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Service Innovation Strategies: Universalistic, Contingency, And Configurational Explanations Of Firm Performance

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SERVICE INNOVATION STRATEGIES: UNIVERSALISTIC, CONTINGENCY, AND CONFIGURATIONAL EXPLANATIONS OF FIRM PERFORMANCE

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Abstract

The field of service innovation strategy has been criticized for its lack of a solid theoretical foundation. To address this issue, we investigate a configuration approach with the prevailing universalistic or contingency perspectives in exploring the effects of service innovation strategies on firm performance. Based on a service-oriented view, we begin by identifying three service innovation strategies: service creation-focused, service delivery-focused, and client interface-focused strategies. This study first aims to identify the relationship between different service innovation strategies and firm performance from a universalistic perspective. We then develop a contingency model of service innovation strategies, indicating that the effectiveness of service innovation strategies is dependent on internal and external contextual conditions, such as environmental innovation intensity and organizational information technology capabilities. Finally, we explore the synergistic effect among service innovation strategies. Based on data from 209 service firms in South Korea, we plan to test each perspective to explore the relationship between service innovation strategies and firm performance. We will also compare the configurational approach with the universalistic and contingency perspectives in explaining the effects of service innovation strategies on different firm performances. Our expectation from the analysis is that each perspective can be used to create theoretical arguments that explain significantly different firm performances.

Keywords: Service innovation, Service innovation strategy, Service innovation dimension, Universalistic perspective, Contingency perspective, Configurational perspective, Firm performance.
1 INTRODUCTION

The service sector at present has tremendous potential for growth and profitability, especially with service innovation being one means for all companies to gain an advantage in a highly competitive environment. Thus, business leaders face the challenge of achieving a flow of service innovation that will enhance performance and ensure long-term survival. Practitioners require guidance how they conduct service innovation for improving firm performance.

The shift has broadened the focus of service innovation studies from a technologist perspective that dominated the field in the past to a strategic perspective because a strategic perspective is more adequate in explaining the service innovation than a technologist one (Sundbo 1997). Given that the strategic approach emphasizes the firms’ strategy as a core innovation determinant for firm success (Teece 1987; Kanter 1989; Porter 1991; Rumelt et al. 1994; Sundbo 1995), firms adopting a particular strategy may show different innovation activities that result in different firm performances (Griffin 1997; Copper et al. 1999). Therefore, various service innovation activities across firms should be explained by the firm’s service innovation strategies, and firms that have greater congruence between their service innovation activities and innovation strategies should enjoy superior performance. In addition, new theories and measurements are required to identify the dynamics and specific properties of service innovation activities (Gallouj and Weinstein, 1997). Thus researchers call it a service-oriented or demarcation approach (Drejer, 2004) as innovations in services are distinctly different from those in manufacturing. This approach focused on non-technological innovation, and broadened the definition of service innovation (Sundbo, 1997) as well as a strategic perspective.

However, the field of service innovation strategy has been criticized for its lack of a solid theoretical foundation because service innovation studies are still in the early development stage. Although prior research has utilized knowledge about service innovation strategies that yield success, few studies currently focus on how service innovation strategy facilitates different firm performances and how the impact of service innovation strategy varies depending on organizations’ internal and external contexts. Moreover, the interplay between individual service innovation strategies has not been identified and studied. Therefore, this study employs three theoretical frameworks, namely, universalistic, contingency, and configurational perspectives, to create a theoretical foundation for service innovation strategy. To avoid a misunderstanding on service innovation from a technological view, we adopt service innovation dimensions as defined by Den Hertog (2000) from a service-oriented perspective. This study basically assumes that each form of service innovation strategy is considered a single service innovation dimension in practice, that is, service concept, service delivery, and client interface, except technology. Thus, service innovation strategy should reveal different but coherent behavior.

This study aims to articulate and test three different theoretical frameworks in service innovation strategy. Our study first examines service innovation strategy decisions that reflect the effect of different strategies on different aspects of firm performance. We then develop a contingency model to investigate whether the effectiveness of service innovation strategies is dependent on internal and external contextual conditions, such as environmental innovation intensity and organizational Information Technology (IT) capabilities. Finally, we investigate the synergistic effect among service innovation strategies from a configurational approach. Ultimately, we compare a configurational approach with the prevailing universalistic and contingency perspectives in explaining the effects of service innovation strategies on different firm performances.

To my best knowledge, this study is one of the early attempts to investigate the role of service innovation strategy using empirical validation. This study may facilitate substantial progress in future service innovation research toward identifying a suitable service innovation strategy. Furthermore, the results of the analysis can be utilized as guidelines for managers involved in organizational decision making on service innovation strategy. In addition, empirical evidence regarding service innovation strategy can be used as a benchmark for identifying expected performance from service innovation strategy for practitioners. This study was conducted with the understanding that each theoretical
perspective is valuable and that a better understanding of the theoretical frameworks will aid in developing service innovation strategy.

2 THEORETICAL PERSPECTIVES OF SERVICE INNOVATION STRATEGIES

Traditional theories of innovation have shifted from the technology-economic paradigm to the strategic innovation paradigm (Sundbo 1997). The strategic approach may be more suitable than the technological approach for studying service innovation, as well as for studies using a service-oriented perspective because services have a non-technological nature (Sundbo 1997). However, because service innovation studies are still in the early development stage, relatively little research has been conducted to study service innovation strategy, thereby leading to confusion in practitioners who make strategic decisions on service innovation. Given that the main focus of this paper is competitive creation using service innovation, the core issue is to understand how service innovation strategies facilitate better firm performance. In this process, we first develop several building blocks for service innovation strategies. We clearly define service innovation strategies and then identify decisions that distinguish among alternate strategies using service innovation dimensions (i.e., service concept, service delivery, client interface). Next, we explore a contingency and configurational model, as well as the traditional universalistic perspective, to examine the effect of service innovation strategies.

2.1 Defining service innovation strategy and its dimensions

Generally, organizational strategy addresses one of determinants for firm success (e.g., Porter 1991). Prior research on strategy indicates that a strategy guides firms in achieving their objectives. Chandler (1963) defines strategy as “determination of the basic long-term goals and objectives of an enterprise, and adoption of courses of action and the allocation of resources necessary for carrying out these goals.” In addition, Mintzberg (1978) proposed that strategy may not always be intentional, i.e., plans guide action, as suggested by Chandler and other; strategy may also be realized, i.e., a pattern reflected in a stream of decisions. Furthermore, Oke (2001) described innovation strategy as a clear direction that focuses the effort of the entire organization on a common innovation goal. With this notion of strategy in mind, we define service innovation strategy as “the logic visible in a firm’s portfolio of service innovation decisions.” This logic may either have served to guide a decision regarding service innovation activities or may be simply revealed in the pattern of individual service innovation decisions. Thus, strategy is not only a single decision that is consciously made, but is also the manifestation of multiple decisions.

Having defined service innovation strategy as the logic underlying a firm’s service innovation decisions, we now need to identify the decisions that are salient in constituting or reflecting a service innovation strategy. From a service-oriented perspective (Sundbo 1997; Dosi 1982; Drejer 2004; Gallouj and Weinstein 1997; Gallouj and Savona 2009), service innovation choices may be understood within the service innovation dimension model defined by Den Hertog (2000). He defined different innovation activities as service innovation dimensions and introduced four dimensions of service innovation, namely, service concept, service delivery, client interface, and technology. Although these dimensions are conceptual, they help to explain the practical development of service innovation strategies.

First, the service concept refers to the prototype for the service and covers both the descriptions of customer needs and services offered by firms (Edvardssons 1997). Thus, innovations in service concept include changes in service characteristics. Second, service delivery indicates that the service innovation process comprises the sequential activities and internal organizational arrangement of a new or existing service. Third, client interface relates to the design of the interface between the service provider and its clients. Finally, technology, although optional in practice, plays an important role as a facilitating or an enabling factor and is increasingly common in service innovations. Among the four dimensions, technology is ignored in this study because it is not a goal in itself but a means of
creating favourable conditions for offering better service, so coincides with other service innovation dimensions (Edvardssons 1997; Den Hertog 2000).

Despite the importance of understanding the effect of service innovation strategy that consists of three major dimensions (i.e., service concept, service delivery, and client interface), little research has been conducted on it as either a single dimension or multiple dimensions. Thus, it is imperative that service innovation strategy has to be investigated initially as a single decision. For these reasons, we begin by identifying three major service innovation dimensions and then develop three different service innovation strategies along these three dimensions: 1) service creation-focused, 2) service delivery-focused, and 3) client interface-focused strategies. These three service innovation strategies are summarized in Table 1.

<table>
<thead>
<tr>
<th>Innovation Strategy type</th>
<th>Dimensional classification</th>
<th>Motivation (Goal)</th>
<th>Results</th>
</tr>
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</table>
| Service creation-focused strategy | Developing new service or new value to its particular market | To create new design or new value of service                                    | -Propose new valuable service to its client  
- Create new particular market and new clients  
- Generate new innovation process and interface according to new service |
| Service delivery-focused strategy | Developing new service delivery process to offer new or existing services to its clients | To increase efficiency and effectiveness of innovation process                  | -Reduce cost, time and effort through a new valuable delivery service  
- Eliminate the redundancy of innovation process |
| Client interface-focused strategy | Developing new design of interface between service provider and its client | To elevate the client satisfaction by changes of service interface | -Get closer to clients  
- Elevate client’s convenience and satisfaction  
- Win more loyalties from clients  
- Reflect the demand of clients to innovation process |

Table 1. A single dimensional classification of Service innovation strategies

### 2.2 Universalistic perspective of service innovation strategies

From a universalistic perspective, researchers attempted to identify “best practices,” such as processes that positively affect firm performance (Delery and Doty 1996). Drawing on the theoretical works of Den Hertog (2000), we identified three service innovation strategies. A universalistic perspective connotes that the greater use of specific service innovation strategy will always result in better (or worse) firm performance. In other words, some service innovation strategies are universally effective. Thus, firms that adopt these best strategies will have higher performance.

Given that service-concept innovation usually offers a new service to a new market or a new value proposition or a significantly improved service in an existing market (Edvardssons 1997; Johne and Storey 1998; Den Hertog 2000), service creation-focused strategy focuses on changes in service characteristics. The firms adopting this strategy tend to be concerned with what is to be done for the customers and how it should be achieved, implying that the correspondence between these two aspects is critical (Edvardssons 1997). Thus, service creation-focused strategy is strongly related to market strategy. Service creation-focused strategy ultimately aims to increase the rate of adoption and diffusion of new services developed through service-concept innovation and usually accompanies other service innovation activities, such as service-delivery or client-interface innovations. Although the service creation-focused strategy takes some risks in developing new services, it might give a firm the opportunity to improve its competitiveness, thus increasing its performance dramatically. Therefore, we hypothesize the following:

**Hypothesis 1-a:** Service creation-focused strategy will be positively associated with firm performance.

Service delivery has played a key role in interactions with customers (Chen et al. 2009). As service delivery-focused strategy concentrates on changes in the service processes between the service
provider and its customers, firms adopting this strategy focus on increasing the effectiveness and the efficiency of a link between the service provider and its customers. Service delivery-focused strategy often uses technology such as a new information technology system that serves as a facilitating or enabling factor in service-delivery innovation (Den Hertog 2000). This strategy creates the opportunity for service firms to reduce cost, time, and effort through a valuable new delivery process (Chen et al. 2009). Furthermore, firms can also improve their competitive advantage to eliminate the redundancy of innovation processes by expanding information sharing using technology. We therefore propose that:

**Hypothesis 1-b:** Service delivery-focused strategy will be positively associated with firm performance.

Customers are often part of the production of a service concept and can be a good source of innovation (Den Hertog 2000). Prior studies stressed the important role of customer interaction as a success factor in service firms (Hipp and Grupp 2005). Thus, client interface-focused strategy concentrates on changes in developing a new design that clients are involved in service design, production, and consumption. Firms using this strategy can get closer to their customers, gain their loyalty, and elevate customers’ convenience and satisfaction (Gruner and Homburg 2000), thereby improving firm performance. This leads to the following hypothesis.

**Hypothesis 1-c:** Client interface-focused strategy will be positively associated with firm performance.

2.3 **Contingency perspective of service innovation strategies**

In a contingency framework, the success of a strategy will vary based on contextual variables. The contingency perspective contends that a strategy should be regarded as a balancing act between the external environment and the internal organizational situation (Zack 1999). To produce the best choice of service innovation strategy, the contingency perspective can be applied by simultaneously considering external and internal contexts. Thus, the study of service innovation strategy needs to be advanced by considering the strategic alignment between external and internal contexts. We thus identify both the external context as environmental innovation intensity and the internal context as organizational IT capabilities, which have been considered as critical contextual factors in prior service innovation studies.

Environmental innovation intensity reflects the external requirements of specific circumstances in which a firm conducts higher innovation activities (Koschatzky 1999). Prior innovation studies have employed innovation intensity as a key indicator of taxonomies because higher innovation intensity results in more competitiveness and new business opportunities for firms (Evangelista 2000; Camacho and Rodriguez 2008; Vence and Trigo 2009). Thus, firms that achieve different levels of innovation intensity must satisfy different environmental requirements. A low innovation-intensive environment, which is dominant in traditional and professional knowledge-intensive business service industries (PKIBS) (Miles et al 1995) (e.g., business consulting, transportation, and design services), is characterized by the relatively low level of access to external sources and strong orientation to solve specific problems articulated by skilled employees. In contrast, the strong use of technology and the complex interplay between service providers and their customers are considered important in a highly intensive environment, such as technology-based knowledge-intensive business service industries (TKIBS) (Miles et al 1995) (e.g., communication, computer and software, and engineering and architecture). Thus, this approach suggests contingent guideline for their choice of service innovation strategy according to the level of environmental innovation intensity.

From a resource-based perspective, organizational IT capabilities indicate the organization’s capability to understand and effectively utilize IT resources (e.g., software, hardware, and IT personnel) and to manage information within the organization (Tippins and Sohi 2003). Although service firms do not necessarily need to achieve high IT capabilities to be successful, firms with higher levels of IT capabilities are regarded to be in a superior position for managing the “invisible assets” that create market leadership (Itami, 1987). High organizational IT capabilities generate high-
quality, reliable, and fast IT systems by encouraging and facilitating service innovation. On the other hand, low organizational IT capabilities provide competitive advantages by reducing unnecessary investment in IT systems and facilitating the use of non-technological innovation resources, such as human resources and marketing capabilities. Thus, the best service innovation strategy differs according to the level of IT capabilities in the organization.

For these reasons, adapting to a proper level of environmental innovation intensity and an appropriate level of IT capabilities simultaneously within the firms is an important strategic aim for both PKIBS and TKIBS firms, making them more competitive in a dynamic business environment. Thus, service firms must consider these key contextual factors in developing their best service innovation strategy to increase competitiveness. In Figure 1, we summarize our contingency model for service innovation strategies: expectations concerning the levels of environmental innovation intensity and organizational IT capabilities for each of the three service innovation strategies.

![Figure 1](image)

**Figure 1. The contingency model of service innovation**

Firms with high environmental innovation intensity tend to do more networking, which allows them to contribute to innovation, more cooperation with customers and more access to external knowledge source (Koschatzky 1999). Moreover, firms with high organizational IT can enhance the intensity of the relationship with their customers using video conferencing, groupware, monitoring system, and online communities for efficient and timely communication (Bloodgood and Salisbury 2001; Cross and Baird 2000). Such activities facilitate the creation of valuable services and make service firms more innovative. Thus, firms with high environmental innovation intensity and high IT capabilities might show the highest propensity to innovate and create new services more effectively through strong cooperation with customers using their IT systems. Thus, service creation-focused strategy is the best choice for firms with high innovation intensity and high IT capabilities to enhance their firm performance (Cell 1).

**Hypothesis 2-a:** When environmental innovation intensity and the firm’s organizational IT capabilities are both high, employing a service creation-focused strategy is the best way to improve firm performance.

Firms with low environmental innovation intensity are characterized by lower cooperation with their customers and less access to external knowledge source. However, high organizational IT capabilities can reduce cost, time, and effort of firms to deliver existing services using an effective IT system while low environmental innovation intensity tends to make a new service creation difficult. It may result in incremental innovation rather than radical one. Thus, it is better for such firms to focus primarily on increasing the effectiveness and efficiency of their innovation process by utilizing their high IT capabilities, thereby improving firm performance. Thus, service delivery-focused strategy is the most suitable for firms with low environmental innovation intensity and high IT capabilities (Cell 2).

**Hypothesis 2-b:** When environmental innovation intensity is low and the firm’s organizational IT capabilities are high, employing a service delivery-focused strategy is the best way to improve its firm performance.
When firms have high environmental innovation intensity and low IT capabilities, a human-oriented network to cooperate with customers should be created, with information being shared through such a network. These firms tend to concentrate on cooperating with their customers and on information sharing between service providers and customers via interpersonal interaction, such as having communities for information sharing and face-to-face contact between providers and customers. A human-oriented network is regarded as one of client-interface innovation activities and organizational restructuring is required to generate a new human-oriented network. Therefore, the client interface-focused strategy might be the best option for firms with high environmental innovation intensity and low IT capabilities to encourage their employees to cooperate with customers through their human-oriented network (Cell 3).

In addition, firms with low environmental innovation intensity and low IT capabilities might show a very low propensity to innovate among the four cells. Given that these firms are conservative in innovation, they attempt to adopt traditional innovation activities based on skilled personnel. Skilled human resources play an important role as a client interface in service innovation, making learning and training systems for employees more essential than the human-based network in overcoming intensive competition from other service firms. Thus, the client interface-focused strategy is also the best way for firms with low environmental innovation intensity and low IT capabilities to improve their firm performance. Consequently, we propose that the client interface-focused strategy might be the best for firms with low IT capabilities, regardless of their level of environmental innovation intensity (Cells 4).

**Hypothesis 2-c:** When the firm’s organizational IT capabilities are low regardless of the level of environmental innovation intensity, employing a client interface-focused strategy is the best way to improve its firm performance.

### 2.4 Configurational perspective of service innovation strategies

The configurational perspective is more complex than either of the previous two theoretical perspectives (Delery and Doty 1996). The configuration represents nonlinear synergistic effects and higher-order interactions that cannot be represented with contingency theories (Doty et al. 1994). The configurational theories posit that multiple unique configurations of the relevant factors can result in maximal performance (Doty et al. 1994; Meyer et al. 1993). Thus, this paper contrasts a configurational approach against the universalistic and contingency perspective in explaining the effects of service innovation strategies on different firm performances.

The concept of gestalts or profile deviations (Venkatraman 1989) is more appropriate for exploring service innovation strategies from a configurational perspective in this study. Venkatraman (1989) defined gestalts as “feasible sets of internally consistent” configurations and stressed that incongruent patterns of choices will be less efficient and effective on firm performance than congruent patterns of choices. Therefore, firms pursuing a feasible set of consistent service innovation strategies will have superior performance compared with firms with incongruent service innovation strategies. In other words, there are synergistic effects among three dimensions of service innovation strategy.

Considering that service innovation is composed of three dimensions, we can observe four possible combinations (i.e., service concept-focused x service delivery-focused strategies, service concept-focused x client interface-focused strategies, service delivery-focused x client interface-focused strategies, service concept-focused x service delivery-focused x client interface-focused strategies). This study attempts to identify which combined pattern can or cannot generate synergistic effect. This leads us to the following hypothesis:

**Hypothesis 3:** Gestalts (i.e., feasible set of internally consistent configuration) will outperform non-gestalts (i.e., incongruent configurations) with respect to firm performance.
3 RESEARCH METHODOLOGY

3.1 Research Method

The unit of analysis in this study is a firm level for identifying major service innovation strategies. A field survey is applied to test the effects of different service innovation strategies on firm performance. Our survey items are designed to measure several key factors based on a thorough literature review. In developing the measurements, multiple items are used for all variables to improve the reliability and validity of the items. Firm performance is measured by factual data using total sales as of 2010 in this study. Finally, we employ 6 constructs and 20 items as measures in this study.

3.2 Current status

All data were collected through a field survey. For our main study, survey samples were randomly selected from the entire population of service firms based on the 2010 Korean Innovation Survey. The samples were stratified across six broad subsectors: transportation, communication, computer and software, engineering and architecture, business consulting, and design services. Respondents who have implemented at least one service innovation in the reference period 2009 to 2010 were asked to complete the entire questionnaire. In addition, the respondent characteristics were categorized in terms of industry type, number of employees, and total sales revenue as a percentage of total sales.

To validate the newly developed measures, we conducted a pilot test using a focus group of 11 managers from service firms operating in the market. The results of the pilot test allowed for the significant refinement and restructuring of the questionnaire and also the establishment of the initial face validity of the measures. We distributed the questionnaire to 856 firms through e-mail, fax, mail, and personal interview and received 324 responses. The complete case approach applied is the missing data imputation method. Finally, 209 responses were found useful for this study, with a usable response rate of 24.4%.

3.3 Future tasks

This study plans to conduct data analysis and results interpretation as a future task. Our analysis will consist of five steps. First, we will conduct a reliability test to measure reliability and a factor analysis to reduce the number of uncorrelated factors in our dataset. Second, the means, standard deviations, and correlations for all variables will be checked. Third, to test the contingency effects, we will categorize service firms as either high or low in innovation intensity and IT capabilities. This procedure will allow us to create four distinctive contingency cells with the following contexts: high innovation intensity and high IT capabilities (Cell 1), low innovation intensity and high IT capabilities (Cell 2), high innovation intensity and low IT capabilities (Cell 3), and low innovation intensity and low IT capabilities (Cell 4). We will then use multiple regression analyses to verify the effects of service innovation strategies on firm performance. Next, additional multiple regressions will be conducted to test whether the three service innovation strategies are significantly related to firm performance in each cell. Finally, multiple regression analyses will be used to investigate the synergistic effect among service innovation strategies. After conducting data analysis, we will introduce a comparative analysis of each set of results and propose a comprehensive interpretation of these results.
4 RESEARCH PLAN

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Tasks</th>
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<tbody>
<tr>
<td>08/2010-06/2011</td>
<td>Developing research model</td>
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<tr>
<td>06/2011-06/2011</td>
<td>Developing survey questionnaire</td>
</tr>
<tr>
<td>7/2011-7/2011</td>
<td>Pre-test/refining measurement</td>
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<tr>
<td>8/2011-12/2011</td>
<td>Full data collection from samples</td>
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<tr>
<td>03/2012-05/2012</td>
<td>Conducting data analyses</td>
</tr>
<tr>
<td>06/2012-06/2012</td>
<td>Result interpretation</td>
</tr>
<tr>
<td>07/2012-08/2012</td>
<td>Write-up paper</td>
</tr>
<tr>
<td>09/2012-09/2012</td>
<td>Proof reading, editing , formatting</td>
</tr>
</tbody>
</table>

Table 2. Schedule of completion

References


