Diversification Strategies and the Formation of Korean Big Business Groups (Chaebols): Resource-based and Institutional Perspectives on the Causes of Diversification

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In the 1990s, probably no other firms in emerging economies have drawn more attention than Korean big business groups, or "chaebols." When Korea emerged as a new industrial power, boasting the 11th largest economy in the world in 1996, chaebols were praised as drivers of this unprecedented, rapid economic growth. In recent years, the chaebols' dramatic international expansion often made headlines in business magazines and newspapers all over the world. Thanks to the chaebols' explosive foreign investments, Korea numbered among the largest foreign investors in many countries, including the United Kingdom. Impressed by this rapid expansion in overseas markets, particularly in high-tech industries such as semiconductors, Business Week (1995a) featured a cover story and analyzing the chaebols' "success formula." Moreover, emerging or transition economies such as China and Russia attempted to adopt a Korean economic development model based on chaebols, encouraging their own large firms to become chaebol-like diversified business groups (Business Week, 1995b; Economist, 1997). Some scholars supported such efforts to imitate Korean-style big business groups, praising chaebols as a new organizational form (Orru, Biggart, and Hamilton, 1991). Others lauded the chaebol as a legendary success story (Khanna and Palepu, 1997), some arguing that they were more appropriate than focused firms for late industrializing economies (Amsden, 1997).

What a dramatic turnaround! In the wake of the financial crisis that swept East Asia since 1997, the Korean economy faltered badly and top-30 chaebols such as Kia, Hanbo, Halla, Sammi, and Haetae went bankrupt. Except for the top-4 chaebols -- Samsung, Hyundai, Daewoo, and LG, many of the top-30 chaebols were in serious financial trouble and some are expected to fail in the near future. Suddenly, chaebols have become the main culprit of the Korean economic crisis (Economist, 1998). At the center of such criticisms is the chaebols' diversified expansion. Critics argue that the "irrational" diversification strategies of the chaebols often failed to consider economic efficiency and resulted in excessive, debt-fueled expansion unsustainable in economic downturns (Business Week, 1998). What went wrong with the chaebols' expansion? Why did chaebols diversify so aggressively? Did they really place only secondary priority on economic efficiency in their diversification decisions? If so, what factors played a primary role in the chaebols' diversification strategies?

Focusing on the evolution of chaebol diversification strategies, we seek to answer these questions by examining both economic and institutional forces underlying chaebol diversification decisions. Diversification decisions are assumed traditionally to be driven solely by economic motives - seeking profit or efficiency. The purpose of this study is to demonstrate that the formation of business groups through diversified expansion is a process which is affected not only by efficiency-oriented strategic considerations of exploiting existing resources, but also non-efficiency-based institutional factors, such as institutional isomorphism and inter-firm rivalry. To develop a comprehensive model of the causes of the chaebols' diversified expansion, we rely on two alternative theoretical frameworks: a resource-based view of the firm and institutional theory. We describe first the historical patterns of the chaebols' diversified expansion over the past four decades. Then, using a series of logit models, we examine empirically both the resource-based and institutional factors influencing a chaebol's decision to change diversification strategies over time. Finally, based on both the historical and statistical analysis, we discuss the rise and fall of chaebols and draw lessons in corporate strategy for firms in emerging economies.

History of Chaebols' Diversified Expansion

Chaebols are defined as diversified, family-owned business groups (Cho, 1990). According to the Fair Trade Commission, in 1996 the top-thirty chaebols accounted for 40% of Korea's GNP. The top-5 chaebols are especially dominant, accounting for 58% of the total assets of the top-thirty chaebols.

Since 1962, when the military government launched the first economic development plan, GNP growth rate and export volume became the most important criteria in the evaluating successful economic development. To sustain rapid growth, the government pursued industrial policies to select strategic industries for import substitution and export promotion (Amsden, 1997; Kim, 1987). Under the government's initiative, some Korean firms diversified aggressively into these strategic industries to take advantage of preferential credit allocations, tax benefits, and government protection from foreign imports and investments (Steers, Shin, and Ungson, 1989). These strategic industries were often unrelated to existing businesses of these firms. However, given that real effective interest rates of policy loans and export financing were usually negative in the 1960s and 1970s, gaining access to policy loans through diversified entry into government-designated strategic industries as well as through increasing export volume became a primary goal of Korean firms (Chung, 1987). Not surprisingly, chaebols relied heavily on banks for financing their diversified expansion. In 1997, the top-30 chaebols averaged approximately 5.2 times more debt than equity, according to the Fair Trade Commission. Firms that did not enter strategic industries often lost their competitive edge to diversified competitors or those that gained superior access to preferential loans (Cho, 1990). Furthermore, a multimarket presence allowed chaebols to leverage their power in individual markets.

In this environment, chaebols began to place top priority on growth rather than efficiency or profitability and pursued product diversification and overseas expansion aggressively. In 1995, the average return on sales (ROS) of the top-50 chaebol was merely 2.5% and the number dropped even further, to 0.2%, in 1996, according to the Bank Supervisory Board. The economic size and concentration of chaebols have been both a driving force and a consequence of Korea's government-led economic development policies (Ungson, Steers, and Park, 1997). As noted by Amsden and Hikino (1994), as well as by Ungson and colleagues (1997), a principal characteristic of the major chaebols is a strong entrepreneurial spirit that encourages risk taking on a grand scale. This "bet-your-company" mentality toward diversification was solidified by the belief that the government would protect and bail out new ventures, and even the chaebol itself, should the venture fail.

Because the combined revenues of affiliated firms were viewed as a measure of the power and success of chaebols, as well as a guarantee for potential government bailout, chaebols have engaged in intense multi-market competition at the business group level (Amsden, 1997). To maintain a competitive balance with their rivals in such inter-group competition, the chaebols demonstrated herd behavior in market entry patterns. Until the 1970s, the government pursued strong industrial policies. The major chaebol responded to government initiatives in terms of the direction and timing of diversified entries. However, even in the 1980s, when the Korean government seldom announced guidelines for supporting a specific industry, the chaebols,

particularly the top-four, showed strikingly similar diversification patterns. Since the 1980s, the major chaebols have been eager to diversify into "high-tech" industries. The top-four chaebols gained a foothold in virtually every major high-tech area that Korean firms entered.

The top-four chaebols' entry into the semiconductor industry exemplifies herd behavior. In 1983, Samsung made investments in wafer fabrication of DRAMs. Goldstar (later renamed LG), Samsung's rival in the consumer electronics business, followed suit the same year. Interestingly enough, Hyundai, which previously had not been involved in the electronics business, also announced a major investment in the DRAM business that year. In 1986, Daewoo, too, entered the semiconductor business by acquiring Zymos. In the 1990s, the chaebols continued to demonstrate herd behavior and intense rivalry in their entries into the mobile telecommunications business, as well as in the location decisions for their international expansion.

Theory and Hypotheses

Chandler (1990) defined diversification as one of the most conspicuous features of the modern corporation. Since Rumelt's seminal work (1974) relating the type of diversification to economic performance, much of the strategy research has been geared toward identifying the types of diversification that lead to above-normal returns. Empirical work has generally shown that related or dominant diversification is associated with above-normal returns, while unrelated diversification often leads to poor performance (Hoskisson & Hitt, 1990). As a result, a major stream of strategy research on diversification has focused on explaining why related diversification leads to higher returns (Singh and Montgomery, 1987).

Resource-based Explanations

The traditional research on diversification has paid scant attention to the driving forces behind the expansion of the boundary of a firm through diversification (Flingstein, 1991). Recently, however, strategy researchers suggested that a resource-based view of the firm provides insight into a fundamental explanation for the motives behind firm diversification (Chatterjee and Wernerfelt, 1991). A resource-based view of the firm emphasizes a firm's idiosyncratic resources and capabilities as sources of above-normal rates of return and a sustainable competitive advantage (Wernerfelt, 1984). Although the resource-based view has drawn attention recently, Penrose (1959) proposed such an approach decades ago. Drawing on the identification of the physical and human resources that a firm embodies, Penrose proposed that a firm's "unused or residual resources," or organizational slack, are major forces pushing firms to expand through diversification. Hoskisson and Hitt (1990), in their systematic investigation of antecedents and performance outcomes of diversification, suggested that diversified firms perform better when their entries into new industries are linked to core competencies or resources of these firms.

Recently, a few empirical studies done at the firm level provide empirical evidence of the resource-based explanation for diversification in which profit seeking firms diversify in those directions where they can better exploit their underutilized resources. Drawing on the classification of a firm's unique resources, Chatterjee and Wernerfelt (1991) showed that

underutilized physical resources, intangible resources, and external financial resources are likely to lead to related diversification, while internal financial resources tend to encourage firms to pursue unrelated diversification. In an analysis of about 13,000 diversified firms in the U.S., Farjoun (1994) found that American firms tend to diversify within resource-related industry groups in pursuit of efficiency.

Resource-Based Hypotheses

The resource-based view of the firm proposes organizational slack and the capability of internal knowledge creation as the two main driving forces behind a firm's expansion via diversification (Barney, 1996). The resource-based view of the firm describes a firm's growth through the mechanism of organizational learning by which the firm accumulates and dissipates new resources and capabilities. Among various learning mechanisms, R&D investment has been regarded as a major device of organizational learning influencing diversification (Penrose, 1959). Based on findings from existing studies of the relationship between diversification and R&D investments, Baysinger and Hoskisson (1989) noted that firms may improve the efficiency of R&D expenditures through diversification by exercising economies of scope. In a similar vein, Cohen and Levinthal (1990) suggested that to build up "absorptive capacity," a firm needs to diversify its knowledge base through R & D investment. They argue that absorptive capacity, built up through R&D efforts, enables a firm to assess the potential for and successfully exploit new business opportunities, thereby facilitating entry into a new business area.

Findings from empirical research generally have supported a positive role for R&D investments in diversification decisions. In an extensive case study of the emergence of large corporations in the U.S., Chandler (1962) found evidence of Penrose's proposition that firms diversify in response to excess technological resources. In Chandler's (1962) study, firms with the greatest resources invested in R&D were often the first to diversify. Furthermore, MacDonald (1985) showed that R&D capital accumulated in a firm's primary industry influences diversification decisions because firms attempt to transfer intangible assets built through R&D activities to new areas. Sampling semiconductor firms, Kim and Kogut (1996) also found that a firm's experience in core technologies in its primary industry influences subsequent diversification. Based on field observations, Amsden and Hikino (1994) argued that an ability to source, absorb, and disseminate technology formed the basis for chaebol diversification. As articulated by Cohen and Levinthal (1990), R&D investments provide an important basis for such technological capabilities. Hence, we hypothesize:

Hypothesis 1: R&D investment (in the primary industry) of a chaebol will be positively associated with a change in diversification strategies.

Chang (1992) showed that organizational slack, measured by the size of the firm, has a positive relationship with search activity and thus, firms with more slack resources are more likely to initiate entry or diversification. Moreover, considering the importance of human resources as the main fuel and constraint of a firm's growth (Penrose, 1959), the practical meaning of the firm size as a proxy for a firm's resources appears to go beyond the argument of organizational slack.

As suggested by Barney (1996), employees may have incentives to favor large, diversified firms in anticipation of rapid promotion and better management compensation. Moreover, managers seeking to maximize their income attempt to expand their firm and one of the easiest ways to expand a firm is through diversification.

Employee incentives to diversify appear to be especially strong in Korea. Working for a chaebol has been regarded as a good way to enhance job security, social status, and earnings potential through internal promotion (Cho, 1990). Long-term employment and internal promotion are norms in the Korean labor market. Consequently, graduates from top-ranked universities have favored major chaebols which pursued diversified expansion aggressively. The agglomeration of talented managers and engineers, who are scarce resources in an emerging economy, enabled chaebols to accelerate diversified expansion. Hence, we hypothesize:

Hypothesis 2: The size of a chaebol will be positively related to the change in the degree of diversification.

Institutional Explanations

The aforementioned herd behavior of chaebols into new technological and regional areas at the cost of efficiency and profitability suggests that the efficiency-oriented approach described above may fall short of offering a complete answer to the formation of chaebols through diversification. We seek an alternative explanation from institutional theory that attempts to explain why firms behave similarly. While a resource-based view of the firm focuses on the characteristics of firm-level resources to explain firm heterogeneity (Barney, 1996), institutional theory emphasizes the role of interfirm level or institutional pressures for social conformity that lead to homogeneity or isomorphism among firms in strategic decisions (Scott, 1995). Institutional theory suggests that conformity to social expectations contributes to a firm's success and survival by enhancing the legitimacy of the firm (DiMaggio and Powell, 1983). Whereas a resource-based view of the firm assumes that a firm's behavior is based on economic rationality (profit seeking and efficiency), institutional theorists argue that a firm often makes nonrational decisions that are shaped by its social context (Oliver, 1997). Based on the premise that a resource-based view of the firm does not examine the social or institutional context that profoundly influences a firm's strategic decisions, Oliver (1997) proposed that a model of the sustainable competitive advantage of a firm should include institutional as well as resource-based factors. In a more general context, Scott (1995) also proposed a rapprochement of institutional and efficiency arguments for various organizational decisions by conceiving of their relationship as complementary.

Drawing on DiMaggio and Powell's (1983) insightful work on the role of institutional isomorphism in the process of homogenization in an organizational field, Flingstein (1991) applied institutional theory to a firm's diversification decisions by promoting a non-efficiency based rationale for diversification. Flingstein discussed four institutional mechanisms that affect change in diversification strategies: the role of existing strategy, structure, and power distribution which may inhibit change and promote organizational inertia; turbulence in organizational fields; the role

of new entrants; and the forces of institutionalization. In an empirical investigation of the diversification strategies of American firms, Flingstein showed that diversification is an institutional process that depends upon the location of organizations in organizational fields. While Flingstein explored the relationship between isomorphism and diversification in the American institutional setting, Orru, Biggart, and Hamilton (1991) investigated "organizational isomorphism" in business groups in East Asia. Orru and his colleagues suggested that institutional pressures have contributed to the emergence and the maintenance of market order based on organizational isomorphism among business groups. These studies emphasized the need to develop a more comprehensive model of the causes of diversification that encompasses both economic and institutional perspectives.

Institutional Hypotheses

Based on the work described above, we examine institutional mechanisms that affect change in chaebol diversification strategies. We focus on (1) the strategic orientations and stability in organizational fields which determine forces of institutionalization in the form of isomorphism and (2) the role of existing strategy, structure, and power distribution in inhibiting changes and promoting organizational inertia.

Institutional theory is primarily concerned with a firm's relationship or fit with the institutional environment (Dacin, 1997). This fit occurs through the process of institutional isomorphism that influences a firm's diversification strategies. As mentioned above, government policy initiatives played an important role in shaping the diversified expansion of firms in Korea. In addition to this government-led, "coercive isomorphism" in DiMaggio and Powell's (1983) term, mimetic isomorphic pressures from rival firms affected diversification strategies, even after the government substantially reduced its influence on private firms' diversification decisions. Therefore, we propose that a dominant type of diversification strategies in an organizational field – a primary industry of a firm -- will affect the future selection of diversification strategies of chaebols in the same organizational field. For example, if the majority of firms in an organizational field adopt an unrelated diversification strategy, firms with different strategies in the same organizational field are also more likely to adopt an unrelated diversification strategy in the future because strategic interactions and competitive balance with competing firms affect the nature of competition and legitimization in the organizational field. Firms with the dominant type of strategy -- unrelated diversification strategy in this example -- are also more likely to maintain the strategy. We hypothesize that diffusion of the dominant type of diversification strategies in an organizational field affects the choice of future diversification strategy. We also hypothesize that the correspondence of the existing diversification strategy of a firm to the dominant type of diversification strategies in an organizational field influences the choice of future diversification strategy of the firm.

Hypothesis 3a: **The diffusion rate of the dominant type of diversification strategies in an organizational field will be positively related to the change in a chaebol's diversification strategy.**

Hypothesis 3b: **The correspondence of the existing diversification strategy to the dominant type of strategy in an organizational field will be negatively associated with the change in a chaebol's diversification strategy.**

As the existing organizational theory literature articulates very well, firms tend to retain their existing strategies and structures due to various reasons that facilitate inertia (Hannan and Freeman, 1984). Oliver (1997) suggests that managers commonly make nonrational choices bounded by historical limitations and the inertial force of habit. The history of chaebols demonstrates clearly that efforts to divest existing businesses often face strong internal resistance as well as external legitimacy problems. As a result, highly diversified chaebols often cling to their existing strategies, even when excessive diversification led to managerial inefficiency and a lack of strategic focus. In an investigation of longitudinal relatedness in diversification, Ambergey and Miner (1992) found that a firm is more likely to repeat a type of diversification it has already adopted. Along this line, we suggest that the existing diversification strategy (measured in terms of the types of diversification strategy: unrelated, related, and dominant type), can be a predictor of future diversification strategy.

Hypothesis 4: **The existing diversification strategy of a chaebol will be inversely related to the change in diversification strategy.**

In addition, we examine effects of a given power distribution in inhibiting change and promoting organizational inertia on diversification decisions. According to Tushman and Romanelli (1985), to induce a significant change in strategy, a firm needs to install a new top management possessed of the ability and vision to overcome organizational inertia. In a study of the diversification strategies of German and French corporations, Dyas and Thanheiser (1976) showed that management succession provide a key moment for structural change.

Diversification decisions are among the most important decisions a firm's top managers make (Pennings, Barkema, and Douma, 1994). Management succession provides an opportunity for a chaebol to change its diversification strategies. Because most chaebols are owned and controlled by a single family, management succession in chaebols occurs within the founding family. Unlike the founder, a new chairman – most often, a son of the founder -- earned an MBA degree and/or underwent systematic training in modern management practices (Cho, 1990). To legitimize management succession from his father, a new chairman typically initiated a major change in strategies and organizational structures. Hence, we hypothesize:

Hypothesis 5: **Management succession within a chaebol will be positively related to the change in diversification strategies.**

Methodology

The main purpose of this study is to examine resource-based and institutional factors influencing a chaebol's decision to maintain or change its relative position through diversification strategies. First, a set of binary logit models examine the effects of both resource-related factors and institutional factors measured at a given point in time (1974) on the chaebols' subsequent decision to keep or change their diversification strategies in the next period (1984). The second portion of our empirical analysis concerns the direction of change in diversification strategies over time. Because the degree of diversification is highest in unrelated diversification and lowest in dominant strategy, an ordered logit regression is used.

Sample

The sample of this study consists of the 100 largest chaebols as of 1984. We examined changes in diversification strategies over 1974-1984. In this period, some firms, which had emerged as chaebols in the 1960s, accelerated their diversified expansion in response to the government-led, heavy and chemical industry drive. Data sources included Chung (1987), Maeil Economic Daily (1975, 1985), and the Directory of R&D Laboratories in Korea (1985). As cases with missing data were deleted, the total number of chaebols included in the analysis was 86.

Variables

In the first model using binary logit regressions, the dependent variable is whether a chaebol changed its diversification strategy over 1974-1984. The change in diversification strategy -- what we call "CHANGE" in the regression model -- was coded as 1, otherwise 0. In the second model using an ordered logit regression, we used the type of diversification strategy -- what we call STTYPE84 in ordered logit regressions -- in 1984 as the dependent variable. Three categories -- unrelated, related, and dominant -- were coded based on Rumelt's (1974) classification scheme. As for explanatory variables, the log of a chaebol's total sales in 1974 was used as a proxy for organizational slack. In addition, to measure the commitment to R&D investment, a dummy for the establishment of a central R&D lab in the primary industry of each chaebol was introduced. Primary industries as proxies of organizational fields were identified based on the Korean Standard Industrial Classification. For manufacturing sectors, two digit industry classifications were used for the identification of the primary industries, while for other sectors, one digit classification schemes were used. Each chaebol was assigned to an industry category based on the identification of a main business in terms of sales volume. In addition, the type of diversification strategy at the first time point -- 1974 -- was used as a measure for inertia or initial conditions. In binary logit models as well as ordered logit models, dummy variables named ST74UNRE and ST74RELA were created, which represented unrelated diversification and related diversification respectively.

To operationalize the effect of new leadership on the change in the diversification strategy, a dummy named OWNER indicates whether or not management succession occurred over the period. In the first part of binary logit analysis, in an effort to test the role of the dominant type of strategy in an organizational field in shaping the institutional forces of isomorphism, a dummy

variable named MATCH was created based on the following procedure. Both the existing diversification strategy of a chaebol and a dominant type of diversification strategies in a primary industry of the chaebol were dichotomized into a single category of diversification -- accommodating both unrelated and related diversification -- and the other category of dominant strategy. To determine a dominant type of diversification strategies in a primary industry, the ratio of chaebols that belonged to each category was obtained and then a category with higher ratio was chosen as the dominant type of diversification strategy. Finally, an existing diversification strategy of a certain chaebol was compared with the dominant type of strategy in the primary industry. If the two strategies were the same, MATCH was coded as 1, otherwise 0.

In addition, in the model regarding the direction of change in diversification strategy, following Flingstein (1991), the percentage of firms employing a specific type of diversification strategy in a given primary industry was adopted as a measure of institutional forces. Specifically, PERUNRE represented the ratio of chaebols adopting unrelated diversification in the primary industry in 1974, while PERRELAT stood for the ratio of chaebols adopting related diversification in 1974. In the binary logit model, PERDIVER represented the ratio of chaebols adopting diversification strategies -- both unrelated and related diversification strategies. Table 1 shows descriptive statistics.

TABLE 1. Descriptive Statistics

Variables	**Means**	**s.d.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1. CHANGE	0.41	0.49												
2. STTYPE84	3.16	0.80	-											
3. LOGSALES	4.90	1.08	.12	.47***										
4. R&DLAB	0.49	0.50	.33***	.49***	.36***									
5.ST74UNRE	0.12	0.32	-.15	.44***	.45***	.30**								
6.ST74RELA	0.20	0.40	.01	.21*	.23*	.10	-.18							
7.OWNER	0.30	0.46	.07	-.36	.40***	.27*	.24**	.25*						
8.MATCH	0.72	0.45	-.27**	-	-.03	-.11	-.02	-.08	.07					
9.PERDIVER	0.34	0.23	.06	-	.33**	.28***	.36***	.24*	.16	-.18				
10.PERUNRE	0.28	0.21	-	.39*	.37***	.50***	.41***	.04	.12	-	-			
11.PERRELA	0.34	0.21	-	.15*	-.03	-.01	.04	.20	.21	-	-	-.23*		
12.AGE	19.59	11.3	.04	.23	.23*	.15	.14	.07	.47***	.08	.11	.11	-.03	

* p <.05 ** p<.01 *** p<.001

Results

In the binary logit model using CHANGE -- whether or not a chaebol changed its diversification strategy -- as a dependent variable, the dummy for a central R&D lab (R&DLAB), correspondence of the existing strategy to the dominant type of diversification strategies in an organizational field (MATCH), and unrelated diversification strategy (ST74UNRE) turned out to be significant at the α=0.05 level in the full model (Model 1). In addition, related diversification strategy (ST74RELA) was marginally significant in Model 1, as shown in Table 2. Thus, we constructed a parsimonious model with these significant variables only (Model 2). With the computation of twice the difference in the log-likelihood for these two models, we found that Model 2 was not different from Model 1 in terms of explanatory power, although ST74RELA -- related diversification strategy -- became insignificant in Model 2. Therefore, we reconstructed a more parsimonious model without ST74RELA (Model 3).

TABLE 2. Binary Logit Coefficients for CHANGE -- Whether or Not a Chaebol Changed its Diversification Strategy -- on Selected Independent Variables[a]

Independent Variables	Model 1	Model 2	Model 3
Intercept	-2.0928 (1.5782)	0.0005 (0.5532)	-0.1482 (0.5311)
Sales(log) (LOGSALES)	0.4567 (0.3269)	_	_
R&D Lab (R&DLAB)	1.6910** (0.5682)	1.8403*** (0.5436)	1.7201*** (0.5214)
Unrelated Diversification (ST74UNRE)	-3.2037** (1.1173)	-2.2201* (0.9258)	- 1.9959* (0.8940)
Related Diversification (ST74RELA)	-1.3777(+) (0.7971)	-0.7092 (0.6618)	_
Management Succession (OWNER)	0.4503 (0.7225)	_	_
Correspondence of Diversification Strategy (MATCH)	-1.3595* (0.5969)	-1.3118* (0.5671)	-1.2515* (0.5580)
Ratio of Diversifiers (PERDIVER)	0.4485 (1.3228)	_	_
Age (AGE)	-0.0062 (0.0277)	_	_
Chi-Square	23.225	20.769	19.837
Degrees of Freedom	8	4	3

[a] Numbers in parentheses are standard errors. Number of cases is 86.
(+) P<.1 * p<.05 ** p<.01 *** p<.001

In Model 3, the dummy for a central R&D lab (R&DLAB) was positively related to the change in diversification strategy over 1974-1984, as hypothesized in Hypothesis 1. Considering that the degree of chaebols' diversification increased in this period, the result suggests that R&D investment in primary industries helped chaebols to pursue continued diversification by creating intangible assets that can be transferred to new businesses. The coefficient for MATCH was negative, a finding consistent with Hypothesis 3b. In other words, a chaebol whose strategy conformed to the dominant type of strategy in 1974 -- MATCH=1 -- was less likely to change its diversification type. In contrast, a chaebol whose strategy was at odds with the dominant type of strategy in an organizational field -- MATCH=0 -- might well feel a strong pressure to match its strategy to that of its competitor in order to enhance its legitimacy, as well as to maintain a competitive balance with rival chaebols in the organizational field. Thus, the significant effect of MATCH on the change in diversification strategy may provide evidence of isomorphic pressures in an organizational field. Finally, the negative sign for ST74UNRE -- unrelated diversification strategy -- may reflect a strong inertia or backward rigidity of chaebols' diversification strategies against decrease in the level of diversification by divestiture.

The second part of this study analyzed effects of resource-based and institutional factors on the *direction* of change in diversification strategy over time, using an ordered logit model. Given the p-value of 0.3647 from the score test, Model 4 as a full model satisfied the proportional odds assumption of the equal slope across cut points among diversification categories. Among explanatory variables, firm size (LOGSALES), the dummy for a central R&D lab (R&DLAB), the ratio of chaebols adopting related diversification (PERRELAT), and unrelated diversification strategy (ST74UNRE) were significant. With the significant variables in Model 4, we reconstructed a more parsimonious model (Model 5).

In Model 5, the positive coefficient for the size of a chaebol (LOGSALES) supported Hypothesis 2, derived from the resource-based view of the firm. This finding suggests that organizational slack, or underutilized resources, may be a major driving force behind the pursuit of higher levels of diversification. Alternately, considering the argument that the size of a chaebol represents the attractiveness of the chaebol in the labor market, this result may be viewed as evidence that a chaebol was forced to diversify in order to recruit top quality personnel and in turn, that these human resources have played an important role in further diversification over time. Moreover, the positive coefficient for the presence of R&D lab in a primary industry (R&DLAB) gives us evidence of the resource-based argument that organizational capabilities built through R&D investment can result in a higher level of diversification (Hypothesis 1).

In addition, a chaebol that engaged in unrelated diversification in 1974 remained highly diversified over time, given the positive coefficient for ST74UNRE -- unrelated diversification strategy in 1974. This result was consistent with those in the binary logit analysis. Moreover, a positive effect of PERRELAT -- the ratio of chaebols adopting related diversification -- on the level of diversification in the subsequent period partially supported Hypothesis 3a. The result indicated that if (un)related diversification strategies as opposed to a dominant strategy were diffused widely in a primary industry as an organizational field, a chaebol that belongs to the same organizational field is more likely to retain the diversification strategy -- if it already adopted the diversification strategy -- or change its strategy to a more diversified one. Given that PERRELAT was included as a proxy for the effect of the degree of institutionalization or

TABLE 3. Ordered Logit Coefficients for STTYPE84 -- Types of Diversification Strategies at the Second Time Point (1984) -- on Selected Independent Variables[a]

Independent Variables	Model 4	Model 5
Intercept1	-8.1220***	-7.5726***
	(1.8379)	(1.6024)
Intercept2	-5.6562***	-5.2309***
		(1.4702)
Sales (log)	0.5591*	0.7511*
(LOGSALES)	(0.2986)	(0.2715)
R&D Lab	1.2821*	1.6338**
(R&DLAB)	(0.5505)	(0.4964)
Unrelated Diversification	2.5163*	2.2022*
(ST74UNRE)	(1.0462)	(0.9658)
Related Diversification	0.8866	_
(ST74RELA)	(0.6117)	
Management Succession	-0.1494	_
(OWNER)	(0.6523)	
Ratio of Unrelated Diversifiers	2.4493	_
(PERUNRE)	(1.5619)	
Ratio of Related Diversifiers	3.5097*	3.1736**
(PERRELAT)	(1.3653)	(1.2227)
Age	0.0313	_
(AGE)	(0.0247)	
p-value for score test	0.3647	0.0634
Chi-Square	40.666	36.902
Degrees of Freedom	8	4

[a] Numbers in parentheses are standard errors. Number of cases is 86.

* p<.05 ** p<.01 *** p<.001

isomorphism in the process of diversification, such a positive association may provide additional evidence of our major proposition that firms tend to reproduce the status in an organizational field by matching their diversification strategies to their major competitors.

Discussion and Conclusion

Focusing on the change in diversification strategies of chaebols over a decade, this study explored both resource-based and institutional factors affecting diversification decisions of chaebols. A series of logit regression models designed to capture changes in diversification strategies yielded support for the two alternative theoretical frameworks for determinants of diversification strategies. Specifically, R&D investment was positively associated with both the change in the type of diversification strategy and in the level of diversification over time. In addition, the size of a chaebol -- a proxy for the amount and quality of organizational slack or unused resources -- was found to have a significant and positive effect on the level of diversification in the subsequent period. These findings suggest that a chaebol's unique resources, which lie at the core of the resource-based view of the firm, influenced the evolution of chaebols' diversification strategies.

Moreover, findings from logit regressions supported our main argument that institutional isomorphism played an important role in the formation of chaebols through diversified expansion. In the longitudinal investigation, we found that a chaebol whose strategy conformed to the dominant type of strategy in 1974 was less likely to change the type of its diversification strategy. In contrast, a chaebol whose strategy was at odds with a dominant type of diversification strategies in an organizational field was more likely to match its strategy to the dominant type of strategy in the primary industry in an effort to enhance its legitimacy by maintaining competitive balance with its main rivals.

These findings suggest a need to incorporate both efficiency-oriented factors and non-efficiency-oriented institutional factors into a single, comprehensive model to examine the causes of diversification or the formation of big business groups. If we rely on any single theoretical framework with little consideration of the other, such an empirical model will produce only a partial picture of the forces behind complex phenomena such as diversification. For example, the shift of diversification strategy made by a major competing chaebol may bring about a chain reaction from rival chaebols that want to maintain their competitive positions in an organizational field (institutional perspective). However, without sufficient resources such as organizational slack and intangible R&D assets, the chaebols face severe obstacles to counteract the competitor's move (resource-based perspective). Viewed this way, a major contribution of this study as opposed to its predecessors (e.g. Chang, 1992; Farjoun, 1994; Flingstein, 1991) lies in the use of multiple theoretical frameworks to explain the evolution of diversification strategies. In this study, using both resource-based perspectives and institutional views, we offer an explanation for the emergence of chaebols.

Based on our historical and statistical analyses, we argue that the institutional view that focuses on isomorphic pressures explains why many chaebols pursued excessive diversified expansion. Chaebols' very low-levels of profitability -- an average ROI of 0.2% and 2.5% in 1996 and 1995 respectively -- suggest that efficiency was not the main concern in chaebol diversification. Existing empirical studies of the factors influencing diversification strategies (e.g., Chang, 1992; Chatterjee and Wernerfelt, 1991; Farjoun, 1994) focused predominantly on Western firms. This research found that efficiency factors played a leading role in diversification decisions.

However, as we elaborated above, growth-oriented economic development policies encouraged Korean chaebols to place much higher priority on growth than on efficiency or profitability because diversified entries in response to government industrial policy often ensured preferential treatment and government protection. Moreover, the repeated history of government bailouts of troubled chaebols resulted in moral hazard and thus, encouraged the chaebols to grow more vigorously in the belief that the larger a chaebol, the more likely the government would bail it out if necessary. This obsession with growth remained intact even after the government substantially reduced special treatment and protection. In a comparative study of the differences in Korean and U.S. executives' strategic orientation, Hitt, Dacin, Tyler, and Park (1997) found evidence that Korean executives still place top priority on rapid growth, whereas U.S. executives focus on profitability.

A strong emphasis on rapid growth through diversified expansion with little consideration of efficiency and profitability may be justifiable in an era when the chaebols enjoyed low wages in low-to-mid-tech industries that were often sheltered from foreign competition. However, since the late 1980s, Korean wages were no longer low by world standards. Changes in the international economic environment made it difficult for the Korean government to protect chaebols from more specialized and efficient foreign competitors. Moreover, the emergence of China and Southeast Asia as new low-wage manufacturing bases forced Korean firms to move up the technology ladder towards high-tech industries in which Korean chaebols often lacked the technological and managerial expertise required for survival. In turn, Japanese and Western firms became increasingly reluctant to transfer technologies to chaebols because they now viewed them as potential competitors (Ungson, Steers, and Park, 1997).

In 1994, in response to erosion in the competitive advantage of chaebols in the global market, the Korean government embarked upon a new policy initiative for globalization. Promoted by the government, chaebols expanded their overseas production networks dramatically in the 1990s. To overcome declining price competitiveness in low-to-mid-tech industries, chaebols set up production bases in low-wage locations. To gain access to technological resources, chaebols made huge investments in developed countries in technology-intensive industries. However, financial and administrative burdens from rapid international expansion aggravated efficiency problems that had originated from aggressive domestic expansion.

What lessons do the rise and fall of chaebols provide top managers and policy makers in emerging economies? In advanced Western countries, highly diversified firms performed poorly and thus, conglomerates were often portrayed as dinosaurs. However, Amsden (1997) and Khanna and Palepu (1997) suggest that diversified business groups such as chaebols are more appropriate than focused firms for emerging economies because these business groups can perform the functions of institutions such as venture capital firms that are often missing in emerging economies. They argue that business groups act as intermediaries between individual entrepreneurs and imperfect markets for realizing economies of scale and scope that are otherwise unavailable in emerging economies.

As these scholars point out, since the institutional context of emerging economies is vastly different from that of advanced economies, companies in these markets may need to formulate diversification-oriented corporate strategies to achieve economies of scope and scale at an early developmental stage. However, as these diversified firms in emerging economies become major

players in the global market and move to knowledge-intensive industries, they are often forced to compete with the same competitive logic as first movers in developed countries have adopted: focus on core competencies based on efficiency, learning, and flexibility rather than sales growth. If a firm makes a strategic decision based solely on economic rationality, then the change in strategic orientation and core capability required for survival in the new competitive environment will be quick and smooth. However, inertial forces at the individual, firm, and social levels often inhibit radical changes in a firm's behavior. The more successful an existing strategy was in the past, the more difficult it is to change the strategy when necessary. In a nonrational world, success often breeds failure due to this inertia or resistance to change. The dramatic and even tragic decline of chaebols exemplifies this difficult road to change and the crucial role of institutional factors in strategic decisions.

In the late 1980s and early 1990s when chaebols enjoyed high export growth due to the sharp yen appreciation and worldwide DRAM shortages, chaebols could have transformed themselves smoothly into more focused and efficient firms. However, in Korea, efforts to divest existing businesses often faced strong internal resistance as well as external legitimacy problems. As a result, highly diversified chaebols often held onto their existing strategies, even when excessive diversification led to managerial inefficiency and a lack of strategic focus. In the 1990s, the government that previously had nurtured chaebols attempted to curb their excessive diversification and now tried to transform them into focused business groups. The chaebols, however, no longer complied with the government's initiative to specialize and, on the contrary, continued to pursue diversification. Samsung's entry into the already overcrowded automobile industry was a vivid representative example of the chaebols' continued obsession with growth at the expense of efficiency. Not surprisingly, in the current economic crisis, Samsung's automobile business is in serious trouble. The sad news is that continued cross subsidization from the highly competitive electronics business to the automobile business may even hurt Samsung's competitiveness in its core electronics business. The chaebols stand at a crossroads. The only way to survive is to place top priority on efficiency by divesting and restructuring highly diversified businesses.

The history of the rise and fall of Korean chaebols provides an important lesson to both policymakers and top managers in emerging economies. Diversified expansion of business groups can be a shortcut in rapid industrialization, but economic efficiency must be emphasized in order to survive the wave of global competition. Institutional forces shaped in the history of a country's economic development may hinder transformation of highly diversified business groups into the more focused, efficient competitors that this new era of global competition demands.

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