The Influence of High-Involvement Human Resources Practices, Procedural Justice, Organizational Commitment and Citizenship Behaviors on Information Technology Professionals’ Turnover Intentions

Par : Guy Paré
Michel Tremblay

Cahier du GReSI no 04-17
Septembre 2004
The Influence of High-Involvement Human Resources Practices, Procedural Justice, Organizational Commitment and Citizenship Behaviors on Information Technology Professionals’ Turnover Intentions

Guy Paré, Professeur titulaire
Service de l’enseignement de technologies de l’information
HEC Montréal
3000, chemin de la Côte-Sainte-Catherine
Montréal, Québec, H3T 2A7
Canada
tél : (514) 340-6812
fax : (514) 340-6132
guy.pare@hec.ca

Michel Tremblay, Directeur et professeur titulaire
Service de l’enseignement de la gestion des ressources humaines
HEC Montréal
3000, chemin de la Côte-Sainte-Catherine
Montréal, Québec H3T 1A7
Canada
Tel: (514) 340-6349
michel.tremblay@hec.ca

Prière de faire parvenir toute correspondance à :
guy.pare@hec.ca
Résumé

Dans la présente étude, nous développons et testons un modèle de recherche portant sur la rétention des spécialistes en TI. Ce modèle examine les relations entre diverses pratiques de gestion des ressources humaines (RH), la justice procédurale, les comportements discrétionnaires, l’engagement organisationnel et les intentions de quitter des spécialistes en TI. Un questionnaire fut développé et envoyé aux membres de la Fédération de l’informatique du Québec (FIQ). Les données de 394 questionnaires ont servi aux fins d’analyses statistiques. Les résultats de cette étude révèlent que les spécialistes en TI au Québec sont particulièrement sensibles à quatre types de pratiques de GRH, soit : la justice distributive, la reconnaissance non monétaire, le développement des compétences professionnelles et le partage des informations. Notre étude est également la toute première à démontrer clairement que l’impact des pratiques de GRH sur l’intention de quitter des spécialistes en TI dépend à la fois du niveau d’engagement et de mobilisation des employés. Notamment, cette étude est la première à démontrer que le développement des compétences est positivement associé à l’engagement continu et que la justice procédurale a un effet médiateur dans la relation entre les pratiques de GRH et l’engagement affectif, les comportements discrétionnaires et l’intention de quitter. Nos résultats confirment enfin l’importance relative de deux formes distinctes d’engagement organisationnel (affectif et continu) dans un tel contexte.

Abstract

The present study investigates the role of high-involvement human resources practices, organizational commitment and citizenship behaviors on turnover intentions among a sample of highly skilled professionals. Five significant findings emerged: first, structural equation modeling analyses revealed that non-monetary recognition and competency development, and, to a lesser extent, fair rewards and information sharing practices, are negatively related to turnover intentions. Second, both forms of organizational commitment, together with citizenship behaviors, are negatively associated with turnover intentions. Third, we observed that extensive investment in competence development is strongly and positively associated with the development of perception of continuance commitment among IT professionals. Fourth, procedural justice mediated the influence of HR practices on organizational commitment behaviors and turnover intentions. Fifth, four out of five high involvement HR practices have a direct negative influence on turnover intentions among IT specialists. Implications of these results for practice and research are also discussed.

Mots-clés

EH02 IS Staffing Issues
EH0202 IS Turnover
INTRODUCTION

While a growing body of literature reveals that substantial investment in human capital and the implementation of human resources (HR) practices may enhance corporate financial performance (Huselid, 1995; Huselid, Jackson, & Schuler, 1997; Vandenberg, Richardson, & Eastman, 1999), our understanding of the processes or mechanisms through which HR practices impact organizational outcomes is still at an embryonic stage. In this regard, Youndt (2000) recently found that HR practices do not directly influence organizational performance; rather, these practices help build intellectual capital, which in turn leads to increased organizational value creation. Several scholars found that HR practices play an indirect role in organizational effectiveness, i.e., by enhancing organizational commitment (Meyer & Smith, 2000; Whitener, 2001), perceptions of procedural fairness or justice (Meyer & Allen, 2000), organizational citizenship behaviors (Podsakoff, MacKenzie, Paine & Bachrach, 2000) and turnover intentions (Vandenberg et al., 1999). Notwithstanding these recent results, the role HR practices play in such attitude-behavior relationships remains unclear. It is also worth noting that the existing literature on organizational commitment, citizenship behaviors and turnover offers a narrowly focused, atheoretical set of HR practices in research models. Indeed, the choice of HR practices in empirical studies has rarely been theoretically justified despite a growing consensus about the conceptualization of HR practices (Wright & Boswell, 2002). Lastly, empirical studies have seldom targeted highly skilled workers such as IT professionals or engineers as their unit of analysis even though retention of these resources is often referred to as the most critical human issue in the minds of executives today (Evans, Gonzalez, Popiel, Walker, 2000; Ang, Slaughter & Ng, 2002).

In this context, we identified a multidimensional set of high-involvement HR practices and tested a series of research hypotheses that specifies the relationships between HR practices, procedural justice, organizational commitment, organizational citizenship behaviors (OCB) and turnover intentions. Specifically, the present study examines two main questions: 1) What high-involvement HR practices are needed to implement an effective strategy for retaining highly skilled professionals? 2) Do procedural justice, organizational commitment and citizenship behaviors mediate the effects of high-involvement HR practices on the turnover intentions of highly skilled professionals?

This study departs from previous literature in this area in five respects. First, while prior research on organizational commitment and OCB has yielded a significant cumulative body of knowledge on these constructs, the present study integrates the notion of high-involvement HR practices with the current understanding of the relationship between job attitudes, role behaviors and turnover intentions. Second, although sets of innovative HR management practices intended to retain highly skilled professionals exist (e.g., Foote, 1998; Scheier, 1998; Morello & Lehman, 1999), we define a multi-dimensional, theoretically grounded configuration of high-involvement HR practices based on the conceptual frameworks of Lawler (1986) and Bailey (1993, in Appelbaum et al., 2000), and test its influence on withdrawal intentions of employees. Third, this study is the first to consider procedural justice, organizational commitment, and citizenship behaviors as potential mediators of the association between high-involvement HR practices and turnover intentions. Fourth, no prior empirical study has considered procedural justice as a
potential mediator of the relationship between perceptions of high-involvement HR practices and both organizational commitment and citizenship behaviors. Lastly, applying the adopted conceptual model to a sample of highly skilled professionals also represents an empirical advance.

In the sections that follow, we will discuss the antecedents and/or consequences of OCB, organizational commitment, procedural justice, HR practices, and turnover intentions. We then test our theoretical model using cross-sectional data from a large sample of Canadian IT professionals and present the results. Although experimental data would provide a stronger test of the causal flows stated in our theoretical model, the cross-sectional data used in this research has the advantage of enabling us to test the entire set of hypothesized relationships simultaneously. We believe that this approach allows a more comprehensive test of whether the data are consistent with the theoretical rationale underlying the hypotheses. We conclude with a discussion of the implications of the findings for practice and research.

BACKGROUND AND HYPOTHESES

Organizational Citizenship Behaviors and Turnover Intentions

OCB is defined as an employee’s willingness to go above and beyond the prescribed roles which he/she has been assigned (Organ, 1990). These extra-role behaviors are considered to support the maintenance and enhancement of the social and psychological context which supports task performance in the organization (Organ, 1997). At the same time, such discretionary behaviors are not explicitly recognized by a formal rewards system, and their contribution to organizational success is based on resource transformations, innovativeness and adaptability (Organ, 1988). Shore, Barkdale, and Shore (1995) and Chen, Hui, and Sego (1998) argue that a high level of OCB reflects employees’ true willingness to be involved in the organization. Conversely, a lack of willingness to exhibit citizenship behaviors may be a clear indication of employee withdrawal from the organization.

In the present study, we considered a prominent form of citizenship behavior, namely helping behaviors (Podsakoff et al., 2000). Helping behavior involves voluntarily helping others with, or preventing the occurrence of, work-related problems. The first part of this definition (helping others with work-related problems) includes Organ’s altruism, peacemaking and cheerleading dimensions (Organ, 1988, 1990); Graham’s interpersonal helping (Graham, 1987); Williams and Anderson’s (1991) OCB-I; and the helping others constructs from George and Brief (1992) and George and Jones (1997). The second part of the definition captures Organ’s (1988, 1990) notion of courtesy, which involves helping others by taking steps to prevent the creation of problems for coworkers. Empirical research has generally confirmed that all of these forms of helping behavior load on a single factor (e.g. MacKenzie, Podsakoff, & Fetter, 1993; Podsakoff & MacKenzie, 1994; Podsakoff, Ahearne, & MacKenzie, 1997).

Empirical studies have explored the relationship between OCB, quit intentions and actual turnover. For instance, Chen et al. (1998) and MacKenzie, Podsakoff & Ahearne (1998) found a negative link between OCB and quit intentions while an even stronger negative association between OCB and actual turnover was reported in both studies. The key argument that affirms
this negative link is that extra-role behaviors, through helping others and courtesy, enhance group attractiveness, cohesiveness and support and subsequently decrease voluntary turnover (George & Bettenhausen, 1990; MacKenzie et al., 1998). Accordingly, IT specialists who help coworkers and their immediate superiors are likely to develop close relationships with them, receive reciprocal support from them and consequently remain with the organization voluntarily. Although a recent longitudinal study conducted by Koys (2001) reveals the existence of a negative but non-significant relationship between OCB and actual turnover, we posit that:

H1 OCB-helping behaviors are negatively related to turnover intentions.
Role of Organizational Commitment\(^1\) on OCB Helping Behaviors, and Turnover Intentions

Several empirical studies confirm the predominant role of organizational commitment in the turnover process among highly skilled professionals (Igbaria & Greenhaus, 1992; Igbaria & Guimaraes, 1999) and several conceptualizations for this construct have been advanced (Meyer & Herscovitch, 2001). One of the foremost conceptualizations is that of Meyer and Allen (1997), who posit that organizational commitment is comprised of three distinct dimensions: affective, continuance and normative commitment. Affective commitment corresponds to an employee’s personal attachment to and identification with the organization, resulting in a strong belief in the organization’s goals and values. Continuance commitment is perceived as a tendency to engage in consistent lines of activity based on the individual’s recognition of the “costs” associated with discontinuing the activity. Normative commitment suggests that employees exhibit behaviors solely because they believe it is the right and moral thing to do. Prior studies of turnover intentions among professionals have considered the first and most studied dimension of the construct: affective commitment (e.g. Igbaria & Greenhaus, 1992; Igbaria & Guimaraes, 1999).

\(^1\) In the present study, we chose to consider organizational commitment rather than job satisfaction as our focal construct of interest for several reasons. First, some authors have argued that organizational commitment represents a more stable construct than job satisfaction (e.g. Mowday et al., 1982). Second, recent studies conducted by Gould-Williams (2003) and Shappe (1998) show that while organizational commitment and job satisfaction are both considered antecedents of behavioral outcomes, only organizational commitment has a significant influence on the dependent variables. Third, and most importantly, some scholars (e.g. Organ, 1990; Moorman, 1991) have suggested that job satisfaction largely reflects employees’ perceptions of organizational justice or fairness; a construct which is already integrated in our research model.
In order to expand our understanding of the mediating role of organizational commitment, we considered both affective and continuance commitment, as suggested by King and Sethi (1997).

Organizational commitment has long been considered a key predictor of OCB (Meyer, Stanley, Herscovitch & Topolnytsky, 2002). According to Mowday, Porter, and Steers (1982), those who are committed to the organization “are willing to give something of themselves in order to contribute to the organization’s well-being” (p.27). One way for an individual to repay the organization is through extra-role or citizenship behaviors (Schnake, 1991; Kidwell, Mossholder & Bennett, 1997). Furthermore, employees who are highly committed to their organization often perceive their work roles more extensively, and such an enlargement of role definition tends to increase employees’ motivation to exhibit OCB behaviors (Lee, 2001; Morrison, 1994; Tepper & Taylor, 2003). In accordance with this view, previous studies show that affective commitment is positively related to extra-role behaviors while continuance commitment is either negatively or not significantly associated with OCB (Allen & Smith, 1987; Meyer & Allen, 1991; Mayer & Schoorman, 1992; Chen et al., 1998; Meyer et al., 1998; Lee, 2001; Riketta, 2002; Meyer et al., 2002). A plausible explanation for these findings is that employees that exhibit a high level of continuance commitment are more likely to develop a transactional relationship (as opposed to a relational relationship) with their employer. Indeed, according to the psychological contract theory (Rousseau, 1995), employees who perceive their relation with their employer as primarily instrumental are more likely to restrict their professional obligations to those activities they are paid for (i.e. intra-role behaviors). In contrast, a relational contract encompasses a higher level of affectivity that predisposes workers to adopt a much broader view of their relationship with their employer and thus encourages extra-role behaviors. Consequently, we posit that:

\[ H2a \text{ Affective commitment is positively related to OCB-helping behaviors.} \]

\[ H2b \text{ There is no significant relationship between continuance commitment and OCB-helping behaviors.} \]
The Role of Procedural Justice on Organizational Commitment, OCB-Helping Behaviors and Turnover

Research on organizational justice suggests that when an organization treats its employees fairly, employees are likely to reciprocate by adopting behaviors beneficial to the organization (Organ, 1988). Some scholars have proposed that the use of fair procedures and systems may enhance employee commitment because fairness suggests that employees are respected members of the organization (Lind & Tyler, 1988). The group value model (Tyler & Lind, 1992) specifies that individuals greatly value long-term relations with the group to which they belong. Fair procedures enhance the feeling of being treated as a full member of the organization which, in turn, reinforces the emotional bond to the group and/or the organization. In the same vein, a positive relationship has been found between perception of procedural justice and affective commitment (e.g. Folger & Konovsky, 1989; McFarlin & Sweeney, 1992; Kerman & Hanges, 2002; Allen et al., 2002). Consequently, we posit the following hypothesis:

H4 Perception of procedural justice is positively related to affective commitment.

According to social exchange theory (Blau, 1964), organizations are considered loci of mutual social and long-term transactions between employees and employers (Wayne, Shore & Linden, 1997). These social exchange relationships characteristically trigger unspecified future obligations (Kovovsky, 2000). Moreover, social exchange relationships are strongly influenced by the level of mutual confidence in compliance with fairly long-term obligations by either party. Procedural justice is then considered one of the main factors of trust (Kovovsky & Pugh, 1994; Folger & Kovovsky, 1989) and as an important input in exchange relations with employees (Masterson, Lewis, Goldman & Taylor, 2000). A social exchange relationship founded on fair procedures is therefore more likely to promote a contractual relationship that gives the employees the freedom to adopt discretionary behaviors. These behaviors are thus an adjustment variable that employees can harness to counter organizational injustice (Organ, 1990). The presumed link between perception of procedural justice and discretionary behaviors was recently affirmed in the literature (e.g. Colquitt, Conlon, Wesson, Porter & Ng, 2001; Cohen-Charash & Spector, 2001). Consistent with our earlier argument that fair procedures enhance the feeling of being treated as a full member of the organization, this sentiment should not only predispose individuals to perform activities and assume roles that exceed their normal tasks (de Cremer & Knippenberg, 2002; Tepper & Taylor, 2003), but also to remain a full member of the organization (Albrecht & Travaglione, 2003; Mulinge, 2001; Simon & Roberson, 2003). The considerations above lead us to posit the following two hypotheses:

H5 Perception of procedural justice is positively related to OCB-helping behaviors.

H6 Perception of procedural justice is negatively related to turnover intentions.
Role of High-Involvement HR Practices

As mentioned earlier, although several sets of innovative HR management practices have recently been proposed to enhance effectiveness in organizations and to retain talented employees (Arnett & Obert, 1995; Pfeffer & Veiga, 1999; Dessler, 1999), these configurations of practices are narrowly focused and often lack theoretical grounding. Two complementary conceptual frameworks have received much attention in the academic press. First, the high-involvement model proposed by Lawler (1986), which is seen as the primary engine behind the evolution of contemporary strategic HR management (McMahan, Bell, & Virick, 1998), suggests that four organizational processes may influence work-related attitudes and behaviors, namely empowerment, competence development, information sharing and reward. Second, the high-performance work system model proposed by Bailey (1993, in Appelbaum et al., 2000) posits that workers will exhibit discretionary efforts if and only if they have the opportunity to participate, they possess the necessary skills to make their effort meaningful and they are given appropriate incentives to deploy such discretionary efforts. Accordingly, a comprehensive HR strategy that aims to promote positive behaviors and attitudes among employees must consider three key conditions: 1) employees must have an incentive (e.g. recognition, rewards) to elicit desirable attitudes and behaviors; 2) employees must possess the necessary skills to make their efforts meaningful; and 3) employees must have the opportunity to participate at various levels. In line with Lawler’s and Bailey’s models, HR practices that enhance these three components are likely to heighten the perception of organizational commitment (both affective and continuance), perception of procedural justice and OCB-helping behaviors, and decrease intentions of resigning among employees because individuals tend to respond positively to top-management commitment and support (Eisenberger, Fasalo, & Davis-LaMastro, 1990).

The present study examines five high-involvement HR practices that an organization may employ to increase procedural justice and commitment, induce extra-role behaviors and decrease turnover intentions among highly skilled professionals. We will begin by describing each of these practices succinctly. First, empowerment has been defined as organizational practices devoted to increasing employee discretion and influence through task involvement (Campbell, 2000; Forrester, 2000; Spreitzer, 1995). Organizations allow employees to assume several roles and responsibilities and thus exert a greater influence at work while enjoying increased autonomy in the hopes that they will experience a higher sense of ownership. This should foster a greater sense of support, trust and intrinsic motivation, provide positive work attitudes and consequently attenuate job turnover (Eby, Freeman, Rush & lance, 1999). Second, competence development practices (e.g. job rotation programs, mentoring, and training) convey to employees that the organization considers human resources to be a competitive advantage or value assets (Schwochau, Delaney, Jarley, & Fiorito, 1997; Morrison, 1996), and that it is seeking to establish a long-term relationship with the staff (Tsui, Pearce, Porter, & Hite, 1995; Guptill, 1998; Agarwal & Ferratt, 1999).

Third, previous research shows that information-sharing practices favor the interiorization of organizational goals and values by employees, enhances feelings of mutual trust and makes individuals feel important to the company (e.g. Rodwell, Kienzle, & Shadur, 1998; Meyer & Allen, 1997). According to Lawler (1986), information sharing is one of the easiest and most effective ways to foster employee involvement within organizations.
Fourth, for most highly skilled professionals, much of their motivation ensues from the recognition they get from managers for a job well done and the feeling that they are a pivotal part of the organization (Agarwal & Ferratt, 1999; Gomolski, 2000). In this study, recognition practices refer to non-monetary rewards (e.g. extended vacations, tickets to a baseball game, award ceremonies, thank-you notes) through which an organization tangibly signals its appreciation of quality work and achievements. These practices also included efforts made by the organization to carefully consider employee suggestions and provide employees with positive feedback. Lastly, fair organizational rewards refer to the perceived fairness of various job outcomes including compensation conditions, performance evaluations and job assignments. In short, a high level of perceived equity signals to employees that the organization supports them and has their well-being at heart (Eisenberger, Huntington, Hutchison & Sowa, 1986).

Previous research concluded that individual or bundles of HR practices play a positive role in the development of affective commitment (e.g. Gaerter & Nollen, 1989; Meyer & Smith, 2000; Gould-Williams, 2003). Although findings from several studies suggest that HR practices are related to employee commitment, some scholars have found that these relationships are not necessarily direct or unconditional. For instance, Meyer and Smith (2000) observed that the links between some HR practices and both affective and normative commitment were either fully or partially mediated by employees’ perceptions of procedural justice and organizational support. In the present study, we will further investigate the mediating effect of procedural justice on the links between HR practices and employee commitment and extra-role behaviors.

While the positive link between HR practices and affective commitment has received extensive support, the role of HR practices in the reinforcement of continuance commitment has been less clearly established. Meyer and Allen (1997) and, more recently McElroy (2001), have suggested that HR practices positively influence continuance commitment. More recently, however, Meyer and Smith (2000) found no significant relationship between HR practices and continuance commitment. Despite the latter result, we predict a positive link between HR practices and continuance commitment. Consider employee empowerment. Employees who are empowered in their job might not only view the organization as caring and supportive, and thus experience a stronger affective commitment; but might also believe that to lose the benefits associated with a high level of empowerment would be costly, therefore experiencing greater continuance commitment. In light of the arguments presented above, we posit that:

\[ H7 \quad \text{Recognition, empowerment, fair organizational rewards, competence development and information sharing practices has a positive influence on affective commitment}. \]

\[ H8 \quad \text{Recognition, empowerment, fair organizational rewards, competence development and information sharing practices has a positive influence on continuance commitment}. \]

\[ H9 \quad \text{Recognition, empowerment, fair organizational rewards, competence development and information sharing practices has a positive influence on procedural justice}. \]

Morrisson (1996) maintains that an organization’s approach to HR management is instrumental in eliciting considerable citizenship behaviors. The key argument being that the way an organization manages its HR sets the tone and conditions of the employee-employer relationship.
If a firm’s philosophy implicitly states that employees are short-term resources that are easily disposable, economic rather than social exchange relationships are likely to develop (Witt, 1991). In contrast, high-involvement work practices may convey to employees that their organization promotes humanistic values, cares about their well-being and is willing to trust them. On the basis of reciprocity norms, employees will be inclined to increase their personal contribution and efforts and ultimately exhibit extra-role behaviors (Tsui, Pearce, Porter, & Tripoli, 1997). Therefore, we posit that:

**H10 Recognition, empowerment, fair organizational rewards, competence development and information sharing practices has a positive influence on OCB-helping behaviors.**

Moreover, previous studies (e.g. Huselid, 1995; Shaw, Delery, Jenkins, & Gupta, 1998; Vandenberg, Richardson, & Eastman, 1999) have shown that high-involvement HR practices enhance employee retention. Support theory holds that beneficial actions directed at employees should obligate employees to reciprocate in a positive manner. HR practices represent such organizational actions that may reinforce the employees’ beliefs that the organization values their contributions and cares about their well being, which in turn reduces turnover intentions among employees (Eisenbeger et al., 1990; Wayne et al., 1997). Given these empirical results, we posit that:

**H11 Recognition, empowerment, fair organizational rewards, competence development and information sharing practices have a negative influence on turnover intentions.**

**METHODOLOGY**

In order to test our research hypotheses, a mail survey was conducted. A questionnaire, with a cover letter indicating the purpose and importance of the study, was sent to the 2,398 Quebec members of the Canadian Information Processing Society (CIPS) in the fall of 2000. This sample was chosen because CIPS members represent a wide variety of IT jobs and organizational settings. A total of 394 questionnaires were returned to the researchers via regular mail within an 8-week period; 134 questionnaires were returned unanswered because of incomplete addresses (net response rate of 17.4%). The somewhat low response rate is understandable for two main reasons. First, several members of CIPS telephoned us upon receipt of the reminder letter to let us know they could not complete the questionnaire simply because of the workload associated with the end of the fiscal year. Another reason is linked to the characteristics of the sample itself; a small segment of CIPS members in Quebec is believed to be self-employed, and therefore is not directly concerned by the current study. We believe these reasons to be more plausible causes for non-response than the nature of the question under study.

Nevertheless, given the somewhat low response rate, it was necessary to determine how representative the sample was of the population of CIPS members in Quebec. The 2001 CIPS Yearbook and Directory reported that 79.8% of their Quebec members were men, whereas 77.3% of respondents in our sample were men. With regard to education, 73.6% of CIPS members in Quebec were reported to have a university degree, compared with 75.1% in our sample. Furthermore, 55.8% of CIPS members in Quebec work as systems analysts, programmers, consultants or directors, compared with 53.5% in our sample.
Measures

The items measuring turnover intentions, organizational commitment, OCB and HR practices are presented in Appendix. Turnover intentions were measured using a two-item scale developed by Meyer, Allen, and Smith (1993). Affective commitment and continuance commitment were measured using the instrument proposed by Meyer and Allen (1990). Procedural justice was measured using a 6-item scale developed by Tremblay, Guay & Simard (2001). OCB was measured using a 5-item scale adopted from Podsakoff et al. (1997) and Williams and Anderson (1991). Specifically, respondents were asked to imagine how their supervisor would evaluate their own helping behaviors on 7-point Likert-type scales. All of the HR practices scales but one were developed by Tremblay, Rondeau & Lemelin (1997). Recognition was measured by a 6-item scale (e.g. In my work unit, supervisors regularly congratulate employees in recognition of their efforts). Empowerment was measured using a 3-item scale. Fair rewards was measured using a 5-item scale while competence development practices were measured using a 6-item scale (e.g. proficiency courses such as specialized technical courses and professional certification are encouraged by management). Lastly, information sharing practices were measured using a 9-item scale adapted from the survey of Lawler, Mohrman & Ledford (1992).

Control variables. Organizational behavior and management researchers have also identified three socio-demographic variables which tend to correlate with turnover intentions. Indeed, age, organizational tenure and pay level have a negative affect on voluntary turnover (Griffeth et al., 2000). Furthermore, organizational tenure has consistently been found to be positively associated with both forms of organizational commitment (Meyer & Smith, 2000, Meyer et al., 2002), whereas pay level is positively related to continuance commitment. It has also been asserted that the continuance component of organizational commitment is developed on the basis of a perceived lack of job alternatives. Indeed, job opportunities increase the perceived costs associated with leaving the organization (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983) and, in turn, lowers quit intentions. More recently, Meyer et al. (2002) also found continuance commitment and lack of alternative job offers to be positively associated. Accordingly, age, organizational tenure, pay level and the number of job offers were assessed and statistically controlled in the present study. The pay level measure was based on annual salary in current position. Categories ranged from 1) below $40,000 to 5) $100,000 or above. The number of formal job offers was measured using a Likert-type scale ranging from 1) no job offers to 7) several job offers. In addition, age and organizational tenure were each measured by a single-item scale and are assumed to perfectly assess the underlying constructs.

DATA ANALYSIS

Following Tsiu et al. (1997), a confirmatory factor analysis (CFA) was performed on the 29 items that measure the five HR practices considered in this study. The results in Table 1 supported a five-factor structure, with an adjusted goodness-of-fit index (GFI) of .98 and a root-mean-square residual (RMSR) of 0.05. Of all the items included in the analysis, only FR3 was removed from the fair rewards scale, because its factor loading was less than 0.50. The reliability coefficients for the five HR scales ranged from .73 to .86. Next, a similar CFA procedure was performed for items from the affective commitment, continuance commitment, perceived
procedural justice and OCB scales. As indicated in Table 2, only AC5 was not retained in the affective commitment scale since its factor loading was not above the cutoff point. Nevertheless,
as expected, the results supported a four-factor structure, with a GFI of .99 and a RMSR of .04. Therefore, the reliability and construct validity of our measures are highly satisfactory.

Table 1. Standardized Results of Confirmatory Factor Analysis of HR Practices Items

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Recognition practices</td>
<td></td>
</tr>
<tr>
<td>1. Employees’ suggestions are seriously taken into consideration</td>
<td>.67</td>
</tr>
<tr>
<td>2. In my work unit, employees’ suggestions are followed up regularly</td>
<td>.72</td>
</tr>
<tr>
<td>3. When an employee does good quality work, his colleagues regularly show him their appreciation</td>
<td>.77</td>
</tr>
<tr>
<td>4. In my work unit, supervisors tangibly recognize employees’ efforts in different ways (e.g. tickets for cultural or sports events; dinners at restaurants)</td>
<td>.75</td>
</tr>
<tr>
<td>5. In my work unit, employees receive written recognition from their supervisors (e.g. memos)</td>
<td>.81</td>
</tr>
<tr>
<td>6. In my work unit, supervisors regularly congratulate employees in recognition of their efforts</td>
<td>.79</td>
</tr>
<tr>
<td>Empowerment practices</td>
<td></td>
</tr>
<tr>
<td>1. Employees are given great latitude for the organization of their work (e.g. work schedules)</td>
<td>.82</td>
</tr>
<tr>
<td>2. Employees in my work unit have much autonomy in project management</td>
<td>.76</td>
</tr>
<tr>
<td>3. In my work unit, employees have considerable freedom regarding the way they carry out their work</td>
<td>.81</td>
</tr>
<tr>
<td>Competence development practices</td>
<td></td>
</tr>
<tr>
<td>1. Employees can develop their skills in order to increase their chances of being promoted</td>
<td>.76</td>
</tr>
<tr>
<td>2. Employees can rotate jobs to develop their skills</td>
<td>.72</td>
</tr>
<tr>
<td>3. Several professional development activities (e.g. coaching, training) are offered to employees to improve their skills and knowledge</td>
<td>.80</td>
</tr>
<tr>
<td>4. Proficiency courses such as specialized technical courses and professional certification are encouraged by management</td>
<td>.73</td>
</tr>
<tr>
<td>5. I am able to apply my new skills in my work</td>
<td>.77</td>
</tr>
<tr>
<td>6. Managers encourage employees to apply their new abilities and skills in the context of their daily work</td>
<td>.75</td>
</tr>
<tr>
<td>Fair rewards practices</td>
<td></td>
</tr>
<tr>
<td>1. I estimate my salary as being fair internally</td>
<td>.85</td>
</tr>
<tr>
<td>2. My salary is fair in comparison with what is offered for a similar job elsewhere</td>
<td>.78</td>
</tr>
<tr>
<td>3. In my work unit, our supervisors assign mandates in a fair manner (removed)</td>
<td>.49</td>
</tr>
<tr>
<td>4. In my work unit, employees consider that their compensation level adequately reflects their level of responsibility in the organization</td>
<td>.75</td>
</tr>
<tr>
<td>5. The pay increases and/or bonuses I received in the last two years adequately reflect my recent performance evaluations</td>
<td>.74</td>
</tr>
</tbody>
</table>

Copyright © 2004. HEC Montréal.
Table 1. Standardized Results of Confirmatory Factor Analysis of HR Practices Items, cont’d

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor s</th>
<th>Items</th>
<th>Factor s</th>
<th>Items</th>
<th>Factor s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information sharing practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Employees are regularly informed of future corporate projects (e.g. major investments, acquisitions, new technologies)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employees are regularly informed of financial results</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Employees are regularly informed of their work unit’s performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Employees are regularly informed of technological orientations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Managers regularly inform employees of the level of customer satisfaction for products or services offered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Employees’ suggestions concerning ways to improve our work unit’s effectiveness are seriously taken into account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Employees are regularly informed of the criteria that will be included in their performance evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Employees’ suggestions are followed up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Employees are regularly informed of new products and/or services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alpha coefficient = .83 .73 .86 .82 .85

GFI = .97 RMSR = .03
Table 2. Standardized Results of Confirmatory Factor Analysis of Attitude Items

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Affective commitment</strong></td>
<td></td>
</tr>
<tr>
<td>1. I really feel as if my organization’s problems are my own</td>
<td>.72</td>
</tr>
<tr>
<td>2. I do not feel a strong sense of belonging to my organization</td>
<td>-.67</td>
</tr>
<tr>
<td>3. My organization has a great deal of personal meaning for me</td>
<td>.82</td>
</tr>
<tr>
<td>4. I feel emotionally attached to the strategic choices of my org...</td>
<td>.68</td>
</tr>
<tr>
<td>5. The values advocated by top management are aligned with my own</td>
<td>.48</td>
</tr>
<tr>
<td><strong>Continuance commitment</strong></td>
<td></td>
</tr>
<tr>
<td>1. It would be very hard for me to leave my organization right now</td>
<td>.68</td>
</tr>
<tr>
<td>2. It would be too costly for me to leave my organization now</td>
<td>.69</td>
</tr>
<tr>
<td>3. Too much in my life would be disrupted if I decided to leave my</td>
<td>.78</td>
</tr>
<tr>
<td>4. I feel I have too few options to consider leaving my organization</td>
<td>.80</td>
</tr>
<tr>
<td>5. One of the few serious consequences of leaving my organization</td>
<td>.72</td>
</tr>
<tr>
<td><strong>Perceived procedural justice</strong></td>
<td></td>
</tr>
<tr>
<td>1. The criteria used to grant promotions are clearly defined</td>
<td>.83</td>
</tr>
<tr>
<td>2. Employees do not know exactly how to obtain a promotion</td>
<td>-.78</td>
</tr>
<tr>
<td>3. Promotions are determined mainly by unfair political games</td>
<td>-.82</td>
</tr>
<tr>
<td>4. The criteria used to grant pay raises are known by employees</td>
<td>.76</td>
</tr>
<tr>
<td>5. Management is transparent in terms of compensation management</td>
<td>.79</td>
</tr>
<tr>
<td>6. In my work unit, the criteria used to grant pay raises are clearly defined</td>
<td>.81</td>
</tr>
<tr>
<td><strong>OCB</strong></td>
<td></td>
</tr>
<tr>
<td>1. I help colleagues who have been absent from work</td>
<td>.76</td>
</tr>
<tr>
<td>2. I help colleagues who have heavy work loads</td>
<td>.85</td>
</tr>
<tr>
<td>3. I am mindful of how my behavior affects other people’s work</td>
<td>.84</td>
</tr>
<tr>
<td>4. I go out of way to help new employees</td>
<td>.77</td>
</tr>
<tr>
<td>5. I take a personal interest in my colleagues’ work</td>
<td>.80</td>
</tr>
<tr>
<td><strong>Alpha coefficient</strong></td>
<td>.82</td>
</tr>
<tr>
<td>GFI = .98 RMSR = .03</td>
<td></td>
</tr>
</tbody>
</table>
A major concern in this study was common method and to determine whether the focal variables were represented by multiple factors, Harman’s one-factor statistical test was performed (Podsakoff & Organ, 1986). Following Moore (2000), an exploratory factor analysis was conducted on the scale items used to assess the ten variables considered in the present study. A total of 50 items were entered into the analysis, and 10 factors that possess eigenvalues greater than 1.0 emerged. The first factor in the unrotated solution was made up of various items from the recognition, procedural justice, distributive justice and competence development scales. Some of those items also cross-loaded strongly on subsequent factors. Items from OCB, continuance commitment, affective commitment and turnover intentions loaded highly on subsequent factors. The results of this test indicate that the items used to assess the independent, mediating and dependent variables in the present study do not tend to load on a single general factor.

Table 3 shows the means, standard deviations and correlation coefficients for all the variables examined. In structural equation modeling research, the nature and significance of the relations between the independent variables is a common concern. To assess the significance of multicollinearity in the present study, two statistical tests were performed. Tolerance is a statistic used to determine how closely the independent variables are linearly related to one another. More specifically, it represents the proportion of a variable's variance not accounted for by other independent variables in the equation (Neter, Kutner, Nachtsheim & Wasserman, 1996). The higher the correlation of one variable with the other independent variables, the closer the tolerance index is to 0. In the present study, the tolerance indexes ranged from 0.33 to 0.80, which is highly satisfactory (Neter et al., 1996).
Table 3. Descriptive Statistics for Study Variables (n=394)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>REC</th>
<th>EMP</th>
<th>FR</th>
<th>PJ</th>
<th>CD</th>
<th>IS</th>
<th>AC</th>
<th>CC</th>
<th>OCB</th>
<th>JOBS</th>
<th>TOI</th>
<th>AGE</th>
<th>TEN</th>
<th>SAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC</td>
<td>4.98</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.83</td>
</tr>
<tr>
<td>EMP</td>
<td>5.43</td>
<td>1.09</td>
<td>**.33</td>
<td>**.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td>4.61</td>
<td>1.44</td>
<td>**.45</td>
<td>**.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.83</td>
</tr>
<tr>
<td>PJ</td>
<td>4.30</td>
<td>1.43</td>
<td>**.58</td>
<td>**.21</td>
<td>**.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.86</td>
</tr>
<tr>
<td>CD</td>
<td>5.24</td>
<td>1.17</td>
<td>**.56</td>
<td>**.33</td>
<td>**.43</td>
<td>**.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.77</td>
</tr>
<tr>
<td>IS</td>
<td>5.00</td>
<td>1.32</td>
<td>**.63</td>
<td>**.25</td>
<td>**.39</td>
<td>**.49</td>
<td>**.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.90</td>
</tr>
<tr>
<td>AC</td>
<td>4.83</td>
<td>1.27</td>
<td>**.42</td>
<td>**.25</td>
<td>**.27</td>
<td>**.33</td>
<td>**.38</td>
<td>**.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC</td>
<td>3.43</td>
<td>1.33</td>
<td>.03</td>
<td>-.05</td>
<td>-.01</td>
<td>-.01</td>
<td>-.02</td>
<td>,01</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.78</td>
</tr>
<tr>
<td>OCB</td>
<td>5.67</td>
<td>0.91</td>
<td>**.38</td>
<td>**.18</td>
<td>**.15</td>
<td>**.21</td>
<td>**.28</td>
<td>**.20</td>
<td>**.23</td>
<td>**.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**.85</td>
</tr>
<tr>
<td>JOB</td>
<td>3.88</td>
<td>2.02</td>
<td>.03</td>
<td>**.18</td>
<td></td>
<td>.09</td>
<td>.03</td>
<td>.03</td>
<td>.04</td>
<td>**.13</td>
<td>*</td>
<td>.12</td>
<td>*</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOI</td>
<td>3.17</td>
<td>1.73</td>
<td>-.48</td>
<td>-.12</td>
<td>-.40</td>
<td>-.43</td>
<td>-.49</td>
<td>-.37</td>
<td>-.42</td>
<td>-.22</td>
<td>-.31</td>
<td>.19</td>
<td>**.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>41.2</td>
<td>7.91</td>
<td>-.01</td>
<td>-.03</td>
<td>.04</td>
<td>.20</td>
<td>.04</td>
<td>-.03</td>
<td>.07</td>
<td>.11</td>
<td>*</td>
<td>-.01</td>
<td>-.06</td>
<td>-.12</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>TEN</td>
<td>7.61</td>
<td>7.51</td>
<td>.06</td>
<td>-.05</td>
<td>-.02</td>
<td>.17</td>
<td>.08</td>
<td>-.02</td>
<td>.18</td>
<td>.31</td>
<td>.08</td>
<td>-.04</td>
<td>-.24</td>
<td>.46</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>SAL</td>
<td>3.14</td>
<td>1.21</td>
<td>**.12</td>
<td>**.19</td>
<td>**.37</td>
<td>**.17</td>
<td>**.16</td>
<td>**.12</td>
<td>**.09</td>
<td>**.06</td>
<td>**.02</td>
<td>**.33</td>
<td>**.05</td>
<td>**.42</td>
<td>**.11</td>
<td></td>
</tr>
</tbody>
</table>

** p<.01  * p<.05

REC=Recognition; EMP=Empowerment; FR=Fair Rewards; PJ=Procedural Justice; CD=Competence Development; IS=Information Sharing; AC=Affective Commitment; CC=Continuance Commitment; OCB=Organizational Citizenship Behavior; JOB=Number of job offers; TOI=Turnover Intentions; TEN=Tenure; SAL=Salary
Another formal method for detecting the presence of multicollinearity is the variance inflation factors test (VIF). VIF measure the inflation of variances of the estimated regression coefficients when the independent variables are not linearly related (Neter et al., 1996). In the present study, the VIF values ranged from 1.11 to 3.00, which is highly satisfactory given that a maximum VIF value in excess of 10 is often taken as an indication that multicollinearity may be unduly influencing the least square estimates.

RESULTS

After assessing the fit of our confirmatory factor models, we evaluated the complete structural model represented in Figure 1. Given the relatively modest sample size, a manifest variables model was evaluated, using the variance-covariance matrix for input as suggested by Williams and Hazer (1986). Following Meyer and Smith (2000), we assessed model fit using the Tucker Lewis Index (TLI) (Tucker & Lewis, 1973) and the Root Mean Squared Error of Approximation (RMSEA) (Steiger, 1989). Both of these indices include parsimony as a criterion in the estimation of fit (i.e. impose a penalty for inclusion of additional paths). TLI values greater than 0.90 are generally considered to indicate a good fit. Values for the RMSEA below 0.08 indicate a reasonable fit and those below 0.05 indicate a good fit to the data (Browne & Cudeck, 1993). The path coefficients found in the test of the initial model are reported in Figure 1. The overall fit of the model was acceptable ($\chi^2(13) = 61.75, p<.01; \text{TLI} = .979; \text{RMSEA} = 0.08$) but, as can be seen, several of the path coefficients were not significant ($t < 1.96$).

Figure 2. Results of SEM Analysis
In accordance with hypothesis 1, we found a negative and significant coefficient path linking OCB-helping behaviors ($\beta = -.23$, $p < .05$) to turnover intentions. Hypothesis 2a and 2b are once again fully supported. Indeed, affective commitment has a significant positive influence on OCB-helping behaviors ($\beta = .19$, $p < .05$), whereas the coefficient for the path linking continuance commitment to OCB is not significant. Hypotheses 3a and 3b are affirmed as well. Affective commitment ($\beta = -.18$, $p < .05$) and continuance commitment ($\beta = -.13$, $p < .05$) are negatively associated with turnover intentions. Hypotheses 4 to 6 all related to the role of procedural justice. Hypothesis 4 posits a positive relationship between perception of procedural justice and affective commitment. This relationship could not be confirmed. However, hypotheses 5 and 6 were empirically supported. In particular, our findings show a significant and positive link between perception of procedural fairness and OCB-helping behaviors ($\beta = .14$, $p < .05$) and a negative relationship between perceived procedural fairness and turnover intentions ($\beta = -.24$, $p < .05$).

Hypotheses 7 to 10 postulate that all five HR practices are significantly related to affective and continuance commitment, procedural justice, OCB-helping behaviors and turnover intentions. These hypotheses are confirmed only partially by our results. As illustrated in Figure 2, extensive use of non-monetary recognition ($\beta = .22$, $p < .05$), empowerment ($\beta = .10$, $p < .05$) and competence development ($\beta = .12$, $p < .05$) practices are significantly and positively related to affective commitment. Interestingly, while Meyer and Smith (2000) did not observe a significant relationship between HR practices and continuance commitment, our findings point to the presence of a positive association between competence development practices and continuance commitment ($\beta = .37$, $p < .05$). In addition, non-monetary recognition ($\beta = .33$, $p < .05$), competence development ($\beta = .25$, $p < .05$), information sharing ($\beta = .11$, $p < .05$) and fair rewards ($\beta = .11$, $p < .05$) practices and policies are all significantly and positively associated with perception of procedural justice. However, contrary to our expectations, OCB-helping behaviors did not appear to be related to any HR high-involvement practices. Rather, the link between such practices and OCB helping-behaviors is apparently mediated by affective commitment and procedural fairness.

As for hypothesis 11, four out of five HR practices were directly related to turnover intentions. Among IT professionals, turnover intentions are more likely to be low when the quality of work is well recognized ($\beta = -.58$, $p < .05$), they perceive that they have sufficient competence development opportunities ($\beta = -.36$, $p < .05$), they are regularly informed about business matters and they feel listened to ($\beta = -.21$, $p < .05$) and when they perceive that they are fairly rewarded ($\beta = -.19$, $p < .05$).

**DISCUSSION AND IMPLICATIONS**

While prior research on procedural justice, organizational commitment and OCB has contributed to a deeper understanding of these constructs and of their relationships with quit intentions and actual turnover, few empirical studies have comprehensively examined, from an individual perspective, the mediating role of these constructs on the relationships between high-involvement HR practices and quit intentions.
Similar to Chen et al. (1998) and Mackenzie et al. (1998), we found that citizenship behaviors are significantly and negatively related to quit intentions. This result reaffirms that a lack of willingness to exhibit helping behaviors may signify withdrawal from the organization. Frequent helping behaviors motivate individuals to reciprocate such inducements and strengthen relationships among employees and with superiors. Such relationships thus motivate individuals to remain in their organization.

In corroboration with previous studies (e.g. Podsakoff et al. 2000; Meyer et al., 2002), we found that IT professionals who developed a strong affective commitment toward their organization are more likely to exhibit OCB-helping behaviors than those with a low affective or a high continuance commitment. Meyer and Herscovitch (2001) suggested that employees who develop strong affective commitment become less sensitive to signals or constraints that may demarcate their behavior. This affective commitment thus predisposes individuals to adopt a fairly broad range of discretionary or intentional behaviors. Similarly, researchers (e.g. Morrison, 1994) have demonstrated that a strong affective commitment motivate individuals to construe their work role as extending beyond tasks formally prescribed, which in turn encourages them to adopt extra-role behaviors.

In line with previous IT research (e.g. Igbaria & Greenhaus, 1992; Igbaria & Guimares, 1999), affective commitment was also found to be negatively related to quit intentions among IT professionals. Figure 2 shows that some HR practices play a determining role in the development of affective commitment among highly skilled professionals. Specifically, an organization that invests in its human capital and grants employees sufficient resources and opportunities to improve their skills (competence development), sets up systems allowing immediate supervisors to recognize individual contributions (recognition) and accepts greater power-sharing in the definition, coordination and conduct of work (empowerment) has a greater likelihood of developing a higher level of affective commitment among its highly-skilled professionals. Such practices make the professionals feel important, responsible and free to optimally channel their creativity and competencies. They also signal that the organization is supportive of the employees and is seeking to establish or maintain a social exchange relationship with them (Eisenberger et al., 1986; Leana & Florkowsky, 1992; Appelbaum, Bailey & Berg, 2000; Tsui et al., 1995; Meyer & Smith, 2000; Allen et al., 2003).

We speculated that continuance commitment might also be associated with turnover intentions; our findings support this hypothesis. This result confirms that IT professionals are likely to stay with their organization not only when they have an emotional attachment to their organization but also when they perceive a cost of leaving. Most importantly, we observed that extensive investment in competence development is strongly and positively associated with the development of perception of continuance commitment among IT professionals. To our knowledge, ours is one of the few studies that have observed such a link. One explanation is related to human capital theory (Becker, 1975), which dictates that when a substantial investment is allocated to developing skills specific to an organization, the employees’ chances of finding a job elsewhere are reduced because the knowledge acquired is difficult to export. The strong association between this HR practice and continuance commitment leads us to believe that the development of this form of commitment may be better explained by the perception of a lack
of alternatives on the job market than by the feeling that knowledge is lost, as presumed earlier. This result deserves to be investigated further.

Contrary to our expectations, our study failed to find a significant link between procedural justice and affective commitment. Previous results indicate that the association between the two constructs may be mediated by other variables. For instance, Meyer and Smith (2000) and Rhoades et al. (2001) found that the link between procedural justice and affective commitment was mediated by perceived organizational support. Gould-Williams (2003) recently observed that the association between procedural justice and organizational commitment was conditioned by the perception of trust. As a whole, these findings suggest that procedural fairness may play a determining role in shaping employees’ affective commitment, but only when employees perceive their organization to be supportive of or committed to them, in a trusting relationship and environment.

Consistent with previous research (e.g.; Simon & Roberson, 2003), our findings reveal that the paths that link procedural justice to OCB-helping behaviors and to turnover intentions are significant. Note that the present study is one of the first to demonstrate the mediating role of procedural justice in the relationship between HR practices and both OCB and quit intentions. Specifically, this result indicates that IT professionals who benefit from high-involvement HR practices are more likely to reciprocate through citizenship behaviors when they perceive that fair organizational procedures are in place and they feel emotionally attached to the organization.

As shown in Figure 2, four out of five high-involvement HR practices are significantly and negatively related to turnover intentions among IT specialists. Allen, Shore & Griffeth (2003) recently demonstrated that the influence of human resources practices on departure intentions is mediated by the perception of organizational support. HR practices also effectively reinforce the perception of confidence in decision makers (Gould-Williams, 2003; Whitener, 1997). It is therefore probable that the direct link between HR practices and quit intention observed in this study is explained by the fact that we did not evaluate the role of perception of support and trust. Notwithstanding these limitations, high-involvement HR practices communicate to employees that the organization values and cares about them and wishes to establish a social exchange relationship with them (Tsui et al., 1995; Allen et al., 2003). In turn, these organizational dynamics enhance employees’ desire to be loyal to their employer and to remain within the firm.

**Limitations and Avenues of Future Research**

The present study enlightens practitioners and researchers with regard to turnover among highly skilled professionals, yet several limitations should be considered. For one, given the low response rate, the results may be influenced by non-response bias and volunteer bias. In addition, cross-sectional data cannot confirm the direction of causality implied in our research model. Longitudinal studies are thus needed in order to validate the predictive dimension of the model through the integration of the construct “actual turnover.” Researchers could therefore view actual turnover as one extremity of a withdrawal continuum. Less extreme manifestations might include job search behaviors such as contacting employment agencies, sending out resumes and attending job interviews. Turnover is thus transformed from a binary to a continuous variable, while providing insights into what causes IT personnel to leave. Furthermore, future research
should clarify the direction of relationship between turnover intentions and OCB behaviors. Indeed, we cannot rule out the possibility of an inverse relationship between OCB-helping behaviors and turnover. A high rate of turnover may increase the fragility of the social capital and the skills capital within work groups and thus reduce the possibilities of reciprocal support and helping behaviors.

The present study (similar to most of the research in this area) relied on single methods. Even though Harman’s one-factor test (Podsakoff & Organ, 1986) is useful in testing for common method variance, future research should attempt to gather data from multiple sources including employee self-reports, co-workers, supervisors and company records, as well as multiple methods such as structured interviews, questionnaires, and observation.

Further research could examine a wider variety of antecedents of turnover intentions including previously studied variables such as role ambiguity, role conflict and career opportunities (Baroudi, 1985; Guimaraes & Igbaria, 1992; Igbaria & Greenhaus, 1992) as well as new variables such as superior-employee relationship (Griffeth et al. 2000). Future work in this area could also include other potential predictors of citizenship behaviors and organizational commitment such as trust in leader, leader support, personality traits (Podsakoff et al., 2000; Penner, Midili, & Kegelmeyer, 1997) and other HR practices as job security, selective hiring, teamwork, egalitarian and socialization practices (Pfeffer & Veiga, 1999; Caldwell, Chatman, & O’Reilly, 1991).

It has often been asserted that organizational effectiveness can be improved only when HR practices and policies are consistent or aligned with organizational and environmental contingencies (e.g. Jackson & Schuler, 1995). For instance, there is evidence that the effectiveness of various HR policies and practices is dictated by the proper alignment between a firm’s overall business strategy and the HR plan (e.g. Youndt et al. 1996; Wright & Boswell 2002; Wright, Dunford & Snell, 2001). Future research could examine the influence of such contingency variables in order to clarify the role of HR practices on individual and organizational outcomes.

Our research methodology did not allow us to test for the possibility that certain HR practices are related to turnover intentions only when used in conjunction with other practices. It is possible, for example, that information sharing is related to turnover intentions only when it is part of a broader program designed to enhance employees’ participation in the decision making process. As reported by Meyer and Smith (2000), this issue has been raised by researchers interested in the impact of HR practices on productivity and organizational effectiveness (e.g. Becker & Gerhart, 1996; Delery & Doty, 1996), and represents an important direction for future research.

Lastly, further research should investigate turnover in a variety of organizational and cultural contexts. It would be interesting, for instance, to identify the predictors of turnover for other professional groups in public, private and consulting firms in North America, Asia, and Europe.

In conclusion, the primary goal of the current study was to provide empirical evidence that high-involvement HR practices may contribute to positive key attitudinal and behavioral outcomes often considered necessary conditions for the improvement of organizational performance. Our
results clearly reveal that HR practices play, directly or indirectly, a determining role in the development of procedural justice, affective commitment, the adoption of extra-role behaviors and the decision to stay with the organization. Whereas the precise mechanisms and/or channels of investments in a comprehensive HR strategy that lead to positive outcomes have not been definitively identified, our results imply that highly skilled professionals should not be managed as disposable productive resources but rather, should be considered as humans beings with specific needs and interests. They should therefore be granted fair rewards, opportunities to learn and innovate, recognition of peers and managers, attainment of new levels of responsibility and empowerment. In short, managers need to bolster highly skilled professionals’ sense of self worth by treating them as intellectual assets, not as operating expenses, and by trusting them and supporting their career experiences. They can thus gain a competitive advantage by keeping the employees’ skills and experience within the organization rather than outside it.
REFERENCES


The Influence of High-Involvement Human Resources Practices, Procedural Justice, Organizational Commitment and Citizenship Behaviors on Information Technology Professionals' Turnover Intentions

Guy Paré and Michel Tremblay


Copyright © 2004. HEC Montréal.


