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KNOWLEDGE CREATION AND ORGANIZATIONAL PERFORMANCE: AN ORGANIZATIONAL AGILITY PERSPECTIVE

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Abstract

This paper is an extended summary of a research that examines the role of organizational agility as a mediator between knowledge creation processes and organizational performance. The moderating role of two knowledge characteristics, tacitness and institutionalization, in the mediation processes are also analyzed. Our results indicate that organizational agility significantly mediated the effect of knowledge creation on organizational creativity, which, in turn, affects organizational performance.

Introduction

The strategic value of knowledge management has been demonstrated in a number of empirical studies on knowledge creation, organizational creativity and organizational performance. For instance, Lee and Choi [47] theorize that Nonaka's knowledge creation processes have positive impact on organizational performance through creativity enhancement, and report empirical findings that support this theoretical position. The emphasis on the role of organizational creativity in knowledge creation raises a few interesting research questions: Can an organization foster continuous creativity through knowledge creation processes and what is the underlying mechanism for knowledge creation processes to enhance organizational creativity?

A purpose of this research is to build a model that extends the growing stream of work on organizational creativity [1, 28, 32, 82] by incorporating the role of organizational agility and empirically evaluating the extended model. Our theoretical exposition that organizational agility plays a pivotal role in the relationship between knowledge creation and creativity is firmly based on existing theories. New knowledge develops better routines that make operations more efficient and effective. Other literatures also indicate that, as organizations learn from newly generated knowledge, not only do they improve existing processes, dynamic capabilities also develop to integrate

knowledge into creative ideas, novel solutions, and new products and services [30, 42].

Another goal of this research is to examine whether the effect of knowledge creation processes on organizational creativity exists in all organizations or is contingent upon the nature of the organization's knowledge. Based on the common understanding that tacit and explicit knowledge differ substantially in their codifiability and transferability, our goal is to examine the moderating role of knowledge characteristics in the process of using knowledge management to foster organizational creativity.

Moderating Role of Organizational Agility

Knowledge creation processes not only promote a higher level of organizational creativity, they also create competitive advantage by enhancing the organization's agility. Following Sambamurthy, Bharadwaj, and Grover [70], we define organizational agility as "the ability to detect opportunities for innovation and seize those competitive market opportunities by assembling requisite assets, knowledge, and relationships with speed and surprise" (p. 245). In this section, we elaborate on the mechanism through which knowledge creation processes enhance organizational agility. At the same time, we specify how agility promotes organizational creativity. More specifically, we argue that the relationship between knowledge creation and organizational creativity is predicated on organizational agility. Additionally, we would like to demonstrate that the effect of different knowledge creation processes may differ in different organizations. A contingency model is proposed to predict boundary conditions within which knowledge creation processes are most effective. Specifically, we argue that two knowledge characteristics, namely, tacitness and institutionalization, play important moderating roles in knowledge creation processes. These arguments are elaborated below.

As modern organizations adapt to hypercompetitive environments, organizational agility, or their ability to sense environmental changes and respond to them appropriately with speed and intensity [62], becomes increasingly crucial for firm survival [19, 70]. Our analysis of the literature reveals that the relationship between knowledge creation processes and organizational creativity, as Lee and Choi [47] have reported, may be understood as a consequence of increased organizational agility.

While Sambamurthy and colleagues [70] argue that strategic IT provides a platform for agility, we would like to argue that knowledge creation processes similarly supply a solid basis for agility. Knowledge creation processes increase organizational agility because they enhance the organization's knowledge reach and richness. The level of knowledge reach and richness significantly determines an organization's agility, as current and substantive knowledge stock allows firms to make quick decisions with a high degree of certainty, notwithstanding change and uncertainty in the environment [70]. People and information are key differentiators in the presence of agile competition [35], and knowledge creation processes allow firms to maximally mobilize these intellectual resources.

New knowledge generated as a result of knowledge creation processes contributes to the firm's digital knowledge capital, "the IT-enabled repository of knowledge and the systems of interaction among organizational members to generate knowledge sharing of expertise and perspectives" [70, p. 247]. Knowledge codified through the externalization process, for example, can be digitally transmitted to a broader set of functional units and organizational members across geographical boundaries, reaching a more diverse audience that can benefit from such knowledge. For example, semiconductor design companies implement eCatalogs and design repositories to support communication and collaboration efforts during the new product development process across the organization [27]. ECatalogs and design repositories are information technology applications that inventory existing design products in the semiconductor community. They provide a common platform to support various knowledge creation processes. As such, these tools create greater knowledge reach by facilitating awareness of designs that are available for reuse and visibility of internal design products in the marketplace outside the organization. Greater accessibility of the industry's knowledge base is vital to the organization's ability to quickly translate design concepts into marketable products, and to "move quickly from one temporary advantage to another" in an industry with a fast clockspeed [27,

p.266].

At the same time, insights derived from knowledge creation processes enrich the quality of the firm's digital knowledge capital. Socialization, for instance, enables organizational members to share and develop tacit knowledge that forms a rich basis for intellectual capital. Combination, on the other hand, engages organizational members in idea exchanges that inspire them to take new perspectives, again enhancing the richness of the firm's knowledge [70]. In new product development, peer reviews are an important part of knowledge creation processes for ensuring the quality of knowledge products and justifying design decisions [27, 60].

Greater knowledge reach and richness fostered by knowledge creation processes enable stronger organizational agility [70]. Externally, enriched knowledge allows the organization to more accurately detect a relevant change in the environment (e.g., market opportunities, or evolving customer needs), and to more quickly comprehend the meaning of such events. This enhanced speed in perception and comprehension is a key element in organizational agility. Internally, greater knowledge reach and richness promote tighter integration and coordination across functional units. This higher level of rapid coordination allows the organization to respond quickly as soon as it senses significant changes or critical events in the environment [70]. Moreover, a constant supply of new knowledge from well-established knowledge creation processes helps the firm build a solid knowledge base for continuously creating small and short-term advantages. The know-how advantages from having a strong knowledge base enable firms to quickly outmaneuver competitors and to gain timing advantages [19].

Organizational agility, in turn, stimulates organizational creativity that welcomes new ideas and encourages risk taking and experimentation. "Innovation is intendedly adaptive, and it is undertaken typically in response to unfamiliar, unexpected, or nonroutine problems" [33, p.1095]. An agile organization is nimble in both sensing problems and unexpected changes arising in the environment, and developing an appropriate response plan and executing it in a speedy manner. The agile organization's response is often an innovation with varying degrees of proven track records. The ability to sense problems quickly and identify proper solutions accurately gives the organization higher degree of certainty in adopting and implementing innovative ideas. In other words, the agile organization is more capable of dealing with the risks associated with creativity not because they have

strong tolerance for risks, but because their solid operating capabilities enable them to commit the right resources and to act with maximal speed and confidence [62, 70].

To summarize, we have developed a theoretical model to illustrate the mechanism underlying the impact of knowledge creation processes on firm performance. Specifically, we argue that knowledge creation processes promote organizational creativity that enhances firm performance. Moreover, this relationship can be mediated through organizational agility. With these ideas linked together, the mechanism through which knowledge creation processes stimulate organizational creativity becomes clear. When an organization develops stronger agility through knowledge creation processes, it also becomes more receptive to creative solutions. In this process, organizational agility plays a critical role between knowledge creation processes and the resulting innovative culture.

Data Collection

An empirical study was conducted to test the proposed research model. Survey instruments were distributed to 414 representatives in the top 1000 enterprises in Taiwan ranked by the CommonWealth Magazine [17], when they participated in an extended education program sponsored by their companies. The ranking of top 1000 enterprises by the CommonWealth Magazine was based on firm revenue; the ranking system was regarded as highly prominent and representative of the profile of Taiwanese businesses. All participants were selected for the education program based on their substantive amount of work experience with their organizations; as such they were able to provide useful information regarding the survey questions.

Of those surveyed, 147 filled out and returned the questionnaire, which resulted in 134 unique cases that completed forms without missing or invalid data. This represented an effective response rate of 32.4%. The sample organizations were well represented in the service sector (N=63, 47.01%), manufacturing (N=41, 30.60%), finance (N=9, 6.72%) and the other (N=21, 15.67%). More than a third of the organizations had established formal positions or units for knowledge management activities (N=50, 37.31%). All organizations had implemented knowledge management systems in some ways.

The majority of the respondents had worked for their organizations for 3-5 years (N=58, 43.28%), 30.60% had worked for 6-10 years, 17.16% had worked for 11-15 years, and 8.96% had more than 15 years of work experience in their organizations. The extensive

work experience of the study informants in their respective organizations suggests that their assessments of their organizations should be reasonably valid and representative of their respective organizations.

Data Analysis and Findings

After validating the data collected from the survey, we can further evaluate the structural relationships in the research model. We first use our data to test the benchmark model of Lee and Choi's [47], that has been empirically established. This analysis allows us to verify the integrity of our measurements as compared with existing research. Then, we continue to test the extended organizational agility model. These analyses were conducted using PLS. Figure 1 in the next page shows the major findings with the solid lines indicate significant results.

Concluding Remarks

Even though organizational creativity has received much attention in the management literature over the last decade, only limited research has established its antecedents and consequences empirically. Motivated by a critical synthesis of literatures on organizational creativity, knowledge creation, and organizational agility, this study thoroughly investigates the effect of knowledge creation processes on organizational creativity and the mediating role of organizational agility in the process. Consistent with prior research, our study shows that knowledge creation processes improve organizational creativity, which subsequently results in superior organizational performance.

Drawing upon an organizational agility perspective allows us to further demonstrate that availability of new knowledge leads to a creative organization by building agility. This agility perspective complements the more prominent approach to organizational creativity, which focuses more heavily on psychological antecedents to creativity [2, 3, 82]. Existing theories tend to emphasize the significance of factors such as leadership, organizational structure, and resources in promoting creativity. The present research, in contrast, shows that in order for the organization to be creative, it may be just as important, if not more so, to maintain an environment that fosters knowledge creation among employees. Particularly, our data suggest that knowledge creation processes such as socialization, combination and internalization improve organizational creativity because they allow the organization to be more agile. When knowledge creation processes afford the organization the freedom to experiment with new ideas and take risks, the enriched knowledge environment can

significantly facilitate the organization to be more creative.

References are available upon request.

References

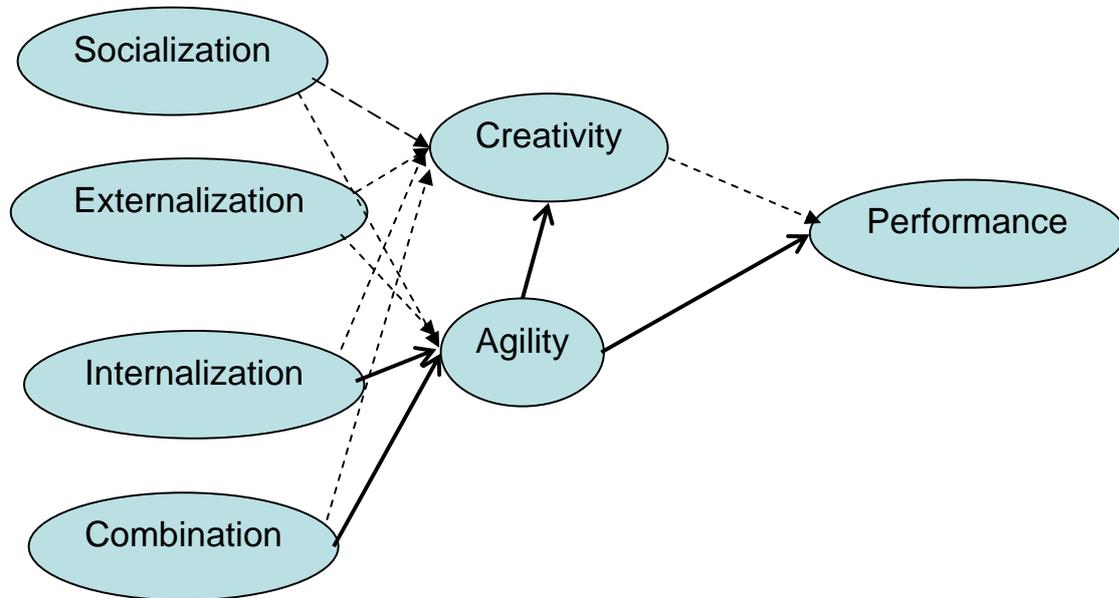


Figure 1. Resulting Model from the PLS Analysis