

# Human or System Strategy for Managing Knowledge?: From a Knowledge Creating Process Perspective

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## Abstract

It is more important than ever for companies to distinguish themselves through knowledge management strategies. Without a constant creation of knowledge, a business is condemned to poor performance. However, it is still unclear how these strategies affect knowledge creation. Knowledge management strategies can be categorized as being either human or system oriented. This paper proposes a model to illustrate the link between the strategies and its creating process. It is found that human strategy is more likely to be effective for socialization while system strategy is more likely to be effective for combination. Furthermore, the result suggests that managers should adjust knowledge management strategies in view of the characteristics of their departments.

## 1. Introduction

Managing knowledge is important because knowledge is one of the most strategic weapons that can lead to sustained increase in profits. It is no surprise that many researchers have investigated enablers for fostering knowledge.<sup>1</sup> Although these enablers are essential for a firm's capability to manage knowledge effectively, it is still unclear how to employ them in a strategic fashion.

Knowledge management strategies are necessary for facilitating these enablers; they determine how to utilize knowledge resources and capabilities.<sup>2</sup>

The fit between knowledge management processes and knowledge management strategies is a lynchpin in improving corporate performance. Therefore, knowledge processes should be guided by appropriate knowledge strategies. Knowledge management strategies that firms take have a significant influence on knowledge management processes.<sup>3</sup> Previous approaches have some difficulties in clarifying this relationship.

The primary objective of this paper is to explore how knowledge management strategies improve corporate performance. For this exploration, this paper attempts to investigate how managers can align knowledge management strategies with its creation process to improve corporate performance. Our investigation focuses on knowledge creation in isolation because it is a critical competitive weapon in today's global marketplace.

## 2. Knowledge Management Strategies

Knowledge management focus is one of the most common considerations for establishing knowledge management strategies; they can be described along two dimensions reflecting their focus.<sup>4</sup> One dimension

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emphasizes the capability to help create, store, share, and use an organization's explicitly documented knowledge. In this paper, this strategy is referred to as system strategy. Another dimension emphasizes knowledge sharing via interpersonal interaction. This strategy can be referred to as human strategy.

Many studies have shed lights on guidelines for employing system or human strategy. These studies can be categorized into three views; focused, balanced, and dynamic. Figure 1 compares these three views.

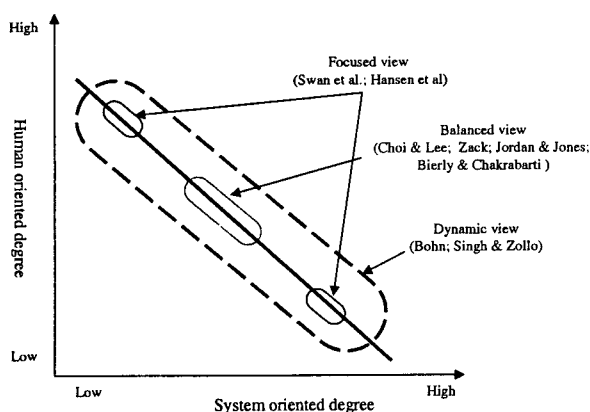


Figure 1. Three views of knowledge management strategies

### 3. Samples and Measures

This paper investigates Korean firms empirically to find the link between knowledge management strategies and knowledge creation. 100 firms were selected randomly. We surveyed from 5 to 15 middle managers in each firm.

Research constructs were operationalized through related studies and a pilot test. Multiple-items method was used and each item was based on a 6 point Likert scale. We adopt the constructs that have already been used and

validated by previous studies.

### 4. Results

In total, 424 responses from 58 firms were analyzed. The reliability is assessed by Cronbach's alpha. For convergent validity, items whose item-to-total correlation score was investigated. Discriminant validity was checked by a factor analysis. Furthermore, interrater reliability and agreement analysis are performed.

A cluster analysis is performed by the use of Ward's hierarchical technique.

#### 4.1 Knowledge creation process and KM strategy

In order to explore their relationship with knowledge management strategies, knowledge creation modes are measured from high or low system strategy perspective.

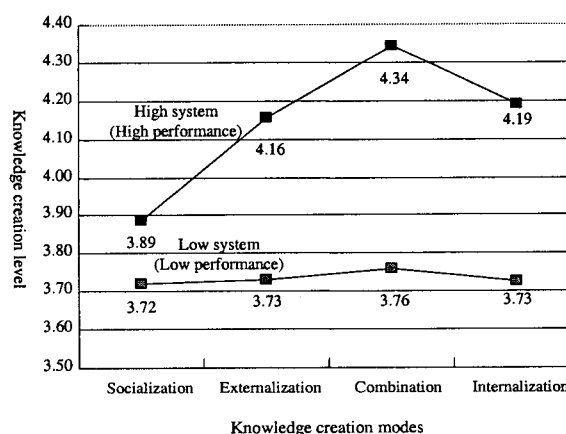


Figure 2. Knowledge creation modes and system strategy

As shown in Figure 2, a significant difference is noted among knowledge creation modes in the highly system strategy oriented group ( $p=0.019$ ). The figure takes a

"skewed arc" form. By contrast, the figure for the low system strategy oriented group has a nearly horizontal form.

Similarly, the relationship between knowledge creation modes and human strategy is investigated. As shown in Figure 3, in the case of the highly human strategy oriented group, socialization shows the highest level while combination shows the lowest. The figure takes a "skewed U" form. A significant difference is noted among knowledge creation modes ( $p=0.023$ ). However, the figure of the low human strategy oriented group has a "skewed arc" form ( $p=0.000$ ).

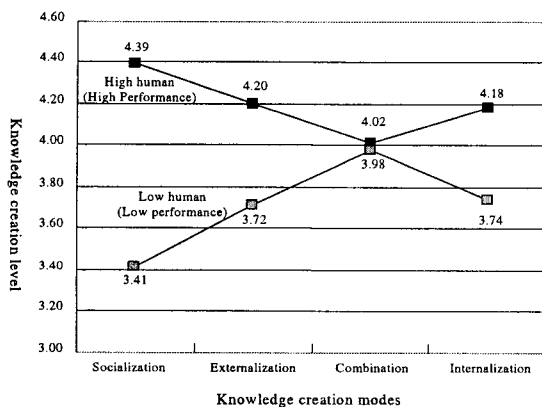


Figure 3. Knowledge creation modes and human strategy

#### 4.2 Knowledge management strategy and performance

Based on the above two figures, a distinctive guideline is pointed out. Firms, which are to employ knowledge management strategies effectively, need to adjust them as their knowledge creation process varies. They tend to focus on human strategy in case of socialization, or system strategy in case of combination (in Figure 4). The effective zone confirms that human strategy is appropriate for socialization while system strategy is appropriate for

combination. In addition, the zone shows that balancing human and system strategies is appropriate in case of externalization and internalization.

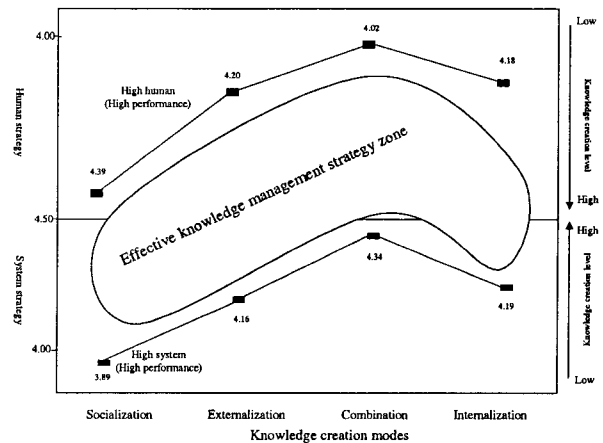


Figure 4. Knowledge creation modes and KM strategies

To demonstrate the feasibility of our effective strategy zone empirically, we compare the firms in the effective knowledge management zone with those out of it. Five out of 58 firms fall into the effective zone. Table 1 shows that these five firms within the zone significantly improve corporate performance.

Table 1. Dynamic strategy and corporate performance

Performance	SS	DF	SSM	F-value	p-value
Between Group	3.29	1	3.29	9.14	0.00
Within Group	20.13	56	0.36		
Total	23.42	57			

#### 4.3 Knowledge creation and department type

The proposed model with the effective knowledge management zone can be used to adjust strategies along

with management factors such as department types. Department types are closely related to knowledge types.<sup>5</sup>

A multiple comparison test (Duncan method) is performed. It is found that planning and sales departments have relatively high socialization and externalization while information systems, production, and R&D departments have relatively high combination and internalization. This finding suggests that human strategy is more appropriate for planning and sales departments while system strategy is more appropriate for information systems, production, and R&D departments.

## 5. Two Examples

We introduce two examples to sharpen our two major findings. First, our finding suggests that managers should align their knowledge management strategies with knowledge creation to get better performance. An example would be the development task for the cyber recipient service of F company. A senior manager in its development team said, *“Complaints of customers, who did not want to visit our branches to clear unpaid fees, are found through conversation. To solve for these complaints, many functional teams work together. After a series of brainstorming and face-to-face meetings, we derived a concept for cyber recipient service.”* It is noted that F company adopted human strategy for conceptualizing this new service. He continued to say, *“After the concept is organized, the system is implemented according to standard procedure, methodology, and documents.”* F company adopted system strategy for implementing this service

system. This example confirms that managers should consider dynamic characteristics of knowledge strategies.

Second, most managers have employed their knowledge strategies regardless of their department types. However, our study suggests that knowledge strategies should vary depending on department types. A manager of the knowledge management team in S company confessed, *“In the introductory stage of knowledge management, our company seemed to employ both human and system strategy without considering department types. However, we realize that utilizing both of them simultaneously for any department might not work.”* This example highlights that managers should consider each department’s characteristic for selecting their knowledge strategy.

## 6. Conclusion

Our empirical test results in a “skewed arc” model to relate strategies with creation process. The model implies that companies should align their knowledge strategies along with knowledge creation modes.

Our study has the following contributions. First, it is the first to highlight that dynamic alignment of knowledge strategies can lead to better corporate performance. Second, it proposes a guideline for this alignment with four knowledge creation modes. Third, it finds that knowledge strategies should differ according to department types.

## Reference

1. Hansen, et al., What’s your strategy for managing knowledge?, *HBR*, April, 106-116 (1999).

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