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Intragroup Resource Sharing of Business group in Korea: The Effects on the Internationalization of Group-affiliated companies[1]

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ABSTRACT

This study examines the roles of intangible and tangible resources of Korean business groups on internationalization by their member firms. Specifically, we argue that not all affiliates receive same benefit from group-level resource sharing. Instead, the effect of group-level knowledge sharing on affiliates' internationalization depends on individual affiliates' relative financial positions within a business group. Using samples of business groups in Korea, chaebols, hereafter chaebols, we find that foreign market knowledge at the group level has a positive impact on the internationalization of affiliated firms while the product knowledge has no impact. Furthermore, we also find evidences that an affiliate with high level of financial capacity receives internal pressures to stay in domestic market to secure internal capital market and support other sister affiliates' international activities.

Keywords: Knowledge sharing, Chaebols, Internationalization, Business group's knowledge, Financial capacity

1. INTRODUCTION

Multinational companies from emerging markets (EMNEs) have recently become major players in international business and have changed today's global business environment in numerous and unprecedented ways (Dunning 1988; Luo and Tung 2007; Xiao et al. 2013). For example, firms in emerging markets have rapidly increased their international sales and operations,

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thereby threatening the global market positions of many established multinational enterprises (MNEs). Many leading emerging market firms are comprised of business groups located in late-industrializing countries such as Korea, China, and India (Amsden and Hikino 1994; Lee et al. 2014).

Prior research on business groups from emerging markets tends to focus on the effect of business group affiliation on firm's performance (e.g., Chang and Hong 2000; Guillèn 2000; Khanna and Rivkin 2001; Khanna and Yafeh 2007). A firm's affiliation with a business group may enhance its performance since business group helps affiliated firms to fill institutional void through providing capital, labors, and technologies in an environment with under-developed institution. (Gaur and Kumar 2009; Khanna and Rivkin 2001; Khanna and Yafeh 2007; Kim et al. 2010). However, the such benefits from group affiliation may no longer be as effective as in an advanced institutional environment where other firms can also easily have access to strategic assets in the market via arm-length transactions (Chang 2003b; Gaur and Kumar 2009; Kim et al. 2010). Nonetheless, business group still plays an important role in advanced institutional environment because the amount of accumulated intangible resources such as strategic knowledge at the group level would be much larger than independent firms (Kim et al. 2010).

While a great number of affiliated firms of business groups have become global players in last two decades and numerous researches have been conducted on business groups, we still know little about the mechanism by which business group affiliates' performance enhanced through intra-resource sharing. Therefore, the purpose of this study is to examine the effect of business group resources and knowledge on the internationalization of affiliated firms. In this study, we argue that chaebols can increase the affiliated firms' internationalization by providing them with access to valuable knowledge at the group level. While previous studies have addressed the benefits and costs of business groups in terms of performance, this study deals with internationalization of affiliated firms. Moreover, the most of existing research on business groups have mainly focused on the difference between a business group's affiliated firm and non-affiliated firm. In these studies, they have treated business groups more or less equally through the use of dichotomous variable (Carney and Gedajlovic 2002; Khanna and Palepu 1997). However, in this study, we analyze only the companies belonging to a business group and differentiate business group with the amount of resources at the group-level, which could be shared to individual affiliates.

We also argue that not all affiliated firms benefit equally from group-level resources for their internationalization. Instead, the amount of group-level resource utilization hinges on the strategic roles that the affiliated firm plays in enlarging and securing internal capital within the group. As capital plays a crucial role in the business activities of any product market and

Korea is known for its difficulty of having access to financial resources, an affiliated firm that generates significant revenues in domestic market may be given a special task of supporting its affiliated sister firms rather than seeking foreign market opportunities themselves.

Using the sample of Korean business groups, *chaebols*, from 2000 to 2012, we find that knowledge sharing within a business group contribute to the affiliated firms' internationalization. However, the benefits of such intra-resources sharing on internationalization diminish when an affiliated firm has a great financial capacity with revenues in domestic market to secure internal capital market at the group level.

In doing so, this study contribute to extend the current literature on business group by identifying two strategic group resources that promote an affiliated firm's internationalization; namely foreign market knowledge and product development knowledge (Tanriverdi and Venkatraman 2005). This study sheds light on the 'paragons vs. parasites' (Guest and Sutherland 2010; Khanna and Yafeh 2007) debate over business groups by examining their internal resource sharing. That is, although the most affiliates may benefit from the accumulated knowledge at the group level, few firms with great capability generating financial revenues experiences a great deal of internal pressure from its headquarters to remain in domestic market without taking any unnecessary risks doing business abroad.

In the next section, we present an empirical study designed to validate the relationship, we propose exists between group-level resources and internationalization and the moderating role of the financial capacity of an affiliated firm. We then conclude by discussing our findings, managerial implications, limitations, and potential avenues for future research.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES

Business groups can be defined as "a set of legally independent firms under common administrative control" (Chang and Hong 2000, p. 429; Khanna and Rivkin 2001; Leff 1978). While the specific characteristics of business groups vary across countries, they share a common feature in that business groups operate in diverse industries under the control of a founder family (Ghemawat and Khanna 1998; Granovetter 1994). Affiliated firms with a family membership can facilitate resource sharing among member firms (Khanna and Rivkin 2006; Lamin 2013). Such social ties have been found to not only increase the number of interactions between the member firms, but also encourage firms to exchange more sensitive, yet crucial information to compete successfully with other firms (Kim and Lee 2015; Lamin 2013).

Chaebols, which is one of form of business group in South Korea, are known for their high international orientation (Lee et al. 2014) as well as their remarkable presences in the global market (Chang and Hong 2000; Guillèn 2000; Kim et al. 2010; Lee et al. 2014). Historically, to promote economic growth, the Korean government pursued export-oriented policies during the 1960s and 1970s, providing various supports and subsidies to *chaebols* (Chang and Hong 2000). For example, *chaebols* could obtain easy access to capital with low interest rates because the government guaranteed their credit for executing huge projects such as building heavy manufacturing facilities (Chang and Hong 2000). In addition, Korean firms have traditionally had strong incentives for international expansion from the past due to the small domestic market (Lee et al. 2014). In this paper, we argue that *chaebols* membership may motivate its affiliate firms to internationalize because they can have access to valuable resources at the group level. While the market-oriented institutional changes and economic reforms have strengthened a large part of Korean factor markets (Chang 2003a; Chang and Hong 2000), access to capital has still remained as main problems conducting business in Korea (Chang and Hong 2000). Therefore, the theoretical explanations, which posit that a business group has arose from with market imperfections, needs re-examination. This paper aims to find out whether business group affiliation provides additional benefits such as resource sharing among member firms. The founding families of *chaebols* utilize cross-shareholding to tightly control independent affiliated companies to facilitate interfirm cooperation by allowing access to valuable resources and information among sister affiliates (Chang 2003a; Fudenberg and Tirole 1985). In this vein, c*haebols* offer a particularly interesting setting for examining the links between resource sharing and affiliated firms' internationalization.

2.1. Within-group intangible resource sharing for chaebols

According to the resource-based view, a firm' s intangible resources such as technology and brand serve as particularly important sources of sustainable competitive advantages due to the difficulty that competitors have in imitating (Barney 1986; Wernerfelt 1984). Prior studies have found that not only does possessing intangible resources improve a firm's performance as well as its international activities (Kogut and Zander 1992; Prahalad and Hamel 1990; Teece et al. 1997).

Several studies in international business field have emphasized the role of intangible resources on firms' internationalization such as foreign market knowledge (e.g., Barkema and Vermeulen 1998; Johanson and Vahlne 1977; Lamin 2013; Luo and Peng 1999), and technological and advertising knowledge (e.g., Caves 1982; Chang and Hong 2000; Chatterjee and Wernerfelt 1991; Montgomery and Hariharan 1991; Sharma and Kesner 1996). Based on this stream of research, we divide intangible resources of business group that can influence its affiliates' internationalization into two types: foreign market knowledge and product development knowledge. The roles that these two intangible resources play could be different. First of all, the literature in international business field has emphasized the importance of foreign market knowledge with internationalization process theory (Barkema et al. 1996; Johanson and Vahlne 1990). The internationalization process model highlights that firms prefer to expand initially into culturally and physically closer market to their home countries. Then they incrementally not only increase their operational involvement in foreign markets but also move to more distant market after they accumulate enough foreign market experiences to understand foreign market institutions and culture (Hymer 1976; Nachum and Zaheer 2005). This accumulated foreign knowledge accompanied in foreign expansion enable firms to reduce uncertainty and perceived risk but also lead to increase resource commitment. The development of specific knowledge about foreign markets is an essential for successful internationalization (Johanson and Vahlne 1977, 2009). The foreign market knowledge is characterized as location specific and tacit knowledge which cannot be easily acquired and codified as well (Johanson and Vahlne 2003). Therefore, individual firms may devote more time and sources to gain foreign market knowledge before they start to earn revenues in foreign markets (Eriksson et al. 1997; Johanson and Vahlne 2009).

Contrary to individual firms, a business group is the agglomeration of firms. Thus, affiliated firms spends less time and resources than an individual firm and can utilize the foreign market experience held by other affiliated firms within the business group. This intra-resource sharing may provide its member firms valuable information about potential market opportunities and business risks in going abroad (Elango and Pattnaik 2007; Lamin 2013). As business groups have developed knowledge in diverse foreign markets through frequent transactions with numerous foreign partners (Amsden and Hikino 1994; Encarnation 1989; Lee et al. 2013), each affiliate can utilize such knowledge to effectively select investments among diverse foreign market opportunities and reduce the risks followed by foreign market operations. For example, an affiliated firm may obtain local-market-specific knowledge from other member firms that have entered in the same region or country via resource sharing and inter-firm learning. For instance, Chang and Park (2005) demonstrated how Samsung SDI could relatively easily enter to Tianjin in China as they could acquire foreign market information and foreign networks from Samsung Electronics already established in the same region.

Furthermore, business group also indirectly affect international strategies of affiliated firms through indirect referrals where member firms' reputation motivates the potential foreign clients to sign contracts with the focal firm. Such indirect referrals enhance perception of affiliated firm's trustworthiness and competency (Lamin 2013; Nayyar 1990). Hence, business group also helps an affiliated firm overcome liability of foreignness in host countries through reputation from business group.

In sum, foreign market knowledge at the group level may provide affiliated firms' prerequisite learning for internationalization, which can decrease the risks and uncertainty in foreign markets. In addition, affiliated firms take advantage of the not only utilizing connections of business groups, but also reducing transaction costs with potential clients (Elango and Pattnaik 2007). Therefore, we expect that a business group membership will promote the internationalization of its affiliated firms by intragroup resource sharing.

H1: The foreign market knowledge at the at the group level positively relates to the international activities of its affiliated firms.

Similar to foreign market knowledge, affiliated firms of business group can share product development knowledge by providing a generally applicable knowledge across broad business lines, which in turn promote affiliates' internationalization. Zirger and Maidique (1990) argue that a firm's success is achieved when the organizations possess such product development knowledge, including skilled R&D personnel and manufacturing and marketing capabilities. Based on this view, we define product development knowledge as knowledge that is required to develop localized products and sell those products to foreign customers.

Product development knowledge within business group indicate general knowledge which can be applied and transferred to diverse business units. As such, Lee et al. (2010) illustrated how a Korean business group can transfer and share technological knowledge. For example, the Samsung Group and Hyundai-Kia Motors Group set up a research institute (e.g., "Samsung Advanced Institute of Technology," for Samsung Group and "Hyundai Motor Central Research Centre" for Hyundai-Kia Motors) with the aim of creating technology at the group level to promote innovation activities by group-affiliated firms (Lee et al. 2010). These research centers act as a central hub for generating integrated group-level technology. On the other hand, LG Group has adopted a polarized R&D system in contrast to the two business groups above by focusing on two core business units; namely, the electronics industry (LG Electronics) and the chemical industry (LG Chem). This polarized group structure has led LG Group to build two R&D centers within one group. Although they do not operate a group R&D center, they actively exchange their knowledge with affiliated firms that belong to each polarized group (Lee et al. 2010).

Similar to group-level R&D, group-wide advertising resources, such as brand and image, can create a competitive advantage for affiliated firms as the enhance each company's brand awareness in foreign markets (Kumar et al. 2012). For instance, Chang and Hong (2000) illustrated that the Samsung Group's advertising activities such as sponsoring sports teams like Chelsea Football Club from 2005 to 2015 and large world-class sport events such as the Olympic Games since 1988 can result in spillover effects to all affiliates by enhancing their image and reputation for the whole group. This advantage can help *chaebol* affiliates gain competitive advantages in international markets compared to independent firms without business group membership. Accordingly, *chaebols* have their own advertising companies (e.g., Cheil Worldwide Inc. for Samsung Group and INNOCEAN Worldwide Inc. for Hyundai-Kia Motor Group), to create a coherent group image and brand and also provide assistance to produce specialized advertising for individual member firms. In sum, we define product development knowledge to include both technological knowledge and advertising knowledge at the group level, which are essential group knowledge for assisting affiliates' activities related to doing business abroad. Then we suggest that the amount of product development knowledge at the group level has a positive correlation with affiliates' internationalization efforts.

H2: The product development knowledge at the at the group level positively relates to the international activities of its affiliated firms.

2.2. Within-group tangible resource sharing for chaebols

Along with intangible resources, tangible resources are also important determinants of firm performance and internationalization. Access to financial capital, for example, is an essential part of business activities especially in Korea as its financial sectors remain largely underdeveloped and ineffective (Chang and Hong 2000; Park 1994). Not only does the capital market imperfection creates difficulties for conducting business at home, it severely restricts firms to operate successfully in foreign markets as financial capital forms a basic need for general business activities, starting from product development to marketing for foreign customers (Hitt et al. 2000). Therefore, in order to reduce the transaction costs resulting from capital market failures in home country, *chaebols* have strived to secure internal capital via cross-subsidization between business units, resorting to equity financing only as a last resort (Fudenberg and Tirole 1985; Lincoln et al. 1996; Nakatani 1984). Using this internal capital market, affiliates of business group can gain financial resources with lower costs than other firms that rely on market transactions. Moreover, Chang et al. (2006) have found that internal capital markets influence affiliated firms' performance positively in terms of profitability and innovation.

However, the resource sharing within business group does not hold only positive aspects to affiliates' performance. It requires some of affiliated firms with financial capacity to generate large revenues to create sufficient internal capital to be supported other affiliates' business activities. For example, Samsung has insurance and brokerage companies within the group that play an important role in providing long-term and short-term capital to other financially distressed member firms. In other words, other affiliates could be dependent on the affiliate with a higher financial capability for retrieving stable internal capital.

Although a firm with financial capacity in the domestic market may have a strong incentive to enter international markets for gaining greater return, founder or founding families may be reluctant to allow the affiliated firm to expand its business internationally because the affiliated firm has an important role of financial support to other affiliated firms within group (Carney et al. 2011). According to previous literature which explained *chaebols* internal exchange mechanism, they tend to place more emphasis on profit stability than profit maximization because of capital market failures in domestic market as well as risks and uncertainty inherent in foreign operations (Chang and Hong 2000; Friedman et al. 2003; George and Kabir 2008). Likewise, Bae et al. (2008) examined the direction of capital flows among member firms of *chaebols* and found that firms with high revenues among affiliated firms contribute to support other member firms. From this point of view, we suggest that the affiliates with financial capacity to generate large revenue in domestic market receive strong internal pressure from the group headquarter to secure internal capital for the international activities of other sister affiliates rather than seeking internationalization themselves.

Therefore, we expect that affiliates with strong financial capabilities may have less incentives to utilize group-wide knowledge (i.e., foreign market knowledge and product development knowledge) for their internationalization as much as other affiliated firms within the group.

H3a: The relative position of the affiliate within the group in terms of financial capability negatively moderates the relationship between foreign market knowledge at the group level and affiliates' internationalization.

H3b: The relative position of the affiliate within the group in terms of financial capability negatively moderates the relationship between product development knowledge at the group level and affiliates' internationalization.

3. METHODS

3.1. Data and sample

We obtained the lists of *chaebols* and the affiliated firms of each from the Online Provision of Enterprise Information System (http://groupopni.ftc.go.kr/). This database offers not only financial information of *chaebols* as a whole but also corporate governance information, including the control status of family members as well as mutual investments among affiliates in *chaebols*. In addition, we aggregated additional data from the KisValue database and TS2000 from Korea Companies Information System for financial information of individual affiliates in *chaebols*. For our sample, we have selected affiliated firms of business groups that are listed on the two main Korean Stock markets, Korea Securities Dealers Automated Quotations (KOSDAQ) and Korea Composite Stock Price Index (KOSPI), from 2000 to 2012. Since the list of affiliates for a *chaebol* is subject to change based on institutions and economic situations, we collected *chaebol* information in 2008 for this study. We chose this specific year because the number of affiliates was stabilized during that year in comparison to other years. The final sample is an unbalanced panel of 153 affiliates from 32 *chaebols*, yielding a total of 1,322 affiliates-year observations. The average number of affiliates is 29.3. SK has the largest number of affiliates among all *chaebols* with 64 member firms, while S-oil only has the smallest number of affiliation among our sample in 2008 with two affiliates. The list of *chaebols* used for the analysis of this study is provided in Table 1.

3.2. Variables

The dependent variable in our study is the level of internationalization of an affiliated firm, which we measured by using export ratio. Among other modes of entry, exporting is the most basic stage as it only requires a minimal resource commitment and few operating risks (Aw et al. 2000). Also, exporting has been taken as dominant mode of foreign market participation by MNEs (Lee et al. 2009). Likewise, Guillèn (2000) highlighted large Korean firms tend to exploit their competitive advantages abroad via export.

For independent variables, we measured the product development knowledge as the sum of R&D intensity and advertising intensity at the business group level. R&D intensity is measured by research and development expense divided by total assets. Advertising intensity is measured by advertising expense divided by total assets. The foreign market knowledge is gauged as the ratio of the foreign assets among total assets within a business group. For the moderating effect, we measured the financial capacity of an affiliation within the *chaebol* as the ratio of an affiliation's sales to the total sales of a business group. We include a set of control variables related to various context factors. To control for an affiliate's characteristics, we used the affiliate's age, leverage, size, and market power. An affiliate's age is defined as the number of calendar years since its establishment. Affiliate's leverage is measured by total debt divided by total assets, as an indicator of financial soundness. We also control for affiliate's size, measured by a logarithm of total assets. In addition, firms that have a competitive advantage in the industry may perceive less risk of failure than other domestic rivals (Chang 1995). Accordingly, previous studies have pointed that strong domestic market presence is critical for foreign market success (Elango and Pattnaik 2007; Rangan and Drummond 2004). To control for an affiliate's comparative advantage in its industry, or affiliate's market power, we incorporate the concept of firms' aspiration level, which is defined as the prospect of success or failure based on the past performance (Diecidue and Van De Ven 2008; Frank 1935). Following Greve (2007)'s study, we calculate the sum of the social aspiration and historical aspiration level in the equal-weighted framework.

To control for the characteristics of a *chaebol*, we used the group's size, age, and years of foreign affiliates, separately. A group's size is measured by a logarithm of total assets of the entire *chaebol*. A group's age is defined as the number of calendar years since the parent firm's establishment. The years of foreign affiliates are measured by the number of calendar years since the *chaebol* established its first foreign affiliates.

4. RESULTS

Table 2 presents descriptive statistics and correlation coefficients for the variables used in our analysis with the whole sample.

Table 3 shows the results of empirical analysis in testing the relationship between the *chaebols*' intangible resources and internationalization. Since our dataset includes multilevel data from within *chaebols*, we conducted a regression analysis with a fixed effect in clustering year and *chaebols*. To check the validity of regression analysis with fixed effects, we conducted a Hausman (1978)'s test between the regression analysis with random effect and that with fixed effect. As the results of this test show, there is a systematic difference between random and fixed effects, which led us to reject the null hypothesis at the 1% significance level.

In model 1, only the control variables related to the characteristics of individual affiliates and *chaebols* are included. The result shows that while affiliate's age and market power have a positive relationship with internationalization, *chaebols* age has a negative relationship with

Table 1. List of Korean business group in 2008

Name	Foundation	Number of affiliations	Name	Foundation	Number of affiliations
Samsung	1952	59	Hyosung	1966	30
Hyundai	1962	9	DongYang	1962	20
LG	1962	36	Hyundai Department	1968	25
SK	1955	64	YoungPung	1949	21
Hyundai Motors	1953	36	Kolon	1954	34
Han-Jin	1937	27	Hite-Jinro	1973	15
POSCO	1968	31	SEA-A	1954	23
LOTTE	1958	46	Hydai heavy industries	1973	9
Kumho Asiana	1960	54	KT	1981	29
Hanwha	1952	40	Nongshim	1965	16
Doosan	1962	21	Deasung	1976	47
Shinsege	1967	15	Hankook tire	1941	9
CJ	1953	66	GS	1954	53
Dongbu	1953	29	LS	1947	39
Dealim	1956	14	KCC	1958	7
Dongkuk steel	1654	12	S-oil	1976	2

Table2. Descriptive statistics and correlation of whole sample

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1	Internationalization	43.8180	31.3781	1.0000									
2	Group's product development knowledge	0.9991	0.8594	0.0090	1.0000								
3	Group's foreign market knowledge	0.0582	0.2575	0.0459	-0.0600*	1.0000							
4	Affiliate's financial capacity	13.5206	19.2694	0.0985*	-0.0068	0.0406	1.0000						
5	Group's age	55.9667	48.7256	-0.0094	-0.1550*	0.2716*	0.1264*	1.0000					
6	Group's size	221.2565	113.1684	0.0162	0.2781*	-0.0405	-0.4024*	-0.1292*	1.0000				
7	Years of foreign affiliates	22.9932	16.1584	0.2727*	0.2014*	-0.0377	-0.1273*	-0.2028*	0.3802*	1.0000			
8	Affiliate's age	32.5159	18.6355	0.0509	0.1746*	0.0052	0.2843*	0.1044*	-0.1481*	-0.0668*	1.0000		
9	Affiliate's leverage	26.9813	1.9497	0.2497*	0.0638*	0.0136	0.4209*	-0.0082	0.1131*	0.1314*	0.3124*	1.0000	
10	Affiliate's size	27.6721	1.8132	0.2456*	0.0779*	0.0178	0.4231*	0.0128	0.1494*	0.1564*	0.3303*	0.9733*	1.0000
11	Market power	0.7413	0.4381	0.1327*	0.1330*	0.0034	0.2528*	-0.0191	0.0561*	0.1094*	0.2785*	0.5389*	0.5460*

N=1322; * indicates that the correlation coefficient is statistically significant at the 5% level

internationalization. The main effects are added in model 2 with product development knowledge and foreign market knowledge within *chaebols.* Model 3 adds the moderating variable alone. Finally, model 4 presents the results of the effect of interaction between independent variables and moderating variables on the internationalization of the affiliated firm.

Hypothesis 1 proposes that a positive relationship exists between foreign market knowledge and internationalization. In model 2, model 3, and model 4 in Table 3, the foreign market knowledge has a positive impact on the internationalization at a 1% significance level, respectively. Thus, foreign market knowledge at group level facilitate internationalization of individual firms within a *chaebol*, supporting hypothesis 1.

Hypothesis 2 suggests that the product knowledge of a *chaebol* has a positive effect on the internationalization of affiliated firms. However, model 2, model 3, and model 4 in Table 3 show no relationship between product development knowledge and internationalization. Contrary to group's foreign market knowledge, product development knowledge does not increase internationalization of affiliations. Therefore, hypothesis 2, which suggests that the extent of product development knowledge at the *chaebol* level is positively related to the international activities of an affiliated firm, is not supported.

Hypotheses 3a and 3b address the moderating effect of the affiliate's financial capability within the *chaebol* on the relationship between the *chaebol's* knowledge and internationalization. In model 4 in Table 3, the coefficients of foreign market knowledge are negatively and highly significant at the 1% level. However, the coefficients of product knowledge are not statistically significant in model 4 in Table 3. Therefore, hypothesis 3a that the financial capacity of affiliated firms negatively moderates the relationship between foreign market knowledge at the group level and affiliates' internationalization is strongly supported while hypothesis 3b that the financial capacity of affiliated firms negatively moderates the relationship between product development knowledge at the group level and affiliates' internationalization is not supported

Table 3. Fixed effect regression result

	Model1	Model2	Model3	Model4
VARIABLES	Dependent variable: Internationalization			
Group's age	-4.6446***	-4.6684***	-16.8402**	-16.8026**
	(0.328)	(0.330)	(6.699)	(6.557)
Group's size	-0.0232	-0.0233	-0.0445	-0.0445
	(0.038)	(0.039)	(0.042)	(0.042)
Years of foreign affiliates	1.1418**	1.1626**	2.0238***	2.0508***
	(0.461)	(0.469)	(0.662)	(0.701)
Affiliate's age	4.1000***	4.1139***	15.5460**	15.4796**
	(0.670)	(0.671)	(6.340)	(6.201)
Affiliate's leverage	-5.7468*	-5.6779*	-5.6811**	-5.6731**
	(2.836)	(2.843)	(2.644)	(2.632)
Affiliate's size	4.8337	4.7227	5.3623	5.3156
	(3.470)	(3.478)	(3.329)	(3.330)
Market power	6.3433**	6.4719**	7.1599**	7.1686**
	(2.948)	(2.953)	(3.043)	(3.033)
Group's foreign market knowledge (FMK)		1.9049***	1.9002***	3.8574***
		(0.278)	(0.282)	(0.439)
Group's product development knowledge (PDK)		-0.6071	-0.4009	-0.1715
		(1.696)	(1.878)	(1.956)
Affiliate's financial capacity			-0.2365*	-0.2234*
			(0.129)	(0.128)
Group FMK x affiliate's financial capacity				-0.0706***
				(0.008)
Group PDK x affiliate's financial capacity				-0.0112
				(0.042)
Constant	172.6623***	174.6688***	454.1209***	454.3292***
	(45.585)	(45.571)	(155.416)	(151.749)
Observations	1,322	1,322	1,322	1,322
R-squared	0.096	0.098	0.111	0.112
Number of id	153	153	153	153

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

5. DISCUSSIONS AND CONCLUSION

While the most of the previous literature that examined the effects of business groups focused on the performance implications, the research on the affiliate's internationalization has largely remained under-researched. The rapid growth of EMNEs as wells their growing presence in global market has motivated us to research on the internationalization of business groups (Khanna and Palepu 2000; Lins and Servaes 2002). To response this inquiry, this paper focuses on the resource sharing within business groups and its effect on the affiliates' internationalization. We argue that resource sharing of tangible and intangible assets provide both advantages and disadvantages for the member firms of business groups in conducting international business operations. Specifically, we suggest that group-level resources provide special benefits for affiliate firms in expanding their businesses internationally. We identified two intangible resources, foreign market knowledge and product development knowledge, which are transferrable to diverse product markets for assisting internationalization of affiliated firms. In addition, we suggest that each affiliated firm has a different financial capacity, and thereby plays a different strategic role in securing the internal capital market. Using the sample from 32 Korean *chaebols*, we provide evidences of such knowledge sharing within business groups.

Based on our empirical results, we find that only foreign market knowledge sharing facilitates affiliations' internationalization whereas product development knowledge does not affect affiliations' internationalization. In addition, an affiliated firm with financial capability tend to less exploit group-level foreign market knowledge for its internationalization. From an affiliated firm's point of view, a firm with capacity to generate large revenue cannot enjoy the same benefits of accessing group-level resources as other affiliates. This result shows that the benefit of knowledge sharing is not equally distributed among affiliated firms; it may depend on the affiliate's relative position and subsequent roles within the group. Our results also indicate that foreign market knowledge is transferrable across multiple product markets, thereby effectively promoting the internationalization of the group's affiliates. In contrast to foreign market knowledge, product development knowledge within a group does not have any effect on the affiliated firms' internationalization. A possible reason for this may stem from a high level of unrelated diversification by *chaebols*. The lower relatedness of product knowledge among affiliates failed to achieve synergies in regard to sharing product knowledge within the group (Chatterjee and Wernerfelt 1991; Markides and Williamson 1994; Tanriverdi and Venkatraman 2005).

In this study, we have three contributions to the study of affiliates' internationalization. Recently, there has been a debate on whether business groups are 'paragons' or 'parasites' (Guest and Sutherland 2010; Khanna and Yafeh 2007). Rather than examining how business group membership itself affect the performance of affiliates, we offer additional evidence to extend this debate by considering a business group as a vehicle for sharing strategic resources to individual affiliates in order to reduce uncertainty in expanding business activities to foreign countries. Based on the results, we found that internal knowledge sharing benefits member firms in increasing their internationalization. However, a particular firm within a group with a high financial capability may be asked to stay in the domestic market even when they have a greater incentive to go abroad and exploit their competitive advantage. Thus, while it is possible to perceive business groups as 'paragons' in that they create values from resource sharing, they can also be considered 'parasites' due to the fact that internationalization by an affiliated firm with financial capability is often simultaneously hindered by its internal role of resource sharing. Second, we subdivide intangible resources into foreign market knowledge and product development knowledge in contrast to previous research which have treated intangible resources in a rather uniform manner (Chang and Hong 2000). While previous studies just focused on R&D intensity and advertising intensity of business groups (Chauvin and Hirschey 1993; Hirschey and Weygandt 1985), we also examined the other important intangible resources: foreign market knowledge. However, we argue that R&D intensity and advertising intensity are not enough to explain the internationalization of firms. To successfully enter a foreign market, knowledge related to customer preferences, cultures, norms, and regulations about the target country, are critical to conducting business operations in foreign countries (Buckley et al. 2007; Kogut and Singh 1988). Therefore, we also included foreign market knowledge that can be shared effectively within business group. Third, this study tries to cover the distinct role of affiliated firms within groups. In international business literature, firms with higher performance in domestic market are likely to engage in internationalization in order to exploit its competitive advantage in foreign markets (Bernard and Jensen 1999; Capar and Kotabe 2003; Salomon and Shaver 2005). However, in the case of *chaebols*, an affiliated firm with financial capability plays other important strategic role in supporting other affiliated firms by securing internal capital market so that affiliated firms can enjoy lowered transaction costs in the under-developed Korean capital market. A headquarter of business group may prevent the affiliated firm with financial capacity from expanding their operation aboard for securing financial stability of entire business group.

Our study has several managerial implications. The managers of affiliated firms need to pay close attention to strategic resources of sister affiliates as well as the headquarter, which can promote their internationalization. Specifically, before entering a foreign market, a manager of affiliate firm should check whether sister affiliates have entered the target countries and possessed country-specific knowledge by which it can utilize. However, product development knowledge sharing within business group is not as effective for promoting affiliates' internationalization as foreign market knowledge. This is related to the fact that *chaebol* tend to operate diverse product markets due to their unrelated diversification. At least for the purpose of operating in foreign markets, foreign market experiences are much more valuable strategic resources that confer competitive advantage to sister affiliates. Meanwhile, the managers from independent firms should learn about the importance of networks from our results and may want to establish networks to share their information and resources with other independent firms to compete successfully with affiliated firms.

Our study has some limitations. First, as it attempts to examine the international activities of *chaebols* precisely, it is hard to directly apply our results to other contexts. A *chaebol* is one form of the business group in Asia, but there are other forms of business groups in emerging markets and developed markets as well, such as Latin America's grupos economicos, India's business houses, Taiwan's guanxiqiye, Russia's oligarchs, and China's qiye jituan (Carney et al. 2011). Other business groups may have distinct characteristics based on the historical and economic market situation of the home country. Therefore, our findings should be limited to Korean *chaebols* only. Future research can overcome this limitation by conducting a comparative study of business groups in other countries or established MNE to the behaviors of *chaebols'* affiliates. Second, we measured the foreign market knowledge as the foreign assets over the total assets of the group. However, such a measurement can be affected by the firm's size and industry. To overcome this problem, we control for the size of both the group level and affiliated firm level. However, we still have confounding effects from other variables that cannot be controlled in this study.

Also, we can expect to find other important factor markets within groups other than internal capital market. In our study, we found that the relative financial position can affect the internationalization of an affiliated firm. This shows that affiliated firms play specific functions within groups. For instance, some *chaebols* have firms in the financial industry, which includes banks and insurance companies; therefore, it would be interesting to examine whether the existence of an affiliated financing firm within a group enhances internationalization. Future research may aim to find other factors within a business group which could facilitate (or constraint) the internationalization of affiliates. We can also analyze the behaviors of affiliated firms according to these factors.

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저 자 소 개

김 기 현 (Kihyun Kim)
현재 고려대학교 일반대학원 국제경영학과에서 박사과정을 수료하였으며, 동 대학원에서 경영학 석사학위를 취득하였다. 관심분야는 국제경영전략, 서비스기업의 경영전략, 중소기업 및 신생벤처기업의 국제전략 등이다. 지금까지 국제경영연구, 지식경영연구 등 주요 학술지에 논문을 발표하였다.

이 영 우(Youngwoo Lee)
현재 대구대학교 경영학과 교수로 재직 중이다. 고려대학교에서 경영학 박사 학위를 취득하였고, 한국과학기술원 연구교수를 역임하였다. 주요 관심분야로는 혁신전략, 전략적 제휴 전략, 국제화 전략 등이다. 지금까지 Research-Technology Management, Asian Business & Management, 기술혁신학회지, 인터넷전자상거래연구 등 주요 학술지에 논문을 발표하였다.