217	,046*
Satisfaction on the work	1,6	2,0	2,876	217	,004**
Satisfaction with the colleagues	2,0	1,9	1,001	217	,318
Satisfaction with the superiors	1,8	1,9	,421	217	,674
Satisfaction with the salaries	1,4	1,5	,728	217	,468
Satisfaction with the promotion opportunities	1,0	1,2	1,399	217	,163

*p<0,05, **p<0,01

Independent sample t-test findings

H₀= The scales of organizational commitment and job satisfaction do not show a significant difference by gender

Independent sample t-test was applied to understand if the scales of organizational commitment and job satisfaction show a significant difference by gender (Table 1). Accordingly, there are significant differences between male and female in the job satisfaction at p<0.05 level, satisfaction from promotion opportunities at p <0.01 level. Males who responded the questionnaire have higher satisfaction on the work itself and promotion opportunities than the females. H₀ has been rejected.

H₀= There is no significant difference between organizational commitment and job satisfaction of employee working in the position of worker and manager.

Another analysis was carried out to understand whether there is a significant difference between organizational

commitment and job satisfaction of employee working in the position of worker and manager (Table 2). According to the independent sample t-test results presented in the Table 2, the affective commitment (p<0.01), continuance commitment (p<0.05), normative commitment (p<0.05) and satisfaction with the work itself (p<0.01) of the managers are higher than employees. H₀ has been rejected.

ANOVA analysis findings

H₀= Job satisfaction level does not differ according to the age groups.

Oneway ANOVA analysis has been applied to the dependent variables of affective commitment, continuance commitment, normative commitment, job satisfaction, colleague satisfaction, satisfaction from top managers, satisfaction with financial gain and promotion opportunities satisfaction. Age groups were chosen as factor (Table 3). Accordingly, job satisfaction indicates a significant difference at p<0.05 level

Table 3. Age groups, ANOVA analysis

	<26 N=92	27-31 N=63	32-36 N=38	37-41 N=13	42> N=4	df	F	P
Affective commitment	3,4	3,3	3,2	3,5	3,8	4	1,995	,096
Continuance commitment	3,0	3,0	3,1	3,2	3,2	4	,531	,713
Normative commitment	3,2	3,0	2,9	3,1	3,2	4	1,366	,247
Satisfaction with the work	1,8	1,6	1,7	2,2	2,3	4	2,994	,020*
Satisfaction with the colleagues	2,0	2,0	1,8	2,0	2,1	4	,603	,661
Satisfaction with the superiors	1,9	1,8	1,7	2,0	1,9	4	,518	,722
Satisfaction with the salaries	1,4	1,5	1,4	1,6	1,4	4	,375	,826
Satisfaction with the promotion opportunities	1,2	0,9	0,9	1,2	1,0	4	1,089	,163

*p<0,05,

Table 4. ANOVA analysis of the occupational groups.

	Architect N=137	Civil engineer N=58	Other N=24	Df	F	p
Affective commitment	3,2	3,6	3,4	218	7,876	,000**
Continuance commitment	3,0	3,3	3,0	218	2,369	,096
Normative commitment	3,0	3,3	3,1	218	4,397	,013*
Satisfaction on the work	1,6	2,1	1,8	218	6,877	,001**
Satisfaction with the colleagues	2,0	1,9	1,9	218	,211	,810
Satisfaction with the superiors	1,8	1,9	2,1	218	1,539	,217
Satisfaction with the salaries	1,4	1,4	1,5	218	,046	,956
Satisfaction with the promotion opportunities	1,0	1,3	1,1	218	3,907	,022*

*p<0,05

according to the age groups. No significant difference was observed in the other scales. Analysis of variance was first conducted to determine in which age groups the Job satisfaction indicates differences. It has been determined that the variance for this scale was not equal. Accordingly, Games Howell test revealed significant differences between job satisfactions levels of the 27-31 age group, and the group of 42 years and over. Accordingly, job satisfaction of the people between the ages of 27-31 is very low regarding to people of 42 years old and over.

H₀ = Organizational commitment scales and job satisfaction levels do not indicate significant difference according to the occupational groups.

The one-way ANOVA analysis was applied to the scales of the organizational commitment and job satisfaction (Table 4). Occupational groups were chosen as factor. Accordingly, affective commitment and job satisfaction indicates a significant difference at p < 0.01 level according to occupational groups. The normative commitment and satisfaction with promotion opportunities indicate a significant difference

at p < 0.05 level according to occupational groups. No significant difference has been observed in other variables. Post-tests were applied to identify the groups that difference occurred. The variances have been observed to be equal for the affective commitment, normative commitment and promotion opportunities satisfaction; on the other hand, the variance has been not equal for job satisfaction. Accordingly, post hoc Scheffe test was applied to scales, which have equal variance, and the Games Howell test was applied to scales which have non equal variances. Results for these four scales are the same; the difference is due to the difference between architects and civil engineers. The results revealed that the level of affective commitment, normative commitment, job satisfaction and promotion opportunities satisfaction of civil engineers was higher than those of the architects (Table 4). H₀ has been rejected.

Correlation analysis findings

H₀ = There is no correlation among organizational commitment types, job satisfaction level, satisfaction

Table 5. Pearson correlation analysis.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affective commitment (1)								
Continuance commitment (2)	,316**							
Normative commitment (3)	,649**	,486**						
Satisfaction with the work (4)	,657**	,197**	,539**					
Satisfaction with the colleagues (5)	,213**	,087	,300**	,296**				
Satisfaction with the superiors (6)	,369**	,116	,439**	,352**	,378**			
Satisfaction with the salaries (7)	,139*	,047	,249**	,241**	,393**	,372**		
Satisfaction with the promotion opportunities (8)	,440**	,122	,428**	,540**	,287**	,464**	,388**	

* $p < 0.05$, ** $p < 0.01$.

Table 6. Hierarchical multiple regression analysis: affective commitment

Stage	df	F	R ²	P
1 Satisfaction with work	1	165,104	0,432	0,00**
2 Satisfaction with work Satisfaction with superiors	2	89,757	0,454	0,00**
3 Satisfaction with work Satisfaction with superiors Working duration in the same organization	3	62,478	0,466	0,00**

** $p < 0,01$

from colleague, satisfaction with the superiors, and satisfaction with the promotion opportunities.

H_0 = There is no significant correlation between job satisfaction and organizational commitment types.

H_0 = There is no significant correlation between organizational commitment types and financial gains.

The relationship between organizational commitment and job satisfaction scales was tested with Pearson correlation analysis. Pearson correlation was applied to the scales of job satisfaction and organizational commitment (Table 5).

Accordingly, there is a correlation at $p < 0.01$ level among the affective commitment, continuance commitment, normative commitment, job satisfaction, satisfaction from colleague, satisfaction with the superiors, and satisfaction with the promotion opportunities.

In addition, there is a correlation at the $p < 0.05$ level between the affective commitment and financial gain satisfaction. Unlike other organizational commitment scales, continuance commitment is observed to have correlation with lesser number of scales. While this scale has correlation with affective commitment, normative commitment and job satisfaction, a significant relation was found with the other job satisfaction scales.

On the other hand, the affective commitment has been observed to be highly correlated with all organizational commitment and job satisfaction scales ($p < 0.01$). As shown in the table 5, many of the scales, at

$p < 0.01$ level, are interrelated.

There is significant relationship between job satisfaction and affective commitment and normative commitment. In other words, people with job satisfaction feel affective and normative commitment towards their organizations. Unlike the other two types of commitment, while the continuance commitment is in correlation only with job satisfaction, it was not related with the other scales.

Regression analysis findings

H_0 = Satisfaction with the general structure of the job and the superiors as well as employees' working duration in the company do not have influence on organizational commitment.

Findings from the hierarchical multiple regression analysis in the evaluation of affective commitment as the dependent variable are shown in Table 6. Accordingly, satisfaction with the general structure of the job and the superiors are the most influential variables with $p < 0.01$ level, on affective commitment, meaning person's adaptation of the organization's ideals, feeling itself as part of the family, and to strive for the organization's benefit. The effects of the other variables on affective commitment were not statistically significant.

The findings revealed the tendency that a white-collar

Table 7. Hierarchical multiple regression analysis: the continuance commitment

Stage		df	F	R ²	P
1	Working duration in the same organization	1	12,703	,055	0,000**
2	Working duration in the same organization Satisfaction with the general structure of the work	2	10,033	0,085	0,000**

**p<0,01

Table 8. Hierarchical multiple regression analysis: normative commitment

Stage		df	F	R2	P
1	Satisfaction with work	1	88,953	,291	0,000**
2	Satisfaction with work Satisfaction with superiors	2	61,166	,362	0,000**

**p<0,01

employee in the Turkish construction sector might have affective commitment to the organization, if he is satisfied with the general structure of the work, and with his superiors. The first stage results revealed that job satisfaction factor explains a significant percentage of the variance observed in affective commitment. In the second stage; the explained variance of the added variable of satisfaction with superiors increases to significant proportion. At the third stage, working duration in the same organization were added as a control variable. According to the results of multiple regression with all independent variables, the variables, that mostly affected the affective commitment, are the satisfaction with the general structure of job, satisfaction with superiors and duration of time working in the same company. The effects of other job satisfaction and demographic variables on affective commitment were not statistically significant. The results obtained from simple regression analysis where continuance commitment is evaluated as a dependent variable are presented in Table 7. Causal relationship has not been observed between continuance commitment and satisfaction with the colleagues, satisfaction with superiors, financial gain and promotion opportunities satisfaction; however; the causal relationship has been observed between satisfaction with the general structure of the work and continuance commitments.

According to the hierarchical multiple regression analysis, where continuance commitment is assessed, there is a strong causal relationship between the continuance commitment and with duration of time working in the same company. At the second step, when job satisfaction and duration of time working in the same company have been evaluated together, revealed that those factors that mostly affect the continuance commitment. Other variables do not have significant effect on continuance commitment.

In Table 8, the hierarchical multiple regression analysis were applied to normative commitment. Causal relationship at $p < 0.01$ level has been observed between normative commitment and the variables of the satisfaction with the general structure of job, and satisfaction with superiors. These two variables have the strongest effect on normative commitment. There is no significant effect of the other variables on continuance commitment. In other words, according to the opinions of the respondent architects and engineers, if there is job satisfaction and satisfaction with superiors, staying and continuing to work in that organization is a moral act.

Job satisfaction and satisfaction with superiors have been observed as the factors causing affective and normative commitment. There was not a direct relationship with financial gain, colleagues and promotion opportunities.

CONCLUSIONS AND RECOMMENDATIONS

In this paper the relationship between organizational commitment and job satisfaction has been investigated on white-collar employees working in the Turkish construction industry. A questionnaire has been applied to a sample of white-collar employees in the Turkish construction industry. The results can summarized as it follows:

- There is a strong relationship between organizational commitment and job satisfaction.
- The findings present a different aspect from the previous studies, and reveal that colleague satisfaction, which is found to be an important factor in studies conducted in the other sectors, were not significant for the construction industry employees working on a project basis and in a combination of different teams. In the absence of organizational commitment and job satisfaction poor performance, absenteeism, distortion in

mental and physical health of people, withdrawal behaviours can emerge.

- Job satisfaction and organizational commitment of white-collars in the Turkish construction industry tend to change according to demographic factors. Males who responded the questionnaire have higher satisfaction on the work itself and promotion opportunities than the females.

- The managers have the tendency to have higher affective, continuance, and normative commitments compared to their subordinates. This may be due to the fact that the managers tend to have more authority and responsibility, and higher salary than the subordinates.

- Professions affect the job satisfaction and organizational commitment as well. Civil engineers who participated in this study tended to have higher affective and normative commitment compared to the architects.

- Overall structure of the work, satisfaction with regard to the superiors, and working for a long time at the same workplace leads to affective commitment. Satisfaction on the general structure of the work and continuance commitment have causal relationship.

- The findings revealed: positive relationship between affective commitment and job satisfaction; positive relationship between affective commitment, job satisfaction and satisfaction on the work; and positive relationship between normative commitment and job satisfaction.

Precautions should be taken to minimize the personal turnover rate and to ensure the employees' job satisfaction. Future studies should investigate the effect of the working structure and the size of the organization to the job satisfaction or organizational commitment.

REFERENCES

- Acuña ST, Gómez M, Juristo N (2009). How do personality, team processes and task characteristics relate to job satisfaction and software quality? *Information and Software Technol.* 51: 627–639.
- Adams JS (1963). *Towards an understanding of inequity*, J. Appl. Psychol., 424.
- Allen NJ, Meyer JP (1990a). *The measurement and antecedents of affective, continuance and normative commitment to organization*, J. Occupational Psychol., 63: 418.
- Allen NJ, Meyer JP (1990b). *Organizational socialization tactics: a longitudinal analysis of links to newcomers' commitment and role orientation*, Acad. of Manage. J.33(4): 854.
- Alniacik U, Alniacik E, Akcin K, Erat S (2012). Relationships between career motivation, affective commitment and job satisfaction *Procedia – Soc. and Behav. Sci.*, 58: 355 – 362.
- Balay R (2000). *Yönetici ve öğretmenlerde örgütsel bağlılık*, Nobel Yayın Dağıtım, Ankara., 19.
- Balci A (2003). *Örgütsel sosyalleşme*, İstanbul: Günaydın Hukuk Yayınları, 27.
- Baron RA (1986). *Behavior in organizations: understanding and managing the human side of work*, 2. edition, Allyn and Bacon Inc. pp. 164-166.
- Bayram L (2005). *Yönetimde yeni bir paradigma: Örgütsel bağlılık*, Sayıştay Dergisi, EkimAralık, 59.
- Baysal AC, Paksoy M (1999). *Mesleğe ve örgüte bağlılığın çok yönlü incelenmesinde MeyerAllen modeli*, İ.Ü. İşletme Fakültesi Dergisi, 28: 715.
- Becker HS (1960). *Notes on the concept of commitment*, The Am. J. Sociol. [AJS].
- Boylu Y, Pelit E, Güçer E (2007). *Akademisyenlerin örgütsel bağlılık düzeyi üzerine bir araştırma*, FinansPolitik and Ekonomik Yorumlar Dergisi, Cilt: 44, Sayı: 511, 59.
- Clark AE (1997) Job satisfaction and gender: Why are women so happy at work? *Labour Economics*, 4: 341-372.
- Davis K (1988). *İşletmelerde insan davranışı*, (çev. Tosun ve diğ.), İstanbul Üniversitesi İşletme Fakültesi yayını, İstanbul.
- Erdheim J, Wang M, Zickar M (2006). *Linking the big five personality constructs to organizational commitment, personality and individual differences*, (41): 959-970.
- Ergül B, *Örgütsel bağlılık*, Trakya Üniversitesi, S.B.E. İşletme Yönetim Organizasyon Yüksek Lisans Programı Seminer Çalışması, <http://www.angelfire.com/nt/zeus/yl/s20.doc.>, [accessed on: 22.02.2011].
- Freeman RB (1978). *Job satisfaction as an economic variable*, The Am. Econ. Rev., 68 (2): 135-141.
- Henkin AB, Marchiori DM (2003). Empowerment and organizational commitment of chiropractic faculty, *J. Manipulative and Physiol. Therapeutics*, 26(5): 275-281.
- Ildiz GO (2009). *İnşaat firmalarında proje müdürlerinin iş yükü, iş stresi, iş tatmini ve motivasyon ilişkisi*, Doktora Tezi, İstanbul Kültür Üniversitesi, Fen Bilimleri Enstitüsü.
- Leung MY, Chen D (2011). Exploring the Influence of Commitment on Stress for Cost Estimators in Hong Kong *Procedia Engineering* 14: 1953–1958.
- Locke EA (1979). *The nature and causes of job satisfaction*. In handbook of Industrial And Organizational Psychology, ed. M. Dunette. Chicago, IL: Rand McNally, pp. 1297-1350.
- Loi R, Lai JYM, Lam LW (2012). Working under a committed boss: A test of the relationship between supervisors' and subordinates' affective commitment *The Leadership Quarterly*, 23: 466–475
- Luthans F (1995). *Organizational behavior*, McGrawHill Book Company, 7. edition, pp. 127-129.
- Makanjee CR, Hartzler YF, Uys IL (2006). *The effect of perceived organizational support on organizational commitment of diagnostic imaging radiographers*, *Radiography*, 12 (2): 120.
- Marşap B (1995). *Muhasebe mesleğinde iş tatmininin Türkiye açısından incelenmesi*, PhD dissertation, Gazi University, Institute of Social Sciences, Ankara.
- Meyer JP, Allen NJ (1991). *A three components conceptualization of organizational commitment*, *Hum. Res. Manage. Rev.*, 1(1): 66-72.
- Mora T, Ferrer-i-Carbonell A (2009). The job satisfaction gender gap among young recent university graduates: Evidence from Catalonia *The J. Socio-Econ.* 38: 581–589
- Ng TWH, Feldman DC (2010). Idiosyncratic deals and organizational commitment *J. Vocational Behav.* 76: 419–427.
- Mowday RT, Steers RM, Porter LW (1979). *The measurement of organizational commitment*, *J. Vocational Behav.*, 14: 224-247.
- O'Reilly C (1995). *Corporations, culture and commitment: motivation and social control in organizations*, *Psychological Dimensions of Organizational Behaviour*, B. M. Staw, New Jersey: Prentice Hall, Second Edition, 322.
- Porteous M (1997). *Occupational psychology*, London: Prentice Hall 1.st edition, 38.
- Prince JB (2003). Career opportunity and organizational attachment in a blue-collar unionized environment, *J. Vocational Behav.*, 63: 136–150.
- Savery LK, Syme PD (1994). *Organizational commitment and hospital pharmacists*, *J. Manage. Devel.*, 14.
- Theodossiou I, Zangelidis A (2009). Career prospects and tenure–job satisfaction profiles: Evidence from panel data. *The J. Socio-Econ.* 38: 648–657

- Tinbergen J (1952). *The influence of productivity on economic welfare*, The Econ. J., 62 (245): 68-86.
- Vecchio RP (1995). *Organizational behavior*, The Dreyden Press, 3rd edition.
- Wasti SA, Can O (2008). Affective and normative commitment to organization, supervisor, and coworkers: Do collectivist values matter? *Journal of Vocational Behavior*, 73: 404–413.
- Wasti SA (2000). *Örgütsel bağlılığı belirleyen evrensel ve kültürel etmenler: Türk kültürüne bir bakış, Türkiye’de Yönetim, Liderlik ve İnsan Kaynaklar Uygulamaları*, Türk Psikologlar Derneği Yayınları (21), Ankara, 201-224.
- Wagner III, John A, Hollenbeck JR (1998). *Organizational behaviour securing competitive advantage*, New Jersey : Prentice Hall International, 3rd edition, 107.
- Wang X, Armstrong A (2004). An empirical study of PM professionals_ commitment to their profession and employing organizations. *Int. J. Project Manage.*, 22: 377–386.
- Weiss H (2002). *Deconstructing job satisfaction separating evaluations, beliefs and affective experiences*, *Hum. Resource Manage. Rev.*, 12: 174.
- Wiener Y (1982). *Commitment in organizations: a normative view*, *Acad. Manage. Rev.*, 7 (3): 418-420.
- Yalcin A, Iplik FN (2005). *Beş yıldızlı otellerde çalışanların demografik özellikleri ile örgütsel bağlılıkları arasındaki ilişkiyi belirlemeye yönelik bir araştırma: Adana ili örneği*, Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 14(1): 395-412.
- Yang JT (2010). Antecedents and consequences of job satisfaction in the hotel industry *Int. J. Hospitality Manage.* 29: 609–619.
- Yi C, Lin P, Hsu L, Liao P (2009). Applying structural equation models to study the influence of job characteristics, organization commitment, and job satisfaction: a case of construction industry in Taiwan. *ICEE 2009 Conference. Korea (ICEE/ICEER)*.
- Yılmaz B (1999). *Mimari Bürolarda Organizasyonel Yapı ve İş Tatmini İlişkisi*, MSc thesis, I.T.U. Instit. of Sci. and Technol., Istanbul.
- Yucel D (2006). *The influence of motivation and rewarding on job satisfaction and organizational commitment and an application*, MSc thesis, Marmara University, Institute of Social Science, Istanbul, 65.