

Organizational Commitment and Turnover Intention in Union and Non-Union Firms

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Hong Y. Park¹, Raymond L. Christie², and Gail E. Sype¹

Abstract

There are differences in organizational architecture between union and non-union construction firms in early 1990s. The construction industry has traditionally been dominated by strong union firms. However, non-union construction firms began to emerge in the 1990s and this change caused to bring conflicts between union and non-union construction firms. This presents a unique opportunity to study employees' attitude toward organization. This article investigates workers' attitudes toward union and non-union construction firms in terms of organizational commitment (OC) and turnover intention. Control variables in OC and turnover intention include personal characteristics, job characteristics, group-leader relations and organizational characteristics. The study found that employees in union firms are more committed to the organization than non-union organization, but they have higher intention to job turnover although the regression coefficients of union variable in commitment and turnover intention are not statistically significant at the conventional level of significance.

Keywords

organizational commitment, turnover intention, construction firms, organizational architecture, job characteristics, job satisfaction, personal characteristics

Introduction

Worker attitudes toward organizations have drawn attention from scholars in organization science, organizational behavior, and industrial and organizational psychology. Studies on attitudes focus frequently on organizational commitment (OC) and turnover intention. One of the important consequences of OC is the link between OC and employee intention to leave the organization and actual turnover (Allen & Meyer, 1996; Mathieu & Zajac, 1990; Tett & Meyer, 1993).

There are a plethora of studies on OC (Allen & Meyer, 1990; Allen & Meyer, 1996; Benkhoff, 1997; Elloy & Flynn, 1998; Gordon & Ladd, 1990; Hui, Lee, & Rousseau, 2004; Lincoln & Kalleberg, 1990; McConnell, 2006; Meyer & Allen, 1997; Tett & Meyer, 1993). These studies investigated the antecedents of OC and consequences of such commitment to a single organization. Mathieu and Zajac (1990) reviewed and conducted meta-analysis of the antecedents, correlates, and consequences of OC. They found that most studies have investigated the relationships between OC and organizational structural characteristics, career enhancement opportunities, union commitment relationships, and so forth, in sampled employees from a single organization. They advocated that a greater number of studies need to be conducted with employees sampled from a wide variety of organizations to adequately test the relationships between OC and its antecedents. This study attempts to meet that need.

Studies on OC in unionized and non-unionized settings are scarce although several studies have investigated dual commitment to the union and the organization (Gordon, Beauvais, & Ladd, 1984; Gordon & Ladd, 1990; Gordon, Philpot, Burt, Thompson, & Spiller, 1980). Gordon et al. (1980) studied members' commitment to a labor organization and found that the benefits unions provide their members emerged as the most important basis for union commitment. Tetrick (1995), however, argued that the development and maintenance of union commitment is contingent on the mutual obligation of the union and its members centered on a social exchange, rather than an economic exchange model. Thacker, Fields, and Barclay (1990) examined antecedent and outcome models for four factors of union commitment (loyalty to the union, responsibility to the union, willingness to work for the union, and belief in unionism). Gordon, Beauvais, and Ladd (1984) provided empirical evidence of dual allegiance to the union and to management in the job satisfaction and union commitment of unionized engineers.

¹Saginaw Valley State University, University Center, MI, USA

²Central Michigan University, Mt. Pleasant, MI, USA

Corresponding Author:

Hong Y. Park, Professor of Economics and Braun Research Fellow, College of Business and Management, Saginaw Valley State University, 7400 Bay Road, University Center, MI 48710, USA.
Email: hyp@svsu.edu

Gordon and Ladd (1990) reviewed and examined dual allegiance studies based on the taxonomic approach. They argued that dual allegiance must offer unique predictive power above that of company allegiance and union allegiance for even one dependent variable (productivity or effectiveness), and if no such relationship can be isolated, then dual allegiance may be considered an epiphenomenon and dismissed from serious scientific inquiry.

This article will examine determinants of the commitment and impact of commitment on the intention to quit in union and non-union settings in the construction industry. Employees were sampled from many different organizations. The union firm in the construction industry is different from the non-union firm in hiring practices, participation in decision making, methods of rewarding individuals, evaluations of individual performance, duration of employment with the same firm, hierarchical levels of the organization, and pay. These differences between union and non-union firms may be regarded as differences in organizational architecture. Brickley, Smith, and Zimmerman (2008) refer to the assignment of decision rights within the firm, the methods of rewarding individuals, and the structure of systems to evaluate the performance of individuals and business units as the firm's organizational architecture. The organization of work in construction firms also differs from manufacturing and service firms. Production in construction firms is divided into a variety of trades, and it is common practice for general contractors to subcontract portions of a project to a special trade.

Political and economic environments in the U.S. construction industry have changed in the 1980s and 1990s, as non-union firms emerged prominently in the early 1990s. As non-union firms were growing, workers in union firms faced uncertainty and threat of wage cuts and loss of job security. The impact of these threats on OC needs to be evaluated, because employees tend to modify their behavior toward the company as they face threat. We have observed that threats of wage and job reductions due to globalization, downsizing, and outsourcing have made changes easier in the U.S. firms.

The organizational differences in union and non-union firms in the construction industry, job characteristics of construction firms, and emergence of non-union firms in the 1990s present a unique opportunity to study the impact of OC on employees in union and non-union firms. Such research is critical because of the link between commitment and turnover, which are important determining factors of organizational stability and performance. Traditional OC studies have focused on stability and performance as consequences of OC. Perhaps important additional dimensions of consequences in OC are implications in agency costs and corporate changes. Committed employees may help reduce agency costs and make corporate changes easier. These elements are very crucial in today's business environments where continuing improvements are required.

Employees' OC

OC has frequently been conceptualized and measured in three different ways: the affective component, the continuance component, and the normative component. According to Allen and Meyer (1990), the affective component of OC refers to employees' emotional attachment to, identification with, and involvement in the organization. The continuance commitment refers to commitment based on the costs that employees associate with leaving an organization. The normative commitment refers to employees' feelings of obligation to remain with the organization. Allen and Meyer (1996) surveyed the OC literature and found an inverse relationship between commitment and job turnover in all studies they have examined. The measurement of OC in this study is affective commitment. Mowday, Porter, and Steers (1982) defined attitudinal OC as

The relative strength of an individual's identification with and involvement in a particular organization. Conceptually, it can be characterized by at least three factors: a) a strong belief in and acceptance of the organization's goal and values; b) a willingness to exert considerable effort on behalf of the organization; and c) a strong desire to maintain membership in the organization. (p. 27)

This concept of OC benefits employees, organizations, and society as a whole. Mathieu and Zajac (1990) articulated well the benefits of OC:

Employees' level of commitment to an organization may make them more eligible to receive both extrinsic (e.g., wages and benefits) and psychological (e.g., intrinsic job satisfaction and relationships with coworkers) rewards associated with membership. Organizations value commitment among their employees, which is typically assumed to reduce withdrawal behaviors such as lateness and turnover. In addition, committed employees may be more likely to engage in "extra-role" behaviors, such as creativeness or innovativeness, which are often what keeps an organization competitive (Katz & Kahn, 1978). From a larger perspective, a society as a whole tends to benefit from employees' organizational commitment in terms of lower rates of job movement and perhaps higher national productivity or work quality or both. (p. 171)

Benefits of OC suggest that OC should reduce job turnover and agency costs. Agency costs are costs associated with aligning interests of the principal (organization) and agents (employees). Lately, agency costs have become huge problems to organizations, employees, and society as a whole, as we have observed from Enron, Tyco, and WorldCom.

The Characteristics of Construction Work in Union and Non-Union Construction Firms

In the construction industry, today there is a distinct division of labor, with such categories as asbestos workers, boiler

makers, carpenters, cement masons, electrical workers, elevator construction workers, glaziers, iron workers, laborers, millwrights, operating engineers, painters, plasterers, plumbers, pipe fitters, roofers, sheet metal workers, and others. Construction projects are performed by these labor specialists in some serial sequence.

In construction, the various specialties build on the work of other specialties, but the intermediate product does not move, as it does in manufacturing. Instead the intermediate product is fixed and the specialists move. Furthermore, labor specialists can become subcontractors or be hired by general contractors. Eccles (1981) describes parties involved and relationships among them in construction projects in the following way:

The organization of construction projects involves relationships among the owner, the general contractor, and various special trade contractors. Most typically, the owner writes a general contract with a general contractor who assumes total responsibility for accomplishing the project. Often these projects are for a fixed price on a total or unit of work basis and have time deadlines and financial incentives and penalties. Other forms include cost plus contracts which can also have incentives and penalties. For fixed price contracts general contractors are usually selected by competitive bidding among a group of firms who have been qualified to bid for the project. (p. 338)

Eccles (1981) further argues that relations between the general contractor and subcontractors are stable and continuous over fairly long periods of time, because transaction costs would be high if, for every new project, a general contractor solicited bids from a number of subcontractors for each trade. He calls this type of quasi-integration between the general contractor and subcontractors the "quasifirm."

In the construction industry, the degree of quasi-integration differs among firms, and the difference is more pronounced between the union firm and the non-union firm. The key difference between the two is that the union firm has at its disposal skilled craftsmen who can be called upon from the union as demand dictates. In essence, the union performs the function of human resource planning, whereas the non-union firm assumes the responsibility of its own human resource planning.

The union contractor works with the union to control the recruitment of new entrants into the skilled trade unions. Most new entrants go through 4 years of apprenticeship training before receiving journeyman status. Hiring is usually done annually. Selection is made by the joint apprenticeship board comprising contractors and union representatives, and hiring practices in the union firm are governed by union contracts. Most skilled trade unions have similar rules regulating the disposition of their members, a process called the referral system. In this system, the union selects and refers applicants on request of the contractor, who can accept or reject all referrals made by the union. The employer also has

the opportunity to pick from the specified number of candidates on the list.

From the workers' standpoint, there is little difference between firms, as the job function is virtually the same between firms, and pay and benefits are identical under the union contract. Workers frequently move from one firm to another, depending on the demand for workers. Only a select few maintain consistent employment with one particular firm for an extended period of time.

The non-union firm, however, assumes the responsibility of human resource planning. This firm conducts its own recruiting from the general labor pool and then trains workers; it tends to retain its workers during slack times to reduce the problem of finding experienced workers.

The union firms' organizational architecture can be characterized as less hierarchical than non-union firms: Union workers have more decision rights, they are rewarded based on the union contract, and their performances are less monitored than non-union workers. However, union construction workers work for many different firms, although they may work for the same firm many times during their career.

In union firms, decision rights are assigned more to the union, whereas in non-union firms managers have more decision rights. Rewards in union firms are primarily determined by the terms and conditions of employment as specified in union contracts, and union workers are much better paid. Although non-union employees' wages are lower, non-union firms have in place discretionary work incentives, such as bonuses and profit sharing. Performances of employees are more closely monitored in non-union firms than union firms. These differences in organizational architecture of union and non-union construction firms illustrate that the union firms utilize more indirect control than the non-union firms, as summarized in Table 1.

Characteristics of union and non-union construction firms have mixed combinations of positive and negative dimensions for OC and turnover intention. For example, non-union firms have positive characteristics for OC in duration of employment and reward system, but negative characteristics in control and performance evaluation. These positive and adverse dimensions of union and non-union firms are likely to have effect on OC. We summarize the positive (+) and negative (−) characteristics in organizational architecture of union and non-union firms in Table 2. These differences may have implications for firm efficiency and performance (Jensen & Heckling, 1995; Milgrom & Roberts, 1992). This study examines the impact of organizational architectural differences in union and non-union firms on OC and turnover intention.

OC differentials between employees in union and non-union firms will depend on the net effect of these positive and negative dimensions of union and non-union firms. We believe that union firms' positive dimensions may outweigh the non-union firms' positive dimensions in regard to OC. Therefore, we formulate the following hypothesis.

Table 1. Organizational Characteristics of Union and Non-Union Construction Firms.

Organizational characteristics	Union firms	Non-union firms
Decision rights assignment	Union	Manager
Reward system	Union contracts	Contracts, bonus, profit sharing managers' discretion
Performance evaluation	Less monitored	More closely monitored
Duration of employment with the same firm	Shorter	Longer
Control	Indirect	Direct
Pay	Higher pay	Lower pay
Firm size	Larger	Smaller

Table 2. Positive and Negative Characteristics of Union and Non-Union Firms in Commitment and Turnover Intention.

Organizational characteristics	Union firms		Non-union firms	
	Commitment	Turnover intention	Commitment	Turnover intention
Decision rights assignment	±	±	±	±
Reward system	-	±	-	±
Performance evaluation	±	±	±	±
Duration of employment with the same firm	-	-	+	+
Control	+	+	-	-
Pay	+	+	-	-
Job security	-	-	+	+
Firm size	-	-	+	+

Hypothesis 1: Workers in union firms are likely to be more committed to the organization.

Workers in union firms enjoy higher pay and more autonomy, whereas non-union firms rely on the individual incentive system such as bonuses and profit sharing for the selected workers. Pay is inversely related to turnover and the individual incentive system tends to increase functional turnover (Park, Ofori-Dankwa, & Bishop, 1994). The turnover study by Park et al. (1994) contributes to the job turnover functionality and several turnover functionality has drawn scholars interests (Guthrie, 2000; Lee & Jimenez, 2011; Shaw, Delery, Jenkins, & Gupta, 1998; Shaw, Dineen, Fang, & Vellella, 2009). Studies also found that there is a close relationship between intention to leave (quit) and turnover (Mathieu & Zajac, 1990; Tett & Meyer, 1993). Based on the low pay, individual incentive system of non-union firms, we can draw the second hypothesis.

Hypothesis 2: Workers in union firms are less likely to quit the organization than workers in non-union firms.

Control Variables

Many studies have examined the relations between affective commitment and its antecedents. The wide range of variables that have been investigated were presented in the categories of personal characteristics, group-leader relations,

organizational characteristics, and role states in Mathieu and Zajac's meta-analysis of antecedents of OC (Mathieu & Zajac, 1990). We closely follow those categories in our study and formulate additional hypotheses on antecedents that were not investigated in previous studies.

Personal Characteristics

Personal characteristics in our study include age, gender, educational attainment, organizational tenure, trade tenure, and salary. The results of Mathieu and Zajac's (1990) meta-analysis show that age, organizational tenure, salary, and ability have positive relationships with OC. Marital status and level of education attained are inversely related to OC. We hypothesize that our study will confirm the Mathieu and Zajac's results.

The likelihood of bonuses and pay increases, which were not investigated in previous studies are included in our study. These should make employees feel good about the organization and we believe that there will be a positive relationship between the perceived bonus and pay increase and OC.

Hypothesis 3: The likelihood of bonus pay and pay increases will have a positive association with OC.

This study also investigates the effect of threat of wage reductions on OC. Construction employees in union firms faced a threat of wage reductions as non-union firms emerged

in the 1990s. Today, many employees in the United States face problems such as wage reductions and job eliminations because of globalization, downsizing, and off-shore outsourcing. The effect of wage reduction on OC may offer a clue to the effect of similar threats, such as downsizing and outsourcing, on OC. Based on the above premises, we formulate Hypothesis 4.

Hypothesis 4: There will be a positive relationship between a threat of wage reductions and OC.

Construction employees experience frequent layoffs and the number of layoffs will have an adverse effect on OC; therefore, we formulate Hypothesis 5.

Hypothesis 5: The number of layoffs will show an inverse relationship with OC.

Job Characteristics

Job characteristics investigated in Mathieu and Zajac's meta-analysis are skill variety, task autonomy, job challenge, and job scope. These have positive relationships with OC. We added job security, flexibility, and job satisfaction in our study. We also hypothesize that there will be a positive relationship between job characteristics and OC.

Group-Leader Relations

An employee connects to an organization through relationships with the immediate supervisor and peers. Wayne, Shore, and Linden (1997) developed and tested a model of the antecedents and consequences in OC and they investigated perceived organizational support and leader-member exchange. They found that leader-member exchange positively related to organizational citizen behavior and OC. Antecedents in group-leader relationships are task independence, leader competency, co-workers, participative leadership, and leader understanding. We hypothesize that these variables will reveal a positive relationship with OC.

Organizational Characteristics

Organizational characteristics typically deal with organizational size and organizational centralization (Mathieu & Zajac, 1990). However, we investigate characteristics of union and non-union firms in the construction industry, in which non-union firms are more hierarchical than union firms in the construction industry. As illustrated before, our study adds additional dimensions to the organizational characteristics.

Turnover Intention

The important consequences of OC are its relationships with turnover intention and actual turnover. Studies on the

relationships between OC and the employees' intention to leave the organization and actual turnover report consistent negative correlations (Allen & Meyer, 1996; Mathieu & Zajac, 1990; Tett & Meyer, 1993).

This study investigates the relationship between OC and employee intention to quit the organization. Steel and Ovalle's (1984) meta-analysis on turnover found that intention to quit the organization is the strongest predictor of turnover.

Hypothesis 6: Committed employees are less likely to quit the organization and we hypothesize that there will be an inverse relationship between OC and intention to quit the organization.

Several studies made comparisons of relative importance of OC and job satisfaction to intention to quit the organization (Ajzen & Fishbein, 1980; Carsten & Spector, 1987; Hom & Hulin, 1981; Hom, Katerberg, & Hulin, 1979; Steel & Ovalle, 1984; Tett & Meyer, 1993). These studies report that satisfaction and commitment each uniquely contribute to turnover intention.

There are also many studies on the relationship between job satisfaction and OC. Martin and Bennett (1996) classify them into four models: (a) job satisfaction as antecedent to OC, (b) OC as antecedent to job satisfaction, (c) OC and job satisfaction as reciprocally related, (d) OC and job satisfaction as independent.

The model that specifies job satisfaction as an antecedent of OC has received considerable support. The relationship between OC and job satisfaction has been found to be positively correlated (Bateman & Strasser, 1984; Bluedorn, 1982; Mulinge, 2001). We investigate the impact of job satisfaction, OC, and intention to quit the organization.

Hypothesis 7: Satisfied employees are likely to be strongly committed to the organization and less likely to quit the organization.

Construction employees tend to work for more firms than employees in other industries. They are similar to knowledge workers in consulting firms and they are exposed to different firms and working environments. Construction employees' experiences with various organizations may help develop adaptabilities to changes and different working environments.

Hypothesis 8: There will be a positive relationship between the number of firms worked and turnover intention.

Control Variable in Turnover Intention Model

Alberson and Baysinger (1984) indicated that individual, organizational, and environmental attributes influence the employee's perception of costs and benefits associated with

the entire process of quitting one employment opportunity and joining another.

Numerous studies (Jackofsky & Peters, 1983; Mobley, Griffeth, Hand, & Meglino, 1979; Porter & Steers, 1973) have investigated turnover based on individual attributes. These studies have examined individual characteristics such as age, gender, length of service, level of employment, level of skill, education, and ability. We will include age, gender, length of employment, education, salary, satisfaction, and commitment as individual characteristic variables in this study.

Organizational characteristics associated with turnover are integration, communication, centralization, routinization, professionalization, upward mobility, distributive justice, and firm size. Antecedents included as organizational characteristics are the same as those included in the commitment model.

Environmental characteristics are geographic location, environmental turbulence, size of metropolitan area, competition in the market place, economic conditions, and support organizations. This study does not include environmental characteristics because we draw our data and sample from one region in Midwestern states. We include a perceived job opportunity variable in our study that may reflect what the environment characteristics try to capture.

Method

Data used for the study are based on construction industry employer and employee surveys, administered in 1992. The employer survey was designed to find out characteristics of union and non-union construction firms. The employee survey was designed to study employee attitudes toward OC, turnover intention, and job satisfaction. We obtained a mailing list of construction firms in three counties in the Midwestern region of the United States from Dun and Bradstreet. The list consists of 530 firms of general contractors (SIC 15) and 913 firms of special trade contractors (SIC 17). We mailed 1,443 surveys, which included all construction firms listed in Dun & Bradstreet, from the identified region. Of the 1,443 surveys mailed, 121 firms responded. As many of the firms listed in Dun & Bradstreet did not stay in the construction business, the 121 firms that responded make up about 10% of the population. Of the surveys returned, 23 indicated they are union firms and 87 indicated they are non-union firms.

The employee survey consisted of four parts: (a) demographic characteristics, education, and experiences; (b) work safety, work environment, and organizational characteristics; (c) OC and intention to quit; (d) motivation and job satisfaction. The survey questionnaire we used in this study followed closely the survey questionnaire of Maloney and McFillen (1984). We obtained the use of 6,150 home addresses of construction employees from the state employment and security office. Eight hundred and ninety three surveys were returned;

of these, 130 surveys were incomplete and 55 survey respondents failed to indicate whether they worked for union or non-union forms. Thus, we used 652 survey respondents in our study. Of these, 340 were hourly employees in union firms and 312 were from non-union firms. Survey respondents skipped some questions in the survey; thus, the number of observations varies.

Measures

Measurements of the data are largely a Likert-type 7-point scale. There are, however, some numerical interval scale data such as age, years of employment, years of technical school, years of education, pay and benefits. Union versus non-union employees (union = 1, non-union = 0), gender (male = 1, female = 0), and marital status (married = 1, not married = 0) are dummy variables in the model. The Cronbach's alpha was calculated to see the internal reliability of multi-item measures of variables such as commitment and satisfaction. Commitment was measured with Allen and Meyer's (1990) eight-item affective commitment scale. The 7-point response scales ranged from *strongly disagree* (1) to *strongly agree* (7). The Cronbach's alpha was .869. General job satisfaction was measured by asking respondents to show their level of agreement with the two items: (a) all in all, I am satisfied with working my trade and (b) In general, I like working at my trade. The reliability test score showed the α -value of .858.

Other multi-item variables in the model and their reliability test scores were intrinsic reward (seven items; $\alpha = .892$); participation in decision making (two items; $\alpha = .804$); interpersonal relationships with co-workers (three items; $\alpha = .820$); foreman's bias (three items; $\alpha = .676$); working conditions (two items; $\alpha = .739$); professional commitment (four items; $\alpha = .734$); perceived performance (two items; $\alpha = .719$); accomplishment (two items; $\alpha = .647$); work autonomy (three items; $\alpha = .824$); work flexibility (two items; $\alpha = .912$); foreman's understanding your work (two items; $\alpha = .702$); worker's aspiration (three items; $\alpha = .704$); and job security (two items; $\alpha = .822$). The rest of the variables were measured in a single-item question. These α values show that measurements are reliable.

Empirical Results

Regression coefficients of multiple regression models were estimated, with the sampled data and results presented in Table 3.

The survey asked questions regarding the number of layoffs, the number of construction firms worked, and incentive systems, to find out differences in organizational characteristics of union and non-union firms. The 73% of non-union firm employees worked for a single firm and 48% of union firm employees worked for a single firm. The average number of firms worked for in the previous year was 1.4 in

non-union firms and 2.4 in union firms. The percent of zero layoffs in non-union firms was 31.3% and in union firms, 10.6%. The average number of layoffs for non-union and union firms was 1.2 and 2.7, respectively. The prevalent form of work incentives in non-union firms was bonus pay.

Personal data indicated that employees in non-union firms were younger than union firm employees; the average age of non-union firm employees was 35.6 years, compared with 40.3 years for union-firm employees. The average number of years in current trades was 12.1 years for non-union employees, 17.7 for union employees. The average hourly pay was US\$10.69 for non-union employees, compared with US\$17.11 for union employees, in 1992 dollars.

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Statistically significant variables at the conventional level of significance ($\alpha = .01, .05$ and $.10$) in the commitment model are age, organizational tenure, hourly pay, likelihood of pay increase, likelihood of wage cut, accomplishment, job flexibility, foreman's understanding, organizational policy, work rules, inspiration, professional commitment, and loyalty to union.

Statistically significant variables in the turnover intention model are age, trade tenure, ability, likelihood of bonus and pay increase, perceived performance, OC, number of construction firms worked, participation in decision making, foreman's understanding, foreman's bias, and professional commitment and job satisfaction.

Discussion

The variables in organizational characteristics reveal interesting results. Employees in union firms show a higher level of commitment than non-union firm employees. The union variable is a dummy variable (union = 1, non-union = 0, and p value is .34.) The regression coefficient reveals that employees' commitment in union firms is higher than that of non-union firm employees by .154 in the 7-point scale. This result may imply that the positive dimensions of union firms, such as higher pay, indirect control, and less monitoring, outweigh the positive dimensions of non-union firms. The non-union firm has positive dimensions in organizational tenure, small size, pay bonuses, and less frequent layoffs. The empirical result failed to confirm Hypothesis 1 at the conventional level of significance, but revealed the hypothesized direction of the relation between the union and OC. As competition between union and non-union firms grows, both sides modify their attitudes toward employers. Balsler and Winkler (2012) found that the leadership of the International

Brotherhood of Electrical Workers (IBEW) and union members increases their labor-management cooperation in response to increasing competition from the non-unionized electrical contracting sector. This evidence shows that competition drives changes in employees' attitudes and culture (value) and changes in culture lead to changes in employee behavior.

Organizational policy, work rule, and inspiration variables are statistically significant and show positive association with OC. Inspiration has a strong association with OC. Standardized regression coefficients (beta) indicate that the inspiration variable is the most important variable in the commitment model.

OC

Statistically significant personal characteristics in OC are organizational tenure, hourly pay, likelihood of bonus and pay increase, likelihood of wage cut and accomplishment. The age variable reveals an inverse relationship with OC. This result, which does not confirm Mathieu and Zajac's (1990) meta-analysis, may be due to the nature of construction work. Construction employees' organizational tenure is relatively short compared with other industries. As construction employees work for many firms over the years, they may commit less to an organization.

The likelihood of bonuses and pay increase and threat of wage cuts are statistically significant and reveal positive signs. These aspects of personal characteristics have not been explored in previous OC studies. The likelihood of bonuses and pay increases represents employees' perceptions and outlook on the organization. The employees' perceived bonuses and pay increases provide a better perspective on the organization that he/she is working for. Therefore, he or she is more likely to be loyal to the organization, and the empirical results support Hypothesis 3.

The likelihood of wage cuts is an interesting variable. As non-union firms have prominently emerged in the early 1990s, union firm employees felt threats of wage cuts and showed strong commitment to their union firms. Today's workers in the United States are facing similar threats as the firms' input and output markets are changing rapidly. This result supports Hypothesis 4. Workers are likely to be more loyal to their organization and accept changes to save the organization and their jobs. Kim's (1998) study demonstrated that Hyundai Motor in Korea constructed crisis proactively to shift learning orientation and facilitate organizational learning.

Perceived accomplishment reveals a strong positive association with OC. Although the number of layoffs and perceived job alternatives are not statistically significant, they are inversely associated with OC. Frequent layoffs may generate resentment toward the organization. While the results are consistent in direction with Hypothesis 5, they fall short of meeting the conventional level of significance. Workers'

Table 3. Empirical Results of Organization Commitment and Turnover Intention.

Variables	(1) Organizational commitment	(2) Turnover intention
	Regression coefficient	Regression coefficient
Constant	1.922 (.07)	5.089 (.05)
Organizational characteristics		
Union vs. non-union	0.154 (.34)	0.396 (.29)
Opportunity for promotion		0.019 (.79)
Policy	0.066 (.10)	-0.127 (.19)
Work rules	0.053 (.03)	
Inspiration	0.282 (.00)	-0.054 (.56)
Pension plan		0.196 (.42)
Working conditions		0.088 (.44)
Personal characteristics		
Age	-0.013 (.07)	0.038 (.10)
Marital status		-0.197 (.19)
Education	-0.033 (.61)	-0.098 (.52)
Organizational tenure	0.015 (.04)	-0.008 (.62)
Trade tenure		-0.040 (.08)
Ability		-0.263 (.08)
Perceived job alternatives	-0.018 (.51)	0.064 (.33)
Hourly pay	0.032 (.03)	-0.012 (.75)
Likelihood of bonus & pay increase	0.033 (.10)	-0.090 (.08)
Likelihood of wage cut	0.110 (.00)	0.034 (.64)
Accomplishment	0.265 (.01)	-0.178 (.42)
Perceived performance	-0.073 (.45)	1.225 (.00)
Number of layoffs	-0.02 (.35)	
Organizational commitment		-0.410 (.10)
Aspirations		0.088 (.53)
Number of construction firms worked		0.135 (.01)
Job characteristics		
Job security	0.028 (.36)	-0.019 (.81)
Job flexibility	-0.095 (.07)	
Task autonomy		0.108 (.51)
Group relations		
Participation in decision making	0.016 (.73)	-0.404 (.01)
Foreman understanding	-0.094 (.07)	-0.233 (.06)
Foreman's bias	-0.055 (.22)	0.197 (.06)
Co-worker relationship	0.080 (.12)	-0.0866 (.48)
Trust	-0.036 (.19)	
Foreman listening	-0.037 (.30)	0.074 (.37)
Feedback	0.028 (.38)	
Professional and union commitment		
Professional commitment	-0.060 (.09)	0.230 (.00)
Loyalty to union	-0.072 (.01)	-0.055 (.36)
Job satisfaction		
Overall	0.32 (.55)	-0.381 (.00)
Intrinsic reward	0.078 (.48)	
R ²	.64	.56
Adjusted R ²	.60	.49
n	269	242
F	20.34 (.00)	7.83 (.00)

Note. Numbers in parentheses are p values.

perceived job alternatives may offer hopes for jobs in other organizations and make them less committed to the organization.

Perceived job security has a positive association with OC, but is not statistically significant. The job flexibility variable is statistically significant and shows an inverse association with OC. Job flexibility may mean that employees are required to do specialties that they are not trained for. The results indicate that employees prefer not to work specialties that they are not well trained for. As job flexibility increases, employees are less committed to their organizations.

The only statistically significant variable in group relations is foreman understanding. Co-worker relationship variable falls just shy of statistical significance (p value = .12). Foreman understanding shows a negative sign and appears to contradict previous studies (Mathieu & Zajac, 1990). Participation, foreman bias, and feedback confirm the previous findings in directions of association, but are not statistically significant at the conventional level of significance.

Professional commitment and union loyalty are statistically significant and show an inverse relationship with OC. Employees more strongly committed to the profession and union are less committed to the organization. These results indicate that there is a trade-off between OC and commitment to profession and union. This study is not designed to study company and union dual allegiance (Gordon & Ladd, 1990; Thacker & Rosen, 1986) and should not be interpreted as contradictory to the previous dual allegiance studies.

Consequences of OC

One of the important consequences of OC is a negative correlation between OC and employee intention to quit the organization. The result of the turnover intention model strongly supports Hypothesis 6 that there will be an inverse relationship between OC and intention to quit the organization. This result also confirms previous studies (Allen & Meyer, 1996; Mathieu & Zajac, 1990; Tett & Meyer, 1993). However, the results indicate that OC holds higher relative importance than does the job satisfaction variable.

Group relation characteristics showed a strong association with the turnover intention, but they did not show strong association with OC. Organizational characteristics variables revealed a strong association with OC. Participatory management and foreman understanding have significant inverse relationship with the intention to quit, which implies that employees' participation in decision making and foreman understanding reduces turnover. Foreman bias is found to have a strong positive association with the intention to quit. Therefore, foreman bias can foster employee turnover and good relationships with co-workers may deter turnover, but the latter association is not statistically significant.

Intention to quit in union firm employees is higher than in non-union firm employees. Though there is turnover intention differential between union and non-union employees,

the differential is not statistically significant. The result fails to confirm Hypothesis 2. However, the turnover differential may indicate that union firm employees feel insecure about their employment and seek alternative opportunity for the same pay.

The job satisfaction variable is statistically significant in the turnover intention model. However, it is not statistically significant in the OC model only and partially confirms Hypothesis 7. Fu and Deshpande (2012) obtained the same results from a Chinese company.

The number of firms worked shows a statistically significant positive association with the turnover intention and confirms Hypothesis 8. As employees work for more firms, they develop abilities to adapt to new organizations, a factor likely to increase turnover intention.

Limitations

Empirical studies on OC and turnover intention suffer from measurement problems and this study is no exception. Survey respondents are self-selected to respond to the survey and there is a likelihood of selection or non-response bias.

Conclusion

The study investigated factors affecting OC and consequences of OC in union and non-union construction firm settings. The unique nature of construction firms permitted us to study some additional dimensions of OC and turnover intention in our study. The study suggests that employees' OC in union firms is higher than that of non-union firms, but employees' turnover intention in union firms is higher than employees in nonunion firms although both regression coefficients are not statistically significant at the conventional level of significance. The difference may stem from differences in organizational architecture of union and non-union firms. Higher pay, indirect control, and less hierarchy in union firms may explain the speculative commitment differential. Since employees in union firms work for more number of firms than nonunion firm employees they might have developed a better adaptive proclivity in changing organizations. Differences in organizational characteristics of union and nonunion firms might have also dissipated over the years as organizations compete to hire competent employees from the same labor pool. We have investigated additional personal factors that were not examined in previous OC studies. Economic factors such as hourly pay, likelihood of bonuses, and pay increase and likelihood of wage cuts revealed significant positive relationships with OC. The association between the number of layoffs and OC was negative, but not statistically significant. These findings indicate that economic factors play an important role in OC.

Organizational characteristics such as work rules, organization policy, and inspiring employees were found to have statistically significant association with OC. Therefore,

inspiring employees and establishing fair policy and work rules can improve employee OC.

We found that OC and job satisfaction have statistically significant strong association with turnover intention, and high job satisfaction can lower turnover intention and turnover. Perceived pay increases reduce turnover intention, but the number of firms worked increases turnover intention. Group factors were found to be statistically significant in turnover intention compared with organizational factors in OC. More employee participation in decision making, better foreman understanding, and reduction of foreman bias may lower turnover intention and turnover. We conclude that managers need to pay attention to economic, organizational, and group factors to improve OC and to reduce turnover intention.

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Author Biographies

Hong Y. Park earned his undergraduate degree from Kyung Hee University, Korea, MA from Seoul National University, MBA from Fairleigh Dickinson University and PhD from Utah State University. Professor Park specializes in the theory of the firm and economics of organization. His research interests include sourcing strategies, work incentives, application of the theory of the firm to business practices and strategies. His research has been published in *Human Relations, Managerial and Decision Economics, Economic Studies, Annals of Regional Science, American Journal of Business, Multinational Business Review* and *Journal of Purchasing and Supply Management*. He was a Fulbright Scholar to Kyung Hee University, Seoul, Korea in 2002-3. He was an International Scholar at Kyung Hee University, Seoul Korea in 2009-2010. Professor Park served as the president of Korea-America Economic Association and the chair of advisory board for the same association in 2009-10. He received the Braun Research Fellowship for three years in 2013 from Saginaw Valley State University.

Ray L. Christie, PhD, has served as Vice Provost for Academic Administration at Central Michigan University (CMU) since 2003 and is also currently serving as Interim Vice President for CMU's Global Campus. He has previously directed institutional research offices at multiple institutions and has published in the areas of higher educational access and degree attainment. Dr. Christie holds a BA from Saginaw Valley State University, an MBA from CMU and a PhD from Georgia State University.

Gail E. Sype earned her PhD from Michigan State University in 1993. She has been a professor at Saginaw Valley State University since 1990. Her academic interests include diversity, improving classroom instruction techniques, and improving services to diverse student populations. Her primary teaching interests include principles of management courses, organizational behavior, and international management.