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The Impact of Outsourcing Strategy on a Firm's Innovation and Internationalization*

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Abstract

Purpose **–** Based on transaction cost perspective and institution-based perspective, this research attempts to investigate the effect of outsourcing on a firm's performance and how it interacts with institutional context in which the firms operate.

Research design, data, and methodology **–**With a sample of 164 manufacturing firms form South Korea, we examine the direct effects of outsourcing on the a firm's level of product innovation and internationalization and the moderating effects of competitive pressure and property right protection as important external factors that could affect the effectiveness of outsourcing decision.

Result **–** The findings show that outsourcing not only enhance a firm's capability to concentrate on its core competencies, but also to increase a firm's combinative capacity to acquire external knowledge. Furthermore, we finds that in a highly competitive environment, potential knowledge spillovers to other competitors may attenuate the potential benefits of outsourcing.

Conclusion **–** Outsourcing can enhance a firm's innovation activities by providing valuable access to external knowledge and also to complementary resources from the external partners, which in turn enables firms to focus on core competences.

Keywords: Outsourcing, Product innovation, Internationalization, Competitive pressure, Property right

JEL Classification Code: M10, M31.

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1. Introduction

As innovation is acknowledged as key source of a firm's competitive advantage, the growing number of research has analyzed a considerable antecedents of a firm's innovation. Among them, firm's internal factor such as dynamic capability and absorptive capacity is considered as important factors affecting a firm's innovation capabilities (Cohen & Levinthal, 1989; Danneels, 2002). Another important factor being considered is the external factors such as industry competition, suppliers' involvement, and the overall access to external knowledge (Veugelers & Cassiman, 1998). However, limited studies have examined under what condition outsourcing becomes a legitimate strategic choice to enhance performance from a firm's perspective.

Not only the outsourcing strategy has not been well explored in the current literature, but also the previous empirical studies on its performance effect remains to a large extent contradictory (Gilley & Rasheed, 2000; Laugen et al., 2005; Bengtsson, 2008). Amity and Wei (2004) found the positive effect of outsourcing on the level of productivity using firm-level data on US manufacturing sectors. On the other hand, Egger and Egger (2006) using European data in manufacturing sectors argue that outsourcing has a negative effect on productivity and innovation. While the most previous research studies have mainly considered outsourcing as operational mechanism to lower costs or to increase productivity (Abraham & Taylor, 1996), we aim to extend the current knowledge by refocusing outsourcing as a strategy strengthening its core competences, and thus a source of firms' sustainable competitive advantage.

On one hand, outsourcing allows access to valuable external knowledge by extending its business network (Chesbrough, 2003; Gorg & Hanley, 2011). At the same time, however, outsourcing tends to emphasize short-term profits and reinforces further short-term mind-set, which can reinforce path dependency toward existing capability rather than investing in R&D, thereby potentially decrease innovation. Quinn and Hilmer (1994) identified such short-term oriented mindset is one of risk factors for conducting outsourcing. More resources devoted to meet short-term goals, less resources is left for conducting innovation and enhancing a firm's competitiveness in the long-term (Lacity & Hirschheim, 1993; Weeks & Feeny, 2008; Lacity et al. 2010). This indicates that outsourcing strategy may not guarantee improved performance via cost saving or that outsourcing may provide benefits only under certain circumstances. We aims to examine environmental conditions in which outsourcing becomes effective for promoting a firm's innovation and internationalization.

Based on the samples of 164 Korean manufacturing firms, we examine performance implications of outsourcing and we strive to provide following contributions. First, we examine whether outsourcing can be implemented as a firm's strategic decision that affects its product innovation and internationalization. Second, we examined the potential moderating roles of institutional factors at the industry and country level on firms' outsourcing strategies. Taken together, we strive to provide answers to following research question, (a) does the firm's decision to outsource its production increase its product innovation probability and/or internationalization? (b) to what extent the institutional factors such as competitive pressure and property right influence the effectiveness of outsourcing decision of the firms?

The remainder of the paper is organized as follows. In the next session, the related literature is reviewed and hypotheses are developed accordingly. Following section discuss on the research methodology and results of this study. In the final section, we provide theoretical implications as well as managerial recommendations based on the results of this research.

2. Literature Review

Transaction cost theory is the dominant paradigm to explain the underlying mechanism for firm's internalization decision under different contexts, ranging from strategic alliances to equity joint venture (Gooroochurn & Hanley, 2007; Williamson, 1979). According to the transaction cost economists, in-house production (i.e., make decision) is preferred when transaction costs related to uncertainty and asset specificity are relatively high (Teece, 1985). On the other hand, the relying on market (i.e., buy decision or outsourcing) is preferred when the transaction costs related to collaborating with outside partners via arm-length relationship is relatively low.

Recently, however, outsourcing have been considered as a strategy that provide competitive advantages in addition to the traditional cost saving motives (Quinn, 2000; Quinn & Hilmer, 1994). The access to valuable external knowledge and a chance to enlarge a firm's external network by outsourcing has led many scholars and practitioners to start treat outsourcing as a strategic business option for enhancing business performances (Porter, 1980; Gulati, 1998). It is known that interaction with customers, suppliers, universities and other firms in the market

helps firms to bridge gaps in their information and resources that are not readily available internally (Gulati et al., 2000; von Hippel, 1988). Moreover, delegating production activities to external parties enables firms to save scarce organizational resources, which then can be invested into strengthening their core activities (Sharpe, 1995; McNally & Griffin, 2004). However, previous research have mostly emphasized on the cost saving benefits of outsourcing, so the effect of outsourcing on enhancing a firm's core competences has remain largely unknown (Harland et al., 2005; Veugelers & Cassiman, 1998).

Also, previous studies have shown that the relationship between a firm's strategic choice and performance is determined by not only firm capabilities but industry conditions as well as other institutional factors (North, 1990; Peng et al., 2008). According to Peng et al. (2008), institutions provide the context of competition among industries as institution have political (e.g., corruption), legal (e.g., laws and regulations), and societal aspects (e.g., attitudes towards foreign enterprises).

One external factor that could affect this relationship is industry competition in which the firm operates. On the one hand, competition may trigger innovation, as it induces companies to innovative to stay ahead of their competitors in the market (Lundvall & Nielsen, 1999; Smolny, 2003). On other hand, intense competition in the market may increase the potential knowledge leakage whereby opportunistic partners steal the core knowledge of a firm and sell it to other competitors in the market (Porter, 1990). In this case, the costs of maintaining relational governance with their suppliers increase dramatically and a firm may have to rely on the internal production rather than relying on the market.

One institutional factor that we consider in this study is the enforceability of property rights. Government policies may influence the innovativeness of firms by setting the 'rules of the game' and protecting their property right (Nelson, 1993). The more confident firms are that their property rights will be upheld in legal disputes, the less uncertainty they perceive in the relationship with their suppliers, thereby increasing the possibility of forming trust-based relationship with its suppliers, facilitating effective knowledge transfer (Doney & Canon, 1997; Das & Teng, 2000). Also, formal IP protection mechanisms such as patents grant a temporary monopoly to innovating firms, thereby encouraging firms to engage in innovation activities. The stronger this protection, the higher incentives for the firms to seek the external knowledge sourcing by building linking with other firms in the market, which in turn help them generate more innovation (Shan et al., 1994; Gulati et al., 2000).

On the basis of this theoretical foundation, we argue that the firm's strategic decision to outsource has an impact on innovation and internationalization, which is reflected in our research model presented in <Fig. 1>. In addition, we suggest that external factors of national and industrial environment could affect the relationship between outsourcing strategy and organizational outcomes.

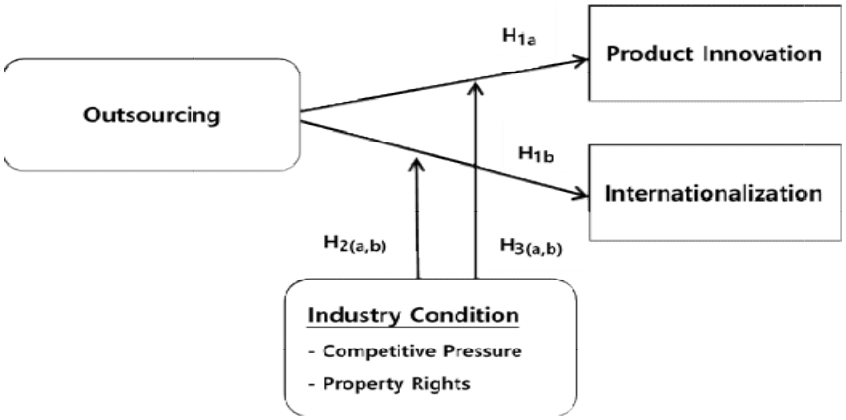

Figure 1: Research Model

3. Hypotheses

3.1. Outsourcing

Outsourcing implies the transfer of goods and services that were previously carried in-house to a specialized provider out in the market. Recent evidences suggest that firms utilize outsourcing with strategic motives of accessing to suppliers' knowledge for improving their business performance (Dyer & Nobeoka, 2000; Quinn, 2000;

Whitley & Willcocks, 2011). Extant literature also supports that relying on in-house production may constrain a firm's flexibility in the long run by increasing organizational commitment to a specific type of technology (Quinn, 2000). On the other hand, outsourcing allows a quick response to changes in the business environment because it reduces costs associated with bureaucracy in regards to a firm's structural changes in response to the market trends (D'Aveni & Ravenscraft, 1994; Dess et al., 1995).

In general, firms can concentrate on core competencies and improve its competitiveness by outsourcing other activities that are complementary in nature (Sharpe, 1995; Calantone et al., 2002; Berger et al., 2004). Core competencies represent the core knowledge and skills that the firm share across business units, providing a competitive advantage to the firm. Furthermore, more recent investigations have found that outsourcing may increase a firm's performance by enhancing the firm's ability to build strong links with external sources such as its suppliers (Chesbrough, 2003). It is known that interaction with external partners has a positive effect on innovation as it provides access to knowledge and resources that are not readily available internally (Shan et al., 1994; Dyer & Singh, 1998; Grossman & Helpman, 2005). Thus, we argue that the external linkages with suppliers through outsourcing will allow the firm to adapt more quickly to technology- and market-related changes, which can help increase the firm's innovation performance.

Additionally, prior literatures have analyzed and provided evidences supporting the relationship between outsourcing and internationalization. For example, in the empirical study on from network and internationalization, Camuffo et al., (2007) argued that firms gradually learn and accumulate knowledge about international business as a result of outsourcing. The external linkage with suppliers could work as conduits that channel the flow of information related to the foreign markets that may improve the firm's internationalization (Furlan et al., 2007). Thus, these findings lead us to propose the following hypothesis:

Hypothesis 1: A firm's strategic decision to outsource is positively related to (a) the probability of product innovation and (b) internationalization.

3.2. The Moderating Effect of Competitive Pressure

Research have shown that the firms choose mode of operation (i.e., internalization vs. outsourcing) depending on competitive industrial pressures they faced (Lundvall & Nielsen, 1999; Freel, 2005). Under competitive industrial environment, outsourcing is considered to be an efficient strategy which allow cost advantage enabling firms to win price competition (Cachon & Hacker, 2002).

At the same time, however, other scholars argued that firms can improve their market position in the product market by relying on internal production in a highly competitive industry (Grossman & Steger, 2007). They suggest that in-house production will allow the firm to operate more effectively, avoiding possible knowledge leakage to competitors with opportunistic behaviors. In this case, the potential cost advantage of conducting outsourcing could not exceed the potential risk of knowledge leakage in a highly competitive market. Likewise, Nieto and Santamaría (2007) found that in a competitive pressure environment, inter-firm alliances may have a negative impact on firm innovation. Farrell (2005) and Anderson (2006) also argue that in a competitive environment, relying on its internal capabilities enable firms to react quickly to market changes and new market opportunity by shortening time for coordination with its partner, while effectively reducing the risks of partner's opportunistic behaviors.

Sources of competitive advantage solely lie on the sets of unique and differentiated knowledge possessed by a firm. While cost advantages of outsourcing may strengthen market position when the competition level is low, securing core knowledge become a key for generating a firm's competitive advantage in highly competitive markets. Thus, we develop the following hypothesis:

Hypothesis 2: Competitive pressure negatively moderates the relationship between a firm's decision to outsource and (a) the product innovation and (b) internationalization.

3.3. The Moderating Effect of Property Right

Property rights represent a subset of the full range of mechanisms by which a firm can protect its proprietary assets and knowledge (Veugelers & Cassiman, 1998). There are formal mechanisms such as patenting and copyrights, and informal mechanisms such as product complexity, secrecy, and lead time (Veugelers & Cassiman, 1998; Kanwar & Everton, 2003; Peng et al., 2008). The existing literatures suggest that strong property right

protection enhance trust between partners, which in turn enable effective knowledge transfer (Branstetter et al., 2006). Property right protection mostly depends on the enforceability of laws, which varies across countries. In an economy with strong protection and enforceability of property right, firms may share their core know-how and resources with their partners for effective collaboration. For instances, Buss and Peukert (2014) argue that the strength of patent enforcement encourages technology transfer to external partners. Empirical studies on the macro-level show that stronger intellectual property protection results in an increase in trade and royalty payments for transferred technology between participating firms, especially in knowledge-intensive industries (Branstetter et al., 2006; Canals & Sener, 2014).

Because innovation is the best source of growth, policymakers around the globe try to encourage firms' innovation by gradually strengthening the level of intellectual property rights (Lewis, 2008). The above discussion leads to the following hypothesis:

Hypothesis 3: The strength of property right positively moderates the relationship between a firm's strategic decision to outsource and (a) the product innovation and (b) internationalization.

4. Research Methodology

4.1. Sample and Data

The study uses the firm-level data from the Business Environment and Enterprise Performance Survey (BEEPS) 2005 database as previous literatures (Fritsch et al., 2001). BEEPS is designed to provide firm-level data on a specific range of issues regarding the business environment and firms' performances, in addition to business-government relations, firms financing, infrastructure, corruption, and other divers topics such as employees training and firm's innovation capability. The survey uses a stratified random sampling to ensure that the samples are representative of the relevant population of firms. BEEPS collect information about various firms' characteristics (for example size, age, access to finance, and infrastructure) and over ninety percent (90%) of the questions objectively ascertain characteristics of a country's business environment. The remaining questions assess the survey respondents' opinions on what are the obstacles to firm growth and performance. The mode of data collection is face-to-face interviews. In most cases, the survey sample frame is derived from the universe of eligible firms obtained from the country's statistical office. The strata for Enterprise Surveys are firm size, business sector, and geographic region within a country. Since in most economies, the majority of firms are small and medium-sized; Enterprise Surveys oversample large firms since larger firms tend to be engines of job creation. The sector breakdown is usually manufacturing, retail, and other services. For the purpose of this study, South Korea was selected from the BEEPS database to conduct the empirical research analysis. This research focuses on the manufacturing sector, which allows a total sample of 215 Korean firms. The effective sample is reduced to 164 firms due to missing data. Small size firms with 2 – 49 permanent full-time employees, medium firms 50 – 249 and large size firms that are more than 250 full-time employees constitute 60.37%, 17.07% and 22.56% of the total sample, respectively. The list of the sample distribution is shown in the Table 1 below.

Table 1: Sample Distribution

Firm Size	Number of Firms	Frequency (%)
Small (<50 employees)	99	60.37
Medium (50-249 employees)	28	17.07
Large (>250 employees)	37	22.56
Total	164	100

4.2. Measurement

The data of the innovation and internationalization measurements tool are collected through a questionnaire. The questionnaire survey has become a common method of collecting data in social sciences because not all strategy and

innovation measures have objective data. Previous studies have often used various measurements in the literature. Traditionally, researchers have used patent data for measuring innovation because of its availability and relatively access (Becheikh et al., 2006). However, as we previously discussed in the introduction, OECD Oslo manual (2005) defines innovation as the implementation of a new or significantly improved product good, service and/ or process. The definition suggests that innovation must have been implemented or introduced into the market. This is different from invention. Invention needs to be first translated into marketable new product and then become an innovation. An innovation addresses the use of or commercialization of an invention. That is why using patent data as an indicator to measure innovations may be inappropriate as it measures invention rather than innovation. Michie (1998) argued that patent data encounter challenges of overestimating the innovation process output by considering unsuccessful inventions into new products or process. Contrary to patent data, this study uses firm-based survey approach to acquire direct information on innovation. The firm-based survey is developed from the outset with the specific aim of acquiring information on innovative activities carried out in firms. It represents a direct measure of innovation, and it only includes innovations considered to be technologically and/or economically significant (Archibugi & Pianta, 1996). The firm-based surveys provide significant information on the evolution of technology, since they make it possible to record precisely when and how a certain innovation was introduced. Therefore, firm-based survey has become the standard method of collecting direct information on innovation (Michie, 1998).

Table 2: Correlation Analysis

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7
Innovation	0.52	0.501	1.000						
Outsourcing	0.26	0.441	.373**	1.000					
Competitive Pressure	2.68	1.123	.057	.144	1.000				
Intellectual Property	3.6	1.149	-.127	.013	-.003	1.000			
Firm Size	201.82	415.998	.219**	.240**	.141	.036	1.000		
Firm Age	30.15	155.487	.08	.148	.038	.035	.344**	1.000	
Largest Shareholder	72.42	30.325	-.074	-.162*	-.163*	.003	-.192*	.040	1.000

**p<0.01; *p<0.05, N= 164

Table 3: Correlation Analysis

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7
Internationalization	19.32	30.254	1.00						
Outsourcing	0.26	0.441	.148	1.000					
Competitive Pressure	2.68	1.123	-.105	.144	1.000				
Intellectual Property	3.6	1.149	.019	.013	-.003	1.000			
Firm Size	201.82	415.998	.185*	.240**	.141	.036	1.000		
Firm Age	30.15	155.487	.204**	.148	.038	.035	.344**	1.000	
Largest Shareholder	72.42	30.325	-.160*	-.162*	-.163*	.003	-.192*	.040	1.000

**p<0.01; *p<0.05, N= 164

Dependent variables. First, *product innovation* is measured by asking managers whether the firm had successfully developed a major new product line over the last 36 months. Innovation is measure with a dummy variable. We

utilize logistic regression analysis to investigate the effects of a set of variables on firm's probability to develop product innovation. Second, *internationalization* is gauged by asking managers about the percentage of foreign sales out of total sales. Following Shirokova and Tsukanova (2013), this study uses a cross-sectional ordinary least squares (OLS) regression to study the effect of a range of variables on the firm's probability of internationalization.

Independent variable. *Outsourcing* measurement is based on the explicit question on whether firms had outsourced a major production activity that was previously conducted in-house in the past three years. Outsourcing is thus measured with a dichotomous variable. According to this measurement, outsourcing involves a realignment of the firm's activities.

Moderating variables. This study includes two moderating variables that may influence the firm's innovative capacity and internationalization. First, *competitive pressure* is measured by a 4-likert scales in the survey. The question is related to the importance of competitive pressure on key decisions about the firm's business with respect to "reducing the production costs of existing products or services." Second, *intellectual property right* is measured by 6-likert scales. The measurement assess the degree of confidence by managers how the current legal system will uphold firm's property right in business disputes. Intellectual property rights indexes may prove useful when facing the issue of how stronger property right systems enhance innovativeness, or when trying to detect whether innovative countries display a higher attitude towards evolving the institutions associates with stronger intellectual property rights.

Control variables. A set of control variables based on previous study that may influence this research are included in this analysis. The research measures *firm size* by asking a direct question related to the number of full-time employees working within a company, following Jansen et al. (2006). *Firm age*, defined as the logarithm of the number of years in operation since a firm's establishment within a country, is being controlled for, as research suggests that it influences the rate of innovations due to the firm's cumulative experience over time (Sorensen & Stuart, 2000). *Large shareholder* is measured by asking question about the percentage owned by the largest shareholder(s). Finally, R&D often considered as an indicative of the internal effort of the firm in increasing its knowledge-based performances is measured by the ratio of the R&D spending out of the total sales.

Tables 3 and 4 show the descriptive statistics and bivariate correlations regarding the above explanatory variables. Approximately 52% of this sample firms have reported product innovation over the last 36 months. The table presents the mean, standard deviations, and correlations among variables. The Pearson correlation coefficients displayed in the table suggest a low correlation between explanatory variables. In addition, a more robust test for multicollinearity is conducted. The analysis shows none of the variance inflation factors to be higher than 1.2, suggesting that multicollinearity is not a major concern (Hair et al., 1995).

4.3. Model Specification

The hypotheses developed with the firm-level data are tested using both logistic and ordinary least square (OLS) regressions. The full regressions model for the data analysis can be written as follow:

Logistic regression equation

$$PI = \beta 0(\text{Constant}) + \beta 1(\text{Control variables}) + \beta 2(\text{Outsourcing}) + \beta 3(\text{Competitive pressure}) + \beta 4(\text{Property rights}) + \beta 5(\text{Outsourcing} \times \text{Competitive pressure}) + \beta 6(\text{Outsourcing} \times \text{Property rights}) + \varepsilon \text{ (Error)}$$

OLS regression

$$I = \beta 0(\text{Constant}) + \beta 1(\text{Control variables}) + \beta 2(\text{Outsourcing}) + \beta 3(\text{Competitive pressure}) + \beta 4(\text{Property rights}) + \beta 5(\text{Outsourcing} \times \text{Competitive pressure}) + \beta 6(\text{Outsourcing} \times \text{Property rights}) + \varepsilon \text{ (Error)}$$

Where: PI = Product Innovation; I = Internationalization; $\beta 0$ denotes the intercept of the regression equation. $\beta 1$, $\beta 2$, $\beta 3$, $\beta 5$ and $\beta 6$ are the regression coefficients of the explanatory variables. The statistical software package used for data analysis was SPSS version 20.

5. Results

To test the proposed hypotheses, this paper analyzed the firm-level data using both logistic regression model and the ordinary least square regression (OLS) because of the different nature of the dependent variables. The regression

results are shown in table 4 and 5. In the first part of this research analysis, the dependent and/or main effect variables were regressed on the control variables in model 1. The result reported in table 4 Model 1 indicates that R&D intensity is significantly related to the probability of product innovation at the $p<0.01$ level. The other control variables are not significant. Model 2 was calculated with the control variables and the independent variable. Looking at the fit statistics, as moving from Model 1 to Model 2, -2log likelihood decreased from 207.808 to 185.919; Nagelkerke's pseudo R-square and Cox and Snell R-square respectively increased from 0.190 to 0.295 and 0.142 to 0.221. This suggests that the independent variable explain a reasonable amount of the variation. From the analysis in Model 2 the observed independent variable (outsourcing) has a statistically significant relationship towards product innovation $\beta= 1.778$, $p< 0.01$. The result support (H1a) the hypothesized effect of a firm's strategic decision to outsource positively related on the probability of product innovation. This means that a firm which outsources its production has a greater probability to spend more on research and development activities to introduce new product. The direct effect of competitive pressure and property right is introduced in Model 3 and only property right is negatively significant $\beta=-0.329$, $p<0.05$. Finally, the product terms of competitive pressure and outsourcing in addition to property right and outsourcing are respectively added in model 4. It is observed that the first product term (H2a) is significantly negative $\beta=-2.227$, $p<0.05$. This means that the effect of outsourcing on innovation becomes attenuated in a highly competitive pressure environment. The hypothesis (H3a) is not supported $\beta=0.381$, $p>0.10$.

Table 4: Outsourcing Decision on the Probability of Firm's Product Innovation. Logistic Regression Results

VARIABLES	(1)	(2)	(3)	(4)
Control variables				
Constant	-0.771 (0.650)	-1.037 (0.689)	-0.102 (0.965)	1.032 (1.219)
Firm size	-0.033 (0.140)	-0.110 (0.153)	-0.083 (0.155)	-0.033 (0.158)
Firm age	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)	0.000 (0.003)
Largest shareholder	0.003 (0.006)	0.005 (0.007)	0.006 (0.007)	0.004 (0.007)
R&D Intensity	0.323*** (0.088)	0.320*** (0.095)	0.324*** (0.096)	0.322*** (0.100)
Main effects				
Outsourcing		1.778*** (0.486)	1.795*** (0.492)	3.198*** (1.214)
Competitive pressure			0.025 (0.163)	-0.333 (0.291)
Property right			-0.329** (0.162)	-0.371** (0.182)
Moderating effects				
Outsourcing X Competitive pressure				-2.227** (1.011)
Outsourcing X Property right				0.381 (0.462)
-2 Log likelihood	201.808	185.919	181.613	169.039
Nargelkerke R^2	0.190	0.295	0.322	0.397
Cox and Snell R^2	0.142	0.221	0.242	0.298

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$. Notes, N= 164.

<Table 5> below represents the results of the regression analysis (OLS) between internationalization and outsourcing. According to the findings observed in Model 1 which reports the regression with only control variables, firm age is positively related to internationalization. Model 2 includes the explanatory variable and control variables. It is observed that there exist no statistically significant relationship between outsourcing and internationalization (β=3.697, p>0.10), (H1b) is not supported. Next in Model 3 are included the direct effect of competitive pressure and property right. Competitive pressure is negatively significant with (β=-4.288, p<0.05) and property right is insignificant (β=0.036, p>0.10). Finally, the product terms of competitive pressure and outsourcing (H2b); property right and outsourcing (H3b) are respectively added in model 4. The first product term (H2b) is insignificant (β=3.546, p>0.10) and the second product term (H3b) is significant (β=8.367, p<0.05).

Table 5: Outsourcing Decision on Internationalization. OLS Regression Results

VARIABLES	(1)	(2)	(3)	(4)
Control variables				
Constant	21.500** (8.598)	20.954** (8.651)	32.510*** (12.247)	32.201*** (12.196)
Firm size	0.125 (1.858)	-0.008 (1.872)	0.446 (1.877)	0.513 (1.890)
Firm age	0.036** (0.015)	0.035** (0.015)	0.035** (0.015)	0.034** (0.015)
Largest shareholder	-0.111 (0.082)	-0.108 (0.082)	-0.126 (0.082)	-0.113 (0.082)
R&D Intensity	1.906 (1.171)	1.804 (1.183)	1.610 (1.178)	1.457 (1.177)
Main effects				
Outsourcing		3.697 (5.520)	4.845 (5.510)	4.363 (5.509)
Competitive pressure			-4.288** (2.077)	-3.930* (2.073)
Property right			0.036 (1.982)	-0.406 (1.991)
Moderating effects				
Outsourcing X Competitive pressure				3.546 (4.871)
Outsourcing X Property right				8.367** (4.223)
Adjusted R^2	0.075	0.072	0.085	0.098
F-Statistic	4.316***	3.530***	3.167***	2.976***
Durbin-Watson	2.178	2.191	2.183	2.181

*** p < 0.01; ** p < 0.05; * p < 0.10. Notes, N= 164.

6. Discussion and Limitation

This paper uses the Business Environment and Enterprise Performance Survey (BEEPS) data to analyze SMEs and large firms' product innovation and internationalization of manufacturing firms in Korea. This study aims at deepen the understanding of innovation by focusing on firm's strategic decision to outsource its production, and on the moderating effect of competitive pressure and property rights protection.

Several key findings emerged from the analysis of this research. First, the result provides robust evidences supporting previous empirical study that outsourcing is associated with a greater probability to spend on research and development and to introduce new products and upgrade existing products (Fritsch et al., 2001). Our results confirms a direct effect of outsourcing on a firm's innovation activities and its indirect effect of outsourcing in providing valuable access to external knowledge. In addition, outsourcing strategy can provide a firm valuable complementary resources from the external partners (Teece, 1986), and thus enables the firm to save time, focus on its core competences and develop new products via innovation activities (Sirmon et al., 2007). This finding indicates that the firm's decision to outsource its production is an important factor in determining the probability of innovation. Overall, our results indicate that strategic outsourcing brings a positive effects in terms of strengthening the product technological development of a firm.

The second main finding of this research relates to the competitive pressure implications towards to the relationship between outsourcing and product innovation. We find that competitive pressure negatively moderates the relationship between outsourcing and product innovation, indicating that high competitive pressure decreases outsourcing production activities. A rise in competitive pressure makes firms more exposed to each other's actions. Firms that conduct outsourcing in a competitive pressure environment could be exposed to managerial risks caused by potential knowledge diffusion and opportunistic behavior by its partners and this risks tend to affect firms more severely. Thus, competitive pressure weakens the strategic incentive for firms to conduct outsourcing. Our results contradict some previous empirical studies which have asserted that outsourcing production tend to be more found in the intermediate levels of competitive pressure (Leahy and Montagna, 2007). This means that manager's strategic considerations should not just rest on the economic dimension of the make-or-buy (outsourcing vs. in-house production) decision of the firm, but they also need to consider surrounding industrial factors for firms to innovate.

Our third contribution is that we examine the effect of intellectual property protection rights on the relationship between outsourcing and product innovation as well as internationalization. Our results show that property right protection positively moderates the relationship between outsourcing and internationalization; and it is insignificant between outsourcing and product innovation. In the latter case, this is indicative of the fact many Korean firms perceive intellectual property right not helpful but discouraging factors for their innovation activities. In a recent study of Korean firms, Song and Shin (2006) have provided empirical evidence that intellectual property rights are barriers for product development of smaller firms. Lall (2003) in his study regarding newly industrialized countries in Asia has provided empirical evidence supporting the fact that weak intellectual property rights regulation provides local firms with more opportunities for generating technological innovation capability by adapting and catching up.

However, the empirical result shows that intellectual property protection rights interplay between outsourcing and internationalization has a strong positive effect. This indicates that in contrast to Korean market, property right protection is indispensable practice and standard in the global business world. For example, Kanwar and Evenson (2003) showed that intellectual property right protection has a positive impact on R&D investments and innovation activities for firms, which it turn positively affects national economic growth. Overall, our results lead us to conclude that at the international level, intellectual property right protection is strong determinant of export.

This study has several limitations. First, this empirical research only examines a fraction of outsourcing as a determinant of innovation. The findings that were presented did not make a clear distinction between a cost-reducing production focused outsourcing versus R&D related outsourcing. Second, the current mean value of internationalization point to 19 percent which do not represent the actual export ratio of Korea and it brings questions to the overall representativeness of sample. Third, the empirical results were from a sample of Korean firms. Therefore, the result presented in this study should be applied with caution to other countries. Additional research in newly industrialized Asian countries will be valuable to verify the findings of this research. Fourth, the BEEPS data used in this research reflect a specific point in time and were not based on longitudinal approach. Moreover, this research analysis is based on the combination of SMEs and large firms sample. The findings, thus, do not give clear directions for each category of firms. Small and medium firms differ from large firm in terms of organizational capabilities and slack resources. Finally, because this study treats all outsourcing firms as homogeneous, there exists the risk of missing important features of outsourcing behaviors which can misguide managers.

References

Abraham, K. G., & Taylor, S. K. (1996). Firms' use of outside contractors: Theory and evidence. *Journal of Labor Economics, 14*(3), 394 - 424.

Amiti, M., & Wei, S. (2004). Services outsourcing, production and employment: Evidence from the US. *IMF Working Paper*, 4, 186.

Anderson, P. H. (2006). Regional clusters in a global world: Production relocation, innovation, and industrial decline. *California Management Review, 49*(1), 101–122.

Archibrugi, D., & Pianta, M. (1996). Measuring technology change through patents and innovation Surveys. *Technovation*, *16*(9), 451-468.

Bamberger, P. (2008). Beyond contextualization: using context theories to narrow the micro-macro gap in management research. *Academy of Management Journal, 51*(5), 839-846.

Becheikh, N., Laundry, R., & Amara, N. (2006). Lessons from innovation empirical studies in the manufacturing sector: A systematic review of the literature from 1993- 2003. *Technovation, 26*(5), 644-664.

Bengtsson, L. (2008). Outsourcing manufacturing and its effects on engineering firm performance. *International Journal of Technology Management*, *44*(3), 377-390.

Berger L. A., & Berger, D. R. (2004). *The Talent Management Handbook*, NY: McGraw-Hill.

Branstetter, L. G., Fishman, R., & Foley, C. F. (2006). Do Stronger Intellectual Property Rights Increase International Technology Transfer? *Quarterly Journal of Economics, 121*(1), 321–349.

Buss, P., & Peukert, C. (2014). R&D outsourcing and intellectual property infringement. *Research Policy, 44*(10), 1016.

Cachon, G. P., & Harker, P. T. (2002). Competition and Outsourcing with Scale Economies. *Management Sciences, 48*(10), 1314 -1333.

Calantone, R. J., Cavusgil, S.T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management, 31*(6), 515-24.

Camuffo, A., Furlan, A., Romano, P., & Vinelli, A. (2007). Routes towards supplier and production network internationalization. *International Journal of Operations and Production Management, 27*(4), 371-387.

Canals, C., & Sener, F. (2014). Offshoring and Intellectual Property Rights Reform. *Journal of Development Economics*, *108*(3), 17–31.

Chesbrough, H. (2003). The era of open innovation. *Sloan Management Review, 44*(3), 35-41.

Coase, R. H. (1937). The Nature of the Firm. *Economica, 4*(16), 386-405.

Cohen, W. M., & Levinthal, D. (1989). Innovation and learning: the two faces of R&D. *The Economic Journal*, *99*(397), 569-596.

D'Aveni, R., & Ravenscraft, D. (1994). Economies of integration versus bureaucracy costs: Does Vertical integration improve performance? *Academy of Management Journal, 37*(5), 1167-1206.

Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, *23*(12), 1095-1121.

Das, A., Handfield, R., Calantone, R., & Ghosh, S. (2000). A contingent view of quality management — the impact of international competition on quality. *Decision Science*, *31*(3), 649-90.

Das, T. K., & Teng, B. S. (2000). Instabilities of strategic alliances: an internal tension perspective. *Organization Science, 11*(1), 77-101.

Dess, G.G., Rasheed, A., McLaughlin, K., & Priem, R. (1995). The new corporate architecture. *Academy of Management Executive*, *9*(3), 7-20.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer–seller relationships. *Journal of Marketing Studies*, *61*(2), 35-51

Dyer, J. H., & Nobeoka, N. (2000). Creating and managing a high-performance knowledge sharing network: the Toyota case. *Strategic Management Journal, 21*(3), 345-367.

Dyer, J. H., & Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, *23*(4), 660-679.

Egger, H., & Egger, P. (2006). International Outsourcing and the Productivity of Low-skilled Labour in the EU. *Economic Inquiry*, *44*(1), 98-108.

Farrell, D. (2005). Offshoring: Value creation through economic change. *Journal of Management Studies, 42*(3), 675–683.

Freel, M.S. (2005). Patterns of innovation and skills in small firms. *Technovation*, *25*(2), 123-134.

Fritsch, M., & Lukas, R. (2001). Who cooperate on R&D? *Research Policy, 30*(2), 297–312.

Furlan, A., Camuffo, A., & Grandinetti, R. (2007). How do subcontractors evolve? *International Journal of Operations and Production Management*, *27*(1), 69-89.

Gilley, K. M., & Rasheed, A. (2000). Making more by doing less: An analysis of outsourcing and its effects on firm performance. *Journal of Management*, *26*(4), 763-790.

Gooroochum, N. & Hanley, A. (2007). A tale of two literatures: Transaction costs and property rights in innovation outsourcing. *Elsevier Science Direct Research Policy*, *36*(10), 1483-1495.

Gorg, H., & Hanley, A. (2011). Services Outsourcing and Innovation: An Empirical Investigation. *Economic Inquiry, 49*(2), 321-33.

Gould, D. M., & Gruben, W. C. (1996). The role of intellectual property rights in economic growth. *Journal of Development Economics*, *48*(2), 323-350.

Grossman, G.M., & Rossi-Hansberg, E. (2008). Trading Tasks: A Simple Theory of Offshoring. *American Economic Review*, *98*(5), 1978-1997.

Grossman, G.M., & Helpman, E. (2005). Outsourcing in a global economy. *The Review of Economic Studies*, *72*(1), 135-159.

Grossmann, V., & Steger, T. M. (2008). Anti-competitive conduct, in-house R&D, and growth. *European Economic Review*, *52*(6), 987-1008.

Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, *19*(4), 293-317.

Gulati, R., Nohria, N., & Zaheer, A. (2000). Strategic networks. *Strategic Management Journal, 21*(3), 203-215.

Hair, J. F., Anderson, R. E., Tatham, R.L., & Black, W. C. (1995). *Multivariate Data Analysis* (*4th ed.).* NJ: Englewood Cliffs.

Harland, C., Knight, L., Lamming, R., & Walker, H. (2005). Outsourcing: assessing the risks and benefits for organisations, sectors and nations. *International Journal of Operations and Production management*, *25*(9), 831-50.

Jansen, J. J. P., Van Den Bosch, F. A. J., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance. *Management Science*, *52*(11), 1661-74.

Kanwar, S., & Everton, R. (2003). Does intellectual property protection spur technological chance? *Oxford Economic Papers*, *55*(2), 235-264.

Kim, L. (1997). *Imitation to innovation: the dynamics of Korea's technological learning.* Boston: Harvard Business School Press.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, *3*(3), 383-397.

Lacity, M. C., & Hirschheim, R. (1993). The information systems outsourcing bandwagon. *Sloan management Review*, *35*(1), 73-86.

Lacity, M. C., Khan, S., Yan, A., & Willcocks, L. P. (2010). A review of the IT outsourcing empirical literature and future research directions. *Journal of Information Technology, 25*(4), 395-433.

Lall, S. (2003). Indicators of the relative importance of IPRs in developing countries. *Research Policy, 32*(9), 1657-1680.

Laugen, B., Acur, N., Boer, H., & Frick, J. (2005). Best manufacturing practices: what do the best performing companies do? *International Journal of Operations & Production Management*, *25*(2), 131-50.

Leahy, D., & Montagna, C. (2007). *Make-or-Buy in International Oligopoly and the Role of Competitive Pressure*. England: The University of Nottingham Press.

Lewis, J. A. (2008). Intellectual property protection: promoting innovation in a global information economy. *Center for Strategic and International Studies, 40*(8), 1953-2052.

Lundvall, B.-A., & Nielsen, P. (1999). Competition and transformation in the learning economy: illustrated by the Danish case. *Revue d'économie industrielle*, *88*(1), 345-365.

McNally, R. C., & Griffin, A. (2004). Firm and individual choice drivers in make-or-buy decisions: a diminishing role for transaction cost economics. *Journal of Supply Chain Management*, *40*(4), 4-17.

Michie, J. (1998). The internationalization of innovation process. *International Journal of the Economics of Business, 5*(3), 261-277.

Nelson, R.R. (1993). *National Innovation Systems: A Comparative Analysis*. NY: Oxford University Press.

Nieto, J., & Santamaría, L. (2007). The importance of diverse collaborative networks for the novelty of product innovation. *Technovation, 27*(6-7), 367-377.

North, D. C. (1990). *Institutions, institutional change and economic performance.* Cambridge: Cambridge University Press.

OECD & Eurostat. (2005). *Proposed guidelines for collecting and interpreting technological innovation data: Olso Manual.* Brussels: OECD.

Peng, M., Wang, D., & Jiang, Y. (2008). An institution-based view of international business strategy: a focus on emerging economies. *Journal of International Business Studies, 39*(5), 920-936.

Persaud, A., & Floyd, J. (2013). Offshoring and outsourcing of R&D and business activities in Canada technology firms. *Journal of Technology Management and Innovation*, *8*(3), 718-730.

Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors,* NY: Free Press.

Porter, M. E. (1990). *The competitive advantage of nations.* London: McMillan.

Quinn, J. B. (2000). Outsourcing innovation: The new engine of growth. *Sloan Management Review, 41*(4), 13-28.

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

Shan, W., Walker, G. & Kogut, B. (1994). Interfirm cooperation and startup innovation in the biotechnology industry. *Strategic Management Journal 15*(5), 387-94.

Sharpe, A. (1995). International perspectives on productivity and efficiency. *Review of Income and Wealth*, *41*(2) 221 - 237.

Shirokova, G., & Tsukanova, T. (2013). Impact of the domestic institutional environment on the degree of internationalization of SMEs in transition economies. *The International Journal of Entrepreneurship and Innovation, 14*(3), 193 - 204.

Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environment to create value: looking inside the black box. *Academic of management Review, 32*(1), 273-292.

Smolny, W. (2003). Determinants of innovation behavior and investment estimates for West-German manufacturing firms. *Economics of Innovation and New Technology, 12*(5), 449-63.

Song, J., & Shin, H-H. (2006). *The evolution of corporate patent strategy in Korea.* Seoul, Korea: Seoul National University Press.

Sorensen, J. B., & Stuart, T. E. (2000). Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, *45*(1), 81-112.

Teece, D.J. (1985) Transaction cost economics and the multinational enterprise. *Journal of Economic Behavior and Organization, 7*(1), 21 – 45.

Teece, D. (1986). Profiting from technological innovation, *Research Policy*, *15*(6), 285-305.

Veugelers, R. & Cassiman, B. (1998). Make and buy in innovation strategies: evidence from Belgian manufacturing firms. *Elsevier Science Research policy, 28*(1), 63-80.

Von Hippel, E. A. (1988). *The Sources of Innovation.* NY: Oxford University Press.

Weeks, M. R., & Feeny, D. (2008). Outsourcing: from cost management to innovation and business value. *California Management Review*, *50*(4), 127-146.

Whitley, E. A., & Willcocks, L. P. (2011). Achieving Step-Change in Outsourcing Maturity: Toward Collaborative Innovation. *MIS Quarterly Executive*, *10*(3), 95 - 107.

Williamson, O. E. (1979). Transaction-cost economics: the governance of contractual relations. *The journal of Law and Economics*, *22*(2), 233-261.