

Technological Adoption to Combat Burnout

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Abstract

This study examines issues relating to retention of Information Systems and Technology (IS&T) employees. A survey of over 250 Information Systems and Technology professionals indicates that "loyalty issues" have a higher impact on employee retention than do the traditional constructs of job satisfaction and organizational commitment. Path Analysis was used to investigate the role of job satisfaction, employee commitment, organizational loyalty and job burnout as it impacts employee retention.

Keywords: Information systems employee, turnover, burnout, job satisfaction, loyalty

1. INTRODUCTION

Many authors have proclaimed this era as the "Information Age." Companies are adopting technologies in an effort to go beyond just becoming lean. They endeavor to become effective and efficient to gain a leg up on the competition. Organizations use technology as the way to eliminate layers of management and to handle changing workloads. This adoption of technology puts tremendous value on the information and technology specialists who are responsible for implementing the changes. The drive for information technology and the transformation to a knowledge-based company have created a serious demand for highly skilled and educated information technology (IT) workers. According to the U.S. Department of Commerce, the growth rate in technology

is twice the growth rate of the U.S. economy (Turban, 2001).

Failure of an organization to maintain an appropriate environment can trigger an exodus of expensive employees with disastrous results. Szajna and Scamell (1993) indicate high turnover rates of programmers contribute to a 25% project abortion rate. Employees that remain are placed under considerable stress to deal with projects with tight resources and often with under-qualified replacements. Consequently, they may end up working harder and longer than before. This prolonged exposure of high stress can lead to burnout (Perlman, 1982; Lee, 1990; Gresing, 1991; Winbust, 1993). Burnout is characterized by fatigue, depression, hopelessness and lack of enthusiasm, further reducing productivity and effectiveness.

The Information Technology Association of America argues that there is a large projected shortage of

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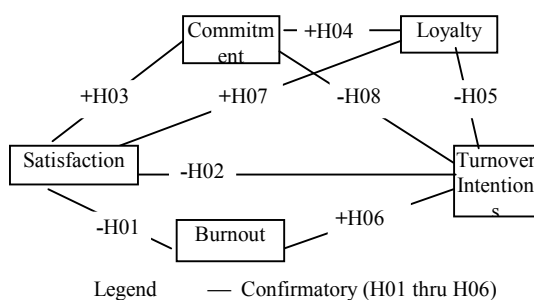
information specialists, while others argue that the shortage is small or does not exist (Ellis, 2000). In either case, IS&T positions in many areas remain unfilled. This phenomenon acts as an attraction for those who are dissatisfied with their current employment. If managers are not careful, they end up spending considerable time and resources dealing with personnel issues instead of proactive planning on tactical and/or operational issues.

Because IT employees are often key to building an organization's distinctive capabilities and core competencies, it is important to understand issues that affect the employees' association with the organization. Griesser (1993) found that the type of person that pursues information systems area as a profession maybe different from the general population. If the antecedents to turnover intentions, job satisfaction, organizational commitment, loyalty, and burnout can be effectively managed, then employees may remain productive and efficient. To investigate these relationships, a survey of IS&T professionals in the Midwest U.S. was performed for the current study.

2. A MODEL ON IS&T TURNOVER INTENTION ANTECEDENTS

The model of this study is shown in Figure 1. This model explores the possible antecedents of turnover intentions as presented in Mak and Sockel (2001) from the perspective of the IS&T knowledge worker. In this research, the IS&T knowledge worker is defined as someone who is involved in the creation and maintenance of information/knowledge-based systems. This definition includes programmers and analysts at all levels, project leaders, quality control specialists, and middle management. It does not include documentation specialists, data entry personnel or others that do not directly impact software production or maintenance.

Figure 1 - Proposed model



Burnout

An organizational culture that becomes too stressful, abusive, non-challenging, or inconsistent with employee needs and desires may lead to personnel burnout and higher turnover rates. Even if the information specialist

does not leave, the increased incidence of burnout can lead to reduced productivity, feelings of frustration, low morale, and incidence of being tired and lonely (Rose, 1986). The continuous struggle with other people enhances the risk of burnout (Winnubst, 1993). Garner (1996) indicates the common features of burnout that IS&T professionals complained about are: (1) too much is expected from too few, (2) not enough time to do a good job, and (3) unrealistic deadlines.

H01: The I.S. Knowledge Workers' sense of job satisfaction will be negatively correlated to their job burnout.

H06: The I.S. Knowledge Workers' sense of job burnout will be positively correlated to their Turnover Intentions.

Loyalty

Loyalty is not the same as organizational commitment. Loyalty is a strong desire to maintain a relationship with the organization, while commitment is a strong belief and acceptance of the organization's goals and values. Loyalty is characterized as the degree of attachment towards the organization. Employees with low sense of commitment are more inclined to have low levels of organizational loyalty (Brooke, Russell, & Price 1988). Loyalty has been shown to be an antecedent of turnover intentions (Locke, 1984; Brooke et al., 1988; Cramer, 1996). Loyalty is also different from job involvement, which is characterized as the degree of importance that the individual's job adds to his/her self-image (Klenke & Kievit, 1992).

H04: The I.S. Knowledge Workers' sense of Organizational Commitment will be positively correlated to their level of Organizational Loyalty.

H05: The I.S. Knowledge Workers' sense of Organizational Loyalty will be negatively correlated to their Turnover Intentions.

H07: The I.S. Knowledge Workers' sense of job Satisfaction will be positively correlated to their level of Organizational Loyalty

Organizational Commitment

Decotiis and Summers (1987) indicate that organizational commitment may be one of the most widely studied constructs that influences turnover. Commitment has been repeatedly identified as an important variable in the study of employee work behavior. It is often defined as a relative strength of individual's identification with the involvement in a particular organization (Mowday 1982). It is viewed in terms of the level at which an employee identifies him/her self with the organization. The definition of commitment is often viewed as an aggregate of many

sub-components: a shared set of goals, and a willingness to exert effort beyond a minimum.

Numerous models exist linking organizational commitment to turnover (Williams & Hazer, 1986) and turnover intentions (DeCotiis & Summers, 1987; Shore & Martin, 1989). These studies and Mak and Sockel (2001) failed to support this association as it relates to IS&T workers. Instead, a strong correlation was supported between commitment and loyalty, as well as between loyalty and turnover intentions. Klenke and Kievit (1992) indicate that, while commitment has been well studied in many professional groups, little is understood of IT commitment predictors.

H03: The I.S. Knowledge Workers' sense of Job Satisfaction will be positively correlated to their level of Organizational Commitment.

H08: The I.S. Knowledge Workers' sense of Organizational Commitment will be negatively correlated to their level of Turnover Intentions.

Job Satisfaction

Hackman and Oldham (1980; p. 37) state, "*If the last several decades of research on behavior in organizations has taught us anything, it is that people at work seek simultaneously many kinds of satisfaction, not just those with economic roots.*" Locke (1976, p. 1307) defines job satisfaction as an emotional reaction, which "*results from the perception that one's job fulfills or allows the fulfillment of one's important job values ... to the degree that those values are congruent with one needs.*" A less formal definition has job satisfaction as a positive emotional state reflecting affective (fondness) attitude towards the job situation. It represents a positive desire to continue to work for one's organization. As such, job satisfaction is affected by the individual's perception and his/her values and needs.

Computerworld's fourteenth (14th) annual job satisfaction survey noted that, across the board, most IS&T employees indicated they were least satisfied with their relationship with IT management. Within the IS&T industry, it is not uncommon for personnel to spend years working the same routines (Cherlin, 1981). Employees can be stuck in the same positions because there is not enough in the budget to train new people to relieve them or to rewrite the system that they are working on.

Job satisfaction has been shown to be an important antecedent to turnover intentions (Igarria & Guimaraes, 1993; Couger, 1988). Igarria and Guimaraes (1993) argue that if the organization gives technical professionals challenging and exciting jobs, they will be more satisfied and less likely to leave. Their results suggest that the determinants of turnover intention may be job satisfaction and commitment.

H02: The IS Knowledge Workers' sense of Job Satisfaction will be negatively correlated to their Turnover Intentions.

3. METHODOLOGY

A self-reported survey was administered to IS&T developers of all levels including programmers, analysts, project leaders, and quality control specialists. Because the study explores implications of employees' attitudes on turnover intentions, a self-reported survey was deemed most appropriate. To avoid concerns of management reprisals and yet still incorporate a large degree of randomness, a variant of "snowball" distribution approach was used. The survey was distributed to trustworthy individuals for further redistribution. A problem with this approach is that it is difficult to accurately determine non-respondent information. The population count was made on the basis of the prepaid envelopes and not the survey instrument.

Instrument Design

Pursuant to established research methodology, relevant scales from prior research were used where possible and augmented only when existing instruments were not available. For cases where established scales did not exist or where there were poor matches, scales were "developed" via the construct's definition. A seven-point Likert scale was used. An exploratory study and pretest were done as part of the instrument development. Items that loaded on more than one construct were rephrased or eliminated.

A total of 1400 surveys were distributed and 285 surveys were returned; 14 were rejected because the respondents were not in the appropriate audience or because of missing data. If the number of questions answered was less than half the number of items for a section, the data for that section was left blank. If more than two sections were missing, the survey was rejected. The usable response rate was 19.3%, which is consistent with research of this nature.

Validity

A multi-step process was employed to validate the items. As suggested by Doll and Torkzadeh (1989), the validity was assessed using factor analysis and correlation between the items. Reliability was measured by Cronbach's alpha. Alpha scores above .70 are considered satisfactory, and those above .80 are considered excellent (Nunnally, 1978). All of the constructs had alphas above .9.

Table 1 - Eigenvalue, Cronbach's Alpha and Factor Summary

Construct	Total Variance	Component % Variance	Alpha	Mean	Std. Dev.	Component
Loyalty	4.327	72.115	0.9162	4.65	1.23	.888
Org. Commitment	5.747	63.855	0.9256	4.94	1.24	.856
Job Satisfaction	6.003	60.035	0.9243	4.68	1.40	.902
Turnover Intentions	4.853	60.667	0.9067	3.03	.96	-.753
Burnout	8.630	53.941	0.9414	3.14	1.43	-.868

4. RESULTS OF ANALYSIS

Path analysis was conducted to analyze the variables in the model. A factor of .05 was used for determining significance. Multiple linear regressions were run to calculate the paths in a reverse stepwise fashion. This is an iterative approach with one item selected as the endogenous variable and the others as the exogenous. After each iteration, the endogenous variable was retired and a new one was selected until all variables were used. All hypotheses from the original model were supported except H08 (commitment - turnover). Turnover Intentions ($R^2 = 0.63$, $F = 139$, $p < 0.001$) is a function of job satisfaction, loyalty, and job burnout. Loyalty was correlated with organizational Commitment and job satisfaction. Table 2 summarizes the path coefficients and the associated significance of the relationships.

Table 2 - Supported hypotheses

Hypothesis	From	To	β	Sig.
H01	Satisfaction	Burnout	-.510	.000
H02	Satisfaction	Turnover	-.190	.007
H03	Satisfaction	Commitment	.681	.000
H04	Commitment	Loyalty	.878	.000
H05	Loyalty	Turnover	-.526	.000
H06	Burnout	Turnover	.346	.000
H07	Satisfaction	Loyalty	.159	.000

5. DISCUSSION AND IMPLICATIONS

The research indicates that most IT managers should concentrate on building loyalty as a means of fighting turnover. It is certainly cheaper to retain employees than to attract and hire new ones. While organizational commitment is highly correlated with loyalty, they are separate constructs, with loyalty having a higher influence on turnover intention.

The good news is that most respondents said they are still happy to be working in IT and are basically loyal (88% said that they were very loyal) to their companies. They also said they feel undervalued by their employers,

receive little communication on how they can contribute, and are overworked (Ouellette, 2001).

Further research needs to be conducted as to whether or not the loyalty of IT professionals is attributable to the IT profession itself or to the employers that pay for their services.

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