When Perceived Organizational Support Matters Most:
Mediating and Moderating Mechanisms among Knowledge Workers

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Abstract

In a test of the reciprocity assumption underlying perceived organization support (POS) theory, this field study examined a nominological net focusing mainly on the mediating role of felt obligation in linking POS and several important outcome variables involving knowledge workers. It also assessed the impact of three moderators of POS linkages. Data were obtained from 193 information technology professionals and their supervisors. Results supported felt obligation as an important mediating mechanism for POS. For the moderators, findings demonstrated that the joint impact of POS, professional commitment, and motivating job characteristics on felt obligation was strongest when POS and the moderating elements were all high. In contrast, the detrimental impact of low POS on intention to leave was strongest when the professional commitment and coworker colleagueship moderators were also low. Overall, this study helps establish boundary conditions for perceived organization support theory.
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According to organizational support theory (Eisenberger, Huntington, Hutchinson, & Sowa, 1986; Rhoades & Eisenberger, 2002; Shore & Shore, 1995), employees develop higher levels of perceived organizational support (POS) when the organization cares about their well-being and values their contributions. Based on the norm of reciprocity (Gouldner, 1960), POS is theorized to indirectly impact employee attitudes and behaviors by creating a sense of obligation within individuals that results in reciprocation (Eisenberger et al., 1986). To date, organizational support theory has received considerable support and appears to be a useful theoretical framework for helping to understand employment relationships in organizations. Yet the mechanisms by which POS exerts influence on important outcomes and the moderating influences that constitute boundary conditions of the theory continue to be in need of further investigation.

Organizational support theory (Eisenberger et al., 1986) relies on the norm of reciprocity (Gouldner, 1960) to posit that POS operates by creating a sense of obligation within individuals that results in reciprocation. Despite this contention, most POS studies to date have examined only the direct effects of POS without investigating the mediating processes through which POS influences employee behaviors and attitudes. One notable exception is a recent study by Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades (2001) in which they found that an important mediator of certain POS-outcome relationships was employee felt obligation to care about the organization’s well-being and help the organization obtain its goals. Although a useful finding, this was a single study and involved workers in relatively routine jobs; hence there is a need to demonstrate that these relationships hold with other types of workers in order to better
establish the nominological net within which POS operates. Thus, one purpose of the present study is to examine the mediating role of felt obligation among members of a growing employee sector, namely knowledge workers (Drucker, 1999).

At the same time, a significant area that remains to be explicitly explored is the potential moderating impact of commitment to one’s profession on important organizational outcomes emanating from perceived organizational support (see Lee, Carswell, and Allen, 2000). There are theoretical and empirical reasons to anticipate that the level of professional commitment--namely one’s affective attachment to one’s profession (Lee, et al., 2000)--may be an influence. For one thing, drawing on intrinsic motivation theory, individuals who are committed to their profession may be more intrinsically motivated (Raelin, 1986) and, therefore, be less dependent on organizational support to remain productive and attached to the organization. For another, individuals with high professional commitment may be prone to derive support from working with professionally similar colleagues, a factor that may lessen the impact of POS (Blau, 2000; Morrow & Wirth, 1989).

Despite these possibilities, we could not locate any existing research that has directly explored how individual differences in professional commitment interact with employee perceptions of organizational support to influence employee attitudes and ultimately behaviors in the employing organization. Therefore, a second major purpose of this study is to examine the potential moderating role of professional commitment on the relationship between POS and outcome variables of importance.

Finally, because our arguments regarding the moderating role of professional commitment raise issues about other related variables that might similarly have moderating impacts in a professional context, even in the absence of professional commitment, we explore
two additional potential moderators: motivating job characteristics and coworker colleagueship. Studying these two additional variables aids our understanding of boundary conditions regarding the impact of POS in a context in which professional commitment is likely to be relevant.

In summary, the major purposes of this research are to further investigate the role of felt obligation as a mediator of POS relationships, to examine the extent to which professional commitment moderates linkages between POS and important outcomes, and to explore two additional moderators that may also constitute boundary conditions for POS, at least in an employment context involving knowledge work.

Theoretical Background and Hypotheses Development

We begin by first considering the extent to which felt obligation can be expected to mediate the relationship between POS and several outcomes. We then examine the underlying rationales for the potential moderating impacts of professional commitment, motivating job characteristics, and coworker colleagueship.

Outcomes of POS and Mediating Role of Felt Obligation

Reciprocity is a basic principle of social exchange. Based on the reciprocity norm (Gouldner, 1960), organizational support theory posits that POS will produce a sense of obligation in employees that will lead them to care about the organization and help the organization reach its objectives (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002; Eisenberger et al., 2001; Lynch, Eisenberger, & Armeli, 1999). The more employees perceive they are receiving support from the organization, the more they might be expected to feel a sense of obligation and be inclined to reciprocate in both attitudinal and behavioral ways.

In order to directly test the underlying mechanisms through which POS is posited to influence important outcomes, Eisenberger et al. (2001) explored the role of felt obligation as a
mediator of the relationship between POS and several important outcomes. For example, in the arena of in-role performance, organizational support theory argues that it is employee feelings of obligation to reciprocate based on perceived organizational support that leads to better performance (Eisenberger et al., 1986). As expected, Eisenberger et al. (2001) found that the relationship between POS and in-role performance was mediated by felt obligation.

Building on research documenting a link between POS and organizational citizen behavior (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Settoon, Bennett, & Liden, 1996; Wayne, Shore, & Liden, 1997; Shore & Wayne, 1993), Eisenberger et al. (2001) found a similar mediating relationship for felt obligation between POS and extra-role behavior in the form of organizational citizenship behaviors. The issue of organizational citizenship behaviors provided a particularly important test of the felt obligation notion because, unlike in-role behaviors, organizational citizenship behaviors are by definition discretionary in nature (Organ, 1990). Whereas employees may find it difficult to withhold in-role behaviors, they can more easily do so with extra-role behaviors. In line with Eisenberger’s findings, we hypothesize:

Hypothesis 1: Felt obligation mediates the relationship between POS and both (a) in-role performance and (b) OCBs.

Although POS is likely to foster employee commitment to the organization (e.g., Bishop, Scott, & Burroughs, 2000; Eisenberger et al., 1990; Eisenberger et al., 2001; Settoon et al., 1996; Shore & Tetrick, 1991; Wayne et al., 1997), this effect, too, may function, at least in part, through a sense of felt obligation to reciprocate the organization’s commitment to them (Eisenberger et al., 1986; Eisenberger et al., 2001). Eisenberger et al. (2001) found that felt obligation only played a partial mediating role. In interpreting these findings, they contended that because organizational support helps fulfill employees’ needs for relatedness and affiliation
(Armeli, Eisenberger, Fasolo, & Lynch, 1998), POS may also increase employees’ social identification with the organization, which constitutes an important aspect of affective organizational commitment (Mowday, Steers, & Porter, 1979). Thus, although there are reasons to expect that reciprocation via felt obligation may be an underlying mechanism, arguments can also be made for a direct effect of POS on organizational commitment. This suggests, as found by Eisenberger et al. (2001), that the mediating role of felt obligation may be only partial. A related reason why partial mediation for felt obligation might be expected is that organizational commitment is an affective reaction rather than a behavior. Thus reciprocation in terms of helping an organization reach its objectives may constitute a clearer mediating mechanism when actionable outcomes, such as in-role performance and OCBs, are involved.

**Hypothesis 2:** Felt obligation partially mediates the relationship between POS and organizational commitment.

Several studies support the notion of a negative relationship between POS and turnover intention (e.g., Eisenberger et al., 2001; Wayne et al., 1997). When considering the relationship between POS and turnover intention, it is likely that the relationship will be direct, rather than operating through felt obligation. One prime reason, suggested by research related to equity theory, is that, when formulating intentions to turnover, individuals tend to consider not only what they are receiving in their present organization, but also what they perceive they might receive elsewhere (Hom & Griffeth, 1995; Milkovich & Newman, 2002). This would suggest that perceptions of higher POS will be associated with lower turnover intentions, but more for reasons of the attractiveness of alternatives and the costs of moving than because of felt obligation per se. In line with this argument, Guzzo, Noonan, & Elron (1994) found that employees who perceived higher levels of support from the organization were less likely to seek
employment elsewhere. In their study, Eisenberger, et al. (2001) found that felt obligation did not mediate the impact of POS on withdrawal behaviors. Accordingly, for theoretical reasons and guided by this recent research, we include turnover intention and hypothesize a direct effect for POS on turnover intention.

Hypothesis 3: POS is negatively related to turnover intentions

Our model also shows a negative relationship between organizational commitment and turnover intentions. Although Eisenberger et al. (2001) did not test this link, it is one that is commonly found in the literature (Griffeth, Hom, & Gaertner, 2000) and, therefore, we hypothesize:

Hypothesis 4: Organizational commitment is negatively related to turnover intentions.

Thus, because only one study previously has evaluated the role of felt obligation in the linkage between POS and several significant outcome variables, we here attempt to constructively replicate the findings of Eisenberger et al. (2001) by testing the model with knowledge workers, rather than the mail processing workers that were the focus of the Eisenberger et al. study. Knowledge work involves a concern with information processing, problem solving, and the creation of new knowledge (Benson & Brown, 2007). We focus on knowledge workers because they are a growing segment of the economy (Meisinger, 2006), because they represent a segment further along the continuum of professionalism (Cullen, 1983; Hickson & Thomas, 1969; Vandenberg & Scarpello, 1994; Liu, Borg, & Spector, 2004), and because professional commitment is likely to be germane (Ivancevich & Duening, 2002; Raelin, 1986; Wallace, 1993). Thus, they constitute a particularly relevant group for extending the generalizability of reciprocity arguments and for testing the moderators we consider in this study.
In this next section, we explicate our hypotheses regarding the moderators of interest in this study: professional commitment, motivating job characteristics, and coworker colleagueship.

**Potential Moderators of POS Influences**

While there is considerable evidence that favorable treatment from the organization will create higher levels of POS among employees, and in turn, foster positive work attitudes and behaviors, individuals may react differently to POS. An important factor that may influence these reactions and moderate the relationship between POS and felt obligation is one’s attitude towards one’s profession or occupation. Although most, if not all, employees are likely to respond favorably to the presence of high levels of POS, the absence of POS may not be as detrimental to the attitudes and behaviors of employees who are able to draw on other means motivation and support. More specifically, because professional commitment involves positive affective responses to working in one’s profession (Lee et al., 2000), individuals with higher professional commitment may have less need for the organizational caring and recognition that is inherent in POS. Individual who are more highly committed to their profession are also likely to be more intrinsically motivated by the work (Wallace, 1995). This may lead them to feel obligated to put forth additional effort to help the organization reach its goals because doing so not only involves making contributions that are related to their profession but also adds to their professional growth. Moreover, professionals often set higher performance standards (Wallace, 1995) and may feel obligated to register high productivity (Jauch, Glueck, & Osborn, 1978) despite deficits in POS. For these reasons, we expect that professional commitment will moderate the relationship between POS and felt obligation. Therefore, we posit:

**Hypothesis 5:** The positive relationship between POS and felt obligation is moderated by professional commitment, such that the negative effects of lower POS on felt obligation
is stronger for employees with lower professional commitment than for those with higher professional commitment.

There are also reasons to expect that professional commitment will moderate the relationship between POS and organizational commitment. One reason is that individuals with stronger commitment to their profession are likely to feel somewhat connected with others in their workplace who are in their same profession, thus potentially constituting an alternative or supplemental source of support (Blau, 2000; Morrow & Wirth, 1989). Moreover, when individuals have a dedication to the main profession that the work encompasses, they are more likely to perceive that they have more in common with their coworkers. Related research has shown that individuals are more likely to feel comfortable with groups that they perceive as being similar to themselves (Ashforth & Johnson, 2001; Turner, 1985), and Wallace (1995) argues that professionals seek to build ties with similar professionals in their workplace as part of their commitment to their profession. In contrast, those with lower professional commitment may look more heavily to the organization for support and be influenced to a greater degree by their perceptions of its level. Therefore, we hypothesize:

Hypothesis 6: The positive relationship between POS and organizational commitment is moderated by professional commitment, such that the negative effects of lower POS on organizational commitment is stronger for employees with lower professional commitment than for those with higher professional commitment.

For similar reasons, we expect that professional commitment will moderate the relationship between POS and turnover intentions. Part of the rationale is the professional socialization processes that take place as individuals join organizations, aiding attachment to the organization (Saks, 1993). Also, as just discussed, the propensity of individuals to identify with
their similarly oriented colleagues (Wallace, 1995) is another likely factor. Based on their meta-analysis, Lee et al. (2000) concluded that professional commitment and related attachments are associated with a greater likelihood of remaining in the organization. In fact, they suggested adopting policies to enhance employee identification with their profession in order to strengthen retention. Thus, it is reasonable to expect that individuals with higher professional commitment would be less likely to leave their organization even when POS is low than would their lesser professionally committed counterparts (Blau, 1988, 1989). Accordingly, we hypothesize:

Hypothesis 7: The negative relationship between POS and turnover intention is moderated by professional commitment, such that the negative effects of lower POS on turnover intention is stronger for employees with lower professional commitment than for those with higher professional commitment.

In addition to professional commitment, we also explored two related variables with likely relevance to the moderating impacts of professional commitment on POS posited above. These additional variables were selected because they constitute two factors that potentially could have a similar effect as professional commitment on attitudes and behaviors in job situations in which employees did not experience high commitment to the particular profession (Wallace, 1995). One factor is motivating job characteristics and the other is coworker colleagueship. Our basic reasoning is that it is likely that not every individual working in a professional field is committed to the particular profession involved. Nevertheless, these additional factors incorporate part of the underlying motivation and attachment rationale associated with professional types of work and, therefore, may also play a moderating role, if present, even if professional commitment is not high. If this is the case, then, depending on the
outcome variable, the most serious decrements in outcome should occur when both professional commitment and the appropriate additional factor are low.

More specifically with respect to motivating job characteristics, we suggested above that one of several reasons why professional commitment is likely to moderate the relationship between POS and felt obligation is that individuals with higher professional commitment tend to be more intrinsically motivated by the work (Wallace, 1995). Borrowing from this logic, we might expect similar effects when the job is perceived as encompassing job motivating characteristics even when professional commitment is not high. The rationale here is that the intrinsic motivation is still present, but is supplied by another source—i.e., motivating job characteristics rather than professional commitment. The implication would be that a decrement in POS would have the most serious implications for individuals who had both low professional commitment and low motivating job characteristics. Therefore, we hypothesize:

Hypothesis 8: The negative effect of low POS on felt obligation is strongest when both professional commitment and motivating job characteristics are low.

Similarly, in an attempt to extend our inquiry regarding the moderating impact of professional commitment on the relationship between POS and organizational commitment, we also considered the potential impact of coworker colleagueship. We argued earlier that professional commitment would moderate the relationship between POS and organizational commitment. Our main argument focused on the notion that individuals with higher professional commitment would be more prone to identify with and relate to other professionals like themselves working in the organization. Thus, they may have less need for organizational support in order to be committed to the organization. For individuals with lower professional commitment, it is possible that they may react similarly if they perceive that they have some
colleagueship with their coworkers. We define coworker colleagueship as perceptions of work-related respect and support from one’s work group. Related research suggests that individuals tend to identify with their work group when they work in organizations (van Knippenberg & van Schie, 2000). Work groups are smaller than organizations, making it easier for individuals to relate to work group members than with the organization as a whole. In other words, it is possible to view oneself as having some colleagueship with one’s coworkers even in the absence of high professional commitment. As a result, we argue that a decrement in POS would have the most detrimental impact on organizational commitment for individuals with both low professional commitment and low coworker colleagueship.

We apply similar arguments to the impact on turnover intentions. Above we posited that professional socialization to the organization and identification with coworkers in the same profession would dampen the propensity to leave for individuals with high professional commitment. Here we extend our arguments to the existence of collegial relationships with coworkers, deducing that perceptions of coworker colleagueship would also serve to lower turnover intentions even when professional commitment is low. Thus, we anticipate that when POS is low individuals with low professional commitment and low perceived coworker colleagueship will be the most prone to report an intention to leave. Accordingly we offer the following two-part hypothesis relating to organizational commitment and turnover intentions:

Hypothesis 9: The (a) negative effect of low POS on organizational commitment and (b) positive effect of low POS on turnover intention are strongest when both professional commitment and motivating job characteristics are low.
Method

Data Collection Procedure and Participants

To test the hypothesized model, data were collected from information technology professionals working in information technology positions associated with the headquarters of a large, U.S.-based, Fortune 500 company. We note that individuals holding lower level technician jobs, such as desktop maintenance, were not included in the sample. An initial email endorsing the study was sent by the head of the IT function to the random sample of 434 professionals. The researchers then sent an email to the potential respondents, providing a link to a Web-based survey. Among these employees, 260 responded, yielding a response rate of 59.9%. Upon receipt of employee responses, emails were sent to their direct supervisors asking them to provide performance and OCB ratings. Supervisors of 193 employees completed the survey, providing performance and OCB data for 74.2% of the employees who responded. Generally supervisors rated one or two employees. Thus, the final sample for this study was 193 employees with data available from their supervisor.

Among the 193 respondents, 71.0% were Caucasian /White, 31.4% were women, and 74.6% were married. The average age was 36.2 years and the average organizational tenure was 5.2 years. Almost all (95.2%) of these employees had bachelor’s degrees or higher.

Measures

Survey data were collected from two sources: ratings on performance and organizational citizenship behaviors were obtained from surveys of employees’ direct supervisors, and data on other variables were collected from employees. Unless otherwise noted, all the variables were measured on 7-point Likert-type scales (1 = strongly disagree, 7 = strongly agree). The specific
measures used are described below and the reliabilities (Cronbach’s alpha) are summarized in Table 1.

**Perceived Organizational Support (POS).** POS was measured with the three items used by Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhodes (2002). A sample item is “My organization really cares about my well-being.”

**Felt Obligation.** Employee felt obligation was measured by three top-loading items from the scale developed by Eisenberger et al. (2001). A sample item is “I feel a personal obligation to do what ever I can to help my company achieve its goals.”

**In-Role Performance.** Employee performance on the job was evaluated by their immediate supervisors, using three items adapted from MacKenzie, Podsakoff, and Fetter (1991), Podsakoff and MacKenzie (1994), and Tsui (1984). A sample item is “This employee performs his or her job that way I like to see it performed.”

**Organizational Citizenship Behavior.** Employees’ organizational citizenship behaviors were evaluated by immediate supervisors using a three-item scale adopted from Chen, Hui, and Sego (1998). This scale was based on the altruism measure developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990). A sample item is “This employee always is ready to help or to lend a helping hand to those around him or her.”

**Organizational Commitment.** Organizational commitment was measured by nine items from Mowday et al.’s (1979) Organizational Commitment Questionnaire (OCQ). Analysis by Bozeman and Perrewé (2001) indicated that six items from the original 15-item OCQ measure overlap with turnover cognitions and should be removed to avoid inflating the potential link between organizational commitment and turnover intentions. Therefore, these items were
removed, leaving the nine items used. A sample item is “I talk up this company as a great company to work for.”

**Turnover Intention.** Employees’ turnover intention was measured with the six items developed by Bluedorn (1982) and used in a number of studies (e.g., Sturman & Short, 2000). With respect to each of three time periods, respondents were asked to answer two questions: “If I have my way I will be working for my current company in…”; and “I intend to leave my current company in the next…” The three time periods were: three months, six months, and 12 months from now. Responses were made on a 7-point Likert scale (1 = very unlikely, 7 = very likely). Because these items by design had different formats, responses to these six items were standardized and aggregated to create a score for turnover intention.

**Professional Commitment.** Professional commitment was measured with three items adapted from Blau (1988). A sample item is “If I could do it all over again, I would choose to work in the IT profession.”

**Job Motivating Characteristics.** Job motivating characteristics was measure with five items from the Job Diagnostic Survey (Hackman & Oldham, 1980), one from each of the five subscales. The items were selected as being relevant to motivating potential in professional IT work by a one of the coauthors with significant work experience in the IT field and their relevance was verified by separate queries to eight graduate students in IT with industrial background who separately rated each item as highly relevant. A sample item is “My job requires me to use a number of complex or high level skills.”

**Coworker Colleagueship.** The three items from the team-member exchange measure utilized by Linden, Wayne, and Sparrowe (2002) that relate to collegial support and respect by
coworkers were used to measure coworker colleagueship. A sample item is “My coworkers value the skills and expertise that I contribute to our work group.”

Analysis

Following the approach taken by previous researchers (e.g., Eisenberger et al., 2001), to test the hypothesized model, data were analyzed through a combination of two analytic procedures. The model containing the direct and mediated effects was examined via structural equation modeling using EQS program (EQS 5.7b, Bentler, 1998), and the interaction effects between POS and professional commitment were tested via moderated hierarchical regression using SPSS.

Structural equation modeling can be used to conduct a simultaneous test of the entire system of variables in the hypothesized model to determine the extent to which it is consistent with the data (Byrne, 1994). As recommended by Anderson and Gerbing (1988), we used a comprehensive, two-stage analysis, in which the measurement model was first confirmed using confirmatory factor analysis, and then structural equation modeling was performed based on the measurement model to estimate the fit of the hypothesized model to the data.

To examine the role of professional commitment as a moderator of the relationship between POS and outcome variables, we used moderated multiple regression analysis—a common approach used by others (e.g., Eisenberger, et al. 2001) in similar situations and recommended by (Kenny, Kashy, & Bolger, 1998). We used the Dawson and Richter (2006) slope difference test to assess specific hypotheses involving three-way interactions.

Results
Descriptive Statistics

In Table 1, a summary of the means, standard deviations, and inter-item reliabilities for all the variables in the model is provided. As can been seen, the scale reliabilities (shown in parentheses) for all variables exceed the value of .70 recommended by Nunnally and Bernstein (1994).

Measurement Model

In conformance to the two-stage analysis recommended by Anderson and Gerbing (1988) in analyzing structure models, we next conducted a confirmatory analysis that included all of the independent, mediating, and outcome variables in the study model (See Figure 1). The confirmatory factor analysis suggested a good fit for the measurement model: $\chi^2 = 460.33$, $df = 297$, $p < .001$; Comparative Fit Index (CFI) = .96, Root Mean Squared Residual (SRMR) = .05, Root Mean Squared Error of Approximation (RMSEA) = .06. The fit indices are summarized in Table 2. Compared to the null latent model ($\Delta\chi^2 = 4245.21$, $df = 54$, $p < .001$), the measurement model was a significant improvement, indicating that there were significant relationships among the latent variables. In the measurement model, none of the indicators cross-loaded on other factors and all the indicators loaded significantly ($p < .001$) onto their hypothesized latent factors. Thus, the initial six-factor measurement model is confirmed and further examination of the structural model is justified (Anderson & Gerbing, 1988).1

Structural Model

Structural modeling results suggested that the Hypothesized Model fit the data well (see Table 2): $\chi^2 = 464.99$, $df = 304$; CFI = .96, SRMR = .05, RMSEA = .05. Although the chi-square statistic is significant ($p < .05$), this statistic is well-known to be oversensitive to sample size and may be significant even when the differences between observed and model-implied covariances
are slight (Kline, 1998). To reduce the sensitivity of the chi-square statistic to sample size, researchers recommended the use of an alternative rule to decide the acceptable $\chi^2$ value: the value of $\chi^2 / df$ being lower than 3 (Kline, 1998). For the proposed model, $\chi^2 / df$ equaled 1.53, meeting this criteria. All of the other fit indices were within the acceptable ranges, suggesting that the proposed structural model offers a good fit to the data.

**Hypotheses Testing for Structural Model**

The path estimates for the hypothesized model are shown in Figure 2. As predicted by Hypotheses 1a and 1b, POS had a positive effect on felt obligation ($\beta = .31, p < .001$), and felt obligation, in turn, led to better job performance ($\beta = .37, p < .001$) and increased OCBs ($\beta = .27, p < .001$) respectively. As a further test of the mediation relationship predicted by Hypothesis 1a, a path added between POS and performance (Model 4 in Table 2) was not significant, indicating that the mediation was not partial. Moreover, the improvement in model fit over the hypothesized model was not significant ($\Delta \chi^2 = .64, df = 1, p > .05$). Similarly, a path added between POS and organizational citizenship behaviors (Model 5) was not significant nor was the improvement in model fit significant ($\Delta \chi^2 = 1.32, df = 1, p > .05$). Consistent with Hypothesis 2, POS had a positive relationship with organizational commitment ($\beta = .33, p < .001$). In addition, while POS had a positive impact on felt obligation, felt obligation was positively related to organizational commitment ($\beta = .26, p < .001$). Thus, these results provide support for Hypothesis 2, which predicted that felt obligation would partially mediate the effect of POS on organizational commitment. As predicted by Hypothesis 3, POS was found to have a negative impact on turnover intention ($\beta = -.13, p < .001$). Finally, Hypothesis 4, which predicted that organizational commitment would be negatively related to turnover intentions, was also supported ($\beta = -.26, p < .001$). Because felt obligation has played a mediating role with the
other outcome variables in our model, we also tested a final alternative model by adding a path between felt obligation and turnover intention (Model 6). As expected, the additional path was not significant, nor was the minor improvement in model fit significant ($\Delta \chi^2 = 1.32$, $df = 1$, $p > .05$).

**Moderating Effects**

To examine the role of professional commitment as a moderator of the relationship between POS and outcome variables, we used moderated multiple regression analysis—a common approach used by others (e.g., Eisenberger, et al. 2001) in similar situations and recommended by (Kenny et al., 1998). Consistent with the recommendations of Aiken and West (1991), the scale scores for the predictor variables (i.e., POS and professional commitment) were mean centered before creating the product terms for interaction. Separate regression analyses were conducted for each of the outcome variables. As suggested by Cohen and Cohen (1983), to assess the interaction effects, the main effects of POS and professional commitment were entered into the first step of the equation, and then the interaction term was entered into the second step of the equation. These moderated hierarchical regression results are summarized in Table 3 (See Steps 1 and 2, which apply to this part of the analyses).

Consistent with Hypotheses 5, 6, and 7, there was a significant interaction effect of POS and professional commitment on felt obligation ($\beta = -.21$, $p < .01$), organizational commitment ($\beta = -.13$, $p < .01$), and turnover intention ($\beta = .24$, $p < .001$). Plots of the interaction effects showed that, as expected, the negative outcomes associated with low levels of POS on felt obligation and organizational commitment and the positive effects on turnover intentions were stronger for employees with lower levels of professional commitment, compared to those with higher levels of professional commitment.
Because we also posited three-way interactions involving motivating job characteristics and coworker colleagueship, we also centered these variables before creating the product terms for the two and three way interactions involving POS and professional commitment. These further moderated hierarchical regression results are summarized in Table 3 (See Steps 3 through 5).

Consistent with Hypothesis 8, there was a significant three-way interaction among POS, professional commitment, and motivating job characteristics on felt obligation (See Figure 3). To assess the specific prediction of Hypothesis 8 that the negative effect of low POS on felt obligation would be strongest when both professional commitment and motivating job characteristic are low, we applied the Dawson and Richter (2006) slope difference test. Results indicated that, as predicted, the slope of the low professional commitment and low motivating job characteristics condition was significantly steeper than the high professional commitment and low motivating job characteristics (\(t = -2.193, p \leq .05\)) condition. It was not, however, significantly steeper than the other two conditions. Thus Hypothesis 8 was only partially supported. Interestingly, the high professional commitment and high motivating job characteristics condition had a significantly steeper slope than the high professional commitment and low motivating job characteristics (\(t = 2.361, p \leq .05\)) and the low professional commitment and high motivating job characteristics (\(t = 1.850, p < .10\)) conditions. This was largely due to the unexpected boost in felt obligation when POS, professional commitment, and motivating job characteristics were all high.

Hypothesis 9a predicted that the negative effects of low POS on organizational commitment would be strongest when both professional commitment and coworker colleagueship are low. Contrary to the hypotheses, the three-way interaction was not significant.
Instead, there was a two-way interaction between POS and coworker colleagueship on organizational commitment. The plot indicated a steeper slope for low coworker colleagueship that followed a disordinal or crossed interaction pattern in which low coworker colleagueship was associated with lower organizational commitment than high coworker colleagueship when POS was low, but higher organizational commitment when POS was high.

Hypothesis 9b posited that the positive effects of low POS on turnover intention would be strongest when both professional commitment and motivating job characteristic are low. Results indicated a significant interaction among POS, professional commitment, and motivating job characteristics on turnover intention (See Figure 4). Again we applied the Dawson and Richter (2006) slope difference test to assess our specific hypothesis. As anticipated, the slope of the low professional commitment and low coworker colleagueship was steeper in a negative direction than was the case for the other three conditions: high professional commitment and high coworker colleagueship ($t = 2.58, p \leq .01$), the high professional commitment and low coworker colleagueship ($t = 3.45, p \leq .001$), and the low professional commitment and high coworker colleagueship ($t = 2.46, p \leq .05$) conditions.

We also conducted further analysis on the variables completed by the employees and supervisors following the procedures recommended by Podsakoff, MacKenzie, Podsakoff, & Lee (2003) in which two methods factor was specified in order to control for the fact that employees had provided the input for four variables in the structural equation on the same questionnaire and supervisors had provided data for two of them on their own separate questionnaire. Although the model fit was significantly better than the hypothesized model, as would be likely with the additional specifications, all of the paths in the model remained significant except for the direct path from POS to organizational commitment. The indirect path of POS to organizational
commitment though felt obligation remained significant. Although there was some evidence of common method bias, as would normally be anticipated, the overall results were supportive of discriminant validity for the variables in the study. However, the weakening of the direct link between POS and organizational commitment in the structural equation model suggests caution with respect to the findings associated with Hypothesis 9a.

Discussion

Our research makes three distinct contributions. First, our study provides confirmation of the nominological net linking felt obligation and perceived organizational support theory—in this case with knowledge workers. Thus, our work builds particularly on the contention by Eisenberger et al. (2001) that felt obligation plays an important role in explaining the impact of POS in organizations and extends the generalizability of that concept.

Second, this study is the first to demonstrate that professional commitment interacts with POS to influence key attitudes and important behaviors in the employing organization. Our results indicate that professional commitment moderates relationships between POS and felt obligation and, in the process, influences other important outcomes. Professional commitment also moderates the relationship between POS and turnover intentions. Thus, our study aids the process of perceived organization support theory building by identifying an important boundary condition.

Third, we also identified two other moderating variables that influence the impact of POS, particularly in conjunction with professional commitment: job motivating characteristics and coworker colleagueship. As expected, a three-way interaction among POS, professional commitment, and job motivating characteristics influenced the impact of POS on felt obligation and related variables, whereas a three-way interaction among POS, professional commitment,
and coworker colleagueship qualified the impact of POS on turnover intentions. The
identification of these two additional moderators of POS also adds to the boundary condition
identification process for perceived organization theory, and, at the same time, aids our
knowledge regarding conditions under which POS is particularly essential. One aspect of the
three-way interaction involving job motivating characteristics suggests a particularly synergistic
possibility involving POS.

More specifically, an argument that is central to organizational support theory
(Eisenberger et al., 1986) is that employees who believe they have received high levels of
support from the organization will tend to reciprocate with positive work attitudes and behaviors
that benefit the organization. Our results are consistent with that view. In fact, our study supports
recent research by Eisenberger et al. (2001) showing that felt obligation mediates the relationship
between POS and in-role performance, as well organizational citizenship behaviors. We also
found evidence that POS influences organizational commitment via felt obligation as well as
directly. However, controlling for common method bias seemed to reduce this direct link,
suggesting that POS may influence organizational commitment mainly through mediation by felt
obligation. Interestingly, our test of alternative models confirmed that felt obligation did not
mediate the relationship between POS and turnover intention. Thus it seems that felt obligation
does not extend to believing that one should remain with the organization in order to reciprocate
for perceived support received. Instead, it appears possible that, in weighing alternative venues
of employment, employees may consider the levels of support they view as available.

Considerable research indicates that perceived alternatives are associated with intentions to leave
(Griffeth, et al., 2000); however, this related research has generally not addressed specifically
how employees might think about the tradeoffs in terms of POS. Thus, this appears to be a promising direction for future research in order to verify these ideas.

Of particular interest in adding to the literature on POS is our consideration of the impact of professional commitment. The emergence of the knowledge economy is bringing with it the need for a larger proportion of knowledge-oriented professional workers (Quinn, Anderson, & Finkelstein, 1996). Thus, as Lee at al. and others (e.g., Quinn, et al., 1996) have pointed out, there is a growing need to better understand the role of knowledge work and professional commitment in organizations. While past research suggests that professional commitment is related to a variety of work outcomes, it generally has not examined whether and how employees’ commitment to their profession might influence reactions to organizational support. In this study, we attempted to address this void by testing the moderating effects of professional commitment on POS-outcome linkages. Results suggested that the strength of relationships between POS and several outcomes depends on the level of employee professional commitment.

Our results considering the interaction of POS and professional commitment on felt obligation showed that the negative effects of low POS on felt obligation were stronger for employees with lower professional commitment. When we additionally considered motivating job characteristics, the three-way interaction results provided considerable insight. As expected, the individuals in the triple low condition (low POS, professional commitment, and motivating job characteristics) registered the lowest felt obligation. However, the anticipated negative impact of low POS (versus high POS) was stronger only for the triple low condition relative to the condition in which there was high professional commitment and low motivating job characteristics. Part of the reason for this result was the unexpected surge in felt obligation that emerged in the triple high condition (high POS, professional commitment, and motivating job
characteristics). This combination seemed to have a stronger positive effect on felt obligation when POS was high relative to either the low professional commitment and high motivating job characteristics or the opposite (high professional commitment and low motivating job characteristics) conditions. Thus, there appears to be some substitutability between professional commitment and job motivating characteristics with respect to POS, but also some potential synergies related to the combination. Future research might consider not only this combination, but others that might combine with professional commitment to boost the positive impact of POS on felt obligation in organizations. Such investigations should consider various aspects of the work itself and additional elements in the work context, such as leader empowerment (Srivastava, Locke, & Bartol, 2006).

Our results supported the prediction that POS would be a more important factor associated with turnover intentions for individuals with lower professional commitment than for those with higher professional commitment. As expected, the significant two-way interaction showed that the negative impact of low POS was even stronger for employees with lower levels of professional commitment, compared to those with higher levels of professional commitment. As expected when we added consideration of the coworker colleagueship variable, the strength of the impact of POS on reducing turnover intentions was strongest when all three predictors (POS, professional commitment, and coworker colleagueship) were low. The strength of the other conditions did not differ, suggesting some substitutability for professional commitment and coworker colleagueship. Future research might explore further the coworker colleagueship variable, as it is likely to become more important in view of the expanding need to manage knowledge workers effectively (Drucker, 1999; Quinn et al., 1996).
Like any study, this one is not without limitations. One issue is that this study was cross-sectional in the sense that the employee data were collected at a single point in time. However, as mentioned previously, common method bias does not appear to explain our results. For instance, our measurement model indicated an acceptable fit. Further, after controlling for common method bias, our major structural equation modeling results continued to be supported. The one exception was that the link between POS and organizational commitment was weakened to be nonsignificant, suggesting that the impact of POS on organizational commitment is mainly mediated by felt obligation. We note also that the data related to two critical outcomes, in-role performance and organizational citizenship behaviors, were collected from supervisors rather than the employees themselves, thus reducing the threat of common method bias. In Ferris and Buckley’s (1990) study, all of the more than 100 high technology firms surveyed reported using the immediate supervisor as the main source of evaluation, and sources outside of the supervisor-subordinate dyad had little input into the performance evaluation processes. Therefore, our use of supervisors for the source of performance-related data fits the reality of the environment within which IT professionals are likely to operate.

A second limitation is that the data were collected among information technology professionals within a single organization. Thus, while recognizing the benefits of eliminating potential confounds associated with multiple professions and organizations, it is also important to note that caution is needed when generalizing the findings of our research to other types of workers and organizational settings. We note, however, that we obtained very similar nominological net results as did Eisenberger et al. with a very different sample (mail-processing employees in their case) and in a separate organization, suggesting that some generalizability may be warranted.
One question for future research is the extent to which the professional commitment results generalize to other knowledge workers and professions, as well as the degree to which they might extend to individuals in occupations that might not be considered as professions. The line of demarcation for considering various occupations to be professions is highly imprecise. Therefore, while mainstream IT work is generally considered a profession (e.g., Cullen, 1983; Vandenberg & Scarpello, 1994), it is possible to take either a broader (Maister, 1997) or a narrower (Hickson & Thomas, 1969) view of what constitutes a profession. We would speculate that the results obtained here might weaken as one considers occupations that encompass fewer characteristics of knowledge work and professions and they might strengthen with professions whose characteristics meet more narrow definitions and enhance levels of knowledge work. However, this remains for future research to determine.

In additional to the research contributions already delineated above, this research also has important implications for practitioners. For one thing, our findings highlight the usefulness of attempting to hire knowledge workers who have a commitment to the profession involved. Second, our findings support suggestions by Lee et al. (2000) and others (e.g., Bartol, 1979, Balkin & Gomez-Mejia, 1984) that employers may find it useful to encourage knowledge workers to pursue professional activities and professional identity through various means, including providing professionally valued rewards. Third, our research suggests that when high POS is combined with high professional commitment and motivating job characteristics there may be particular benefit in terms of felt obligation to the organization. Finally, our research supports notions that connections with other knowledge workers in the workplace may be important, particularly for retention purposes and, hence, the encouragement of coworker
Perceived Organizational Support 29

colleagueship may also be useful in reducing turnover even under conditions of relatively low professional commitment.

Overall, this study adds to the literature on managing knowledge workers by confirming POS linkages with felt obligation and related variables identified by Eisenberger et al. (2001), by demonstrating that professional commitment interacts with POS to influence key attitudes and behaviors, and by aiding a greater understanding of the nature of the professional commitment interactions through consideration of the two additional moderators: job motivating characteristics and professional commitment. In the process, we add to POS theory by helping to understand the boundary conditions that govern its application. In addition, our findings have major implications for effectively leveraging POS, particularly for motivating and retaining knowledge workers. Such issues are critically important to managers in view of the widely acknowledged shift to a knowledge economy (Meisinger, 2006).
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Footnotes

1 The measurement model can also be used as in aid to further evaluate discriminant validity. Constructs demonstrate discriminant validity when the average amount of variance accounted for by the items within the construct is greater than the amount of variance shared by the constructs (Fornell & Larcker, 1981). We conducted these analyses for each pair of variables among the four variables in the model completed by the employees and between the two completed by the supervisors and found that all of the constructs in the model demonstrated discriminant validity. We also ran these analyses using an expanded measurement model that included the moderator variables used in the moderated regression analyses. The measurement model showed acceptable fit (Bollen, 1990) and the moderator variables also showed discriminant validity using the Fornell and Larcker criteria.
Table 1  

*Means, Standard Deviations, Correlations, and Reliabilities*

<table>
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<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
<th>8</th>
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<td>1.19</td>
<td>.04</td>
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<td>(.93)</td>
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<td>.54</td>
<td>.10</td>
<td>.04</td>
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<td>-.40</td>
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<td>7. Professional Commitment</td>
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<td>.20</td>
<td>.29</td>
<td>.11</td>
<td>.09</td>
<td>.30</td>
<td>-.22</td>
<td>(92)</td>
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<td>8. Job Motivating Characteristics</td>
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<td>1.00</td>
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<td>.44</td>
<td>.29</td>
<td>.18</td>
<td>.37</td>
<td>-.33</td>
<td>.31</td>
<td>(.83)</td>
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<td>9. Coworker Colleagueship</td>
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<td>.52</td>
<td>.27</td>
<td>.15</td>
<td>.12</td>
<td>.42</td>
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<td>.15</td>
<td>.49</td>
<td>(.78)</td>
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</table>

*Note.* *N* = 193. Scale score correlations are given below the diagonal. Correlations with an absolute value of .14 or above were significant at the .05 level (two-tailed). Scale reliabilities (Cronbach’s alphas) are shown in parentheses on the diagonal.
Table 2

**Summary of Model Fit Indices**

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<th>df</th>
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<td>.96</td>
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<td>.96</td>
<td>.06</td>
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<td>303</td>
<td>.96</td>
<td>.06</td>
<td>.05</td>
<td>-142.33</td>
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<tr>
<td>FO to Turnover Intent 6</td>
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<td>303</td>
<td>.96</td>
<td>.06</td>
<td>.05</td>
<td>-141.60</td>
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</table>

X= new data
Table 3

Hierarchical Regression Results for the Moderating Effects of Professional Commitment on the POS-Outcome Relationship

<table>
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<th>Step</th>
<th>Variable</th>
<th>β</th>
<th>Variable</th>
<th>β</th>
<th>β</th>
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<td></td>
<td>Felt Obligation</td>
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<td>Organizational Commitment</td>
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<td>Step 1</td>
<td>POS</td>
<td>.30***</td>
<td>POS</td>
<td>.67***</td>
<td>-.44***</td>
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<td></td>
<td>Professional Commitment (PC)</td>
<td>.22**</td>
<td>Professional Commitment (PC)</td>
<td>.17**</td>
<td>-.13*</td>
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<td></td>
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<td>.17***</td>
<td></td>
<td>.53***</td>
<td>.23***</td>
</tr>
<tr>
<td>Step 2</td>
<td>POS X PC</td>
<td>-.21**</td>
<td>POS X PC</td>
<td>-.13*</td>
<td>.24**</td>
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<td></td>
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<td>.04**</td>
<td></td>
<td>.02**</td>
<td>.05***</td>
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<td>Step 3</td>
<td>Motivating Job Characteristics (MJC)</td>
<td>.31***</td>
<td>Coworker Colleagueship (CC)</td>
<td>.07</td>
<td>-.10</td>
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<td>.08***</td>
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<td>.00</td>
<td>.01</td>
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<td></td>
<td>PC X MJC</td>
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<td>PC X CC</td>
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<td>.02</td>
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<td></td>
<td></td>
<td>.02**</td>
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<td>.01†</td>
<td>.00</td>
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<td>Step 5</td>
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<td></td>
<td></td>
<td>.05**</td>
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<td>.00</td>
<td>.02*</td>
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<tr>
<td>Total</td>
<td>R²</td>
<td>.37***</td>
<td></td>
<td>.56***</td>
<td>.32***</td>
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Note. N = 193.

†p < .10, * p < .05, ** p < .01, *** p < .001, all significance levels are based on two-tailed tests.
Figure Captions

Figure 1. Hypothesized Model

Figure 2. Structural Model Results for the Hypothesized Model

Figure 3. Interaction of POS, Professional Commitment (PC), and Motivating Job Characteristics (MJC) on Felt Obligation

Figure 4. Interaction of POS, Professional Commitment (PC), and Coworker Colleagueship (CC) on Intention to Leave
Figure 1

Hypothesized Model

Perceived Organizational Support

- Professional Commitment
- Motivating Job Characteristics

Felt Obligation

Performance

Organizational Citizenship Behavior

Organizational Commitment

Turnover Intention

- Professional Commitment
- Coworker Colleagueship
Figure 2

Structural Model Results for the Hypothesized Model

![Diagram]

Perceived Organizational Support

Felt Obligation

- .31***
- .27***
- .33***
- -13**

Organizational Citizenship Behavior

- .37***

Organizational Commitment

- .26***

Performance

Turnover Intention

Note. *p < .05. **p < .01. ***p < .001 (two-tailed)
Figure 3

POS x Professional Commitment (PC) x Motivating Job Characteristics (MJC)
on Felt Obligation

Low POS High POS

Low PC / Low MJC

Low PC / High MJC

High PC / Low MJC

High PC / High MJC
Figure 4

Interactions of POS x Professional Commitment (PC) x Coworker Colleagueship (CC) on Intention to Leave

![Diagram showing interactions of POS, PC, and CC on Intention to Leave.](image-url)