

December 2002

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## Recommended Citation

Riemenschneider, Cynthia; Allen, Myria; and Reid, Margaret, "POTENTIAL ANTECEDENTS TO THE VOLUNTARY TURNOVER INTENTIONS OF WOMEN WORKING IN INFORMATION TECHNOLOGY" (2002). *AMCIS 2002 Proceedings*. 277.

<http://aisel.aisnet.org/amcis2002/277>

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# POTENTIAL ANTECEDENTS TO THE VOLUNTARY TURNOVER INTENTIONS OF WOMEN WORKING IN INFORMATION TECHNOLOGY

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## Abstract

*This study will ultimately report the findings of 6 focus groups conducted with 39 women working in information technology (IT) at a Fortune 500 company. The views the women shared regarding retention and turnover in the IT profession as well as the quantitative results of a brief survey will be reported. Three researchers will analyze the qualitative data from the focus groups.*

## Introduction

Current estimates of unfilled information technology (IT) jobs range from 342,000 to 600,000 (Catlette & Hadden, 2000; Passori, 2000). “In the next seven years, a million new IT workers may be needed in the U.S., but less than 25,000 computer science graduates enter the work force each year” (Catlette & Hadden, 2000, p. 1). Couple this with potential difficulties retaining female and minority employees and the impending retirement of baby boomers, and an even greater shortage in the IT workforce is likely. In such an environment, retaining current employees is important. The following research seeks to address two broad questions: Do quality of life issues related to IT careers influence retention and career mobility of women in the IT workforce? How do evaluation, reward structures and family-friendly practices impact the retention of workers in the IT workforce? We propose an initial model of the voluntary turnover antecedents influencing females working in IT that includes the concepts raised in these two broad questions along with other concepts appearing in extant models of voluntary turnover.

## Literature Review

### *The Intent to Turnover Model*

Based on our review of the existing IT, management, and public administration literature, as well as articles in the IT trade journals, we propose an initial model for identifying key factors influencing an employee’s decision to voluntarily leave his or her employer (see Appendix A). The dependent variable is intent to voluntarily leave an employer. Voluntary turnover intentions involve a conscious and deliberate willfulness to leave (Tett & Meyer, 1993). While some researchers indicate intent is consistently and strongly correlated with actual turnover (e.g., Mobley, Griffeth, Hand & Meglino, 1979), others (e.g., Vandenburg & Nelson, 1999) indicate the strength of the relationship varies across studies with corrected variance estimates ranging from 28% to 75%. The following section discusses factors previously shown to have influenced turnover intentions and/or the key turnover antecedents appearing in the preliminary model.

### *Antecedents of Voluntary Turnover Intentions*

As we constructed the preliminary model, we used recent meta-analyses (e.g., Griffeth, Hom, & Gaertner, 2000; Hom & Griffeth, 1995) to identify previously identified important antecedents to voluntary turnover intentions. Griffeth et al.’s (2000) meta-analysis “represents the most wide-ranging quantitative review to date of the predictive strength of numerous turnover antecedents” (p. 463). They identified important proximal precursors to the withdrawal process including organizational

commitment and job satisfaction. Our model also includes some of the distal determinants they identified including job scope, stress, leader-member exchange, procedural justice, promotional changes, performance-contingent rewards, pay, and pay satisfaction. Number of children, work-family pressures and company tenure also appeared significant or were mentioned either as antecedents or moderators (Griffeth et al., 2000) and such data will be collected in this study as well.

Many of the previously identified antecedents do not necessarily directly influence voluntary turnover intents but do influence proximal attitudes such as affective organizational commitment and job satisfaction which in turn influence turnover intentions. In a meta-analysis, Tett and Meyer (1993) found that affective organizational commitment and job satisfaction contribute independently to the prediction of voluntary turnover intentions and cognitions. Other studies show that commitment and satisfaction influence each other (e.g., Griffeth & Hom, 2001). Perceived organizational support, an antecedent to affective organizational commitment, also has been linked to turnover intentions. The next section briefly reviews relevant research on these important antecedent attitudes.

### **Perceived Organizational Support**

This concept taps employees' global beliefs that their organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Perceived organizational support can be influenced by policies, procedures, and decisions indicative of an organization's concern for employee welfare and its positive evaluation of employee contributions (Armeli, Eisenberger, Fasolo, & Lynch, 1998). Researchers have identified multiple potential antecedents to perceived organizational support including procedural justice (Moorman et al., 1998), perceived sufficiency of financial inducements, family-oriented actions, high-quality leader-member relationships, promotions, participation in goal setting and the receipt of performance feedback, low role conflict and ambiguity (Armeli et al., 1998), and developmental experiences (Wayne et al., 1997).

### **Affective Organizational Commitment**

This concept involves "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Porter, & Steers, 1982, p. 27). Although several types of commitment exist (e.g., affective, continuance, normative), affective organizational commitment has been identified as one of the most consistent antecedents to voluntary turnover intentions, and in turn the most widely studied consequence of commitment has been employee retention (Meyer & Allen, 1997). Employees reporting high affective organizational commitment are more likely to remain with their employer and exhibit prosocial behaviors benefiting their organization. We looked at previously identified affective organizational commitment antecedents (see Meyer & Allen, 1997) to see which ones also appeared in the intent to turnover literature. Many shared variables were retained in our preliminary model including job scope, procedural justice, leader-member relationships, autonomy, promotion opportunities, and performance-contingent rewards. Additional commitment antecedents were included in the model: decision-making input, job-related feedback, family-responsive benefits, job challenge, and role states (overload, ambiguity, conflict).

### **Job Satisfaction**

Job satisfaction involves one's affective attachment to the job viewed either in its entirety (global satisfaction) or with regard to particular aspects (e.g., facet satisfaction, supervision). Job satisfaction has been linked to turnover intentions although the link is fairly weak (Khatri, Fern, & Budhwar, 2001). Yet, Meyer and Allen (1997) recommend retaining this variable in any model explaining voluntary turnover intentions. Tett and Meyer (1993) found it to be a strong predictor of withdrawal cognitions. Igarria and Greenhaus (1992) found job satisfaction was the most strongly correlated variable with turnover intentions of the nine direct influences they tested with a sample of IT employees. Job satisfaction generally has its greatest impact on voluntary turnover intentions when jobs are plentiful, employees are more highly educated, and they have higher cognitive ability (Trevor, 2001). Until the recent economic downturn, all three conditions described the situation of IT employees.

### **Stress and Work Exhaustion**

Much of the IT-related research focuses on stress and work exhaustion as potential antecedents of voluntary turnover intentions. Moore (2000) found work exhaustion partially mediated the effects of workplace factors on turnover intentions. Those with higher exhaustion levels indicated greater intent to leave, and work overload was the strongest contributor to exhaustion. Fairness of rewards also influenced exhaustion levels. Affective commitment was negatively correlated with IT employee burnout (Sethi, Barrier, & King, 1999).

### **Organizational Justice**

Organizational justice is another concept recently and increasingly linked with turnover intentions, affective organizational commitment and perceived organizational support. Researchers focus on distributive and procedural justice (Bartol, 1999). Procedural justice is two-dimensional (Erdogan, Kraimer, & Liden, 2001; Robbins & Summers, 2000). One dimension involves the perceived justice of procedures and the other involves the perceived justice occurring in interpersonal interactions, especially with those in positions of authority. A substantial path coefficient has been identified between procedural justice and perceived organizational support (Kline & Klammer, 2001). Justice perceptions affect employees' perceptions that they are valued by their organizations (Moorman et al., 1998). It is important to separate out the effects of the two procedural justice dimensions. Robbins and Summers (2000) found that interpersonal justice captured unique variance in organizational commitment, turnover intentions, as well as both individual and group performance, and explained more unique variance in commitment and performance than did distributive justice or instrumental procedural justice.

### **Other Factors of Interest**

Other factors potentially influencing turnover intentions or which should be included in any preliminary model as control or moderating variables include organization size, tenure in the organization, experience in IT, perceptions regarding the availability of other and better IT positions, and industry type.

### ***Research into the Voluntary Turnover Intentions of IT Employees***

Intent to turnover was the dependent variable in several previous studies regarding IT employees (i.e., Guimaraes & Igbaria, 1992; Igbaria & Greenhaus, 1992; Igbaria & Guimaraes, 1999; Moore, 2000), as was intent to stay (Igbaria & Siegel 1992). Igbaria and Guimaraes (1999) tested a model linking role stressors, job satisfaction, organizational commitment, and turnover intentions. Igbaria and Greenhaus (1992) found that job satisfaction and organizational commitment were the two strongest direct determinants affecting an employee's voluntary turnover intentions. Additional variables in the proposed model previously linked to IT employee turnover intentions are work exhaustion (e.g., Moore, 2000), role conflict and role ambiguity (e.g., Guimaraes & Igbaria, 1992; Igbaria, Parasuraman, & Badawy, 1994; Igbaria & Greenhaus, 1992; Igbaria & Siegel, 1992; Sethi et al., 1999), pay, status, job satisfaction, salary, and promotability (e.g., Igbaria & Siegel, 1992).

The practitioner-oriented IT literature suggests issues related to mentoring, training, benefits, flexible hours, casual dress, equity incentives and praise/recognition are linked to retention (e.g., Agarwal & Ferratt, 2001; Goff, 1999; Harris, 2000; Mandell, 1998; Stokes, 2000). This literature also suggests that industry or organizational norms may encourage IT employees to leave their employing organization. Khatri et al. (2001) studied a "job-hopping" attitude among employees across multiple industries in Singapore and found the attitude varied by industry. Admittedly, findings in Singapore may not be applicable to IT employees in the U.S. However, no other empirical investigations studying the job-hopping attitude of IT employees could be identified in preparing this paper. In order to determine its potential significance in the U.S., this research investigates if job-hopping norms influence IT employee turnover intentions. The next section presents the methodology and the current state of the data analysis.

## **Methodology**

### ***Sample Selection***

Focus groups can suggest research hypotheses by exploring questions such as why people do (or do not) behave in certain ways (Whitney, 1996). Focus groups are flexible, can capture real-life data, have high face validity, can provide speedy results, and are low cost (Babbie, 1995). Because of these advantages, we decided to conduct initial focus groups with a local Fortune 500 company in order to determine if the proposed model included all of the possible variables impacting the turnover of IT women.

We conducted six focus groups with women working in IT at the headquarters of a large food company. Thirty-nine women volunteered to participate in one of the six one-hour sessions. Their positions ranged from programmers to systems administrators and senior project leaders. Participants discussed three open-ended questions, responded to two open-ended questions in writing, and finally completed a survey designed around the preliminary turnover intentions model. In the discussion questions, participants were asked to talk about their experiences with previous employers, factors that influenced their decisions to voluntarily leave, if they thought women in the IT workplace face different or more barriers than men, and, if they were in charge, what they would do to better retain and promote women. Each of these six focus group sessions has already been transcribed.

However, each transcription will need to be formatted properly as to be usable with the qualitative software, Nvivo, that we will use for the analysis. An iterative process is required for the analysis of this qualitative data. Initially, we will analyze a single transcription to create the categories of comments, come together to reach a consensus regarding the categories, and then recode the transcription. We may need to go through several iterations on several transcripts to ultimately reach the desirable inter-rater reliability needed in qualitative research. Once this has been accomplished and the researchers are in agreement, all of the transcriptions will be coded individually and then analyzed collectively to determine the overall significance of categories and comments. The researchers are currently in the process of analyzing the 6 focus group transcriptions.

In the focus groups, we also asked participants to respond in writing to two open-ended questions which asked what factors might influence their 1) decision to leave their organizations and 2) decision to remain with their organization. Vandenberg and Nelson (1999) suggest researchers investigate if the motives for leaving differ from the motives for staying. This data needs to be entered and analyzed. A similar method as described for the focus group discussions will be followed.

Finally, the participants completed a survey exploring how likely the individual items included in our preliminary model were to influence their decision to leave an employer. The survey had 31 items on it and the respondents were asked to indicate the extent to which these items had influenced their decision to leave previous employers or might influence the decision of a woman working in IT to leave her employer. The 31 items were either identified in the trade publications or in the academic literature as factors influencing an employee's decision to voluntarily leave a job. The items were answered on a scale ranging from 5 (Definitely influenced my decision to leave) to 1 (Definitely did not influence my decision to leave).

## Initial Results

Appendix B shows the 31 items on the survey listed in descending order beginning with the item that had the highest mean. However, the 5 most frequently mentioned challenges that respondents identified as possible reasons to leave included:

- if they were overlooked for promotions ( $M = 4.10$ ,  $SD = 1.12$ ),
- if they did not receive pay raises based on what they believed to be the merit of their work ( $M = 4.08$ ,  $SD = 1.01$ ),
- if they had a supervisor who was not fair in how he or she treated the employee ( $M = 4.05$ ,  $SD = 1.15$ ), or was not helpful or supportive ( $M = 3.95$ ,  $SD = 1.02$ )
- if they believed unfair procedures were used to decide about pay raises and benefits ( $M = 3.97$ ,  $SD = 1.12$ ) or believed the company reward structure failed to fairly recognize people who worked hard and made important contributions ( $M = 3.92$ ,  $SD = 1.06$ ),
- and if they believed company practices and policies were not family friendly ( $M = 3.87$ ,  $SD = 1.13$ ).  $M =$  mean,  $SD =$  standard deviation.

By the time of AMCIS 2002, all of the qualitative data will be analyzed so the results may be presented at the conference. The study provides an initial model for needed research on the voluntary turnover intentions of women in IT. The final analysis of the qualitative data will lend insight into any missing variables in the proposed model. Once identified, any missing variables will be included in the model for later stages of data collection and ongoing research.

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Appendices A and B are available upon request from the first author.