The Determinants of Job Satisfaction for IS Professionals in Technical Career Paths

Catherine M. Ridings
Drexel University
Academic Building, 3rd Floor
Philadelphia, PA 19104
(215) 895-6940
sg91hygq@dunx1.ocs.drexel.edu

Lauren B. Eder
Rider University
2083 Lawrenceville Road
Lawrenceville, NJ 08648
(609) 895-5521
eder@rider.edu

1. ABSTRACT

Technical career paths have been implemented in Information Systems (IS) departments to address the career development needs of employees whose career aspirations are not met by the traditional managerial career path. Understanding how to meet the needs of the technically oriented IS employee is important to IS career planning and development. Much has been written in both the academic and popular literature about what composes a successful technical career path. This research examines the "key success factors" and their relationship to job satisfaction. Job satisfaction is relevant to an organization because it has been shown to be related to motivation to stay in an organization and organizational commitment. To date no empirical work has been done to determine if these factors are related to the job satisfaction of the employees on technical career paths.

Equity theory has been used in much of the existing research on technical career paths. This literature suggests that a successful technical career path should provide equitable rewards to those of a managerial career path. The present research examines perceptions of reward equity among IS professionals. Implications and areas for further research are discussed.

1.1 Keywords

technical career path, managerial career path, equity theory, job satisfaction, career development

CPR 98 Boston MA USA

2. INTRODUCTION

In the past, Information Systems (IS) departments typically had either only a managerial career track or no formally defined career paths [14]. Employees who wanted to advance their careers and gain increased responsibility, compensation, status, and recognition would typically seek promotion to managerial positions [5][9][21][24]. Likewise, companies that wanted to reward high performing employees would promote them to managerial positions [1][15][16]. Not all employees desire or can perform in a managerial position [24]. As a result, some companies have developed two career paths – managerial and technical.

2.1 Dual Career Paths

Understanding how to meet the needs of the technically oriented employee is important to IS career planning and development. Employees who are technically oriented can become concerned that a management position will allow technical skills to become quickly obsolete. As a result, organizations that do not meet the career advancement needs of their employees may face attrition [6][8][11].

A technical career path is a formal organizational advancement path that provides career progression to positions without increasing management responsibility. These positions usually provide all the incentives normally associated with the management career path, such as increasing compensation, bigger offices, extended training opportunities, bonuses, titles, and recognition.

Dual career systems have been in practice as early as the 1950s [11], however, they are still considered a management innovation [23]. Dual career paths tend to be appropriate in organizations concerned with motivating technical personnel [1][8][12][21]. Lee, Trauth, and

Farwell suggest that changes in the IS industry will lead to the development of multiple career tracks due to the variety of skills in technology and management required by the changes [17]. Therefore, the study of dual career ladders is germane to the field of computer personnel research since IS departments are concerned about attracting, retaining, and rewarding technically oriented people [10][12][16]. Determining which aspects of technical career paths are related to job satisfaction can contribute to decisions about initiating or continuing to implement these systems.

This study examines the "key success factors" of technical career paths and their relationship to job satisfaction. To date there is no empirical work that has been conducted to determine if factors typically associated with technical career paths are related to the job satisfaction of employees on a technical career path. It is generally agreed that aspects of both the managerial and the technical career path should be comparable. The present research compares the two paths from the perspective of the employee on the technical career path. The technical career path is generally implemented to retain and attract employees as well as to reward employees. One way to measure the successful implementation of a technical career path is by examining the degree of job satisfaction of the employee. If the dual career system is successful, the needs of the technically oriented employee should be met, resulting in a higher level of job satisfaction. In the past, "success factors" of dual career systems (pay, promotion, recognition) have been measured and found to be related to job satisfaction [19]. In this study, the job satisfaction of the technical career path employee is viewed as the outcome variable that is affected by various "success factor" variables.

2.2 Job Satisfaction

Job satisfaction is relevant to an organization because it is related to organizational commitment and job performance [19][20]. Locke and Latham suggest, clarifying the contingent and indirect effect of satisfaction on performance, that satisfied employees will be more likely to stay in jobs and accept new challenges, and these new challenges will produce high performance [20]. Therefore, management should be aware of the job satisfaction among employees in both career paths.

Equity theory yields an understanding of the causes of job satisfaction directly applicable in the context of the dual career path system. Equity theory postulates a relationship between a person's beliefs about the fairness of their treatment on the job and a variety of work-related attitudes [22]. Existing research on dual career paths recommends the establishment of equitable components between the two career paths. Carrell and Dittrich propose two major assumptions in equity theory research [3]. The first is that employees perceive an equitable return for what they contribute to a job. The second is that employees determine what their equitable return should be after comparing their inputs and outcomes with those of their co-workers. In this study the employees will be comparing returns among peers on both career paths. The overall model that will be tested by this study is presented in Figure 1.

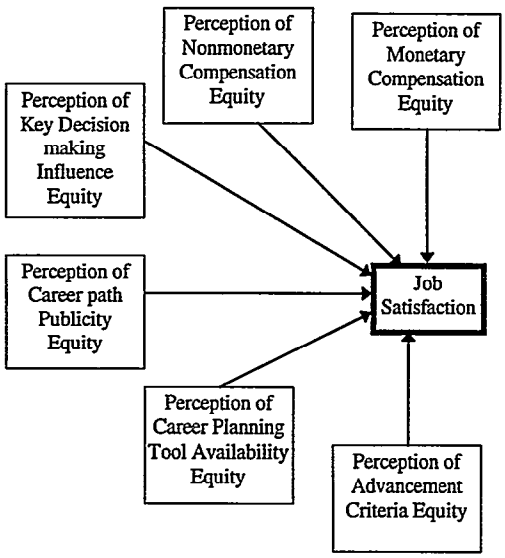

Figure 1: Research Model

3. RESEARCH HYPOTHESES

3.1 Compensation Equity

Porter and Lawler have established a relationship between rewards and satisfaction [22]. This relationship is moderated by the perceived equitableness of the reward. Leibowitz, et. al. [18] cite the establishment of meaningful rewards as a challenge in the development of a multiple career path system. They suggest that organizations with multiple career path systems are most effective when comparable status, salaries, and incentives across career paths exist. Caudron maintains that the rewards on the technical path must compare favorably with those on the managerial path [4]. Ginzberg and Baroudi cite problems with the rewards of the system as a potential downfall of dual career tracks [8]. They suggest that the system may not provide rewards valued by the organization, and may not provide the autonomy, influence, and responsibility valued by the professional community to which the employee belongs.

It is possible for a technical career path to be perceived as a dead end or as a path with less status and recognition than the managerial path [2][14][24]. Leibowitz and colleagues advocate the establishment and maintenance of a management commitment to the new system so that it is viewed as a prestigious route to career growth [18]. A true technical career path must extend to the upper management ranks - not just a lower middle management position [9][16]. Sometimes employees perceive that the technical career ladder equality with the management career ladder is a myth and that upward mobility and influence in the organization only come on the management ranks [1][11].

Prior research indicates the importance of both monetary and nonmonetary rewards. Monetary rewards include salary, bonuses, benefits, and stock options. Nonmonetary rewards include recognition, status, titles, prestige, and responsibility. The following hypotheses are proposed:

H1: *For IS employees on the technical career path, there is a positive relationship between the perception of monetary compensation equity with corresponding managerial peers and job satisfaction.*

H2: *For IS employees on the technical career path, there is a positive relationship between the perception of nonmonetary compensation equity with corresponding managerial peers and job satisfaction.*

3.2 Decision Making Equity

Much of the previous literature on dual career paths emphasizes employee involvement in decision making. Leibowitz et. al. specify that technical employees should be involved in decision making so that they have increased opportunities for influencing company decisions [18]. Ginzberg and Baroudi suggest that a technical career path must move an employee along a track that will increase his/her importance or criticality to the organization, perhaps by increasing the importance of the projects or systems the individual works on [8]. In addition, they suggest that the lack of "radial" movement (an increase or decrease in importance or criticality to the organization) contributes to the failure of dual career ladders for engineers. They further advocate that senior technical personnel should have influence over the organization's direction. The following hypothesis is offered:

H3: *For IS employees on the technical career path, there is a positive relationship between the perception of key decision making influence equity with corresponding managerial peers and job satisfaction.*

3.3 Career Path Publicity

Communicating the existence of the technical career path is necessary for its success. Tucker, et. al. call for broad and effective communication [24]. In addition, they suggest the use of career matrices so that employees can assess their own career development. Dual career systems have been found to be more successful when technical people are aided in assessing their careers so they can make informed career choices [18, 24]. In a study by Moravec and McKee [21], career path career path matrices enabled employees to successfully plan their careers. Caudron recommends that the organization help technical people assess their career interests, preferences, and strengths [4]. Thus the technical career path needs to be publicized by disseminating information about its existence and availability as well as the availability of career planning tools. Therefore,

H4: *For IS employees on the technical career path, there is a positive relationship between the perception of equity of technical vs. managerial career path publicity and job satisfaction.*

H5: *For IS employees on the technical career path, there is a positive relationship between the perception of equity of availability of career planning/assessment tools for the technical vs. managerial career path and job satisfaction.*

3.4 Advancement Equity

The technical career path should be perceived as desirable among employees in order for it to be effective. Goldstein suggests that this can be facilitated by rigorously controlling the nomination and selection of employees for this path [10]. In some cases, peers already on the technical ladder elect employees to advance to higher technical positions, making it more difficult for anyone without genuine qualifications to advance. Poor selection criteria has been cited as one of the problems with technical career paths [1]. Technical tracks can become dumping grounds for poor performers [1][7][10][18] or a place to put unsuccessful managers [24]. Therefore, the following hypothesis is proposed:

H6: *For IS employees on the technical career path, there is a positive relationship between the perception of equity of advancement criteria for the technical vs. managerial career paths and job satisfaction.*

4. METHODOLOGY

The sample for this study is composed of MIS employees from various organizations. A cross-sectional correlational study is being conducted using a structured questionnaire.

4.1 Measurement of Variables

Overall job satisfaction is measured with three items using a five point Likert-type scale ranging from strongly disagree to strongly agree. Each of the independent variables are measured using five point Likert-type scales consisting of two to six items. Responses range from 'technical path receives much more' to 'managerial path receives much more', with the midpoint response indicating that the paths are equal. This type of scale will indicate the direction of inequity if it exists.

5. CONTRIBUTIONS

The present research has potential implications for practitioners and researchers alike. Practitioners may gain insight about what factors contribute to a successful technical career path implementation. Technically skilled employees are currently scarce, thus organizations face stiff competition to obtain and retain them. In addition, technical training is difficult and costly, so organizations want to retain them after training has occurred. Therefore, practitioners have real incentives to understand how to retain technically skilled people. Results from this study

will also contribute to the academic literature on the effective management of IS professionals by (1) extending existing knowledge of job satisfaction among technically oriented employees, and (2) empirically testing the perceived differences of reward systems between technical and managerial career path systems.

6. REFERENCES

[1] Berkman, B. N. The ups and downs of climbing the techno-ladder; dual ladder promotion systems for technologists. Electronic Business 15, 6 (March 20, 1989), 68-70.

[2] Brousseau, K. R., Driver, M. J., Eneroth, K., and Larsson, R. Career pandemonium: Realigning organizations and individuals. Academy of Management Executive 10, 4 (November 1996), 52-66.

[3] Carrell, M. R. and Dittrich, J. E. Equity theory: The recent literature, methodological considerations, and new directions. Academy of Management Review 3, 2 (April 1978), 202-210.

[4] Caudron, S. Motivating creative employees calls for new strategies. Personnel Journal 73, 5 (May 1994), 103-106.

[5] Currid, C. Facing critical crossroads: Technology or Management? LAN Times 12, 23 (November 6, 1995), 149+.

[6] Davis, D. But I don't want to be a manager. Computerworld 22, 2 (January 11, 1988), 65,68.

[7] Deutsch, C. H. Holding on to Technical Talent. The New York Times, Late City Final Edition (November 16, 1986), section 3, column 3, page 4.

[8] Ginzberg, M. J. and Baroudi, J. J. MIS careers - a theoretical perspective. Commun. ACM 31, 5 (May 1988), 586 - 594.

[9] Goff, L. The Management Transition. Computerworld 27, 43 (October 25, 1993), 114+.

[10] Goldstein, M. L. Dual-Career Ladders Still Shaky But Getting Better. Industry Week 236, 1 (January 4, 1988), 57-60.

[11] Gomez-Mejia, L. R., Balkin, D. B., and Milkovich, G. T. Rethinking rewards for technical employees. Organizational Dynamics 18, 4 (Spring 1990), 62-75.

[12] Igbaria, M., and Greenhaus, J. H. Determinants of MIS employees' turnover intentions: a structural equation model. Commun. ACM 35, 2 (February, 1992), 34-49.

[13] Igbaria, M., Greenhaus, J. H., and Parasuraman, S. Career Orientations of MIS Employees: An Empirical Analysis. MIS Quarterly 15, 2 (June 1991), 151-169.

[14] Kaiser, K. M. DP career paths; for system people, there is no clear path to the Land of Oz. Datamation 29, 12 (December 1983), 178-188.

[15] Kinsman, M. Some workers prefer staying on technical track. Star Tribune Minneapolis, MN, Metro Edition (November 22, 1992), section J, page 1.

[16] Laque, M. Dual-Track Career Ladders Need Specialized Features. Investor's Daily (June 22, 1990), 8+.

[17] Lee, D., Trauth, E. M., and Farwell, D. Critical skills and knowledge requirements of IS professionals: A joint academic/industry investigation. MIS Quarterly 19, 3 (September 1995), 313-340.

[18] Leibowitz, Z. B., Kaye, B. L., and Farren, C. Multiple career paths. Training and Development 46, 10 (October 1992), 31-35.

[19] Locke, E. A. The nature and causes of job satisfaction, in Handbook of industrial and organizational psychology, M. D. Dunnette (ed.). Rand-McNally, Chicago, 1976, 1297-1349.

[20] Locke, E. A. and Latham, G. P. Work motivation and satisfaction: Light at the end of the tunnel. Psychological Science 1 (1990), 240-246.

[21] Moravec, M. and McKee, B. Designing dual career paths and compensation. Personnel 67, 8 (August 1990), 4-9.

[22] Pinder, C. C. Work Motivation: Theory, Issues, and Applications. Scott, Foresman, Glenview IL, 1984.

[23] Tannenbaum, S. I. and Dupuree-Bruno, L. M. The relationship between organizational and environmental factors and the use of innovative human resource practices. Group & Organization Management 19, 2 (June 1994), 171-202.

[24] Tucker, R., Moravec, M., and Ideus, K. Designing a dual career-track system. Training and Development 46, 6 (June 1992), 55-58.