

December 2006

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Recommended Citation

Dawson, Greg, "The Role of Work Experiences in Developing Effective CIOs" (2006). *AMCIS 2006 Proceedings*. 375.
<http://aisel.aisnet.org/amcis2006/375>

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The Role of Work Experiences in Developing Effective CIOs

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ABSTRACT

Despite the importance of Chief Information Officers (CIOs) in creating organizational value using technology, little research has been undertaken to understand how to develop effective CIOs. This research-in-progress paper posits that challenging work experiences are more critical than tenure in developing the tacit knowledge necessary for success in this high level position. This paper also examines the role of career anchors, which refer to the CIO's self-perceived talents and motives, in providing a moderating effect on the value of the work experiences.

Keywords

Chief Information Officer, theory of work experience, tacit knowledge, career anchor

INTRODUCTION

CIOs apply technology to create organizational value but little work has been done to understand what experiences mould effective CIOs. Most leadership research focuses on leader traits or behaviors, but this focus fails to consistently account for individual leader differences (Hedlund, Forsythe, Horvath, Williams, Snook and Sternberg 2003). New research highlights the need to develop practical expertise to solve everyday problems, but few studies have addressed how this expertise is developed. Early studies examined tenure-based components of work experience but concluded that tenure explains little variance in outcomes (Tesluk and Jacobs 1998). Current studies focus on the challenge of each work experience and better predict outcome variance, but they do not address the moderating dimension of career anchors, which are categories of basic career orientations. Career anchor theory says that individuals with technical career anchors produces better technicians while those with managerial career anchors produce better managers and leaders (Feldman and Bolino 1996). No known studies examine the work experiences of effective CIOs in developing practical expertise nor address the associated career anchors, thus we address three research questions:

- RQ 1: What is the role of tenure in developing a CIO's practical knowledge?
- RQ 2: How important are challenging work experiences in developing the CIO's practical knowledge?
- RQ 3: Does the choice of career anchors moderate the value of work experiences?

A study examining the work experiences of effective CIOs potentially makes an important contribution to IS researchers and practitioners. In terms of theoretical contributions, we seek to understand which work experiences are most effective at developing a CIO's tacit knowledge, understanding the moderating impact of the CIO's career anchor and defining the types of tacit knowledge associated CIO effectiveness. We believe that this understanding benefits practitioners by understanding the career paths that best position future CIOs for successful work outcomes.

THEORETICAL BACKGROUND

CIO effectiveness has primarily been assessed using a role based perspective. Previous role-based analyses identified six distinct CIO roles including IT educator, IT contract oversight, class IT support / utility providers, integrator, IT strategist and business partner/strategist (Smaltz, Agarwal and Sambamurthy 2006). These roles have been used in other CIO research to map practitioner studies. Four key skills have been mentioned for an effective CIO: (1) strategic business knowledge, (2)

strategic IS knowledge, (3) strong interpersonal skills and the ability to communicate effectively with superiors, peers and subordinates and (4) political savvy (Smaltz et al. 2006) and the existence of these skills is correlated with CIO effectiveness.

Tacit knowledge represents the CIO's achievement of these skills and results from his/her ability to learn from everyday problems. Tacit knowledge is a factor of practical intelligence and is expressed in everyday phrases such as "common sense" (Hedlund et al. 2003). Studies have shown that tacit knowledge is linked to individual performance and that higher levels of tacit knowledge distinguish successful professionals (Sternberg, Wagner, Williams and Horvath 1995). Tacit knowledge differs from academic knowledge. Practical problems are messy, poorly defined and lack necessary information to solve them. Answers to practical problems are rarely ideal and require trading off benefits and liabilities between solutions (Hedlund et al. 2003). Previous studies examining CIO effectiveness have used the label "skills" in addressing attributes of effective CIOs (Smaltz et al. 2006). We believe that these attributes represent a CIO's tacit knowledge of each skill areas since the descriptions of skills closely parallels our description of tacit knowledge, thus we believe that CIO tacit knowledge should be correlated with CIO effectiveness. Similarly we adopt the term "effectiveness" rather than "performance" in this study since that is the term most frequently used in IS research and is conceptually consistent with the definition of performance used in psychological research.

Hypothesis 1: A CIO's tacit knowledge will be associated with CIO effectiveness

The goal of work experiences is to build the tacit knowledge necessary to be successful (Hedlund et al. 2003). Tacit knowledge is acquired from common work experiences with little support from other people or resources and requires the individual to determine what information is relevant (Hedlund et al. 2003). Experience plays a key role in an individual's performance (Tesluk et al. 1998) and the right work experiences heighten career development through the development of tacit knowledge (McCauley, Ruderman, Ohlott and Morrow 1994). Work experience "is one of the most commonly encountered concepts in personnel research and practice" (Quinones, Ford and Teachout 1995) and a strong relationship exists between work experiences and job performance (McDaniel, Schmidt and Hunter 1998). obstacles (e.g. lack of adequate resources) spur development (McCauley et al. 1994).

Work experience theory suggests that three measures are necessary to assess work experience: tenure-based, challenge-based and interaction (Quinones et al. 1995). Tenure-based measures are time-based and amount measures. Time-based measures are the traditional measurement of the length of time spent work in a task, job or organization and are operationalized in terms of number of years (McDaniel et al. 1998; Schmidt, Hunter, Outerbridge and Goff 1988). Amount measures are the number of times that a task has been performed (Ford, Seago and Teachout 1991) and reflect the opportunity to practice and perfect the task. Tenure-based measures have a consistent and positive relationship with job performance (Quinones et al. 1995), but its relationship is curvilinear and after a point, plateaus (Jacobs, Hofmann and Kriska 1990). The point at which the plateau occurs varies, however it generally occurs early within technology and engineering careers (Kaufman 1995).

Hypothesis 2: Tenure-based measures of work experience will be correlated with a CIO's tacit knowledge

The second measure is challenge-based. Work experiences produce learning when they challenge the individual, and challenge is mostly likely to occur when there is a lack of congruence between the individual's knowledge, skills and abilities and the demands of the assignment (McCauley, Eastman and Ohlott 1995). Two individuals with equal job, organizational and position tenure can vary widely in the amount of challenges encountered in their work experience and resulting job performance (Ford et al. 1991). Challenge-based measures capture this aspect and allow a more full analysis of its value of the work experience. Challenge-based measures include (1) unfamiliar responsibilities, (2) new direction, (3) inherited problems, (4) problems with employees, (5) high stakes, (6) scope and scale (7) external pressure (8) influence without authority, (9) work across cultures and (10) work group diversity (Bader, Fleming, Zaccaro and Barber 2002). One of the few studies comparing types of measures found that challenge-based measures better predict performance on ambiguous tasks and tenure-based measures better predict performance on concrete tasks (DuBois and McKee 1994). While no known studies have applied these measures to a CIO's performance, the ambiguous nature of managerial work suggests that challenge-based and interaction measures should predict CIO performance better than tenure-based measures.

Hypothesis 3: Challenge-based measures of work experience will be correlated with a CIO's tacit knowledge

The third measure is the interaction between the tenure-based and challenge-based dimensions and includes the experience's density, placement within the career and criticality of the work experience (Quinones et al. 1995). High density experiences have a greater number of challenges within a short time period and are associated with the "developmental punch" of the experience (Quinones et al. 1995). They are particularly important because they have a disproportional influence on learning and the individual's career trajectory. In short, they are career-making assignments. The criticality of the project to the mission of the organization is important since it forces greater understanding of the organizational mission and exposes the employee to critical organizational members (Rentsch, Heffner and Duffy 1994).

Hypothesis 4: Interaction measures of work experience will be correlated with a CIO’s tacit knowledge

Numerous scholars have proposed a career anchor construct to study the domain of work experiences (Feldman et al. 1996) because the career anchor concept focuses on the “pattern of self-perceived talents, motives and values (which) serve to guide, constrain, stabilize and integrate the person’s career” (Schein 1978). The career anchor construct provides four key contributions (Feldman et al. 1996). First, it proposes that a stable career identity evolves through concrete “real world” work experiences. Second, it highlights the variety of careers within an occupation. For example, an IS professional can take a managerial or technical track within the IS field and this “career within a career” has important consequences. Third, the differences within these career tracks can be as distinct as between those people in entirely different occupations. Finally, as an individual makes choices about jobs, the career anchor functions as a constraining force. The career anchor implies some movement, but the movement is constrained and directed (versus random). While careers can be changed, dramatic change is extremely difficult and is not likely to frequently occur (Schein 1975).

Eight career anchors have been studied including managerial competence, technical/functional competence, security/stability, creativity/entrepreneurship, autonomy/independence, identify, service and variety (Schein 1987) and strong empirical support and discriminant validity has been found (Feldman et al. 1996). Managerial and technical competence are the most common anchors for IS professionals (Igbaria, J.H. and Parasuraman 1991). IS professionals with a technical or managerial career anchor generally follow a technical or managerial career anchor respectively. Individuals with congruence between career anchor and position requirements are more likely to achieve positive career outcomes including promotion and advancement (Schein 1990). The traditional CIO career path is technically based (Kaiser 1983), but the role of the CIO is predominantly managerial (Grover, Seung-Ryul, Kettinger, Lee and C. 1993). This suggests that a CIO with a managerial career anchor will outperform one with a technical career anchor. While challenging work experiences build critical leader knowledge, the choice of career anchors moderates the value of the work experience.

Hypothesis 5: The CIO’s career anchor will moderate the relationship between CIO tacit knowledge and CIO effectiveness

Our research model is presented in Figure 1.

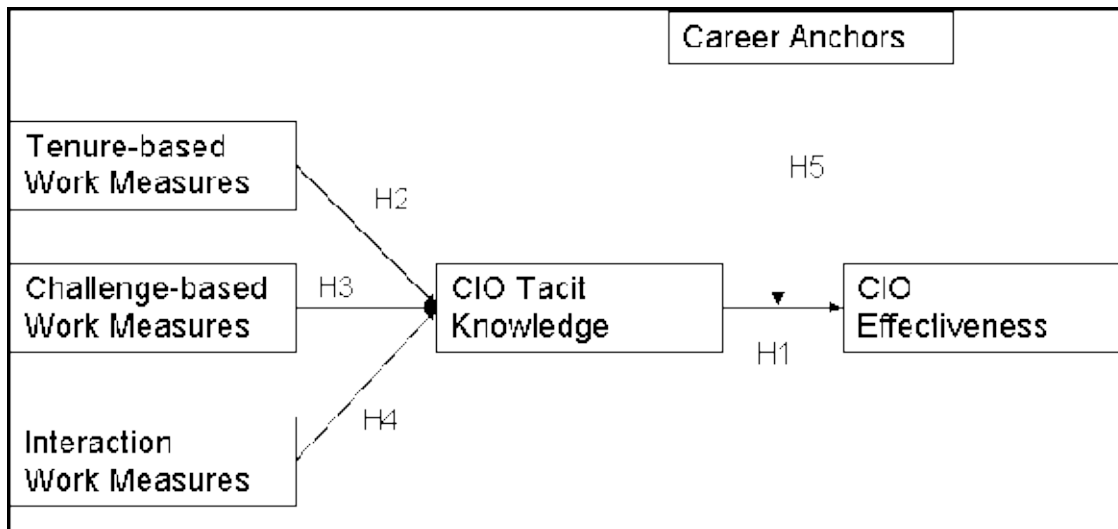


Figure 1 – Research Model

DISCUSSION

The primary focus of this research is on the relationship between challenging work experiences and CIO effectiveness. The research model and hypotheses offer a theoretical foundation for understanding how challenging work experiences develop the tacit knowledge necessary for a CIO to be effective. Substantial literature exists to support these hypotheses including the moderating impact of career anchors.

This research-in-progress has several limitations. First, there is not universal definition of perceived challenge within a job thus two CIOs may rate the challenge associated with the same job at two different levels based on their individual and personal make up. However challenge is in the eye of the beholder thus if a CIO perceives a job to be challenging, it is challenging. Secondly, there are several factors outside of the scope of this analysis, including important items like the interactions between the CIO and his/her peers and our analysis will need to control for those factors.

The findings from this research will help identify the aspects of a CIO's career that are most often associated with CIO success by examining the existence of and timing of challenging work experiences within a CIO's career trajectory. This paper should guide the training of future CIOs by ensuring that high potential individuals are given the necessary career development to be successful CIOs.

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