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THE ROLE OF JUDGMENT AND DECISION MAKING IN IT RESOURCE UTILIZATION TOWARDS SUSTAINABLE COMPETITIVE ADVANTAGE

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ABSTRACT

This paper is intended to propose a conceptual model that will help researchers and practitioners better understand the importance of individual differences in judgment and decision making (JDM) styles of IT leadership. Additionally, such individual differences in JDM can further help understand how they influence the strategic use of IT resources and their contribution to firm performance and competitive advantage. This proposed conceptual model and future related studies will contribute to existing resource-based view (RBV), IS strategy, and IS behavioral research literature.

Keywords

Managerial judgment, decision making, resource value, competitive advantage

INTRODUCTION

The way in which information technology (IT) resources are strategically used within an organization results from the judgment and decision making of IT leadership. Preston, Chen & Leidner (2008) viewed IT strategic management as a key driver in building and sustaining competitive advantage. They noted that the success in organizational strategic management is dependent upon the alignment of information systems and business strategies. The strategic alignment of IT resources and their enablement of business processes were highly dependent upon IT leadership effectiveness, including their judgment and decision making (JDM) efforts. To better understand how IS strategic alignment influences, it is important to initially focus on the available IT resources and the JDM differences of IT leadership supporting the development, alignment, and implementation of IS strategies.

This article contributes to three key research areas, which are as follows.

- Behavioral IS, relating to individual differences in JDM among IT leadership
- Utilization and strategic alignment of IT resources
- Resource-based view (RBV) of strategic management in firm performance and competitive advantage

Schmidt and Keil (2013) described the value of *ex ante* IT resources occurring prior to a firm's decision to acquire and build IT systems or tools. They defined the basis of *ex post* IT resource value occurring upon the firm's decision to invest in the IT resources and to realize the competitive improvements of a firm. The lack of understanding in the individual differences in JDM of IT leadership was noted as a research gap. The conceptual model described later in this article is intended to help address this gap by addressing the following research questions.

- How do the individual differences in JDM influence IT resource utilization?
- What role does JDM play in the strategic alignment of IT resources to business processes towards firm performance and sustainable competitive advantage?

The article is organized as follows. First, an overview of prior literature supporting the proposed conceptual model is provided. Next, the proposed conceptual model, including key constructs, is presented. To close, a conclusion summarizing the importance of studying individual differences in JDM among IT leadership, and the role of JDM in the strategic utilization of IT resources toward firm performance and sustainable competitive advantage.

PRIOR LITERATURE

Individual differences in managerial judgment.

The research provided by Schmidt and Keil (2013) noted a gap in understanding strategic management and its ability to achieve organizational competitive advantage and firm performance. They focused on the need to better understand

individual differences in JDM among management when examining strategic management, assessing the value of potential new resource investments, and in creating competitive opportunities among the existing resource inventory. Three of the four considerations stated conveyed the need for managerial judgment to exist. One of the three considerations involved determining the role of the resource when evaluating how it might be used with the existing resource inventory, if at all. To address the second consideration of the resource's position among the organizational units, managerial JDM was needed to help ensure accessibility of relevant information was achieved. The third consideration emphasized the need for greater, quality managerial judgment in knowing how the resource might be best used. They emphasized differences in expectations due to managerial judgment as a result of their knowledge, interpretation, and use of information as well as experience. Such differences in management judgment were stated to exist and impact how resources deemed valuable might be strategically used for firm performance and competitive advantage. They further noted that how resources are used is driven by the superiority of managerial judgment, which was based on the knowledge and experience levels of management

Managerial Judgment.

Earlier research performed by Blais, Thompson and Baranski (2005) studied the confidence levels in JDM, but no significant individual differences resulted from their examination. The subjects of their study were undergraduate students.

According to Schmidt and Keil (2013), how IT resources are used was driven by the superiority of managerial judgment, which was based on the knowledge and experience levels of management. The effects of managerial judgment regarding resource value and its use was best measured as the difference between the *ex ante* resource value and *ex post* resource value. Managerial judgment existed due to the superiority of management to judge. Additionally, managerial judgment occurred as a result of institutionalized judgment resulting from formalized processes and capabilities used to better assess resource value.

Resource Value and Competitive Advantage

Schmidt and Keil (2013) defined resource value as the degree of the resource to be complementary and drive competitive improvement (assuming all other competitive improvement factors equate to zero). They viewed competitive improvement as the resulting difference from the time the firm decides to make the resource investment and the point at which the resource effects the firm's market position. They noted that a resource can promote competitive improvement as a stand-alone resource (without existing resource inventory interaction). A resource could be complementary by creating additional value or competitive opportunities due to interaction between the resource and existing resource inventory. They also noted that organizations that have a competitive advantage do not automatically gain or have competitive performance. An organization was noted to bear sustainable competitive advantage when its competitors fail to establish competitive improvements.

Individual differences in decision-making.

Appelt, Milch, Handgraaf, and Weber (2011) captured several supporting constructs and measures applicable in assessing common individual differences. In their research, JDM lacked clarity around the individual and group differences as well as cultural differences posing influential effects on decision making. Additionally, while there was significant existing JDM research on individual differences, a gap in understanding the role individual differences had on decision making existed. To support closure of this gap, they provided their reference inventory database, Decision Making Individual Differences Inventory (DMIDI), of individual difference measures that can be used to support future research efforts.

Appelt, Milch, Handgraaf, and Weber (2011) also stated that individual decision making was affected by risk attitude. Lauriola, Levin and Hart (2007) stated that the ambiguity attitude that exists as a part of risk should not be confused with risk attitude. Uncertainty is comprised of differing elements when addressing decision making deemed to be risky or under some level of ambiguity.

IS strategic alignment and decision making authority

Preston, Chen & Leidner (2008) examined past literature to study the strategic decision-making authority of the CIO and how it contributes to firm performance. This paper addressed the gap between the individual differences in judgment and decision-making influencing the abilities of the CIO's to make strategic decision and execute related decision-making authority on IT contributions toward firm performance. Their research model was the basis of the proposed conceptual model. See Figure 1 below.

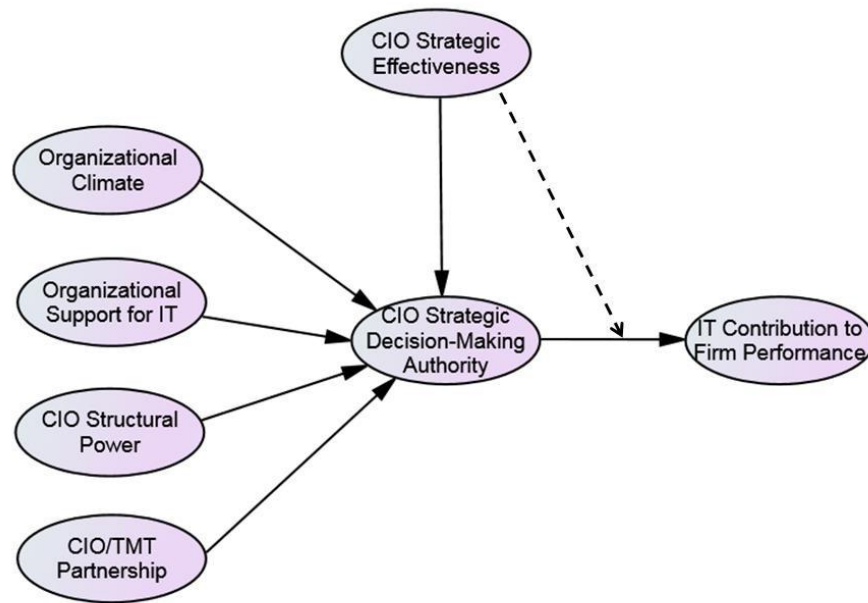


Figure 1. Research Model
Preston, Chen, & Leidner (2008)

Role of IT capability and IT executive leadership reporting structure

The study of Preston, Karahanna, and Rowe (2006) added to prior research that focally addressed the need for a shared understanding of the IS organizational role. To accomplish this shared understanding, formal and informal knowledge communications impacted by the formal reporting structure and executive team membership engagements were enabled between IT leadership and the firm's top management team. The educational mechanisms of IT leadership were also considered essential to help educate the firm's top management team on the organizational role of IS as well as its capabilities.

Preston and Karahanna (2009) examined the shared understanding and language between IT leadership and the firm's top management. They addressed the educational opportunities explored by IT leadership and the firm's top management team. They also tested commonalities regarding the backgrounds and experiences of IT leadership and the firm's top management team to determine if such relationships influence their ability to have a shared understanding and language. Individual differences were noted to play a key role in the shared understanding and language capabilities experienced.

Banker, Hu, Pavlou and Luftman (2011) stated that regardless of the IS leadership reporting structure, IS and business strategic alignment are necessary.

Lim, Stratopoulos, and Warjanto (2013) tested the relationship between the management and expert power of IT executives and the firm's reputation of having IT capabilities towards superiority among its competitors. The strength of IT capability was recognized as a firm's strategic asset and source for sustainable competitive advantage. IT capability was an externally driven factor influenced by firm size, performance and its overall reputation. The results of this study showed that the more expert and structural power possessed by IT executives the more likely superior IT capability would be externally recognized. While the study also tested the association between a firm's value in IT capability and the commensurate contribution (or reward) shown to the IT executive, the results were not formally captured, because of the minimal effects that these constructs may have initially on the individual differences in JDM of IT leadership.

PROPOSED CONCEPTUAL MODEL

This proposed conceptual model is intended to further examine individual differences in JDM of IT leadership in how they influence IT resource utilization, and strategic alignment of IT resources to business processes.

The constructs used in the proposed conception model (see Figure 2 below) are based on prior literature. The high-level constructs incorporated into the prior research model of Preston, Chen & Leidner (2008) include decision making, judgment, IS resource, and competitive advantage. They are defined as follows.

Decision making

This construct focuses on one’s rendering of an opinion objectively as a result of one’s personality, decision-making style, cognitive ability, motivation levels and risk attitude.

Judgment

This construct focuses on one’s rendering an opinion subjectively based upon one’s knowledge and experience.

IS resource

The IS resource is expected to be valuable and render competitive improvements.

Competitive advantage

Competitive advantage results when incremental or competitive improvement exists from a cost or differentiation market perspective.

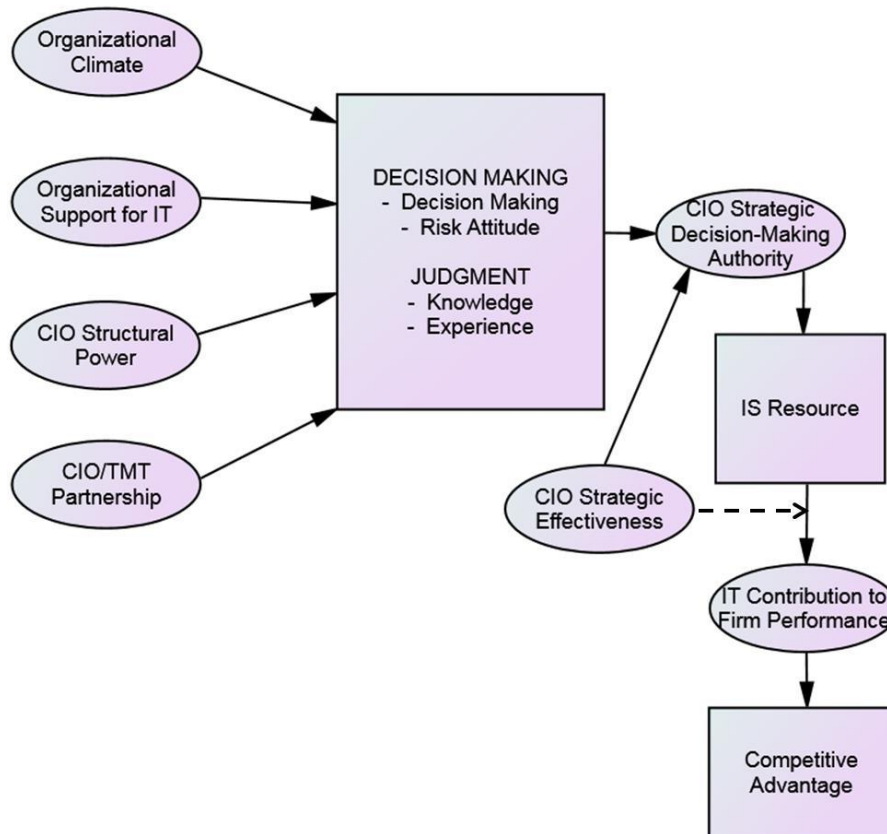


Figure 2. Proposed Conceptual Model

Comparatively, this proposed study would involve IT executives who have gained certain levels of IT knowledge and experience.

CONCLUSION

The proposed conceptual model would support future research in examining individual differences in JDM of IT leadership and their strategic decision making in IT resource utilization. Having a better understanding of such individual differences in JDM could provide valued contributions in IS behavioral research, RBV, and IS strategy. One significant contribution can be

made in understanding how those individual differences effect a firm's ex ante resources, decisions to make IT investment, and the variances determined from a firm's ex ante to firm's post ante use of IS resources. There is additional hope that such research contributions can be further extended to better understanding firm performance, competitive advantage, including its sustainability.

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