



Exploring top managers' innovative IT (IIT) championing behavior: Integrating the personal and technical contexts



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ABSTRACT

Innovative information technologies (IIT) will create or improve a product and enhance intra-organizational efficiency and effectiveness. Based on the TOE framework and upper echelon theory, this study investigated the relationships between top managers' individual differences and IIT championing behavior from two perspectives: the personal context and the technical context. An empirical survey was administered to 130 top managers to test the research model. The results reveal that 52.6% of the variance in top managers' IIT championing behavior can be explained by three antecedent variables: the OSF, IIT absorptive capacity, and involvement. Finally, the implications for practitioners and researchers are discussed.

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1. Introduction

As IT enables businesses to improve efficiency and effectiveness, business investments in Information Technology (IT) have increased rapidly. IT investments can be classified into two groups: innovative investments and follow-up investments. *Innovative IT* (IIT) is either a new type of technology or an innovative use of existing technology [26,45]. When initially employed in an industry, IIT will create or improve a product or service and enhance intra-organizational efficiency and effectiveness [52,54]. Forms of IIT such as cloud computing, RFID (Radio Frequency Identification), and business intelligence systems have recently been implemented to enhance enterprise information infrastructures or business processes. For this reason, the means by which IIT is successfully leveraged to gain a competitive advantage has become an important research issue in the Information Systems field.

Previous studies investigating the factors influencing IT adoption approached the subject from various perspectives: organizational factors [50,75,77], environmental factors [53,99], users' behavioral intention [20,97], innovation diffusion or technological innovation [76], and top management support [11,22,52,53]. Several theories and research models related to IT

adoption have also been proposed to help businesses implement IT successfully [4,42], including the technology acceptance model (TAM) [20], the theory of planned behavior (TPB) [1], the unified theory of acceptance and use of technology (UTAUT) [97], the diffusion of innovations theory (DOI) [85], and the Technology–Organization–Environment framework (TOE framework) [96]. Although the factors influencing IT End Users' usage behaviors are important to the successful implementation of IT, top management support is often prescribed as a critical factor for an organization to be able to fully realize the benefits of IT [41]. As has been stated, “a good MIS must begin at the top with the chief executive officer” [84]. Upper echelon theory suggests that an organization is a reflection of its top managers [35]. The theory states that an organization's upper echelon characteristics will influence performance directly and indirectly via strategic decisions. In other words, organizational choices are a reflection of the top management's values and cognitive base [35], and hence the behavior of top management in championing IIT acts as an intermediary between the environment and an organization's assimilation of IIT. This implies that top management's attitudes toward IIT adoption may permeate an organization. Therefore, it is necessary to explore the factors influencing top managers' IIT championing behavior to understand how to enhance top management support for IIT implementations.

The essence of upper echelon theory is that top management influences an organization via the processes of decision-making, strategic planning, and so on. Top management must take a leadership position in IIT implementation. Thus, enhancing top

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managers' intentions to champion IIT is necessary for the smooth and successful implementation of an innovation [42]. However, most previous studies that investigated the factors influencing top managers' intentions to champion IT focused on the impact of top managers' demographic variables, such as gender, age, and education [6,7,52]. While these demographic variables may partially explain the differences in top managers' IT championing behavior, some studies have argued that strategic processes and outcomes are not likely to be influenced by the demographic characteristics of top managers [11,34]. However, as human variables cannot be manipulated, an organization cannot control top managers' demographic variables, such as gender and age, to enhance their IT championing behavior. Therefore, it is necessary to explore other deeper and implicit variables to predict top managers' championing behavior.

To fill this research gap, we propose an integrated model based on both upper echelon theory [35] and the TOE framework [4,96] to explore the factors influencing top management's IIT championing behavior. We explore the potential variables from two perspectives: the personal context and the technical context. The personal context focuses on the influence of a top manager's *personality* and *beliefs*, as these factors drive individual behaviors. Our results demonstrate that the individual characteristics of top managers substantially influence their IIT championing behavior. The Optimum Stimulation Level (OSL) can be predicted using a manager's degree of openness to experience and acts as a full mediator between openness to experience and IIT championing behavior. In addition, the significant association between involvement and IIT championing behavior confirms that top management's level of involvement is a significant determinant of IIT championing behavior.

From the technical context perspective, our results indicate that top managers who have a higher level of information literacy will enhance their IIT absorptive capacity, which will help them to value, assimilate and apply IT knowledge [16]. Our findings demonstrate that the top manager's IIT absorptive capacity fully mediates the relationship between information literacy and IIT championing behavior. Thus, top management's information literacy may indirectly influence IIT championing behavior via IIT absorptive capacity. Top managers who have more knowledge of and experience with IT will have a greater IIT absorptive capacity and will more strongly perceive the importance of IIT to their organization. When top managers have high IIT absorptive capacity and are highly involved in the use of IT, they are more likely to champion IIT. This study also found that top managers will strengthen their involvement in IIT if they have higher levels of information literacy. Therefore, our findings provide valuable insights for those seeking to enhance top managers' IIT championing behaviors.

The remainder of this paper is organized as follows. Section 2 reviews the literature relevant to this study. We propose our research model and hypotheses in Section 3. In Section 4, we describe the survey procedures and the results of the data analysis. We conclude in Section 5 and present the implications of this study.

2. Literature review

2.1. IIT and top manager support

In recent decades, IIT adoption has been a significant factor in sustaining an organization's competitive advantage and, thus, has been treated as a competitive strategy [30,52,56]. IIT is distinct from IT, in that innovations produce incremental change by introducing new features or new versions of existing technologies [4]. A critical factor influencing successful IIT adoption is the

support of top management [42,85]. Top management support, also known as "executive support," concerns top management's behaviors related to involvement with, participation in, championing of, and assimilation of IT [2,12,33,38,41,47,53,89]. In this study, *top managers* or *top management* describes senior business executives who are responsible for key business lines or functional areas, including the Chief Executive Officer (CEO), Vice President (VP), the Chief Financial Officer (CFO), the Chief Operating Officer (COO), and other senior functional managers [2]. Compared to other types of support, championing by top management is more aggressive and more proactive. Therefore, this study focuses on the scope of top managers' IIT championing behavior.

As top management support is a key factor in successful IIT implementation, the top managers' championing of IIT is an antecedent to the successful implementation of mission-critical information systems [55,81,86]. Bassellier et al. [11] indicated that the soul of championing behavior consists in promoting or advocating the use of technology or other innovations within an organization; hence, top managers' championing behavior should be proactive in supporting, promoting, and advocating IIT utilization within the organization. According to upper echelon theory, individual differences consistently play an important role in top managers' organizational decision-making and competence-building processes [52].

2.2. Antecedents of championing IT

The essence of upper echelon theory is that an organization is a reflection of the characteristics of its top managers [35,90]. As strategic choices do not lend themselves to calculable solutions, those choices reflect the characteristics of top-level decision makers [52]. This implies that an organization is influenced by top management via the processes of decision-making, strategic planning, etc. Moreover, Miles et al. [67] suggested that strategies are self-reinforcing. For IIT planning and IIT implementation to be successful, business managers must occupy a leadership role in these activities. Therefore, enhancing top managers' intentions to champion IIT is necessary for the smooth and successful implementation of an innovation [42]. The information management literature defines the many roles and responsibilities of champions [11]. As Howell and Higgins have argued, "*champions articulate a compelling vision about the positive impact of information technology on the organization*" [38]. In this study, *championing IIT* is defined as "*being proactive in promoting and supporting innovative IT utilization*." Because championing behavior on the part of top management is a meta-structuring enabler of IT assimilation [78], strategies for enhancing top management's IIT championing behavior represent an important research issue.

2.2.1. Upper echelon characteristics

Upper echelon theory states that the characteristics of an organization's upper echelon will influence its performance directly and indirectly via strategic choices [35]. For example, Sobol and Klein [90] employed upper echelon theory to investigate the relationship between the characteristics of the CIO and the company's financial performance. They found that when the CIO's role is oriented toward IT, rather than simply toward general management, the firm's financial performance is enhanced. Thus, the characteristics of top managers may affect strategic changes, as top managers make strategic decisions, create and communicate a vision of the future, and develop key competencies and capabilities [36,37,39,40,101]. Because top managers influence strategic decision-making, including the development of the company's key competencies and capabilities, the decision to champion IIT is strategically important.

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