



A survey relation between job satisfaction and organizational citizenship behavior (OCB)

Job satisfaction

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Abstract

Purpose – The purpose of this paper is to propose a model in which team commitment in self-directed teams moderates the relationship between job satisfaction and organizational citizenship behavior (OCB).

Design/methodology/approach – Survey questionnaires measuring team commitment, OCB, and job satisfaction were administered to 242 full-time employees who were involved in self-directed teams at three geographically diverse manufacturing facilities. After carefully testing the psychometric properties of the scales, hierarchical multiple regression was used to test hypotheses.

Findings – The relationship between job satisfaction and OCB was shown to be significant, as was the relationship between team commitment and OCB. Most importantly, the relationship between job satisfaction and organizational citizenship behavior was moderated by team commitment, such that the relationship was stronger when team commitment was high.

Research limitations/implications – Due to heightened salience of self-directed team functioning in our sample, generalization of results may be limited.

Practical implications – The findings indicate that the usefulness of self-directed work teams may be limited in situations where employees lack team commitment. Besides implementing self-directed teams and assigning performance goals, researchers and practitioners need to identify efforts that work toward increasing commitment of team members, thereby increasing organizational citizenship behavior in the organization.

Originality/value – It is believed that this research makes a significant contribution to understanding the relationship between job satisfaction and organizational citizenship behavior, a relationship that has long been known but not well defined. Moreover, the paper develops what appears to be a valid and reliable measure of team commitment, based on goodness of fit using cross-validation, confirmatory factor analysis, and reliability tests.

Keywords Team working, Job satisfaction, Organizational behaviour

Paper type Research paper

This study investigates the extent to which team commitment moderates the relationship between job satisfaction and organizational citizenship behavior (OCB) among members of self-directed teams in an organization. For the last several decades,

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organizational citizenship behavior (OCB) has become a major construct in the fields of the psychology and management and received a great deal of attention in the literature (Bateman and Organ, 1983; Bergeron, 2007; Bolino *et al.*, 2002; LePine *et al.*, 2002; Niehoff and Moorman, 1993; Organ, 1988; Organ and Ryan, 1995; Smith *et al.*, 1983; Podsakoff *et al.*, 2000; Tang *et al.*, 2008). There are almost 30 different forms of OCB. Organizational citizenship behavior “represents individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ, 1988, p. 4). These behaviors “lubricate the social machinery of the organization”, “provide the flexibility needed to work through many unforeseen contingencies”, and help employees in an organization “cope with the otherwise awesome condition of interdependence on each other” (Smith *et al.*, 1983, p. 654).

More recently, the definition of OCB has been expanded to include not only the categories of altruism (helping behaviors aimed directly at specific persons) and generalized compliance (conscientious performance for the good of the organization) but also the categories of courtesy, sportsmanship, and civic virtue (Podsakoff *et al.*, 2000). Many researchers examine five categories of contextual performance: volunteering for activities beyond a person’s formal job expectations; persistence of enthusiasm; assistance to others; following rules and procedures; and openly espousing and defending organization objectives (Organ, 1997) as related to personality variables, motivational basis, organizational support (e.g. Borman *et al.*, 2001; Organ, 1990), social exchange (Konovsky and Pugh, 1994), job satisfaction (Bateman and Organ, 1983; Koys, 2001), and social capital (Bolino *et al.*, 2002). Additionally, Lam *et al.* (1999) provided important insight regarding perceived boundaries between in-role and extra-role behavior, further clarifying what behaviors constitute organizational citizenship behavior. Organizational citizenship behavior continues to be of substantial interest to researchers and practitioners (LePine *et al.*, 2002).

Concurrently, the use of work teams has evolved over time as a popular strategy for improving employee productivity and efficiency, as well as for enhancing product quality in the USA and around the world (e.g. Abbott *et al.*, 2006; De Jong *et al.*, 2006; Langfred, 2007; Tang *et al.*, 1987, 1989; Tasa *et al.*, 2007). More than two decades ago, it was estimated that over 90 percent of the *Fortune* 500 companies used teams in their organizations (Lawler and Mohrman, 1985). Recently, Druskat and Wheeler (2004) estimated that 79 percent of companies in the *Fortune* 1,000 currently deploy “empowered,” “self-directed” or “autonomous” teams. In self-directed work teams, team members are empowered and have the responsibility and autonomy to complete identifiable pieces of work, and in some cases, even to make and carry out personnel and staffing decisions, such as hiring and firing team members (Tang and Crofford, 1995/1996). These figures suggest that a large number of organizations have implemented some form of self-directed teams (Druskat and Wheeler, 2004; Sheridan, 1997).

Despite the proliferation of research on organizational citizenship behavior and the increasing prevalence of self-directed teams in organizations, remarkably little research has examined organizational citizenship behavior in the context of these teams, with some exceptions (e.g. Banuelos *et al.*, 2006; Euwema *et al.*, 2007; Flaherty and Moss, 2007; Lavelle *et al.*, 2007). The lack of such research represents an important gap in our understanding of organizational citizenship behavior. Indeed, there may be important factors inherent in the team environment that influence employees’

involvement in organizational citizenship behavior. Bishop *et al.* (2005) found support for the distinction between team commitment and organizational commitment, and found that team commitment moderates the relationship between perceived team support and job performance.

Based on these findings, the present study further advances Bishop *et al.*'s (2005) research by focusing on the extent to which team commitment has an impact on the relationship between job satisfaction and organizational citizenship behavior. More specifically, the major purpose of this research is to propose a model in which team commitment in self-directed teams moderates the relationship between job satisfaction and organizational citizenship behavior (Baron and Kenny, 1986) (Figure 1).

In the next section, we briefly review some of the literature on job satisfaction, organizational citizenship behavior, commitment in work teams, and social capital, and state our hypotheses for the study. Following that, we describe the study sample of 242 members of an organization in which self-directed teams are prevalent, as well as the development of the team commitment scale (TCS), a new scale that we found to have good psychometric properties and strong reliability. We then discuss our finding that team commitment in self-directed teams did moderate the relationship between job satisfaction and OCB for our sample. Finally, we offer some implications for practicing managers, and suggestions for future research.

Theory and hypotheses

The relationship between job satisfaction and organizational citizenship behavior (OCB) has been examined by many researchers and is well established in the literature. Due to the reciprocal relationship between job satisfaction and OCB (i.e. job satisfaction (OCB) versus OCB (job satisfaction) (e.g. Koys, 2001; Podsakoff *et al.*, 1993), it is unlikely that researchers will be able to conclusively determine the direction of causality between job satisfaction and OCB in the near future. Directional causality remains uncertain, but ample evidence indicates that such a relationship does exist, and we can at least conclude that job satisfaction is likely to be highest in organizations where OCB is prevalent (Podsakoff *et al.*, 1993). Although the relationship between job satisfaction and OCB has been established in the literature with regard to traditional work environments, we believe it is important to test that relationship in a self-directed team environment, adopting a position similar to other researchers (e.g. Allen and Rush, 1998; Bateman and Organ, 1983; Bishop *et al.*, 2000) by considering job satisfaction as an antecedent of organizational citizenship behavior. Thus:

- H1.* Job satisfaction of self-directed team members will be significantly related to organizational citizenship behavior.

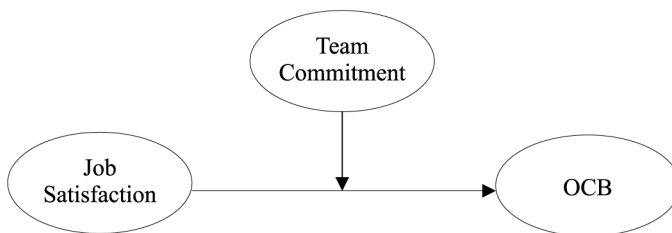


Figure 1.
A model of team commitment as a moderator of the job satisfaction-OCB relationship in self-directed teams

Team commitment

Commitment in the context of self-directed work teams has emerged as a topic of interest in recent years (e.g. Kirkman and Shapiro, 2001; Riketta and Van Dick, 2005). Employees distinguish between commitment to their work teams (team commitment) and commitment to their organizations (organizational commitment) (Bishop *et al.*, 2005). According to field theory, the proximity and salience of environmental elements play a substantial role in determining individuals' reactions to their environments (Mathieu and Hamel, 1989). Therefore, one reason employees distinguish between team commitment and organizational commitment may be that the organization itself seems more remote, and therefore less salient, than the team in employees' daily work experience. In other words, employees may experience more difficulty "connecting" with the organization than with the team, such that their level of commitment to the organization is comparatively lower than their commitment to the self-directed work team (De Lara and Rodriguez, 2007).

Consistent with Bishop and Scott (2000), we believe that self-directed teams, in which members work closely together on an ongoing basis, thereby developing meaningful and positive interrelationships, offer a commitment target that is more salient to employees than is the global organization. Consequently, commitment should be higher among team members, as should the number of organizational citizenship behaviors being demonstrated. The relationship between team commitment and organizational citizenship behavior has been previously shown to be strong and significant (Bishop and Scott, 2000; Bishop *et al.*, 2000; De Lara and Rodriguez, 2007). In this study, we investigate this relationship among self-directed team members and trust that this relationship will hold true for our sample. We present Hypothesis 2 as follows:

- H2.* Team commitment in self-directed teams will be positively related to organizational citizenship behavior.

Social capital and team commitment as a moderator

Social capital in organizations derives from social relations, a dimension of social structure in which favors and gifts are exchanged among organizational members (Adler and Kwon, 2002). "The cognitive aspect of social capital is a precursor . . . of organizational citizenship behavior" (Bolino *et al.*, 2002, p. 516). Thus, the favors and gifts associated with social capital, which can serve to "promote development for the collective whole," (Thomas, 1996, p. 11) may also be considered to be organizational citizenship behaviors. In the context of self-directed teams, this phenomenon may be even more pronounced. There is a reciprocal relationship between help provider and help receiver such that satisfied employees, who help their fellow employees and colleagues who like, trust, and identify with each other, and who understand one another (Bolino *et al.*, 2002), are more likely to receive help in return. The amount of reciprocated help is a monotonic increasing function of the amount of prior help (Wilke and Lanzetta, 1970). Therefore, it is possible that for some effective members of self-managing teams, the initiation of organizational citizenship behaviors may cause the snowball effect and become an upward momentum and vicious circle to improve employee attitudes, commitment, further helping behavior, and continuous improvement (Tang *et al.*, 2008).

According to Adler and Kwon (2002, p. 22), social capital “normally grows and develops with use.” That is, through their functional participation in self-directed teams, members’ interpersonal relationships are strengthened, thereby enhancing the social capital resident within the team, which may in turn lead to a higher level of OCBs (De Lara and Rodriguez, 2007). It can be reasonably argued that members who are more committed to their self-directed teams will “use” the team’s social capital to a greater extent than do those members who are less committed to the team.

Conversely, social capital may depreciate with non-use (Adler and Kwon, 2002). Members who are not satisfied with their jobs and who are not committed to their teams are less likely to participate in their teams’ self-direction (functional participation) and build stronger interpersonal relationships (increase their social capital). These team members are less committed to the team and are more likely to see involvement in team-related activities as burdensome and unnecessary.

We argue that inherent in the social capital accruing from greater functional participation and stronger relationships is an increased propensity to engage in organizational citizenship behaviors (Bolino *et al.*, 2002). The increased social capital of team members who are more committed suggests an attendant increase in the number of organizational citizenship behaviors performed, while the more limited participation of less committed team members suggests non-use (and thereby depreciation) of social capital, with the consequence of diminished OCBs. Thus, we posit that the relationship between job satisfaction and OCB will be positive and stronger for team members who have strong team commitment than for those who do not. Based on these arguments, we assert that team commitment moderates the relationship between job satisfaction and OCB.

- H3.* The positive relationship between job satisfaction and OCB in self-directed teams will be moderated by team commitment, such that the relationship will be stronger when team commitment is high.

Methods

Sample

Survey questionnaires were administered to full-time employees of three geographically diverse (urban Pennsylvania, rural Kentucky, and coastal Mississippi) manufacturing plants of an international organization that produces activated carbon filtration products. A field experiment was conducted among the three facilities: a coastal Mississippi plant had been using self-directed teams for several years and two urban plants in which the implementation of self-directed teams was relatively recent. The company’s concept of self-directed teams involves highly autonomous teams of employees who are wholly responsible for major manufacturing processes within the organization. Teams develop their own work schedules and assignments, are responsible for all aspects of their manufacturing processes and products, and play a major role in the hiring, selection, promotion, and termination of members.

Of the 368 total personnel involved in such teams, 242 participated in the study. Of the respondents, 11 percent were female. Further, 48.3 percent of respondents were between ages 40-49 and 79.5 percent had either not attended college at all or had not completed a college education. The population was 90.1 percent White/Caucasian and 8.2 percent Black/African American, with the remaining 1.7 percent a mix of American

Indian/Alaskan Native, Asian/Pacific Islander and others. Means, standard deviations, and correlations of the major variables are presented in Table I.

Measures

Team commitment. To measure team commitment, we started with the 15-item Organizational Commitment Questionnaire (OCQ) (see Mowday *et al.*, 1979) as a model because it is one of the most important and frequently used measures of organizational commitment in the literature. Following suggestions in the literature (e.g. Bishop *et al.*, 2000; Reichers, 1985; Scott and Townsend, 1994), we then identified appropriate specific items of the OCQ and modified these items to fit the context of self-directed work teams. We developed a new ten-item team commitment scale (TCS) specifically for this study.

OCB and job satisfaction. We adapted Neihoff and Moorman's (1993) 20-item, five-factor OCB scale to develop a short 12-item, four-factor OCB measure: items 1-3 measured Altruism, items 4-6 measured Courtesy, items 7-9 measured Conscientiousness, and items 10-12 measured Civic Virtue. In the present study, results of a confirmatory factor analysis revealed a good fit between our 12-item, four-factor OCB model and our data ($\chi^2 = 127.71$, $df = 49$, $p = 0.00$, TLI = 0.99, CFI = 0.99, RMSEA = 0.08). Job satisfaction was measured by using the following two-item scale:

- (1) I am happy with my job.
- (2) Most of the time I feel dissatisfied in my job (reverse scored).

Results

We examined the psychometric properties of the team commitment scale (TCS) using the following process. First, we randomly selected approximately 50 percent of the data ($n = 108$) from our whole sample ($n = 242$) and employed exploratory factor analysis (EFA), a data-reduction technique that is driven by the data. Results of this exploratory factor analysis showed that the ten items indicated a single factor, with 60.61 percent of the total variance explained by that factor. Factor loadings varied between 0.88 and 0.67. The ratio of the sample size to number of items was good ($108/10 = 10.8$).

Second, we established a ten-item, one-factor model based on results from the first half of the sample, and employed confirmatory factor analysis (CFA) to test our model using the second half of the sample ($n = 128$). We applied the following criteria to examine the goodness of fit (e.g. $\chi^2/df < 3.00$, TLI > 0.90 , CFI > 0.90 , and RMSEA < 0.10). Confirmatory factor analysis allows researchers to test data using the hypothesized factor structure and examine the goodness of fit; it is theory-driven. We found a good fit between the ten-item, one-factor model and our data ($\chi^2 = 71.19$, $df = 35$, $p = 0.00$, TLI = 0.99, CFI = 1.00, RMSEA = 0.09), leading us to conclude that the ten-item, one-factor model of the team commitment scale (TCS) (established using the first half of the sample) survived the cross-validation process (using the second half of the sample). Third, combining the two half samples and using the whole sample, we again conducted both an exploratory factor analysis and a confirmatory factor analysis of this scale and found a good fit between the model and our data ($\chi^2 = 99.71$, $df = 35$, $p = 0.00$, TLI = 0.99, CFI = 0.99, RMSEA = 0.09). The Cronbach's alpha for the team commitment scale using the whole sample was 0.92 (alpha > 0.70). Individual items and factor loadings for both the exploratory factor analysis and the confirmatory factor

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Sex	0.89	0.31									
2. Age	5.51	1.60	0.07								
3. Education	2.88	0.89	-0.05	-0.15*							
4. Organization (year)	16.14	9.02	0.01	0.61*	-0.31*						
5. Job Tenure (month)	103.41	96.09	-0.08	0.41*	-0.16*	0.55*					
6. Prior Team Tenure	16.30	48.51	0.01	0.02	0.07	-0.13	-0.01				
7. Current Team Tenure	38.15	28.88	-0.07	-0.09	0.14*	-0.20*	-0.01	0.16*			
8. Satisfaction	5.50	1.19	-0.05	0.00	-0.01	0.04	-0.01	-0.11	0.12		
9. Team Commitment	5.26	1.08	-0.02	-0.12	0.16*	-0.25*	-0.15*	-0.04	0.25*	0.40*	
10. OCB	5.48	0.60	-0.08	0.09	0.27*	-0.08	-0.01	0.14*	0.04	0.20*	0.44*

Notes: *n* varied between 222 and 236; Sex: Male = 1, Female = 0; Age: 18-24 = 1, 25-29 = 2, 30-34 = 3, 35-39 = 4, 40-44 = 5, 45-49 = 6, 50-54 = 7, 55-59 = 8, 60-64 = 9, 65-69 = 10, 70+ = 11; Education: 8th grade = 1, HS = 2, Some college = 3, 4 year College Degree = 4, Masters Degree = 5, PhD = 6; *p* < 0.05

Table I.
Mean, standard deviation, and correlations of major variables

analysis of the whole sample are presented in Table II. We concluded that the TCS shows good psychometric properties and reliability. Our study suggests that researchers may have confidence in applying the TCS in future research.

Further, we established a measurement model involving the ten-item team commitment scale, the 12-item OCB, and the two-item job satisfaction scale, i.e. all measures of interest in this study. Results suggested a good fit between our model and our data ($\chi^2 = 783.42$, $df = 251$, $p = 0.00$, $TLI = 0.97$, $CFI = 0.97$, $RMSEA = 0.09$). Thus, we have confidence that the items of these measures load properly on their hypothesized dimensions, that the measures have good psychometric properties, and that we have three distinctive and separate measures.

Since all measures were collected from team members at one point in time, there was the potential for issues related to the common method variance bias (CMV) (Podsakoff *et al.*, 2003). The common method variance (CMV) problem may have been overstated and reached the status of urban legend in the literature. There is little credible evidence that common method variance exists, and much evidence to the contrary (Spector, 2006). Nevertheless, to show that our data are not affected by the common method variance, CMV, we conducted Harman's one factor test and examined the unrotated factor solution involving all variables of interest (24 items) in an exploratory factor analysis. Results of this analysis showed six factors. The total amount of variance explained for six individual factors (29.59 percent, 8.88 percent, 8.12 percent, 5.84 percent, 5.26 percent, and 4.74 percent, respectively) and the six factors combined (62.42 percent) suggested that no single factor accounted for the majority of the covariance in the independent and criterion variables. Therefore, we concluded that common method variance was not a significant factor in our findings.

Item		Factor EFA	Loading CFA
1.	I am proud to tell others that my company uses the team concept	0.88	0.88
2.	I am extremely glad our company chose the team concept over other ideas	0.84	0.84
3.	This company's decision to implement the team concept was a definite mistake (R)	0.82	0.78
4.	In the long run, there is not much to be gained by using the team concept. (R)	0.84	0.75
5.	I talk up the team concept to my peers as a positive change for our company	0.79	0.76
6.	The team concept rally inspires the best in me in the way of job performance	0.71	0.74
7.	I really care about the success of the team concept	0.78	0.67
8.	I am willing to put in a great deal of effort beyond that normally expected in order to help the team concept be successful.	0.67	0.65
9.	It would take very little change in my present circumstances to cause me to give up on the team concept. (R)	0.72	0.65
10.	I feel very little loyalty to the team concept (R)	0.72	0.61

Table II.
The team commitment scale

Note: (R) denotes reverse-scored items

Hierarchical multiple regression

We used hierarchical multiple regression to test our hypotheses. In Step 1, we controlled several demographic variables, such as sex, age, team tenure (in months), educational level, and prior team experience (in months). We scale-centered job satisfaction and team commitment measures by subtracting the mean of each scale, respectively, thereby reducing multicollinearity and allowing meaningful interpretation of coefficients (e.g. Aiken and West, 1991; Edwards, 1996). Then, we entered job satisfaction (A), team commitment (B), and the job satisfaction and team commitment interaction ($A \times B$) each in separate steps (Steps 2, 3, and 4). Table III shows that the main effects of job satisfaction and team commitment and the interaction of job satisfaction and team commitment on OCB were all significant, supporting *H1* and *H2*.

Team commitment as a moderator

The major purpose of this research was to ascertain whether team commitment in self-directed teams moderates the job satisfaction-OCB relationship, and to examine the significance of the team commitment-job satisfaction interaction effect with regard to OCB. Based on the observed interaction effect, we further selected participants who scored in the top 25 percent and the bottom 25 percent on the team commitment scale (TCS), labeled these two groups as high and low team commitment groups, respectively, and examined the relationship between job satisfaction and OCB for each group in two separate hierarchical multiple regression analyses. Results suggested that for the high team commitment group, after controlling the demographic variables, the effect of job satisfaction on OCB was significant ($R = 0.37$, $R^2 = 0.14$, $\Delta R^2 = 0.03$, $\Delta F = 4.70$, $p = 0.032$); whereas for the low team commitment group, it failed to reach significance ($R = 0.46$, $R^2 = 0.21$, $\Delta R^2 = 0.01$, $\Delta F = 0.98$, $p = 0.327$). For the high team commitment group, without controlling the demographic variables, the effect of job satisfaction on OCB was again significant ($R = 0.16$, $R^2 = 0.03$, $\Delta R^2 = 0.03$, $\Delta F = 4.25$, $p = 0.041$); whereas for the low team commitment group, it again failed to reach significance ($R = 0.06$, $R^2 = 0.003$, $\Delta R^2 = 0.003$, $\Delta F = 0.20$, $p = 0.657$) (Figure 2). The regression equations for high and low team commitment groups can be expressed as below, respectively.

$$y = 5.572 + (0.159) \times \text{High Team Commitment (1)}$$

$$y = 5.160 + (-0.055) \times \text{Low Team Commitment (2)}$$

Discussion

Our purpose in this study was to propose a model in which team commitment in self-directed teams moderates the relationship between job satisfaction and organizational citizenship behavior. To do so, we developed a measure of team

Variable	<i>R</i>	<i>R</i> ²	ΔR^2	ΔF	<i>df</i>	<i>p</i>
1. Sex, age, team tenure, education, prior team	0.33	0.11	0.11	5.32	5,212	0.000
2. Job satisfaction (A)	0.37	0.14	0.03	6.75	1,211	0.010
3. Team commitment (B)	0.52	0.27	0.13	36.62	1,210	0.000
4. Satisfaction \times Team ($A \times B$)	0.53	0.28	0.01	4.17	1,209	0.042

Table III.
Hierarchical multiple regression on OCB

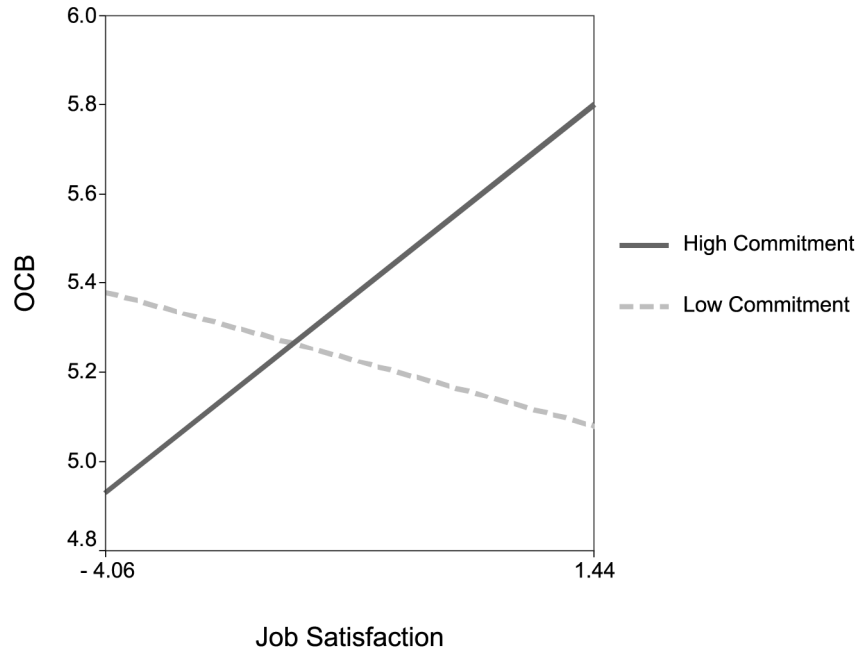


Figure 2.
Effects of team
commitment as a
moderator of the job
satisfaction-OCB
relationship in
self-directed teams

commitment that was adapted from the widely used Organizational Commitment Questionnaire (Mowday *et al.*, 1979) and tested its psychometric properties. Next, we measured job satisfaction, team commitment, and organizational citizenship behavior for a sample of 242 employees in three geographically separate locations. Results suggest that team commitment does moderate the relationship between job satisfaction and organizational citizenship behavior for members of self-directed work teams.

We first hypothesized a significant relationship between job satisfaction and organizational citizenship behavior, based on theory and extant literature that supports such a relationship. The relationship was shown to be significant, and *H1* was supported. While this relationship has been reported by previous researchers, demonstrating the relationship between job satisfaction and organizational citizenship behavior in a team environment was necessary for the development of our model (Baron and Kenny, 1986).

Our second hypothesis predicted that team commitment would be positively related to organizational citizenship behavior, based on earlier studies suggesting that team members are more likely to develop strong personal relationships than are non-team members, which may then lead those team members to engage in more socially supportive activities. *H2* was also supported.

The primary hypothesis of this study, *H3*, predicted that the relationship between job satisfaction and organizational citizenship behavior would be moderated by team commitment, such that the relationship would be stronger when team commitment was high. Figure 2 shows that for employees with high team commitment, job satisfaction was significantly and positively related to OCB. That is, employees with higher job satisfaction who also have a high level of team commitment will display higher levels

of OCB. On the other hand, for low team commitment employees, job satisfaction was not significantly related to OCB. Thus, *H3* was also supported.

This finding may provide insight into situations where employee involvement in self-directed teams did not produce attitudinal change (e.g. Cohen and Ledford, 1994; Pearson, 1992). If team members have not developed satisfying work relationships within their teams, they may not have developed the social capital that could lead to higher levels of commitment to those teams (Van der Vegt *et al.*, 2000). Enhanced job satisfaction ensuing from improved co-worker relationships may in turn lead to higher levels of team commitment, and ultimately to increases in the overall volume of organizational citizenship behavior present in their organizations (Bolino *et al.*, 2002; Wilke and Lanzetta, 1970). The finding that commitment to one's team enhances the likelihood of engaging in organizational citizenship behavior for employees with higher job satisfaction provides important insight into the potential benefits of self-directed work teams for the overall work environment.

The finding that team commitment did not affect the job satisfaction-organizational citizenship behavior relationship for employees with low job satisfaction suggests that the implementation of self-directed work teams may not create a self-reinforcing upward momentum to improve employee attitudes, commitment, further helping behavior, and continuous improvement (Tang *et al.*, 2008). From a practical standpoint, managers in organizations where implementation of self-directed work teams has not produced an increase in team commitment may want to consider implementing team development programs as part of their organizational development (OD) strategy.

In addition to these findings, we have developed what appears to be a valid and reliable measure of team commitment, the Team Commitment Scale (TCS), based on goodness of fit using cross-validation, confirmatory factor analysis, and reliability tests. This scale requires substantial additional testing, but preliminary indications suggest that it may be useful in future studies as a measure of team commitment, a dimension within the commitment domain that has received relatively little attention to date.

Limitations

As with any research, despite the strengths of this paper, there are limitations that must be addressed. Our sample was drawn from employees of an organization in which the functioning of self-directed work teams was a particularly salient issue in that, for many employees, the implementation of those teams was relatively new; therefore, generalization of our findings may be somewhat limited. For this reason, examination of the Team Commitment Scale across a wide range of samples is appropriate and offers a number of opportunities for future research.

Common method bias is also a potential source of error because as our data were collected from a single source at one time. However, as noted earlier, the common method variance problem may not be as significant a concern as it was once thought to be (Spector, 2006). Furthermore, in addition to the unrotated factor solution described in the previous section, we conducted Harman's one factor test and concluded that no single factor accounted for the majority of the covariance, suggesting that common method variance is not solely responsible for our findings (Podsakoff *et al.*, 2003; Spector, 2006). Finally, results of our overall measurement model involving all three measures in a confirmatory factor analysis suggest a good fit between our model and

our data, providing strong evidence to suggest three distinctive and separate measures in this study.

Future research

One potentially fruitful area of future research involves additional examination of the Team Commitment Scale (TCS) developed in this study. Although our tests of the scale suggest that it is psychometrically sound, similar tests must be done across a broad range of samples in order to more fully establish its validity and reliability as a measure of team commitment.

Additionally, researchers might examine the team construct in a variety of settings. It may be particularly interesting to investigate the impact of team commitment in situations where professional or union employees are organized into teams. Other settings of interest might include healthcare environments, service industries, and military units.

Until the last decade or so, much of the research in work commitment still assumed that the linkage occurs between the individual and the organization (Mathieu and Zajac, 1990). The development of a more robust commitment construct than organizational commitment could bring about a major shift in thinking with regard to the domain of work commitment. This study, in conjunction with others (e.g. Bishop and Scott, 2000; Bishop *et al.*, 2000), suggests that team commitment represents a viable construct within the domain of workplace commitment that warrants further study. Given the continued deterioration of loyalty between organizations and their employees (Zhao *et al.*, 2007), and the likelihood that cognitive and emotional salience of an employee's self-directed team may offer a more salient target for commitment, we believe team commitment may be a more potent construct than organizational commitment, and that studies should be designed that can assess the comparative utility of the two constructs (Flaherty and Moss, 2007).

In summary, we believe this research makes a significant contribution to our understanding of the relationship between job satisfaction and organizational citizenship behavior, a relationship that has long been known but the nature of which has, nevertheless, not been well defined. It is our hope that this research will encourage others to further examine the team commitment construct and its impact on the overall domain of commitment in work organizations.

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