ABSTRACT
This study examines the role of human capital and social capital in the career advancement of IT professionals. Specifically, it posits that the greater human capital and social capital an IT professional has, the more promotions that person will receive in his/her career. Although much research about the role of social capital has been conducted, the focus has not been specifically on the IT professional. Yet, there is evidence that IT professionals differ from other professionals not only in terms of the importance they place on social factors, but also in terms of longevity in their jobs, the impact of the dynamics of the IT field on their jobs, and other job related factors. This study examines the IT professional using a theoretical lens that has not been widely applied to them, yet can yield important insights into their careers. This insight includes practical guidance for IT professionals and the organizations for which they work as well as guidance for future research. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: Human Capital; IS Career Path; IS Professional; Social Capital; Social Ties

INTRODUCTION
Career advancement is crucial in attracting, developing and retaining information technology (IT) professionals because it has a substantial impact on their job satisfaction and commitment (Loh, Sankar & Yeong, 1995). While the term “IT professionals” may be defined differently by different trade organizations, one accepted standard is that adopted by U.S. Department of Commerce as those who “design, operate, and repair technology related products across all industries,” (Moncarz, 2002). They can be further defined by a variety of job categories. Further information about the specific categories of IT professionals surveyed in this study is provided in a later section.

In a recent key issues survey, IT executives ranked attracting, developing, and retaining IT professionals as one of their top five concerns (Luftman, Kempaiah, & Nash, 2006). Even in the face of growth in outsourcing and offshoring, company executives find that it is increasingly difficult to attract and retain high quality IT professionals (Rosencrane, 2005). Career advancement is a key motivator for IT professionals and is a critical piece of strategy to effectively manage them (Agarwal & Ferratt,
Despite this, however, there is evidence that they have not received sufficient communication within their organizations about career advancement issues (Ang & Slaughter, 2000). Furthermore, with the exception of early studies by Igbaria and his colleagues (Igbaria & Wormley, 1992, 1995), there has been little research specifically focused on IT professionals’ career advancement.

This study extends previous research findings by focusing on human capital factors and social capital factors as antecedents of IT professionals’ career advancement. We define career advancement as the number of promotions that an IT professional has received in his/her career. Promotion is measured by increases in level and/or any significant increases in job responsibilities or job scope. This is an observable and objective measure of career advancement (Ng, Eby, Sorensen, & Feldman, 2005), compared to subjective measures such as job satisfaction and organizational commitment.

The rest of the article is organized as follows. It first explains why it is important to investigate IT professionals’ social capital apart from that of other professionals. It then uses human capital theory and social capital theory to formulate hypotheses about determinants of IT professionals’ career advancement. Data are then analyzed and results are discussed. Finally, implications of the research are presented along with implications for practice and for future research.

**WHY STUDY IT PROFESSIONALS**

Although there are numerous studies that examine the role of social capital among employees (Sparrowe, Liden, Wayne, & Kraimer, 2001; Seibert, Kraimer, & Liden, 2001), this study provides insight specifically into the role of social capital in the career advancement of IT professionals. It is important to examine IT professionals apart from other professionals for several reasons. One is that research indicates that IT professionals may have different social needs than other professionals and their job performance may be motivated by different factors than other professionals (Cougar, Opperman, & Amoroso, 1994). Another reason is that IT professionals are identified as a distinct occupational group, which may affect their attitudes, behavior, colleagueship, and work consciousness (Moncarz, 2002). This occupational group faces a phenomenon that is not faced by most other professionals. Whereas other professionals’ competencies increase over time, the ever changing evolution of new technologies means that an IT professional’s competencies and skills can erode and grow less relevant in a relatively short period of time (Ang & Slaughter, 2000). New roles emerge, and failure to keep up can negatively impact career advancement opportunities. Therefore, they must continually develop new skills and competencies to remain valuable in their organizations and their professions.

A third reason is that the IT profession is faced with higher turnover rates than many other professions, and it is increasingly difficult for organizations to retain IT employees (Agarwal, Brown, Ferratt, & Moore, 2006). Turnover of IT professionals can cost a lot to organizations. For example, filling an IT open position incurs direct costs such as interview cost, training cost, relocation fee and signing bonus, which could reach up to $49,000. Besides these direct and tangible costs, turnover also brings much higher indirect costs to organizations such as lost revenue, employee stress, project slippages (Del Monte, 2004). When adding all the direct and indirect cost, the total cost of turnover can be two to three times the base salary of the position (Del Monte, 2004). In order to better retain IT professionals and minimize the cost of turnover, insight into the IT professional’s career is important.

IT professionals are often stereotypically perceived to be “quiet, analytical, logical, scientific, dispassionate, cold, impersonal and concerned with matters of truth and unconcerned with people’s feelings” (McConnell, 1999, p. 25). Researchers who have investigated IT professionals have found that this is not
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