Career commitment of information technology professionals: The investment model perspective

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ABSTRACT

This research applied an investment model to investigate the career commitment of IT professionals. We explore why some unfavorable careers persist and why some favorable careers end. Self-reported data from MIS departments of Taiwan's top-1000 large-scale companies were collected to test our hypotheses. The results suggested that an IT professional's career commitment is primarily determined by career satisfaction. In addition, the threat of professional obsolescence exerted more influence on individuals with low professional self-efficacy. Finally, career satisfaction appeared the most important antecedent for individuals with positive valence. In contrast, the career commitment for individuals with negative valence was largely driven by non-voluntary dependence. The implications for practitioners and scholars are discussed.

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1. Introduction

The impact of rapid technology advancement and global competition is changing the traditional expectations of a career. Gradually, the organization cannot guarantee the development of a personal career. Changes in the psychological employment contract suggest that the long-established concept of organizational commitment, even the organizational career, may no longer be valid [21]. While this potential threat may affect most people's lives in the era of the knowledge economy, it is immediate and prominent for IT Professionals[2] (hereafter, ITPs). Thus, in response to changes such as outsourcing of IT-related services, downsizing, layoffs, mergers, and acquisitions, many ITPs choose to concentrate on and commit to their professional careers [5] rather than their organizations.

Career commitment, defined as "the degree to which someone identifies with and values his or her profession or vocation [3]", is recognized as an important construct as it relates to work performance. Past research shows that the development of

sophisticated expertise requires individuals to be constantly devoted to the relevant activities for a long period of time. Individuals with high career commitment show less intention of leaving their jobs, spend more time in developing skills, demonstrate better performance [51], and are likely to promote various relationship maintenance behaviors such as willingness to self-sacrifice, adaptive social comparison, and devaluation of attractive alternatives. Therefore, career commitment is critical to a firm's performance because it helps individuals develop specialized skills by persisting for a sufficient amount of time and also providing the incentives to nurture professional and business relationships.

However, it is not easy for ITPs to commit to their career. Work exhaustion and stress, unexpected ever-changing user demands and unrealistic deadlines, struggling to keep up with ever-advancing technology—all are reported as common occurrences in the work environments of IT professionals [45] and make a career in IT stressful. Today, IT is an occupation in which dramatically changing technologies require continuous learning to stay current in the field [31]. In addition, obsolescence is even more of a threat to ITPs' careers [22]. Past research reveals that, while 52% of civil engineering graduates remained in the field 20 years later, only 19% of computer science graduates did so [4]. Thus, many social and economic reasons exist to influence ITPs' considerations of a career change.

Currently, the retention of skilled ITPs is an important issue for recruiters and employers as well [10]. Investigating career commitment helps us realize how people make sense of, develop,

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[2] In this study, ITPs refer to individuals who devoted themselves to the mainstream of information systems work, e.g., designing, implementing, developing, and maintaining information systems.

and integrate their multiple work-related commitments, especially for those that go beyond organizational boundaries. To our knowledge, limited attention in the IS literature has been paid to the understanding of ITPs' career commitment. Our purpose is to identify salient factors that prompt an ITP to consider whether to remain in or leave a career. Guided by the investment model, we propose that relationship variables (e.g., career satisfaction (SAT), career investment (INV), and availability of career alternatives (ALT)), individual factors (e.g., professional self-efficacy (PSE)), and environmental variables (e.g., threat of professional obsolescence (TPO)) play an integral part in influencing ITPs' career commitment (CRC). In addition, the moderating role of PSE and valence were examined.

2. Research on career commitment of IT professionals

Career is defined as "a sequential, predictable, organized path through which individuals pass at various stages of their working lives. [15] "The terms occupational, professional, and career commitment are used somewhat interchangeably in the literature. Lee et al. [26] preferred to use occupational commitment, defined as "committing to an identifiable and specific line of work that an individual engages in to earn a living at a given point in time." However, professionals may pass through a sequence of related and different jobs in different career stages (e.g., an ITP who was promoted from a programmer to a systems analyst). Therefore, the concept of career commitment seems more relevant to the experiences of a professional because it relates to an individual's motivation to work in a particular career field.

The concept of career commitment evolved from interest in the ongoing evaluation of one's career choices. It is characterized by the development of personal career goals, the attachment to, identification with, and involvement in those goals. One who shows high career comment will persist in pursuing career objectives despite potential barriers and misadventure that may lie ahead. Considerable existing research suggests that career commitment is positively associated with organizational commitment, job involvement, and professional identity and is negatively associated with turnover and job withdrawal cognition. For example, Hauschildt and Heinemann [19] found that career commitment is related to the development of a professional identity. Blau and Lunz [3] investigated the effect of the career commitment of 457 medical technologists and found that career commitment accounted for substantial differences between those intending to leave and those intending to stay. Thus, career commitment relates to the extent to which people feel anchored in a specific occupational domain [31].

The research has examined the issue of career change, career exodus, career abandonment, and career persistence; such topics are closely related to career commitment. A growing body of literature on the career commitment/change of professionals has emerged in other occupational fields, for example, managers [7], research scientists [23], medical careers and technologists [3]. However, in the IS/IT literature, career commitment thus far has received limited attention until recently, and a few empirical studies such as Shropshire and Kadlec [46], Cho and Huang [9] Colomo-Palacios et al. [10], Duffy et al. [13], and Fu [15,16] were published.

Investigating career exodus of IT employees, Shropshire and Kadlec [46] found that IT workers who suffer from stress, burnout, or are concerned about the security of their jobs are more likely to consider a career change. Colomo-Palacios et al. [10] investigate career abandonment intentions among software workers. They concluded that effort–reward imbalance, perceived workload, and emotional exhaustion significantly influence individuals' intention to abandon the career. Duffy et al. [13] found that career commitment was positively related to job satisfaction. Cho et al.

[9] identified three components of commitment: affective, normative, and continuance commitment. It suggested that the impact of affective commitment on professionals' intention to leave their organizations is moderated by the continuance component. Fu [15] found that ITPs appeared to have different career attitudes in various career stages. Finally, Fu [16] found significant differences between ITPs and non-IT employees in their decisions to change career. Threat of professional obsolescence and professional self-efficacy were found to be more salient in predicting ITPs' career commitment compared with non-IT employees. Generally, past research lacks sound theory-based models, thereby compromising their robustness.

With reduced promotional opportunities, decreased employee loyalty, increased contract workers, and changes in job expectations, a career has become a valuable source of occupational meaning and persistency. Moreover, career commitment and organizational commitment can complement each other to understand professionals' motivations and work performance. Scholars have learned a great deal about the antecedents of organizational commitment and turnover intention in work organizations among ITPs. However, there is a paucity of IS research on career commitment. In this article, the authors seek to address this gap in the IS literature.

3. The threat of professional obsolescence (TPO)

It seems ironic that ITPs who are most responsible for promoting innovative technological change are themselves greatly vulnerable to the consequences of such change. This vulnerability is manifested in the obsolescence of their professional competencies [11]. Professional obsolescence refers to the decay or decrease in the value of professional competencies. It occurs when the job incumbent's expertise (which was sufficient to the requirements of the profession previously) is mismatched with current work demands and skill requirements owing to change in the knowledge domain.

As opposed to accumulating over time, ITP expertise is constantly depleted with the "competence destroying" nature of IT. Therefore, the fear of falling behind in the technology race and the ceaseless pressure to stay up-to-date through ongoing learning are extra stressors on top of already tight deadlines and a demanding workload [32]. In fact, among the 33 most mentioned stressors, four of them were related to the pressures to keep pace with developments for ITPs in the field [44]. Failure to maintain and update one's skills can quickly make a professional obsolete. Some anecdotal observations use "ITP's worst nightmare" to describe this phenomenon: "You go to bed one night secure in your technical competences, and you wake up the next morning as a technological dinosaur." This phenomenon is analogous to the Red Queen's race: "You have to run as hard as you can to stay in the same place, and to make any progress you have to run twice as fast."

Although professional obsolescence has been recognized as a critical issue in IT research [26,38], limited studies have inspected the threat and its consequences. However, the speed of the technology change and obsolescence can have profound psychological and physiological effects. Pazy [35] observed that obsolescence is not uniformly experienced by people. Therefore, because the effect of obsolescence has not been understood thoroughly, attempts to study obsolescence in organizations should explore its variety among individuals.

4. Investment model

One model that seems ideal for investigating the factors involved in the relationships between ITPs and their careers is the