Communications of the Association for Information Systems

Volume 17 Article 49

June 2006

Outsourcing Alignment with Business Strategy and Firm Performance

Jae-Nam Lee
Korea University, isjnlee@korea.ac.kr

Recommended Citation
Lee, Jae-Nam (2006) "Outsourcing Alignment with Business Strategy and Firm Performance," *Communications of the Association for Information Systems*: Vol. 17 , Article 49.
DOI: 10.17705/1CAIS.01749
Available at: https://aisel.aisnet.org/cais/vol17/iss1/49

Communications of the Association for Information Systems

OUTSOURCING ALIGNMENT WITH BUSINESS STRATEGY AND FIRM PERFORMANCE

Jae-Nam Lee
Korea University Business School
isjnlee@korea.ac.kr

ABSTRACT

As motivations of Information Technology (IT) outsourcing are evolving from a primary focus on cost reduction to an emerging emphasis on improving business performance, it is imperative for organizations to align their outsourcing strategy with their business strategy in order to reap better outsourcing benefits and firm performance. Accordingly, a critical challenge facing organizations is how to effectively organize and manage a well-planned outsourcing strategy in accordance with the direction of a business strategy. With the premise that organizations with the fit between business strategy (i.e., *defenders, prospectors, and analyzers*) and outsourcing strategy (i.e., *independent, arm's length, and embedded strategies*) are expected to have better outsourcing benefits and organizational performance than those without such fit, this study seeks to answer the following questions: First, are certain outsourcing strategies more effective than others in particular business strategies?; Second, do their effective alignments positively affect outsourcing benefits and firm performance? To answer these questions, we hypothesize three theoretically feasible sets of internally congruent patterns between business strategy and outsourcing strategy which lead to a greater achievement of outsourcing benefits and firm performance as compared with misfit patterns between them. Empirical data gathered from 136 organizations in Korea that have outsourced their IT functions to external service providers are analyzed. The empirical evidence shows that outsourcing alignment with business strategy significantly influences the outsourcing success and firm performance of defenders, analyzers, and prospectors. The findings have significant implications for further research and practice.

Keywords: IT outsourcing, alignment, fit, outsourcing strategy, business strategy, outsourcing success, organizational performance

I. INTRODUCTION

IT outsourcing, defined as the process of commissioning part or all of an organization's IT assets, people, and/or activities to one or more external service providers, has emerged as a viable option in information systems management. The decision to outsource IT functions, however, is not an easy one. Since outsourcing has influence over an organization's market share and technical leadership, it can make the organization either agile and proactive, or sluggish and reactive in responding to customer needs and market opportunities [Hu et al. 1997; Quinn and Hilmer 1994; Tas and Sunder 2004]. Thus, outsourcing is not just an operational decision but a strategic one with far-reaching consequences.

An effective outsourcing strategy is highly critical to the success of outsourcing in the rapidly changing external environment [Lacity and Willcocks 1998; Lee et al. 2004; Saunders et al. 1997;

Miranda and Kavan 2005]. Furthermore, as the motivations of outsourcing are increasingly evolving from cost reduction to business performance improvement, it is crucial for organizations to align their outsourcing strategy with their business strategy. Consequently, a critical challenge facing organizations is how to organize and manage their outsourcing strategies consistent with the business strategy from the beginning of outsourcing. A misaligned outsourcing decision can result in loss of competencies and capabilities, exposure to unexpected risks, and even business failures. Despite its apparent importance, this issue has gained little attention from researchers and practitioners in the field of IT outsourcing.

To address the issue, this study explores the thesis that organizations with the fit between business strategy and outsourcing strategy are expected to have better outsourcing gains and firm performance than those without such fit. Specifically, two fundamental questions need to be answered in this study: ***(1) Are certain outsourcing strategies more effective than others in particular business strategies? (2) Do their effective alignments positively affect outsourcing benefits and firm performance?*** We answer these questions in light of prior theories on business and outsourcing strategies. Using typologies by Miles and Snow (1978) and Lee et al. (2004), we explore the performance implications of the fit between business strategy (i.e., *defenders, prospectors, and analyzers*) and outsourcing strategy (i.e., *independent, arm's length, and embedded outsourcing strategies*). That is, the study builds theoretically feasible sets of internally congruent patterns between business strategy and outsourcing strategy which lead to a greater achievement of outsourcing benefits and firm performances as compared with misfit or incongruent patterns between them. The proposed alignment is then examined with the data set collected from 136 Korean firms that outsourced their IT functions. The performance implications of the alignment are then discussed.

This paper is organized into seven sections. The next section introduces the motivation of the study. In section three, the theoretical background is developed. Section four describes the research methodology, and section five reports the results of the study. Discussions of the findings, implications, limitations, and future research directions are presented in section six. The last section summarizes the study's contributions.

II. MOTIVATION AND BACKGROUND

THE EVOLUTION OF THE ROLE OF IT OUTSOURCING

The future of an organization relies heavily on the quality of information services being used. Attempts to achieve a sustainable competitiveness through IT, however, put much burden on organizations as the scope and the complexity of IT expand [Attewell and Rule 1984; Grover et al. 2002]. An organization's overarching objective in managing its information resources should be to maximize flexibility and control in order to pursue different options as its circumstances change [Lacity et al. 1995]. To accomplish this objective, more and more organizations consider IT outsourcing from external service providers rather than pursuing in-house development, because outsourcing offers a variety of ways for organizations to better leverage their resources and focus on core applications to increase IT's value in the achievement of corporate objectives [Lacity and Willcock 2001]

In the early stage, outsourcing issues were simply centered on acquisition. Organizations then considered outsourcing as a commodity and focused on the choice between internally developed technology and its external acquisition, or what we call the "make-or-buy decision" [Buchowicz 1991; Buck-Lew 1992; Welch and Nayak 1992]. The next issues are related to the motivation of outsourcing and the nature of outsourcing scope. For motivation, while some argue that outsourcing results in significant cost reductions with increased management control, effective use of human resource, capacity on demand, and access to advanced technologies [Apte 1990; Child 1987], the opponents of outsourcing describe that it involves critical risks with loss of control, flexibility, qualified personnel, and competitive advantage in information management [Benko 1992; Gupta and Gupta 1992]. Then various outsourcing options or scope have been

proposed such as degree of outsourcing – total or selective [Lacity et al. 1996], period of outsourcing – long-term or short-term [Koh et al. 2004; Perry and Deyinney 1997], number of vendors – single or multiple [Willcocks et al. 1995], and outsourcing types – service or asset outsourcing [Loh and Venkatraman 1992; Tas and Sunder, 2004]. The options are drawn from the advantages and disadvantages of outsourcing that organizations have experienced.

Though outsourcing is deployed for the purpose of gaining economic, technological, and strategic benefits, no one can assure an effective outsourcing performance. Thus, the attention is also focused on the issue of performance [Lacity and Willcocks 2001]. Many past studies tried to verify if outsourcing was a success or a failure in terms of IT performance such as system efficiency, user satisfaction of outsourced information systems, service quality, and cost reduction [Arnett and Jones 1994; Grover et al. 1996; Koh et al. 2004; Lacity and Hirschhein 1993; Lee and Kim 1999]. However, as organizations that outsourced their IT functions recognize that outsourcing does not always bring about their desired results, different available options such as in-sourcing, mid-sourcing, and co-outsourcing are reemphasized with the premise that outsourcing decisions are a trade-off between many contingent factors, some favoring outsourcing and others insourcing [Benko 1992; Meyer 1994; Dibbern et al. 2004; Reponen 1993].

As outsourcing gains its popularity, the contract and its management that shape the relationship between outsourcing providers and their clients become an important issue [Fitzgerald and Willcocks 1994; Lacity and Hirschhein 1993; Poppo and Zenger 2002; Richmond and Seidmann 1992]. After many organizations experience difficulties in forming and managing a connection with their service providers, organizations identify the limitations of well-specified legal contracts and instead seek flexible relationships with them based on mutual trust [Grover et al. 1996; Klepper 1995; Koh et al. 2004; Sabherwal 1999]. Accordingly, the partnership between clients and service providers is considered as a key predictor of outsourcing success [Cullen et al. 2005; Lee and Kim 1999; Willcocks and Kern 1998]. The reason why organizations focus on how to improve the relationship with their service providers, rather than to improve outsourcing options themselves is that they realize that outsourcing success results from not only the right balance between reward and risk for the vendor and client, but also the right mix of technical and business skills to significantly improve the critical aspects of business performance. After all, the adoption of outsourcing brings new skills and capabilities that link IT to business results rather than to those purely associated with technology.

NECESSITY OF OUTSOURCING ALIGNMNET WITH BUSINESS STRATEGY

As the growing role and importance of IT are being widely recognized, organizations frequently face a significant gap between the capabilities and skills required to realize the potential of IT, and the reality of in-house IT capabilities and skills. IT outsourcing plays a critical role in terms of strategies in order to minimize the existing gap. Therefore, outsourcing becomes a strategic business practice that has a significant impact on firm performance [Ang and Cummings 1997].

However, Lacity and Hirschheim (1993) found out that most organizations that adopted IT outsourcing reported unsatisfactory outcomes. Previous studies identified the reasons for the failure to achieve the expected benefits of IT outsourcing as the lack of a clear definition of the intent and goals for outsourcing [Quinn 2000], failure to align the contract and relationship with strategic objectives [Saaksjarvi 2002; Quinn and Hilmer 1994], lack of a well-planned systematic approach for outsourcing from its initial stage [Lee et al. 2004], and failure to consider the dynamic aspects of outsourcing relationships in order to adjust to changes in business or technology [Diromualdo and Gurbaxani 1998].

Taken together, these studies suggest that, whereas the goals of IT outsourcing are dynamically changing from improving IT competitiveness to delivering bottom-line business benefits, the approach to outsourcing is not flexible enough to adjust to changes in the business as well as in technology. It emphasizes the importance of a well-organized outsourcing strategy which should be developed at the initial stage of the outsourcing process [Lee et al. 2004; Linder 2004]. In addition, the outsourcing strategy should be aligned with the strategic intent underlying the

outsourcing initiative as well as the direction of business strategy [Diromualdo and Gurbaxani 1998; Saaksjarvi 2002], which is critical in achieving the outsourcing goal and maximizing the returns on IT investment.

III. THEORY DEVELOPMENT

This study relies on *fit* as the theoretical framework to develop our hypotheses. Fit and its accompanying configurational approach are well grounded in the field of organization theory [Delery and Doty 1996; Drazin and Van de Ven 1985; Govindarajan 1988; Gresov 1989; Venkatraman 1989], and it has numerous implications for the alignment between business and IT [Camillus and Lederer 1985; Chan et al. 1997; Chung et al. 2003; Earl 1989; King 1978; Teo and King 1997]. According to the theory, organizations are needed to identify the configurations or unique patterns among strategic dimensions, incorporated with the assumption of equifinality by posting that multiple unique configurations of the relevant dimensions can result in maximal performance [Delery and Doty 1996]. Many studies have empirically shown the significant impact of this fit on organizational effectiveness [Lee et al. 2004; Sabherwal and Chan 2001; Snow and Hrebiniak 1980].

OUTSOURCING STRATEGIES

An IT outsourcing strategy is defined as "*the logic visible in a firm's portfolio of IT outsourcing decisions"* [Lee et al. 2004]. This logic may either serve as the guide to decisions regarding the outsourcing of specific functions, or may simply be revealed in the cumulative pattern visible in individual outsourcing decisions. An IT outsourcing strategy need not be a single decision that is consciously made, but is rather a manifestation of multiple decisions. Lee et al. (2004) conceptualized the outsourcing strategy and proposed its three dimensions: degree of integration (minimal outsourcing, selective outsourcing, and comprehensive outsourcing), allocation of control (buy-in, fee-for-service, and partnership), and performance period (short-term, medium-term, and long-term). Drawing upon the residual right theory [Williamson, 1994], they further identified three existing gestalts, i.e., feasible sets of internally consistent configurations among three dimensions, called *independent, arm's length, and embedded outsourcing strategies*, respectively [Miranda and Kavan 2005].

Independent Outsourcing Strategy

In an *independent* approach, relationships with external providers are tenuous, with interactions lasting for a very brief period of time. Since resources are acquired externally but are managed internally, firms pursuing this strategy have lower access to cost efficiency than those that acquire not only resources, but also the management of resources on the market. The distinctive advantage of a hierarchy over a market arrangement, however, is the accretion of organizational routines and strategic competence [Penrose 1959]. Firms provide the boundaries within which what is known can be effectively leveraged by converting specialized knowledge to habituated action [Kogut and Zander 1996]. This strategy serves to minimize dependence on an external entity for critical organizational resources and competencies [Pfeffer and Salancik 1978]. Such a strategy is therefore commensurate with the development of an indigenous strategic competency. In sum, this approach purses a minimal outsourcing, buy-in contract, and short-term duration strategy to gain outsourcing benefits by redirecting the business and IT into core competencies.

Arm's Length Outsourcing Strategy

An *arm's length* approach is based on non-idiosyncratic relationships, i.e., sellers are interchangeable [Dyer and Singh 1998]. Here, an easily measurable commodity is traded for money [Dwyer et al. 1987]. While such relationships commence with a detailed specification of each party's obligations, the control of unspecified obligations is vested on the provider [Uzzi 1997]. In order to minimize the exposure to provider opportunism, such relationships are loosely coupled, and long-term commitments are avoided [Baker 1990]. In large markets, the economies of scale and scope afford neoclassical production cost savings vis-à-vis hierarchies [Williamson

1985]. The outcome of such relationships is typically cost efficiency through the competitive pricing of services [Baker 1990]; in arm's length relationships, "costs are everything" [Uzzi 1997]. In summary, this strategy focuses on improving the business' financial position by pursuing a selective outsourcing, fee-for-service contract, and medium-term approach [Miranda and Kavan 2005].

Embedded Outsourcing Strategy

Whereas hierarchies facilitate "knowledge application," i.e., a firm's ability to leverage the knowledge of its employees [Kogut and Zander 1996], *embedded arrangements* are superior in their ability to facilitate knowledge transfer and acquisition [Liebeskind, et al. 1996]. Economic exchanges occur "through stable networks of exchange partners who maintain close social relationships" [Uzzi 1997]. In these relationships, "embedded actors satisfice rather than maximize on price" [Uzzi 1997]. The relationships "can be so strong that they act as functional substitutes for hierarchy" [Baker 1990] thereby enabling firm-like knowledge transfer [Kogut and Zander 1996]. The strength and stability of the relationship are derived in large part from both parties being committed to a long-term relationship [Dwyer et al. 1987; Jarillo 1988]. Opportunism is curtailed by the anticipated cost of foregoing a long-term relationship. Personal ties and emergent trust provide the governance substitutes for a detailed and formal contract [Granovetter 1985; Miranda and Kavan 2005]. Such relationships offer some distinctive benefits. Partners undertake joint problem solving and are motivated to share information and knowledge that may not be available in the market place [Uzzi 1997]. Therefore, the objective of the outsourcing strategy consisting of comprehensive outsourcing, partnership, and long-term relationship is to strengthen resource and flexibility in technology service to underpin the business' strategic direction.

BUSINESS STRATEGIES

Strategy has been considered as the mechanism that guides environmental alignment and provides integration for internal operations [Snow and Hambrick 1980]. In order to survive and flourish, organizations must develop and maintain an acceptable and reasonable alignment with their environment [Milgate 2001; Weill et al. 2002]. Various typologies are available for studying diverse aspects of business strategies [Etzioni 1961; Segal 1974; Anderson and Paine 1975, Miles and Snow 1978]. However, only one study among them characterizes an organization as a complete system with the notion of strategic orientation, which generally refers to a set of underlying values and propensities that consistently guide organization's strategic actions and responses [Venkatraman 1989]. Furthermore, its widespread use in the strategic literature and its ability to measure the type of strategy at a level of abstraction cause us to adopt Miles and Snow's typology [Hambrick 1983; Smith et al. 1986; Zajac and Shortell 1989]. Miles and Snow (1978) classified business strategies into three: *defenders, prospectors, and analyzers*. Miles and Snow (1978) also identified a fourth type of organization strategy, i.e., reactor. However, most previous studies decided to exclude it, since reactor is not a viable strategy and is in transition from one of the three ideal strategies to another [Miles and Snow 1984; Zahra and Pearce 1990; Delery and Doty 1996; Sabherwal and Chan 2001]. Accordingly, we excluded it in our study. In this section, we discuss the relative effectiveness of the three outsourcing strategies in aligning them with defenders, prospectors, and analyzers, respectively.

The Defender

An organization following a defender strategy attempts to locate and maintain defined markets in relatively stable products and services. Often, this organization is not at the forefront of developments in the industry. That is, this strategy pursues a stable and predictable, but narrow, niche in its industry by providing high-quality standardized products and services at low prices. Accordingly, it focuses mainly on tight control and emphasizes operating efficiency to lower costs. Because of operating efficiency, organizations classified as defenders have a mechanistic and systematic organizational structure, as well as a higher fixed-asset intensity than other strategies.

Moreover, the defender is not likely to look for new opportunities outside its domains, and to adjust its structure and technology [Sabherwal and Chan 2001].

Given the focus on structural stability and cost efficiency, the defender tries to get the required resources from the outside market by minimizing the change in organizational structure and the dependency on external entities, and maximizing the economies of scale with a higher formality of the planning process [Shortell and Zajac 1990]. Since the process of getting resources is well planned and systematic, the defender is expected to be effective in internalizing external resources and knowledge as part of internal routines and processes. For this reason, the independent outsourcing strategy – a minimal outsourcing, buy-in contract, and short-term duration strategy – seems more effective in achieving better outsourcing gains for the defender than other outsourcing strategies.

H_1: The independent outsourcing strategy will be more effective for defenders than the arm's length and embedded strategies with respect to outsourcing gains.

The Prospector

A prospector strategy involves frequently adding and changing products and services in order that these will be the first in the market. An organization with such a strategy attempts to have innovation and flexibility to be able to respond rapidly to the changing market environment. In other words, the prospector continuously seeks new opportunities from new products, services, and/or markets. Although emphasizing innovativeness and flexibility leads to a lack of control and lower operational efficiency, the prospector puts a great deal of effort and investment into developing new products and services, and in searching for new opportunities. In order to function in a dynamic environment, it looks for technological flexibility with an organic organizational structure.

Focusing on flexibility, the prospector tends to have an unstructured and tactical planning process formality, because its products, services, and markets change frequently [Shortell and Zajac 1990]. It needs a more informal process to allow it to explore new opportunities [Ansoff 1984]. This suggests that relationships having a detailed specification with external entities may not be a very effective means to realize flexibility and innovativeness. Further, exclusive relationships based on mutual trust are strongly required, so that the prospector and external entities share valuable information and knowledge with each other that are not available in the market [Uzzi 1997]. Hence, the embedded outsourcing strategy consisting of comprehensive outsourcing, partnership, and long-term relationship is desirable for the prospector to have a successful outsourcing project.

H_2: The embedded outsourcing strategy will be more effective for prospectors than the arm's length and independent strategies with respect to outsourcing gains.

The Analyzer

An analyzer strategy attempts to maintain a relatively stable and limited line of products and services while selectively moving into carefully selected new areas with demonstrated promise. This type of organization tends to emphasize formal planning processes and can be a follower rather than a leader in the market, creating a balance between cost and efficiency. In a sense, the analyzer has the combined characteristics of the defender and the prospector by pursuing cost containment and efficiency with risk taking and innovation. The analyzer is not the creator of new markets and products, but is a quick follower of the prospector. The analyzer tries to minimize risks and maximize opportunities for growth through an in-depth analysis of the given situation [Segev 1989; Venkatraman 1989]. Based on the results of the analysis, this generates the best possible alternatives to solving the existing problem.

Because the analyzer always understands a given situation from an analytic and comprehensive perspective, it is likely to avoid loosely-coupled and long-term relationships with external entities. Instead, clearly and fully specified contracts to reduce risk and to control cost efficiency are

believed to be effective for the analyzer [Uzzi 1997]. As such, an analytic approach in arriving at comprehensive decisions seems suitable for the analyzer. As a result, the arm's length outsourcing strategy – a selective outsourcing, fee-for-service, and medium-term approach – is an appropriate way to have better outsourcing gains for the analyzer.

H_3: The arm's length outsourcing strategy will be more effective for analyzers than the independent and embedded strategies with respect to outsourcing gains.

FIRM PERFORMANCE

The effective management of business strategy contributes positively to firm performance [Conant et al. 1990; Hitt and Ireland 1985; Milgate 2001; Miller and Shamsie 1996]. An effective business strategy requires the use of a combination of all three types of outsourcing strategies. This combination can be represented by a configuration [Malnight 1995; Martinez and Jarillo 1989]. More importantly, for a certain business strategy, a configuration that emphasizes our hypothesized outsourcing strategies is required for high performance. That is to say, the effective integration of a business strategy demands a specific configuration of outsourcing strategies. Complementarities [Milgrom and Roberts 1995] seem to exist between a given business strategy and a certain outsourcing strategy required by the business strategy. Hence, it is expected that an organization with a congruent combination between business strategy and outsourcing strategy will show greater outsourcing gains and firm performance than one without such congruence.

H_4: Organizations with the fit between business strategy and outsourcing strategy will have greater outsourcing gains and firm performance than those with the misfit between them.

IV. METHODOLOGY

MEASUREMENTS

We used the survey method to validate the proposed hypotheses. After developing an initial version of the survey instrument, it was vetted through a series of personal interviews with five academicians who are experts in IT outsourcing. The instrument was then administered for a pilot test to five outsourcing managers, or CIOs, as well as CEOs in Korean organizations. These multiple phases of instrument development not only resulted in a significant degree of refinement and restructuring of the survey instrument, and the establishment of the initial face and internal validity of the measures, but also confirmed the suitability of the adopted questionnaire for studying real-world phenomena [Nunnally 1978].

Independent Variables

For business strategy, we used Snows and Hrebiniak's (1980) validated instrument reflecting Miles and Snow's (1978)'s typology: *(1) defender, (2) prospector, and (3) analyzer*. This study simplified these in order to make them more understandable for the respondents and hence increase their response rate. In the case of outsourcing strategy, we derived its definition and description from Lee et al. (2004)'s three pure outsourcing strategies: *(1) independent (minimal outsourcing, buy-in contract, and short term), (2) arms-length (selective outsourcing, fee-for-service, and medium-term), and (3) embedded (comprehensive outsourcing, partnership, and long-term)*. The measures for both strategies were in categorical scales. The respondents were asked to select their business and outsourcing strategies from the assigned numbers as mentioned above.

Dependent Variables

There are three dependent variables including overall outsourcing success and two economic performance variables, i.e. sales growth and returns on assets (ROA). We developed three perceptual measures (i.e., indicators) to assess the degree of outsourcing success in terms of

operational efficiency, technological leadership, and responsiveness to business needs [Grover et al. 1996; Lee et al. 2004]. The three measures for outsourcing gains were based on a 10-point Likert scale. For the economic performance of each organization, we measured both sales growth and ROA. In order to minimize the same method bias, information regarding sales growth and ROA was gathered from the balance sheet of each respondent which was officially announced in the website of the Korea Chamber of Commerce and Industry.

Control Variables

To account for extraneous sources of variation in outsourcing success and organizational performance, we incorporated *industry type, organization size, and the time length after IT outsourcing was introduced* as control variables in our model. Depending on the industry to which a certain organization belongs, the attractiveness of the industry environment can influence organizational performance [Dess et al. 1990], and the importance of IT outsourcing can differ. Following Chatman and Jehn (1994), the industry type was coded based on the long-linked technology for manufacturing, construction, and retail/wholesale firms, on the mediating technology for banking/finance/insurance firms, and on the intensive technology for research and IT/telecommunication firms. We also controlled organization size that was measured by total sales volume. In addition, since the experiences of IT outsourcing may have some influence on outsourcing success and organizational performance, we decided to control the time-since-adoption by asking respondents to indicate the year when IT outsourcing was first adopted by their organization to eliminate the potential spurious effect of time.

THE SAMPLE AND DATA COLLECTION

As the sampling frame of this study, 500 organizations in Korea were randomly selected from about 10,000 companies covered by the Maeil Business Newspaper's 2003 Annual Corporation Reports. The CIO and CEO of each firm were then identified from the Book of Listed Firms published by the Korean Stock Exchange. Before mailing out the questionnaires, we made phone calls to each of the 500 firms to explain our research objectives and to check their willingness to participate in the study. After this preliminary survey, the survey questionnaires were personally addressed to both the CIO and CEO of each of the 325 firms which promised to fill them out. To avoid the same subject bias in measuring business strategy, outsourcing strategy, and outsourcing gains, we asked the CEOs to answer the questionnaire for business strategy, and the CIOs for outsourcing strategy and outsourcing gains. Since CIOs are generally in charge of IT outsourcing projects in organizations and expected to be knowledgeable about their outsourcing relationships and outsourcing results, they were selected as key informants for outsourcing strategy and outsourcing gains.

To increase the response rate, based on Dillman's total design method (1991), a postcard follow-up was conducted one week after the original mailing. The same questionnaires were mailed again two weeks after the first mailing, and a telephone follow-up was conducted a week after this. After four rounds of solicitation, we eventually obtained 175 responses, representing a response rate of about 53% of all distributed questionnaires. However, 39 responses were eliminated from the analysis: 26 of which did not have responses from both the CIO and CEO, and 13 of which had incomplete data. All in all, 136 responses were used for the final analysis.

MEASUREMENT RELIABILITY AND SAMPLE CHARACTERISTICS

The content validity of the survey instrument was established through the adoption of standard instruments, suggestions in the literature, and the pretesting of the instrument with experts in the field of outsourcing [Kerlinger 1986]. The reliability and validity tests for the metrics for the three outsourcing and three business strategies were not applicable because of the factual nature of the data and the concomitant use of a single item to assess the variables. The metrics are provided in the Appendix. The factual nature of the outsourcing and business strategies also minimized the possibility of the common method variance problem.

Table 1. Profile of responding companies

(a) Industry

Industry Type	Freq.	Percent
Manufacturing	35	25.6
Banking/Finance/ Insurance	28	20.6
Telecommunication	13	9.6
Retail/Wholesale	30	22.1
Construction	30	22.1
Total	136	100

(b) Number of employees

Range	Freq.	Percent
Less than 100	36	26.5
100 – 500	34	25.0
500 – 1,000	24	17.6
1,000 – 5,000	37	27.2
5,000 – 10,000	4	2.9
10,000 and above	1	0.8
Total	136	100

(c) Time-since-firm-established

Range	Freq.	Percent
Less than 10 years	27	19.8
10 – 20 years	34	25.0
20 – 30 years	29	21.3
30 – 40 years	21	15.4
40 – 50 years	18	13.2
50 – 100 years	5	3.7
100 years and above	2	1.5
Total	136	100

(d) Total sales ($US)

Range	Freq.	Percent
Less than $10 million	5	3.7
$10 - $50 million	32	23.5
$50 - $100 million	15	11.0
$100 - $500 million	47	34.6
$500 - $1 billion	18	13.2
$1 - $5 billion	15	11.0
$5 billion and above	4	2.9
Total	136	100

(e) IT budget as % of total sales

Range	Freq.	Percent
Less than 0.5%	58	42.6
0.5% - 1.0%	25	18.4
1.0% - 1.5%	16	11.8
1.5% - 2.0%	22	16.2
2.0% - 5.0%	10	7.3
5.0% and above	5	3.7
Total	136	100

(f) Outsourcing budget as % of IT budget

Range	Freq.	Percent
Less than 10%	14	10.3
10 – 25%	26	19.1
25 – 50%	43	31.6
50 – 75%	30	22.1
75 – 90%	12	8.8
90% and above	11	8.1
Total	136	100

The degree of outsourcing success was measured by assessing CIOs' perceptions about their outsourcing projects using a multi-item instrument in terms of operational efficiency, technological leadership, and responsiveness to business needs. Hence, factor analysis with varimax rotation was conducted to check the unidimensionality of the items which resulted in a single factor. There were no items with a factor loading lower than 0.5 for outsourcing success. The factor loadings

were quite high and ranged from 0.799 to 0.885. Internal consistency, as measured by Cronbach's alpha, was 0.815 which was acceptable.

The respondents' characteristics in terms of industry type, number of total employees, time-since-firm-established, total sales, IT budget as a percentage of total sales, and outsourcing budget as a percentage of IT budget are summarized in Table 1. A large number of the responses came from the manufacturing (25.6%), construction (22.1%), and retail/wholesale (22.1%) industries. The average number of employees was 977.1, with a standard deviation (S.D.) of 1,556. The average total sales was about US$61.3 million (S.D.=$1.2 billion). Of the 136 companies, 19 firms had total sales of 1 billion dollars or more. MIS budget as a percentage of total sales was 0.65% (S.D.=1.85), while outsourcing budget as a percentage of MIS budget was 0.47% (S.D.=0.29).

V. ANALYSIS AND RESULTS

ANALYTICAL APPROACH

The premise underlying this study is that organizations showing better outsourcing gains and firm performance have the fit or congruence which is defined as "feasible sets of internally consistent configurations" [Venkatraman 1989] between business strategy and outsourcing strategy. Given the mutually constraining nature of both strategies, the incongruent patterns of choices will be less efficient and effective as the customer and vendor of IT outsourcing seek to implement incompatible decisions. To assess the validity of this belief and following Lee et al. (2004), we first confirmed the pre-specifications of the fit patterns (i.e., gestalts) via an analysis of the frequency distribution of all observed patterns. Based on the configuration patterns which surfaced, we then analyzed the difference in performance between fit and misfit patterns, and assessed the extent to which each fit pattern distinctively predicts outsourcing gains and firm performance using MANOVA.

IDENTIFICATION OF STRATEGIC PATTERNS

Fit or congruence carries an implication that portfolios of incongruent combinations of strategy dimensions will be less successful. To assess this implication, we first simply counted the number of firms utilizing each combination of strategy dimensions. Table 2 shows the frequencies and percentages of strategic patterns for individual business and outsourcing strategies as well as the combination between business strategy and outsourcing strategy. For business strategy, the results show 57 responses (41.9%) for defenders, 39 responses (28.7%) for prospectors, and 40 responses (29.4%) for analyzers. For outsourcing strategy, the results show 55 responses (40.4%) for independent, 52 responses (38.3%) for embedded, and 29 responses (21.3%) for arm's length outsourcing strategy.

For the combination between business strategy and outsourcing strategy, all nine possible patterns (*3 business strategy types x 3 outsourcing strategy types*) were observed. Among the nine, the most frequent combination was between defender firm strategy and independent outsourcing strategy (25 responses; 18.4%), the second was a combination of defender firm strategy and embedded outsourcing strategy (21 responses; 15.4%), and the third was a combination of analyzer firm strategy and embedded outsourcing strategy (17 responses; 12.5%).

Table 2. Frequency and Percentage of Strategic Patterns

Type			Business Strategy			
			Defender	Prospector	Analyzer	Total
Outsourcing Strategy	Independent	Minimal outsourcing Buy-in contract Short-term	25 (18.4%)*	14 (10.3%)	16 (11.8%)	55 (40.5%)
	Arm's length	Selective outsourcing Fee-for-service Medium-term	11 (8.1%)	11 (8.1%)	7 (5.1%)	29 (21.3%)
	Embedded	Comprehensive outsourcing Partnership Long-term	21 (15.4%)	14 (10.3%)	17 (12.5%)	52 (38.2%)
	Total		57 (41.9%)	39 (28.7%)	40 (29.4%)	136 (100%)

* Frequency (Percentage)

TESTING THE PROPOSED HYPOTHESES

To assess the predictive validity of the identified strategic patterns, we used individual ANOVAs to explore the relative effects of each strategic pattern between business strategy and outsourcing strategy on outsourcing success (for H1, H2, and H3), and also a MANOVA to analyze the differences in outsourcing success and firm performance between fit, i.e., gestalt, and misfit patterns (for H4). The evidence suggests that Pillai's Trace is a more robust criterion relative to Wilks' Lambda, Hotelling's Trace, and Roy's GCR [Hair et al. 1998]. We therefore relied on MANOVA as the statistical tool. The overall MANOVA indicated that there was a significant difference among the three strategic patterns of business strategy (Pillai's Trace=0.177, $F_{(3, 380)}$=3.391, p=0.000). Individual ANOVAs and the descriptive statistics for each business strategy are presented in Tables 3 (a), (b), and (c).

MANOVA investigated the effects of strategic pattern (fit versus misfit) and the control variables (industry type, organizational size, and time-since-adoption) on outsourcing success as well as firm economic performance. The MANOVA results indicated that all control variables have an insignificant impact on outsourcing success (*Industry type*: Pillai's Trace=0.082, $F_{(9, 580)}$=1.002; p=0.998; *Organization size*: Pillai's Trace=0.092, $F_{(9, 580)}$=1.330, p=0.161; *Time-since-adoption*: Pillai's Trace=0.055, $F_{(9, 580)}$=0.790, p=0.713), and organizational performance (*Industry Type*: Pillai's Trace=0.096, $F_{(9, 580)}$=1.445; p=0.178; *Organization size*: Pillai's Trace=0.075, $F_{(9, 580)}$=0.994, p=0.144; *Time-since-adoption*: Pillai's Trace=0.087, $F_{(9, 580)}$=1.229, p=0.162). A further examination of the effects of the control variables via individual ANOVAs revealed only one of the nine possible effects of the control variables across each of the dependent variables, i.e., overall outsourcing success, to be significant (*Effect of industry type on analyzer-related patterns*: F=1.872, p=0.086).

Table 3. Assessing the Predictive Validity of the Patterns on Outsourcing Success

(a) ANOVA for outsourcing success among defender-related patterns

Patterns / Dependent Variable	Defender* Independent (n=25)	Defender* Arm's length (n=11)	Defender* Embedded (n=21)	F (p)
	Mean (S.D.)			
Outsourcing Success	7.43 (1.26)	6.48 (1.07)	7.18 (1.61)	4.524 (0.009**)

(b) ANOVA for outsourcing success among prospector-related patterns

Patterns / Dependent Variable	Prospector* Independent (n=14)	Prospector * Arm's length (n=11)	Prospector * Embedded (n=14)	F (p)
	Mean (S.D.)			
Outsourcing Success	6.38 (1.22)	6.71 (0.91)	7.21 (1.28)	7.558 (0.000***)

(c) ANOVA for outsourcing success among analyzer-related patterns

Patterns / Dependent Variable	Analyzer* Independent (n=16)	Analyzer * Arm's length (n=7)	Analyzer * Embedded (n=17)	F (p)
	Mean (S.D.)			
Outsourcing Success	5.85 (0.85)	6.94 (1.58)	6.29 (1.10)	4.271 (0.021*)

*P < 0.05; **p < 0.01; ***P < 0.001

Table 4. Comparison of Fit and Misfit Patterns

Patterns / Dependent Variables		Fit Patterns* (n=45)	Misfit Patterns** (n=91)	F (p)
		Mean (S.D.)		
Outsourcing Success		7.19 (1.21)	6.48 (1.27)	10.655 (0.000***)
Economic Performance	Sales Growth	0.71 (1.66)	0.57 (1.79)	5.792 (0.045**)
	ROA	0.13 (0.09)	0.06 (0.08)	11.345 (0.000***)

* Fit patterns include defender*independent, prospector*embedded, and analyzer*arm's length strategies

** Misfit patterns are other strategies except above three fit strategies

The testing results of the proposed hypotheses are described below in terms of the research questions mentioned earlier.

(1) Are certain outsourcing strategies more effective than others in particular business strategies?

As shown in Table 3, for defenders, organizations which adopted the independent outsourcing strategy manifested the highest level of outsourcing success (mean=7.43, S.D.=1.26, F=4.524, p=0.009), supporting hypothesis 1. As expected, the prospectors yielded the highest outsourcing success when they selected the embedded outsourcing strategy (mean=7.21, S.D.=1.28, F=7.558, p=0.000), thereby supporting hypothesis 2. Also, the analyzers with arm's length outsourcing strategy rather than independent and embedded outsourcing strategies exhibited the higher outsourcing performance (mean=6.94, S.D.=1.58, F=4.271, p=0.000); thus, hypothesis 3 was supported. In sum, all three hypotheses suggest that the fit patterns between outsourcing strategies and business strategies are significantly supported.

(2) Do their effective alignments positively affect outsourcing benefits and firm performance?

The next step was to assess the extent to which the fit patterns (i.e., *defender*independent, prospector*embedded, and analyzer*arm's length strategies*) outperformed the misfit patterns (i.e., *other strategies except the three fit patterns*) with regard to firms' outsourcing success and economic performance. In the MANOVA test to assess the differences between fit and "misfit" groups, the test for homogeneity of variance on the error term was insignificant for all three dimensions of outsourcing success and for firm performance: outsourcing success (Levene statistic=0.888, p=0.747), sales growth (Levene statistic=0.991, p=0.529), and ROA (Levene statistic=0.837, p=0.837). From the results in Table 4, we can see that the means across the fit and misfit patterns were significantly different for both outsourcing success and firm's economic performance in terms of sales growth and ROA. Thus, hypothesis 4 was supported.

VI. DISCUSSION

The objective of this study was to determine if organizations with the fit between business strategy and outsourcing strategy would have better outsourcing gains and firm performance than those without such fit. Table 5 summarizes the results of our hypothesis testing which indicates that our data provide strong support for the proposed hypotheses.

Table 5. Summary of Hypothesis Testing

Hypothesis		Finding
H1	Independent outsourcing strategy will be more effective than arm's-length and embedded ones for defenders with respect to outsourcing gains.	Supported
H2	Embedded outsourcing strategy will be more effective than arm's-length and independent ones for prospectors with respect to outsourcing gains.	Supported
H3	Arm's-length outsourcing strategy will be more effective than independent and embedded ones for analyzers with respect to outsourcing gains.	Supported
H4	Organizations with the fit between organization strategy and outsourcing strategy will show greater outsourcing gains and firm performance than those with the misfit between them.	Supported

IMPLICATIONS

Based on the notion of the fit as the theoretical framework, we identified three dominant strategic combinations between three types of outsourcing strategies, independent, arm's length, and embedded–based on the residual rights theory [Lee et al. 2004; Miranda and Kavan 2005], and three basic business-level strategies [Miles and Snow 1978]. Our survey results indicated the three congruent patterns. These three patterns are defender-independent, prospector-embedded, and analyzer-arm's length strategies as shown in Tables 3 (a), (b) and (c). Next, we demonstrated that the strategic fit patterns identified outperformed the misfit patterns in terms of both outsourcing gains and firm economic performance. Our analysis provides a strong support for this as shown in Table 5.

The alignment between business and outsourcing strategies was significantly associated with outsourcing success and a firm's economic performance. This implies that alignment goes beyond our simple understanding of the relationship between alignment and outsourcing success. Hence, this study suggests that it is strongly necessary to understand outsourcing investment as combined with the business direction to improve firm performance. Furthermore, the support for hypotheses 1, 2, 3, and 4, suggests that aligning outsourcing strategy with business strategy should be viewed from the configurational perspective rather than the universalistic perspective which means that specific strategies consistently explain success across organizations [Delery and Doty 1996].

Consistent with the previous study [Sabherwal and Chan 2001], there is a significant relationship between alignment, and outsourcing success and firm performance for prospectors, analyzers and defenders. However, an in-depth analysis in terms of each indicator of outsourcing success, i.e., operational efficiency, technical leadership and responsiveness to business needs exhibits that while this relationship is strongly supported for prospectors and analyzers, it is not so strong for defenders. Though as proposed, the combination between defender strategy and independent outsourcing strategy was found to yield the highest outsourcing gains in terms of technical leadership (mean=7.90, S.D.=1.71, F=11.050, p=0.000) and overall outsourcing success, outsourcing gains in terms of operational efficiency (mean=7.82, S.D.=1.51, F=7.351, p=0.000) and responsiveness to business needs (mean=7.45, S.D.=2.08, F=6.459, p=0.002) were in the highest level for the alignment between the defender and embedded strategies. Defenders emphasize structural stability and operational efficiency by minimizing the dependency on external entities and maximizing the economies of scale. Accordingly, since they prefer not to make any radical adjustments, it is generally acceptable for them to adopt the hierarchy (i.e., independent) outsourcing strategy with external service providers. Another way to acquire the needed resources, i.e., knowledge acquisition, from the outside market without internal adjustments and to do an intensive market search for business opportunities is to make an exclusive relationship with external service providers which act as the functional substitutes for hierarchy [Baker 1990; Poppo and Zenger 2002]. These findings have valuable management implications that need to be further verified in the future.

An interesting result is that none of the control variables introduced in this study, i.e., industry type, organization size and time-since-adoption, are significant. They are both counterintuitive and inconsistent with the previous research [Lacity and Willcocks, 1998; Choudhury and Sabherwal, 2003]. For both industry type and time-since-adoption, it is possible that these results may reflect Korea's unique outsourcing situation and environment. In Korea, IT outsourcing is a rapidly growing business practice adopted primarily by the conglomerate-affiliated firms. The integration of affiliated firms' IT departments into a group IT company has been a major trend among Korean conglomerate groups such as Samsung, LG, and Hyundai, and SK. The IT companies of the conglomerate groups hold about a 60% share of the Korean outsourcing market [Lee, 1997]. This phenomenon results from the "guaranteed" outsourcing contracts they secure from the other firms in their group. As a result, firms affiliated with the conglomerate group have gotten outsourcing service from their group IT company during the similar time length, regardless

of their industry type. Such situational factors may have contributed to the non-significant impact of the two control factors on outsourcing success. For organization size, despite the fact that the sampling frame consist of 500 companies randomly selected from 10,000 companies, about half of the respondent companies had an annual sales revenue of below $500 million, which would not be considered large in other countries; thus reducing the impact of organization size on outsourcing success. Though three control variables are insignificant, the results drawn from Korea-specific data may be applicable to firms elsewhere that have exclusive relationships with a specific IT outsourcing company, and allow use to augment existing US-based and European research to provide a more international perspective on IT outsourcing.

Finally, the strategic patterns identified in this study provide organizations with a benchmark against which they can compare their current alignments between business strategy and outsourcing strategy. With the increasing attention paid to IT outsourcing, it is imperative that organizations recognize the importance of the alignment between outsourcing and business strategies. This study emphasized the benefits of the fit patterns over the misfit ones. Therefore, organizations with the misfit patterns can seriously consider changing their current alignment to have better outsourcing gains and firm performance.

LIMITATIONS

Despite the above implications, there are some limitations associated with this study. First, the metrics for outsourcing success clearly need further development. While the prior instruments provide a starting point for assessing the degree of outsourcing success, stronger metrics may evince clearer distinctions across strategies. Second, the typologies used in this study – defenders, analyzers, and prospectors – are simplified pure strategies. In practice, organizations may combine them flexibly. However, this study did not consider any hybrid approaches to avoid complicating our analysis. Third, in cases where multiple vendors had different contract types and contract periods, this study asked the respondents to select the dominant contract type and its period of outsourcing, which may compromise the findings of the study. Finally, the results of this study may not be completely generalizable since the sample was restricted to Korea. While IT outsourcing in Korea is likely to have many characteristics that are similar to the American and European outsourcing environments, the practice of outsourcing and its socio-economic environment may indeed have played a distinctive role in the findings of this study. Hence, the results of this study must be carefully interpreted.

SUGGESTIONS FOR FUTURE RESEARCH

The results of this study suggest that outsourcing alignment with business strategy is indeed viable to achieve the expected outsourcing benefits and firm performance. While many researchers have recognized the importance of this fit, this idea has not been adequately leveraged in examining IT outsourcing decisions. Therefore, this study is a pioneering attempt to adapt the concept of fit to outsourcing research.

This study suggests the following future research directions. First, as outsourcing grows in complexity, outsourcing researchers need to develop more sophisticated metrics to assess the success of outsourcing ventures. While outsourcing research has learned much from existing economic, organizational, and sociological theories, the distinctive characteristics of IT outsourcing relationships may call for theorizing efforts that specifically account for these characteristics. Second, this study adopted a configurational approach to investigate the issue of fit. This was undoubtedly an appropriate approach given the dearth of prior research in this area. However, now that we have identified fit patterns, future research may concentrate on theoretically refining these patterns and then applying alternate perspectives in studying this “fit”. For example, studying fit from a contingency perspective may yield additional insights into the advantages of the alignment between outsourcing strategy and firm strategy [Pugh et al. 1969; Teo and King 1997]. Third, this study concentrated on the fit between outsourcing strategy and business strategy. However, the features of the firm and the firm’s environment may influence the final outsourcing decision and the resulting success in IT outsourcing. Therefore, the notion of fit

should be broadened to include strategy-structure and task-technology relationships in the field of outsourcing.

Fourth, this study focused on the manner in which strategic patterns between outsourcing strategy and business strategy are specified prior to individual strategy decisions. Hence, this study did not consider process dimensions such as information sharing and trust that may be realized at a later stage. Studies that examine such factors may augment our understanding of firms' strategic patterns and their outcomes. Fifth, though this study adopted three predefined gestalts of outsourcing strategies, which consist of three major sub-dimensions including degree of integration, allocation of control and performance period, from Lee et al. (2004)'s study, strategic outsourcing can be defined from other perspectives such as the function being outsourced, the number of vendors, and so on. Therefore, a holistic view on outsourcing strategy needs to be suggested and examined to better understand diverse patterns of outsourcing strategy. Sixth, the data for this study were limited to a Korean sample. Hence, the replication of this study using a more extensive and geographically diverse area for the sample is needed to fine-tune the analysis. Finally, this study examined the concept of fit mainly from the client's perspective. An analysis of congruence in terms of the service provider may provide interesting results.

VII. CONCLUSIONS

Outsourcing offers enhanced ways for organizations to efficiently leverage their IT resources and to focus on core business. Consequently, an increasing number of organizations now look to IT outsourcing rather than pursuing in-house development. However, organizations often lack adequate models for deciding an appropriate alignment between business strategy and outsourcing strategy. A great deal of researches has discussed outsourcing and business strategies, but such studies addressed their importance separately without consideration of their combined effects. Thus, previous researches often yielded conflicting conclusions. In attempting a holistic analysis of the effects of the alignment between the two strategies on outsourcing success and firm performance, this study offers the requisite guidance to practitioners in their decision of outsourcing alignment with business strategy. Our findings suggest that the fit patterns between business strategy and outsourcing strategy (i.e., *defender and independent, prospector and embedded, and analyzer and arm's length*) appear to offer the greatest advantage in terms of outsourcing and firm performance. This should be the first step for us to view IT outsourcing not as a process entailing a decision independent of other aspects, but as one having an inextricable link with other business decisions.

ACKNOWLEGEMENT

The author thanks the anonymous reviewers for their insightful and helpful comments on an earlier version of this article. This work was supported by a 2006 Korea University Grant.

REFERENCES

Anderson, C.R., and Paine, F.T. "Managerial Perceptions and Strategic Behavior," *Academy of Management Journal* (18), 1975, pp.811-823.

Anosff, H.I., *Implanting Strategic Management*, Englewood Cliffs, NJ, Prentice Hall, 1984.

Apte, U. "Global Outsourcing of Information Systems and Processing Services," *The Information Society*, 7 (4), 1990, pp.287-303.

Arnett, K. P. and Jones, M. C., "Firms that Choose Outsourcing: A Profile", *Information & Management* (26:4), 1994, pp.179-188.

Attewell, P., and Rule, J. “Computing and Organizations: What We Know and What We Don't Know,” *Communications of the ACM* (27:12), 1984, pp.1184-1192.

Baker, W.E. “Market Networks and Corporate Behavior,” *American Journal Sociology* (6:3), 1990, pp.589-625.

Benko, C. “If Information System Outsourcing is the Solution, What is the Problem?” *Journal of Systems Management* November 1992, pp.32

Buchowicz, B.S. “A Process Model of Make vs. Buy Decision Making: The Case of Manufacturing Software,” *IEEE Transactions on Engineering Management* (38:1), 1991, pp.24-32.

Buck-Lew, M. “To Outsource or Not?,” *International Journal of Information Management* (12:1), 1992, pp.3-20.

Camillus, J.C., and Lederer, A.L. “Corporate Strategy and the Design of Computerized Information Systems,” *Sloan Management Review* (26:3), 1985, pp.35-42.

Chan, Y.E., Huff, S.L., Copeland, D.G., and Barclay, D.W. “Business Strategy, Information Systems Strategy, and Strategy Alignment,” *Information Systems Research* (8:2), 1997, pp.125-150.

Chatman, J.A., and Jehn, K.A. “Assessing the Relationship between Industry Characteristics and Organizational Culture: How Different Can You Be?,” *Academy of Management Journal* (37:3), 1994, pp.522-554.

Child, J. “Information Technology, Organization, and the Response to Strategic Challenges,” *California Management Review* (30:1), 1987, pp.33-50.

Choudhury, V., and Sabherwal, R. “Portfolios of Control in Outsourced Software Development Projects,” *Information Systems Research* (14:3), 2003, pp.291-314.

Chung, S., Rainer, R., and Lewis, B. “The Impact of Information Technology Infrastructure Flexibility on Strategic Alignment and Applications Implementation,” *Communications of the AIS* (11), 2003, pp.2-30.

Conant, J.S., Mokwa, M.P., and Varadarajan, P.R. “Strategic Types, Distinctive Marketing Competencies and Organizational Performance: A Multiple Measures-based Study,” *Strategic Management Journal* (11), 1990, pp.365-383.

Cullen, S., Seddon, P., and Willcocks, L. “Managing Outsourcing: The Lifecycle Imperative,” *MIS Quarterly Executive* (4:1), 2005, pp.229-246.

Delery, J. and Doty, D.H. “Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurational Performance Predictors,” *Academy of Management Journal* (39:4), 1996, pp.802-835.

Dess, G.G., Ireland, R.D., and Hitt, M.A. “Industry Effects and Strategic Management Research,” *Journal of Management* (16), 1990, pp.7-27.

Dibbern, J., Goles, T., Hirschheim, R., and Jayatilaka, B. “Information Systems Outsourcing: A Survey and Analysis of the Literature,” *The DATABASE for Advances in Information Systems* (35:4), 2004, pp.6-102.

Dillman, D.A. “The Design and Administration of Mail Survey,” In W.R. Scott and J. Blake (eds.), *Annual Review of Sociology*, 1991, pp.225-249.

Diromualdo, A., and Gurbaxani, V. “Strategic Intent for IT Outsourcing,” *Sloan Management Review* Summer 1998, pp.67-80.

Drazin, R., and Van de Ven, A.H. "Alternative Forms of Fit in Contingency Theory," *Administrative Science Quarterly* (30), 1985, pp.514-539.

Dwyer, F.R., Schurr, P.H., and Oh, S. "Developing Buyer-seller Relationships," *Journal of Marketing* (51:2), 1987, pp.11-27.

Dyer, J., and Singh, H. "The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage," *Academy of Management Review* (23:4), 1998, pp.660-679.

Earl, M.J. *Management Strategies for Information Technology*, Prentice Hall, Englewood Cliffs, NJ, 1989.

Etzioni, A. *A Comparative Analysis of Complex Organizations*. Holt, Rinehart and Winston, NY, 1961.

Fitzgerald, G., and Willcocks, L. "Contract and Partnerships in the Outsourcing of IT", *Proceeding of the Fifteenth International Conference on Information Systems, Vancouver, British Columbia, Canada*, December 1994, pp.91-98.

Govindarajan, V. "A Contingency Approach to Strategy Implementation at the Business Unit Level: Integrating Administrative Mechanisms with Strategy," *Academy Management Journal* (31:4), 1988, pp.828-853.

Granovetter, M. "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* (91:3), 1985, pp.481-510.

Gresov, C. "Exploring Fit and Misfit with Multiple Contingencies," *Administrative Science Quarterly* (34), 1989, pp.431-453.

Grover, V., Cheon, M.J., and Teng, J.T.C., "The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions," *Journal of Management Information System* (12:4), 1996, pp.89-116.

Grover, V., Teng, J.T.C., and Fiedler, K.D. "Investigating the Role of Information Technology in Building Buyer-Supplier Relationships," *Journal of the AIS* (3), 2002, pp.217-245.

Gupta, U.G., and Gupta, A. "Outsourcing The IS Function: Is It Necessary for Your Organization?" *Information Systems Management* Summer 1992, pp.44-50.

Hair, J.F., Anderson, R.E., Tatham, R.L., and Black, W.C. *Multivariate Data Analysis* (5th ed.), Prentice Hall, Upper Saddle River, NJ, 1998.

Hambrick, D.C. "Some Tests of the Effectiveness and Functional Attributes of Miles and Snow's Strategic Types," *Academy of Management Journal* (26), 1983, pp.5-26.

Hitt, M.A., and Ireland R.D. "Corporate Distinctive Competencies, Strategy, Industry and Performance," *Strategic Management Journal* (6), 1985, pp.273-297.

Hu, Q., Saunders C., and Gebelt M. "Diffusion of Information Systems Outsourcing: A Reevaluation of Influences Sources," *Information Systems Research* (8:3), 1997, pp.288-301.

Jarillo, J. "On Strategic Networks," *Strategic Management Journal* (9:1), 1988, pp.31-41.

Kerlinger, F.N. *Foundations of Behavioral Research* (3rd ed), Holt, Rinehart and Winston, Fort Worth, 1986.

King, W.R., "Strategic Planning for Management Information Systems," *MIS Quarterly* (2:1), 1978, pp.27-37.

Klepper, R.J. "The Management of Partnering Development in IS Outsourcing," *Journal of Information Technology* (10:4), 1995, pp.249-258.

Kogut, B. and Zander, U. "What Firms Do? Coordination, Identity, and Learning," *Organization Science* (7:5), 1996, pp.502-518.

Koh, C., Ang, S., and Straub, D.W. "IT Outsourcing Success: A Psychological Contract Perspective," *Information Systems Research* (15:4), 2004, pp.356-373

Lacity, M.C., and Hirschhein, R. *Information Systems Outsourcing: Myths, Metaphors and Realities*, John Wiley & Sons, NY, 1993

Lacity, M.C., and Willcocks, L.P. "An Empirical Investigation of Information Technology Sourcing Practices: Lessons from Experience," *MIS Quarterly* (22), 1998, pp.363-408.

Lacity, M.C., and Willcocks, L.P. *Global Information Technology Outsourcing: In Search of Business Advantage*. John Wiley & Sons, Chichester, UK, 2001.

Lacity, M.C., Willcocks, L.P., and Feeny, D.F. "IT Outsourcing: Maximize Flexibility and Control," *Harvard Business Review* May-June 1995, pp.84-93.

Lacity, M.C.; Willcocks, L.P., and Feeny, D.F. "The Value of Selective IT Sourcing," *Sloan Management Review* Spring 1996, pp.13-25.

Lee, J.N., and Kim, Y.G, "Effect of Partnership Quality on IS Outsourcing Success: Conceptual Framework and Empirical Validation," *Journal of Management Information Systems* (15:4), 1999, pp.29-61.

Lee, J.N. "Information Systems Outsourcing Strategies for Affiliated Firms of the Korean Conglomerate Groups," *Journal of Strategic Information Systems* (6:3), 1997, pp.203-229.

Lee, J.N., Miranda, S.M., and Kim, Y.M. "IT Outsourcing Strategies: Universalistic, Contingency, and Configurational Explanations of Success," *Information Systems Research* (15:2), 2004, pp.110-131.

Liebeskind, J., Oliver, A., Zucker, L., and Brewer, M. "Social Networks, Learning, and Flexibility: Sourcing Scientific Knowledge in New Biotechnology Firms," *Organizational Science* (7:4), 1996, pp.428-443.

Linder, J. "Transformational Outsourcing," *Sloan Management Review* Winter 2004, pp.52-58.

Loh, L., and Venkatraman, N. "Diffusion of Information Technology Outsourcing: Influence Sources and The Kodak Effect," *Information Systems Research* (3:4), 1992, pp.334-358.

Malnight, T.W. "Globalization of an Ethnographic Firm: An Evolutionary Perspective," *Strategic Management Journal* (16), 1995, pp.119-141.

Martinez, J.I., and Jarillo, J.C. "The Evolution of Research on Coordination Mechanisms in Multinational Corporations," *Journal of International Business Studies*, Fall 1989, pp.489-511.

Meyer, N.D. "A Sensible Approach to Outsourcing," *Information Systems Management* (11:4), 1994, pp.23-27.

Miles, R.H., and Snow, C.C. "Designing Strategic Human Resource Systems," *Organizational Dynamics* (13:1), 1984, pp.36-52.

Miles, R.H., and Snow, C.C. *Organization and Environment,* Harvard Business School, Division of Research, Boston, 1978.

Milgate, M. *Alliances, Outsourcing, and the Lean Organization*. Quorum Books, Connecticut, USA, 2001.

Milgrom, P., and Roberts, J. "Complementarities and Fit: Strategy, Structure and Organizational Change in Manufacturing," *Journal of Accounting and Economics* (19), 1995, pp.179-208.

Miller, D., and Shamsie, J. "The Resource-based View of the Firm in Two Environments: The Hollywood Firm Studios from 1936 to 1965," *Academy of Management Review* (39:3), 1996, pp.519-543.

Miranda, S.M., and Kavan C.B. "Moment of Governance in IS Outsourcing: Conceptualizing Effects of Contracts on Value Capture and Creation," *Journal of Information Technology* (20:3), 2005, pp.152-169.

Nunnally, J.C. *Psychometric Theory*, McGraw-Hill, NY, 1978.

Penrose, E. *The Theory of Growth of the Firm.* John Wiley & Sons, NY, 1959.

Perry, W., and Devinney, S. "Achieving Quality Outsourcing," *Information Systems Management* Spring 1997, pp.23-26.

Pfeffer, J., and Salancik, G.R. *The External Control of Organizations: A Resource Dependence Perspective*, Harper and Row, NY, 1978.

Poppo, L., and Zenger, T. "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?" *Strategic Management Journal* (23), 2002, pp.707-725.

Pugh, D.S., Hickson, D.J., Hinings, C.R., and Turner, C. "The Context of Organization Structure," *Administrative Science Quarterly* (14:1), 1969, pp.91-112.

Quinn, J.B. "Outsourcing Innovation: The New Engine of Growth," *Sloan Management Review* Summer 2000, pp.13-28.

Quinn, J.B., and Hilmer, F.G. "Strategic Outsourcing," *Sloan Management Review* (35:4), 1994, pp.43-55.

Reponen, T. "Outsourcing or Insourcing," *Proceeding of the Fourteenth International Conference on Information Systems*, December 5-8, 1993, pp.103-115.

Richmond, W.B., and Seidmann, A. "Incomplete Contracting Issues in Information Systems Development Outsourcing," *Decision Support Systems* (8), 1992, pp.459-477.

Saaksjarvi, M. "Success of Outsourcing and Strategic Alignment as Predictors of IS Effectiveness," in *Information Systems Outsourcing: Enduring Themes, Emergent Patterns and Future Directions*, R. Hirschheim, A. Heinzl, and J. Dibbern (eds), Springer Verlag, Berlin, 2002, pp.311-328.

Sabherwal, R. "The Role of Trust in Outsourced IS Development Projects," *Communications of the ACM* (42:2), 1999, pp.80-86.

Sabherwal, R., and Chan Y. "Alignment between Business and IS Strategies: A Study of Prospectors, Analyzers, and Defenders," *Information Systems Research* (12:1), March 2001, pp.11-33.

Saunders, C., Gebelt, M., and Hu, Q. "Achieving Success in Information Systems Outsourcing," *California Management Review,* (39:20), 1997, pp.63-79.

Segal, M. "Organization and Environment: A Typology of Adaptability and Structure," *Public Administration Review* (35), 1974, pp.212-220.

Segev, E., "A Systematic Comparative Analysis and Synthesis of Two Business Level Strategic Typologies," *Strategic Management Journal* (10), 1989, pp.487-504.

Shortell, S.M., and Zajac, E.J. "Perceptual and Archival Measures of Miles and Snow's Strategic Types: A Comprehension Assessment of Reliability and validity," *Academy of Management Journal* (33), 1990, pp.817-832.

Smith, K.G., Guthrie, J.P., and Chen, M.J. "Miles and Snow's Typology of Strategy, Organizational Size, and Organizational Performance," *Academy of Management Best Papers Proceeding*, 1986, pp.45-49.

Snow, C.C., and Hambrick, D.C. "Measuring Organizational Strategies: Some Theoretical and Methodological Problems," *Academy of Management Review* (5:4), 1980, pp.527-538.

Snow, C.C., and Hrebiniak, L.G. "Strategy, Distinctive Competence, and Organizational Performance," *Administrative Science Quarterly* (25), 1980, pp.317-336.

Tas, J., and Sunder, S. "Financial Service Business Process Outsourcing," *Communications of the ACM* (47:5), 2004, pp.50-52.

Teo, T.S.H., and King, W.R. "Integration between Business Planning and Information Systems Planning: An Evolutionary-Contingency Perspective," *Journal of Management Information Systems* (14:1), 1997, pp.185-214.

Uzzi, B. "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness," *Administrative Science Quarterly* (42:1), 1997, pp.35-67.

Venkatraman, N. "The Concept of Fit in Strategy Research: Toward Verbal and Statistical Correspondence," *Academy of Management Review* (14:3), 1989, pp.423-444.

Weill, P., Subramani, M., and Broadbent, M. "Building IT Infrastructure for Strategic Agility," *Sloan Management Review* Fall, 2002, pp.57-65.

Welch, J.A., and Nayak, P.R. "Strategic Sourcing: A Progressive Approach to the Make or Buy Decision," *Academy of Management Executive* (6:1), 1992, pp.23-31.

Willcocks, L.P., and Kern, T. "IT Outsourcing as Strategic Partnering: The Case of the UK Inland Revenue," *European Journal of Information Systems* (7), 1998, pp.29-45.

Willcocks, L.P., Lacity, M., and Fitzgerald, G. "Information Technology Outsourcing in Europe and the USA: Assessment Issues," *International Journal of Information Management* (15:5), 1995, pp.333-351.

Williamson, O. "Transaction Cost Economics and Organization Theory," in N.J. Smelser and R. Swedberg (eds), *The Handbook of Economic Sociology*. Princeton University Press, Princeton, NJ, 1994.

Williamson, O. *The Economic Institutions of Capitalism: Firms, Markets and Relational Contracting*, The Free Press, NY, 1985.

Zahra, S.A., and Pearce, J.A. "Research Evidence on the Miles-Snow Typology," *Journal of Management* (16:4), 1990, pp.751-768.

Zajac, E., and Shortell, S.M. "Changing Generic Strategies: Likelihood, Direction and Performance Implications," *Strategic Management Journal* (10), 1989, pp.413-430.

APPENDIX: THE STRUCTURE OF SURVEY INSTRUMENT

- Organization Strategy

  Question: We are interested in understanding how you would characterize your organization. Please place an X next to the statement to which you agree the most on the space provided for.

Types of Organization Strategy	Selection
The organization attempts to identify and maintain a secure niche in a relatively stable product or service area by offering a limited range of products or services but with higher quality, superior service, lower prices, and so forth. (Defender)	( )
The organization attempts to be the "first mover" in new products and market areas by maintaining a broad product-market domain, and by quickly responding to new opportunities and competitions. (Prospector)	( )
The organization attempts to be a "market follower" by maintaining a stable and limited range of cost efficient products or services, and by carefully monitoring the actions of major competitors. (Analyzer)	( )

- Outsourcing Strategy

  Question: We are interested in understanding how you would characterize your outsourcing strategy. Please place an X next to the statement to which you agree the most on the space provided for..

Types of Outsourcing Strategy	Selection
The outsourcing strategy is to cope with the differences between desired capabilities and actual capabilities by acquiring resources from external service providers with minimal dependency–achieving minimal outsourcing (less than 20% of IT budget), buy-in contract, and maintaining a short-term relationship (less than 4 years) with one or more service providers through resource purchases. (Independent)	( )
The outsourcing strategy is to minimize transaction cost by outsourcing only selective IS functions (20% to 80% of IT budget) and reducing the risk through a fee-for-service contract–achieving a medium-term relationship (from 4 to 7 years) with one or more service providers through detailed contracts. (Arm's length)	( )
The outsourcing strategy is to outsource most of IS functions (more than 80% of IT budget) to one or more service providers with whom close and personalized relationships have been established in order to facilitate efficient governance and yield relational advantages–achieving long-term and exclusive relationships (more than 7 years) with service providers. (Embedded)	( )

- Outsourcing Gains

  Question: Please check the number corresponding to your organization's degree of achievement through your current IT outsourcing strategy in conjunction with each of following questions.

Dimensions of Outsourcing Gains	Scale
Operational efficiency	1 (lowest) – 10 (highest)
Technological leadership	1 (lowest) – 10 (highest)
Responsiveness to business needs	1 (lowest) – 10 (highest)

- Control Variables

Question: Which of the following categories does your business fall under? (Encircle the number.)		
1. Banking and Finance	2. Manufacturing	3. Information and telecommunication
4. Retail and Wholesale	5. Construction	6. Others (pleases specify) _____
Question: Please indicate your organization's approximate:		
● Total number of employees (as of the previous financial year): ( )		
● Total amount of sales volume (as of the previous financial year): ( )		
● Year when IT outsourcing was first adopted: ( )		

ABOUT THE AUTHOR

Jae-Nam Lee is an Assistant Professor in the Korea University Business School in Seoul, Korea. He was formerly on the faculty of both the School of Business IT at Kookmin University in Seoul, Korea and the Department of Information Systems at the City University of Hong Kong. He holds M.S. and Ph.D. degrees in MIS from the Graduate School of Management of the Korea Advanced Institute of Science and Technology (KAIST) in Seoul. His research interests are IT Outsourcing, Knowledge Management, e-Commerce, and IT deployment and impacts on organizational performance. His published research articles appear in *MIS Quarterly*, *Information Systems Research*, *Journal of MIS*, *Journal of the AIS*, *IEEE Transactions on Engineering Management, European Journal of Information Systems*, *Communications of the ACM, Information & Management*, and others. He also serves on the editorial review boards of *Journal of the AIS, Communications of the AIS, Information & Management,* and *Journal of Global Information Management*.

.

Communications of the Association for Information Systems

ISSN: 1529-3181