STRUCTURAL INERTIA, IMITATION, AND FOREIGN EXPANSION: SOUTH KOREAN FIRMS AND BUSINESS GROUPS IN CHINA, 1987–95

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The foreign expansion of firms is treated as an instance of organizational and strategic change shaped by structural inertia and imitation. A longitudinal analysis of South Korean firms in China shows that business group experience and imitation among firms from the same home-country industry increase the rate of foreign expansion. Industry imitation effects tend to decrease after a firm makes its first foreign entry.

Study of the reasons triggering the international expansion of firms has been traditionally approached from an economic perspective. This approach emphasizes cost minimization and efficient governance as motivations for firms to pursue foreign production opportunities. Its origins date back to the late 1950s, when Hymer (1960/1976) proposed treating foreign investment not as the movement of capital but as the result of a firm’s decision to go abroad because of advantages related to market and industry structures in its home country. Economic analysis of multinational firms focuses on variables at the country, industry, and firm levels of analysis, including, among others, labor costs and currency exchange rates, trade protectionism, industry concentration and growth, and firm size and technological assets. The economic literature contains a prodigious amount of empirical research in support of its main tenet that firms expand abroad seeking to reduce the sum of production and transaction costs associated with the exploitation of their exclusive competitive advantages across national borders (for a review of the literature, see Caves [1996]).

In contrast to the economic approach, research on foreign expansion from an organizational perspective has lagged behind considerably. The internal structure of large multinational firms has received some attention in the literature (see Ghoshal and Westney [1993] for a review), and a few scholars have documented empirically that firms learn from their own past experience in foreign expansion (Barbema, Bell, & Pennings, 1996; Kogut & Chang, 1996). Although these analyses draw from contingency and learning theories, other approaches emphasizing interorganizational dynamics among firms—ecological and neoliberal institutional theories in particular—have not been systematically applied to the study of foreign expansion. Only three available empirical studies have looked at interorganizational effects: one focuses on firm-level capabilities (Chang, 1993), and the other two on buyer-supplier relationships (Hennart & Park, 1994; Martin, Swaminathan, & Mitchell, 1998). Thus, the organizational literature has not yet systematically explored how interorganizational variables of an ecological and institutional nature affect the propensity and pattern of international expansion by firms.

Foreign expansion or entry, however, can in general be treated as analogous to market entry, which is a type of strategic change that organizational ecologists and neoliberal institutional researchers have found to be affected by interorganizational variables. In particular, previous organizational research has emphasized age, density, and mimetic effects because of the uncertainty and cognitive limitations surrounding market entry (Baum & Korn, 1999; Greve, 1998; Haveman, 1993).

As in the case of market entry in general, an interorganizational approach can shed light above and beyond that shed by economic explanations on why firms decide to set up operations in foreign countries. In this article, I argue that foreign expansion takes place in a context heavily shaped not...
only by economic variables but also by patterns of interaction among firms. An internationalizing firm may obtain information and legitimacy from interacting with other firms in its home country environment. Those interactions enable the firm to identify foreign opportunities, build the knowledge necessary to pursue them, tackle internal and external resistance, and feel confident of being able to compete against domestic firms familiar with the local environment in the host country. By learning from each other's foreign experiences, firms reduce the uncertainty surrounding foreign expansion and enhance the legitimacy of pursuing international opportunities. In this study, however, I do not assume all firms to be equally influenced by interorganizational effects, because they differ in their propensity to change as well as in their exposure to those effects. The analysis presented here has the economic approach as a baseline and incorporates information and legitimacy seeking as two key additional dimensions shaping foreign expansion.

An interorganizational approach based on ecological and neoinstitutional theories raises a number of fundamental questions about the foreign investment process that have been neglected in the literature. First, how does inertia shape a firm's learning from the foreign experiences of others? Second, what types of institutionalized connections between firms in a home country affect foreign expansion? Third, how do interorganizational effects at different levels—ecological, business group, industry—interact with each other? Fourth, are multinational firms with established presences abroad subject to the same home-country influences as purely domestic firms? This article offers hypotheses regarding the impact of interorganizational effects on foreign expansion derived from ecological and neoinstitutional arguments. The data set captures the decisions of listed South Korean firms to establish manufacturing plants in China between 1987 and 1995. Unlike those in previous research, the hypotheses and tests reported here are cross-industry in nature, and they include a complete set of economic controls. Thus, the work is unique in its treatment of the effects of the interorganizational environment within and across industries.

INTERORGANIZATIONAL ENVIRONMENTS
AND FOREIGN EXPANSION

Although firms are not constrained by country boundaries, it takes special circumstances for them to locate activities, such as production plants, in foreign countries. The decision to go abroad is both strategic and subject to unusual uncertainty. Qualitative studies of multinational firms have long recognized that the routines and knowledge accumulated in a home country are of limited usefulness when it comes to expanding abroad (Aharoni, 1966). Thus, internationalizing firms are subject to the so-called liability of foreignness (Hymer, 1960/1976; Vernon, 1979; Zaher, 1995). Under conditions of uncertainty and lack of knowledge, firms tend to expand beyond their home countries in an incremental and sequential way as they attempt to surmount uncertainty, and lack of knowledge and legitimacy, by taking progressively bolder steps. These steps may start with arm's-length exports from their home countries and gradually shift to opening sales subsidiaries and establishing production plants in foreign markets (Johanson & Vahlne, 1977; Kogut & Chang, 1996; Vernon, 1979).

Organizational theory, however, reminds us that firms not only cope with uncertainty by accumulating experience over time but also by relating to other firms in their immediate environments. Firms' decision makers may not readily realize by themselves that foreign opportunities exist or that they can take advantage of them. Organizations are "recalcitrant tools" (Perrow, 1986) and are more likely to engage in strategic change if it is perceived to be legitimate (Abrahamson & Rosenkopf, 1993; DiMaggio & Powell, 1983; Greve, 1996; Haveman, 1993). Organizational scholars have found that events in the vicinity of firms generate information cues and legitimacy that may affect the adoption of a new strategy or practice, such as investing abroad (Miner & Haunschild, 1995). Firms surmount the liability of foreignness by learning from the experiences of other firms in their same population, business group, and industry as well as from their own experiences. These interorganizational effects result from ecological and institutional processes that shape the firms' ability to respond to change and to obtain information and legitimacy.

Age Effects on Foreign Expansion

Setting up a first plant in a foreign country is a major strategic decision for most firms because it represents a departure from their traditional practices and is surrounded by unusual uncertainty, thus requiring the firms to search for information and legitimacy. Haveman (1993) argued that the likelihood of a firm's entry into a new market is shaped by such ecological variables as market density and organizational age. In foreign expansion, however, conventional count measures are problematic because the relevant population is comprised of both existing domestic competitors and entering foreign ones. For a study of new entries
(analogous to "foundings"), population density is best approximated by the growth rate of the focal market in the foreign country (Vernon, 1979).

In contrast to density, age is a potentially important variable affecting new market entry. Organizational ecologists have long argued that a firm's likelihood of engaging in strategic change depends on its age. The key concept in their reasoning is "structural inertia." The older the firm, the less likely it is to engage in change or adaptation because the proliferation of rules, routines, and internal organizational arrangements over time reinforces its adopted course of action (Delacroix, 1993; Hannan & Freeman, 1984, 1989; Ranger-Moore, 1997; Whetten, 1987). The organizational ecology view regarding structural inertia has been embraced by neoinstitutional scholars (e.g., Scott, 1995: 80–81) and is consistent with the arguments of other theorists that as organizations age they commit themselves to existing courses of action (Staw, 1981), persist in using the same successful routines (Cohen & Levinthal, 1990; March, 1991), and become paralyzed by the competing claims of different interest groups (Selznick, 1948). With the passage of time, increasing structural inertia militates against a firm's expansion abroad, even when it faces environmental shifts that erode the viability of its operations in the home country, such as market saturation, increasing labor costs, or adverse changes in currency exchange rates.

Most empirical research adopting an organizational ecology perspective has established that organizational age reduces a firm's ability to learn, its chances of changing strategy or behavior, its growth rates, and/or its odds of survival (Amburgey, Dacln, & Kelly, 1993; Barnett, 1990; Barron, West, & Hannan, 1994; Baum & Mezias, 1992; Flistein, 1985; Ranger-Moore, 1997; Sorensen & Stuart, 2000). However, some studies have shown age to increase firm survival (Carroll, Bigelow, Seidel, & Tsai, 1996; Evans, 1987), and others have encountered variation in the shape of age dependence in train with firm strategy (e.g., Henderson, 1999). However, these empirical disagreements do not undermine the logic of the inertia argument that, with industry characteristics and firm size controlled for, older firms find it more difficult than younger ones to shift well-established operations abroad because such a change upsets long-standing internal organizational arrangements and patterns of relationships with suppliers and workers. Thus,

Hypothesis 1. A firm's age will reduce its rate of entry into a foreign country.

Institutional Effects on Foreign Expansion

Although organizational ecology presents firms as affected by inertia, neoinstitutional theorists see firms as behaving "socially" in that they imitate the actions of other firms so as to cope with uncertainty. In other words, organizations look to others within their immediate environments in search of effective and efficient practices and structures (DiMaggio & Powell, 1983; Tolbert & Zucker, 1983). Thus, firms tend to model themselves on other firms whose history, experience, or location is, they believe, relevant to their own predicament. Since foreign expansion—especially in its early stages—is mired in uncertainty (Aharoni, 1966; Vernon, 1979), neoinstitutional theory would predict that emerging multinationals imitate other organizations with which they are in social contact. Two types of social structures enveloping firms—clusters or groups of firms, and industries or organizational fields—may provide the social channels whereby imitation can occur (Scott, 1995).

Clusters or groups of firms. Firms belonging to a cluster or group are tied to each other for exchange, ownership, or control reasons. They are in a position to share information and experience and to find common ground for justifying the adoption of similar practices or strategies (DiMaggio & Powell, 1983; Tolbert & Zucker, 1983). Information and stimuli at the level of clusters or groups are likely to provide firms with clues as to new opportunities for action. After organizations go to a foreign country to participate in new markets or set up a plant, a firm connected to them may learn two kinds of precious information. First, the firm may not have realized the extent to which there is an opportunity in the foreign country (Aharoni, 1966). Second, even if the firm is aware of the foreign opportunity, it may not know exactly how to proceed. Establishing foreign operations requires negotiations with governments, suppliers, distributors, and customers, and a labor force needs to be hired and trained. The access that membership in clusters or groups provides to the experience of other firms with a presence in a foreign country facilitates the identification and pursuit of opportunities.

Several previous studies have shown that organizations sharing a director on their boards, holding a stake in each other's equity, or depending on the same sources for critical resources tend to adopt similar patterns of behavior even when located in different organizational fields or industries (Burns & Wholey, 1993; Davis, 1991; Davis & Greve, 1997; Haunschild, 1993; Scott, 1995: 120–123; Westphal, Gulati, & Shortell, 1997). Previous empirical assessments of the effects of group membership on for-
eign expansion have been inconclusive. Hennart and Park (1994) found that previous investment in the United States by another firm in the same vertical keiretsu did not significantly affect the likelihood of investment by other member firms, perhaps because a dynamic or longitudinal data set was not used in the analysis. Chang (1995) did find a "keiretsu effect" among Japanese firms belonging to the same business group, but he did not control for keiretsu membership in the sample of electronics firms he studied. Thus, I propose:

**Hypothesis 2.** A firm's rate of entry in a foreign country will increase as other firms in the same cluster or group set up their own plants in the foreign country.

**Fields or industries.** Besides interorganizational clusters or groups, organizational fields are a second type of social structure that may affect the flow of information and legitimacy from one firm to another, thus encouraging imitative behavior. Organizational fields are spheres of activity within which actors mutually recognize each other's presence and actions (DiMaggio & Powell, 1983; Tolbert & Zucker, 1982). An industry has been frequently proposed as a relevant organizational field or reference point (Fligstein, 1985; Haveman, 1993; Scott, 1995: 56). Firms in the same industry measure their internal processes and performance against competitors'. The state and the financial community need to assess the performance of various firms, and they tend to compare them within industries. Over time, industries become "pools of information about the characteristics and behaviors of firms," and rivals in an industry engage in "collective sense-making" (Porac & Rosa, 1996: 370–372). Managers sharing a competitive arena tend to "characterize environments similarly" (Huff, 1982: 127; see also Reger and Huff [1993]).

It is important for the organizational study of foreign expansion, however, to recognize that mimetic behavior within an industry may take place for either competitive or institutional reasons, as DiMaggio and Powell (1983) noted concerning organizational imitation in general. Scholars taking an economic approach to foreign expansion have devoted a considerable amount of effort to understanding competitive mimicry. They have emphasized that only under moderate degrees of industry concentration (that is, in a loosely knit oligopoly) do firms engage in competitive imitation. In a perfectly competitive market, firms cannot strategize, and in a tight oligopoly, they prefer to collude. In contrast, firms in a loosely knit oligopoly match the foreign moves of their home country competitors so as to prevent them from exploiting a foreign market or source of supply that may enhance their competitive position worldwide (Caves, 1996: 83–97; Hennart & Park, 1994; Hymer, 1960/1976). Other reasons for competitive imitation within an industry may simply stem from the need for firms to remain efficient in the face of adverse changes. For example, rising labor costs or currency appreciation in their home country compels firms to look for alternative foreign locations, especially in labor-intensive industries.

The occurrence of competitive mimicry within a moderately concentrated industry, however, does not rule out the possibility of other forms of imitation. In fact, neoinstitutional theory contains predictions about imitative behavior regardless of the level of industry concentration. If industry-level economic variables as well as the evolution of wages and currency exchange rates are controlled for, an increasing proportion of same-industry firms going abroad both reduces the uncertainty and enhances the legitimacy of establishing a plant abroad for all firms in the industry. The uncertainty of foreign market entry is reduced because the greater the number of firms pursuing the foreign opportunity, the more corroboration there is that it is possible to take advantage of the opportunity and the more information there is as to what specific decisions ought to be imitated and what others ought to be avoided.

An increasing proportion of firms with foreign presences also enhances the legitimacy of such a move. Organizational theorists have argued that as the prevalence of a practice increases, it becomes more legitimate; that is, it begins to be taken-for-granted as appropriate or permissible in the eyes of a firm's stakeholders (Abrahamson & Rosenkopf, 1993; Scott, 1995). Enhanced legitimacy may make it easier for a firm to justify a decision against the opposition of stakeholders adversely affected by the move. In the case of foreign expansion, government and labor opposition to the shift of production offshore tends to be more outspoken and effective when relatively few firms have thus shifted production (Enderwick, 1985). As the legitimacy of the practice increases, firms will find it easier to overcome resistance and join the trend. The reduction of uncertainty as information becomes available and the enhanced legitimacy obtained as a greater number of firms expand abroad leads to the following:

**Hypothesis 3.** A firm's rate of entry in a foreign country will increase with the proportion of firms in the same home country industry that have already established a plant in the country.
Interactions across Interorganizational Levels

**Firm and group experience effects.** Information and clues flowing between group members may make firms aware of foreign opportunities and of how to exploit them. However, is this effect equally strong before and after the firms have established their first operations in foreign countries? In the economic literature on sequential foreign investment, no position has emerged as to whether firm and interorganizational group entries into a foreign country should be expected to interact with each other (Chang, 1995). An organizational perspective suggests that firm and interorganizational effects mutually reinforce each other under the assumption that the channels for information, experience, and resource sharing that link firms to each other are stable and formalized. In addition, the legitimating effects of foreign entry by several firms in the same group should reinforce each other. Such direct organizational ties as shared directors or ownership links, while far from constituting an integrated enterprise, are relatively formal and strong, and likely to persist and be useful even after a firm makes its first entry. Direct interorganizational ties, especially if they create a cluster or group of firms, produce stable patterns of communication that can be extended across country borders as a firm expands abroad (Westney, 1993). Therefore, the ties linking a firm to other companies with operations in a foreign country are expected to reinforce the firm’s own experience after it sets up its first plant abroad. This argument leads to the following:

*Hypothesis 4. The entry of firms in an interorganizational group into a foreign country will reinforce the experience of a firm in the same group in setting up its first plant in the same foreign country.*

**Firm and organizational field effects.** In sharp contrast to economics, an organizational approach to foreign expansion does not rest on the assumption that all firms are equally responsive to organizational field (industry) effects under all circumstances. International management scholars have argued that the relevance of a firm’s home country industry tends to decrease as the firm expands internationally and enters into contact with a new set of firms in a host country (Vernon, 1979; Westney, 1993). A foreign presence allows the firm to gather first-hand information, thus helping it to reduce uncertainty (Kogut & Chang, 1996), making it less important to learn from what other home country firms unrelated to it might be doing. In addition, the legitimating effects of the foreign presence of other firms originating from the same home country industry are bound to decline in value after the firm has taken the first step in that foreign location. Once the firm has established a beachhead in the foreign country and the initial barriers to investment (that is, the liability of foreignness) have been surmounted, the firm is less subject to the competitive, informational, and legitimating effects of the behavior of other firms originating from the same home country industry.

Unlike the influence of more stable interorganizational ties like business groups or clusters, the effect of belonging to the same home country industry is attenuated after the firm has entered the foreign country for the first time because the ties linking the members of an industry are less formal than those linking the members of a business group. Thus, strategically important information flows more purposefully and effectively between firms in the same business group than between firms in the same industry. In addition, formal membership in a business group frequently facilitates the sharing of resources and capabilities that may be critical to foreign expansion. A group trading company is a good example of such resources. Such human and physical assets, however, tend not to be shared with other firms in the same industry. These arguments imply that firm and organizational field effects are substitutes. Thus,

*Hypothesis 5. The institutional effects of firms in the same home country industry going abroad declines after the firm sets up its first plant in the foreign country.*

Firms may also differ in their responsiveness to home country industry or organizational field effects because of their intrinsic characteristics. As Abrahamson and Rosenkopf (1993) put it, it is important to assess the susceptibility of nonadaptors to being influenced by the behavior of adopters or by the information about a new practice or strategy originating from adopters. The structural inertia argument suggests that the older a firm, the smaller its propensity to act upon information received from other organizations. Older organizations will not respond to their peers’ actions and experience as readily as younger ones because structural inertia leads them to believe that what they do is correct and that what others are doing is useless or irrelevant to them (Hannan & Freeman, 1984; Ranger-Moore, 1997). As the information or legitimacy value of an increasing proportion of peers with plants in a foreign country drops with age, so will the probability that a given firm will join in the trend. Therefore:
Hypothesis 6. The imitation effect of firms in the same home country industry going abroad declines with firm age.

METHODS

Empirical Setting and Data

The international expansion of South Korean companies into the People's Republic of China (China) provides an excellent setting for studying the impact of organizational environments on the process of establishing foreign manufacturing plants for several reasons. First, prior to the late 1980s the international manufacturing experience of Korean firms was negligible, making it possible to avoid "left-censoring" problems altogether. Second, Korean companies started to expand abroad in response to well-understood economic changes, including market saturation, wage hikes, and currency appreciation. China offered high-growth markets and lower wages (Tcha, 1998). Thus, this setting provides a conservative test of the effects of organizational variables, given that purely economic factors have been such a powerful force driving foreign expansion. Third, Korean manufacturing companies were barely exporting goods to China prior to the late 1980s. This circumstance rules out the transaction cost issues related to the process of substituting local production in the foreign country for exports from the home country. And fourth, China has attracted Korean firms across a wide spectrum of manufacturing industries.

Korea ranks as the sixth largest foreign investor in China, whose "open door policy" toward foreign companies dates back to 1979 (Lardy, 1996; Pearson, 1991). The first Korean manufacturing plant in China, however, dates back to 1987 (Lee, 1996; Sanford, 1990: 8–15). Most Korean firms operating in China are located in or around Beijing, Tianjin, Qingdao, Liaoning, or Heilongjiang; that is, they are along the northern coast and in Manchuria (An, 1993; Lardy, 1996). Although many Korean firms have established a manufacturing presence in China, not all of them have done so. Surveys of South Korean managers in China reveal that they are overwhelmed by the complexities of dealing with the Chinese government at various levels as well as with a foreign labor force and a new set of suppliers (An, 1993; Lee, 1996: 158). Under these circumstances, the acquisition of knowledge through experience or through contact with other firms plays an important role.

The empirical study covers 506 South Korean manufacturing firms, and trading companies with manufacturing activities, listed on the Seoul stock exchange as of the end of 1995. Thus, U.S. Standard Industrial Classification (SIC) codes 20 through 39 are represented in the sample. Trading companies (SIC code 50) are also in the sample because in Korea they tend to own manufacturing plants as well. Data on Korean foreign manufacturing plants were obtained from the Bank of Korea, which authorizes, registers, and processes all foreign investments by Korean firms. By the end of 1995, 117 of the 506 listed firms had established a total of 202 manufacturing plants in China. The firms with the most plants were Ssangyong Cement Industries and LG International, with 8 each, followed by LG Electronics and Daewoo Corporation, with 7 each, and Daewoo Electronics, with 6. Among the products manufactured are textiles, clothing, footwear, foodstuffs, chemicals, cosmetics, cement, flat glass, metal containers, mechanical components, electrical appliances, vehicle parts, excavators, and even pianos. The month and year in which the Bank of Korea authorized an investment was considered to be the time at which a plant was established. In some cases, firms applied for and obtained authorization but did not actually establish plants. Such occurrences were deleted from the data set. The Bank of Korea correctly treated additions to a pre-existing plant as "enlargements" rather than new entries. It also attributed indirect investments through a Korean subsidiary in a third country (such as Hong Kong) to the ultimate owner located in Korea. Background information on each company—including financials, business group (chaebol) affiliation, and industry membership—was obtained from various annual and semiannual company directories (the Korea Company Yearbook for 1994–96, put out by Asia-Pacific Infoserve; the 1986 yearbook from Business Korea; the indexes produced by the Korea Productivity Center [KPC, 1985a, 1985b]; and the Korea Investors Service [1990] Financial Report of Korean Companies.) Some 20 on-site and telephone interviews at selected firms and chaebols were used to resolve ambiguities regarding chaebol affiliation and date of China entry and also to gain a deeper understanding of the decision-making process leading to the establishment of manufacturing plants in China.

Analysis and Measures

The rate of establishment of new plants in China was modeled as a repeated hazard. The data set consists of a series of spells or durations for each firm designed to accommodate the time-varying independent variables. Spells start at the beginning of January 1987 or at a firm's founding date, which-
ever came last. Given that no plants were established in China by listed Korean firms prior to 1987, there is no left-censoring problem. Each spell was right-censored just after the end of December 1995. Spells were split to account for the occurrence of an event (the establishment of a plant) and at the end of each year to accommodate the annual time-varying variables indicated below. A firm with no plants in China as of the end of 1995 initially contributed one right-censored observation, with a starting date of January 1987 or the firm’s founding date—whichever came last—and an ending date just after the end of December 1995. Following conventional practice, I included the counter of previous establishments by the same firm, updated after each event, in all models. The number of entries by the same firm and a dummy variable for previous entry (coded as 0 before the first entry and as 1 thereafter) are highly correlated with each other and yield similar regression results. Therefore, I chose the dummy so as to be able to test Hypotheses 4 and 5.

**Group effects.** Some Korean firms belong to a chaebol (meaning “wealth clique”). Korean firms either belong or do not belong to a chaebol, and no firm belongs to more than one (Kang, 1996: 11, 86–90; Ungson, Steers, & Park, 1997). Companies associated with the same chaebol engage in a variety of practices conducive to interorganizational sharing of experience, such as joint recruiting, personnel transfers, financial coordination, and technological collaboration. Membership in a business group may expose a firm to the experiences of other firms, making it easier for it to explore new possibilities for foreign expansion. Influences across organizations in the same group, however, could also be caused by an attempt to replicate in a foreign country the value chain of vertical links between group companies in the home country. In the case of Korean firms in China, though, this pattern is relatively rare (our source for this statement is an interview at the International Business Division of the Ministry of Trade, Industry & Energy, Seoul, May 30, 1997). In the data set used for this study, no vertical links were found between plants set up in China by firms belonging to the same chaebol.

A total of 180 firms of the 506 in the sample for analysis were associated with one of 54 business groups or chaebol, with a minimum of 2 listed firms and a maximum of 9 (in the Hyundai group). To illustrate, Table 1 shows the Chinese investments of the firms affiliated with the Daewoo chaebol. The effect of entry into China by other firms belonging to the same group was captured by a time-varying dummy indicating whether a firm in the same business group had previously established a plant. This dummy was coded as 0 until the first event occurred and as 1 thereafter for all of the firms associated with the group. In the case of

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<tr>
<th>Company</th>
<th>Year Founded</th>
<th>Became Part of Daewoo</th>
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<tbody>
<tr>
<td>Orion Electric</td>
<td>1965</td>
<td>1965</td>
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<tr>
<td>Daewoo Electronics</td>
<td>1974</td>
<td>1974</td>
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<tr>
<td>Daewoo Electronic Components</td>
<td>1973</td>
<td>1973</td>
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<tr>
<td>Daewoo Heavy Industries</td>
<td>1937</td>
<td>1976</td>
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<tr>
<td>Daewoo Corporation</td>
<td>1967</td>
<td>1967</td>
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<tr>
<th>Manufacturing Plants in China</th>
<th>Year</th>
<th>Products</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>TV sets, refrigerators</td>
<td>Fuzhou</td>
<td></td>
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<tr>
<td>1993</td>
<td>Car stereos</td>
<td>Tianjin</td>
<td></td>
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<tr>
<td>1994</td>
<td>Fan heaters</td>
<td>Harbin</td>
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<tr>
<td>1995</td>
<td>CRT monitors</td>
<td>Weihai</td>
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<td>1995</td>
<td>Appliance motors&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Tianjin</td>
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<td>1995</td>
<td>Vacuum cleaners</td>
<td>Tianjin</td>
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<td>1994</td>
<td>Deflection yokes</td>
<td>Xianyang</td>
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<td>1994</td>
<td>Deflection yokes</td>
<td>Yantai</td>
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<td>1995</td>
<td>Saw filters, &quot;E-tuners&quot;</td>
<td>Yantai</td>
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<td>1994</td>
<td>Excavators, trailers</td>
<td>Shandong</td>
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<td>1991</td>
<td>Bags, tents</td>
<td>Dalian</td>
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<td>1992</td>
<td>Granite</td>
<td>Qingshao</td>
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<td>1993</td>
<td>Cement</td>
<td>Shandong</td>
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<td>1994</td>
<td>Tin plate</td>
<td>Hai Kou</td>
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<td>1994</td>
<td>Apparel</td>
<td>Tianjin</td>
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<td>1995</td>
<td>Printing and dyeing</td>
<td>Suzhou</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Sources: Daewoo Factbook 1994: 63; Daewoo Factbook 1996: 32, 48, 78–79; News from Daewoo (March 1997: 13; Highlights 1995: 15, 17); and field interviews.

<sup>b</sup> Trading arm of the Daewoo Group since 1975.

<sup>c</sup> In collaboration with Daewoo Electric Motor Industries.
firms that were the first in their business group to establish a plant in China, the group dummy variable was not coded as 1 until a second firm in the same group set up a plant. This coding technique avoids double counting of establishments by the firm and by other firms in the same group (Chang, 1995). Although the sample includes only listed firms, no unlisted firm affiliated with a chaebol in the sample was the first to establish a plant in China. Thus, no bias was introduced because of restricting the sample to listed firms.

**Industry imitation.** Imitation in the organizational field was measured by the proportion of firms in each of 19 industries that had previously established a plant in China. This variable needed to be updated at the end of each calendar year. Accordingly, I split all spells at the end of each year between 1987 and 1995 in order to update the values for industry imitation and the other annual time-varying control variables listed below.

**Firm-level controls.** Firm-level variables generally associated with higher rates of foreign manufacturing expansion, such as size and technological assets, were included in all analyses. Firm size was measured as the logarithm of inflation-adjusted (real) sales during each year between 1987 and 1995. The only measure available for the technological sophistication of each firm was the ratio of cumulative R&D expenses to sales as of 1995. This ratio captures cumulative expenses on R&D over the life of a firm minus an estimated rate of depreciation. Firm age, which I measured as of founding, ignoring subsequent reincorporations or changes in ownership, and updated at the end of each year, ranged from 2 to 99 years (several firms in the sample were founded before World War II, and one before the Japanese occupation). Finally, membership in one of the 54 business groups identified in the sample was controlled for with a time-varying dummy variable as a means of taking into account changes in group membership.

**Group-level controls.** All models include a dummy variable indicating whether a firm is a member of a business group or chaebol. This control variable was coded independently of whether a plant had been opened in China by any of the firms affiliated with the group or not.

**Industry-level controls.** Economic and competitive controls are especially important to the analysis of industry imitation effects (Hypothesis 3) because they account for mimicry induced by competitive pressure. I added three variables to all analyses following previous research on foreign investment (Caves, 1996). First, linear and quadratic terms for the 1989 three-firm concentration ratio within 19 Korean manufacturing industries were included in all equations in order to account for competitive oligopolistic behavior in moderately concentrated industries. The ratios were calculated after I matched the Korea Development Institute’s five-digit classes with the corresponding two-digit U.S. SIC codes. Second, a time-varying measure of labor intensity in each industry was included in all analyses. The ratio of total employee remuneration over total value added was calculated for each two-digit SIC industry and year. Year-on-year variation rates were divided by this ratio for the food and beverages industry as a way to ensure comparability across years; data (for 1989–95) were from Korea’s Report on Mining and Manufacturing Survey. The resulting relative ratio was lagged one year. Third, the relative attractiveness of various industries in China was controlled for by an industry-specific annual growth rate, which was also lagged one year; data (for 1986–96) were from the China Statistical Yearbook. This measure also controlled for the density effect on market entry (Haveman, 1993). These three industry controls account for competitive imitation pressures. Above and beyond the effects of these controls, the proportion of same-industry entry can be safely assumed to capture other kinds of imitation processes that are not competitive but rather have to do with legitimating and information effects.

Lastly, it was necessary to hold constant the evolution of wages and currency exchange rates. Wages in Korea relative to wages in other countries in East and South Asia were controlled for with the ratio of the growth in Korean real wages over the growth in Chinese real wages, using 1990 as the index base. The real exchange rate between the won and the U.S. dollar was also included in all regressions. Both control variables were lagged one year and updated annually using government statistics from both Korea’s Statistical Office and China’s Statistical Bureau for 1986–96.

**Final sample for analysis.** The information pertaining to the 34 manufacturing plants established by 14 of the 31 trading companies was taken into account when the group-level effects were coded but excluded from the regressions as events because the firm-level background information could not be broken down between manufacturing and trading activities, and thus might have introduced unknown biases. Regression results including the events associated with the 31 trading companies, however, did not differ substantially from those reported below. Missing data on some of the variables for 15 firms and the exclusion of all 31 trading companies reduced the final sample for analysis to 460 firms, of which 86 had established a total of 170 manufacturing plants in China by the end of
1995. These data generated 4,400 spells after I split durations when an event occurred and at the end of each calendar year so as to accommodate the time-varying annual variables. Table 2 shows the sample descriptive statistics and the linear correlations between pairs of explanatory variables.

**Estimation Model**

The effect of explanatory and control variables (or covariates) on the rate of foreign entry was estimated using a partial likelihood hazard specification or Cox model allowing for right-censored observations and implemented with the TDA computer program (Röhwer, 1994). Hazard rates of establishment were represented by log-linear functions of the covariates of interest. For each firm, the model calculates the hazard as the likelihood that the observed establishments will take place conditional upon the hazards of all the other firms in the risk set:

\[ L_i(t) = h_0(t) \exp[A_i(t)\beta]/h_0(t) \sum_{j \in R_t} \exp[A_j(t)\beta], \]

where \( L_i(t) \) is the likelihood at time \( t \) for firm \( i \); \( h_0(t) \) is the baseline rate; \( A_i(t) \) is a matrix of covariates that may or may not be time-varying; \( \alpha \) and \( \beta \) are the vectors of coefficients to be estimated; and \( j \) is an index for firms in the risk set \( R \) at time \( t \).

This method rests on three assumptions. The first is that the covariates exert a log-linear effect on the hazard function. Second, the baseline hazard rates and the log-linear function of the covariates are supposed to be proportional. Third, the baseline hazard rate is considered to be the same for all firms in the risk set. The latter two assumptions allowed leaving the baseline hazard unspecified. Thus, taking into account only the conditional probabilities of establishing a plant, I obtained:

\[ L_i(t) = \exp[A_i(t)\beta]/\sum_{j \in R_t} \exp[A_j(t)\beta]. \]

In order to estimate the coefficients in the model, I maximized the partial likelihood function obtained by multiplying all of the conditional probabilities for each time spell ending in a plant establishment. Right-censored spells enter the risk set at each time period but do not contribute to the numerator of the likelihood function. This procedure yields consistent and asymptotically normally distributed estimates, with the \( t \)-statistics being asymptotically close to the full maximum likelihood estimates.

**RESULTS**

Table 3 reports the parameter estimates and \( t \)-statistics for six model specifications. Model 1 includes the effects of the economic control variables at the firm, industry, and country levels of analysis. It confirms the conventional economic wisdom that the rate of foreign expansion increases with: a firm’s size; moderate levels of industry concentration in the home country, peaking at a level of 44.4 percent and decreasing thereafter; the declining competitiveness of the firm’s home country base as a result of rising real wages or a home currency that appreciates in real terms (that is, a lower real exchange rate); and the growth in the corresponding Chinese industry. Labor intensity at the industry level does not reach significance. The control dummy accounting for the existence of a firm’s first plant in China is very significant (for a similar result, see Chang [1995] and Kogut and Chang [1996]). Membership in a business group, in contrast, does not exert a significant effect. Model 1 provides a baseline for assessing what explanatory power organizational variables have that goes above and beyond the effects of the economic variables. Model 2 includes the three main effects related to structural inertia and imitation: firm age, previous group entry, and proportion of same-industry entry. Models 3, 4, and 5 add one interaction term at a time. Finally, Model 6 includes all main and interaction terms.

Hypothesis 1, predicting a negative effect of structural inertia (as measured by firm age) on the rate of foreign expansion, receives no support. Hypothesis 2, on the effect of previous group entry, receives support only in model 2; that is, it is supported when the interaction terms are not included. It should be noted that being associated with a group per se does not affect the rate of foreign expansion. This finding is consistent with the observation in the literature that both chaebol-affiliated and independent firms have been attracted to China as a location for low-cost manufacturing and as an expanding market (Lee, 1996).

Hypothesis 3, predicting that the proportion of firms entering a foreign country that are from the same home country industry increases the rate of foreign expansion, receives strong support from models 2 through 6. Controlling for competitive pressures operating at the industry level (oligopolistic rivalry, labor intensity, foreign market growth) and at the country level (relative wages, currency exchange rates), I found that the greater the proportion of firms from the same home country industry with a plant in China, the higher the rate of a focal firm’s foreign expansion.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Real sales</td>
<td>4.30</td>
<td>1.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. R&amp;D over sales</td>
<td>0.90</td>
<td>1.41</td>
<td>.20*</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Firm age</td>
<td>3.17</td>
<td>0.49</td>
<td>.33*</td>
<td>.36*</td>
<td>.17*</td>
<td>.97*</td>
<td>.05*</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Member of a business group</td>
<td>0.36</td>
<td>0.48</td>
<td>.50*</td>
<td>.18*</td>
<td>.06*</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Previous firm entry</td>
<td>0.08</td>
<td>0.28</td>
<td>.17*</td>
<td>.13*</td>
<td>.97*</td>
<td>.05*</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Previous group entry</td>
<td>0.08</td>
<td>0.27</td>
<td>.36*</td>
<td>.23*</td>
<td>.07*</td>
<td>.39*</td>
<td>.19*</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. Percent same-industry entry</td>
<td>5.30</td>
<td>9.20</td>
<td>.08*</td>
<td>.15*</td>
<td>.99*</td>
<td>-.01</td>
<td>.43*</td>
<td>.19*</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. Previous group x firm entry</td>
<td>0.02</td>
<td>0.14</td>
<td>.28*</td>
<td>.20*</td>
<td>.05*</td>
<td>.19*</td>
<td>.48*</td>
<td>.50*</td>
<td>.23*</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Percent industry x previous firm entry</td>
<td>1.56</td>
<td>6.23</td>
<td>.13*</td>
<td>.15*</td>
<td>.04*</td>
<td>.02</td>
<td>.82*</td>
<td>.17*</td>
<td>.58*</td>
<td>.43*</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10. Percent industry x firm age</td>
<td>17.18</td>
<td>30.01</td>
<td>.10*</td>
<td>.13*</td>
<td>.15*</td>
<td>.00</td>
<td>.43*</td>
<td>.19*</td>
<td>.99*</td>
<td>.23*</td>
<td>.57*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Korean industry concentration</td>
<td>54.32</td>
<td>13.57</td>
<td>.10*</td>
<td>.17*</td>
<td>.10*</td>
<td>.06*</td>
<td>-.03</td>
<td>.04*</td>
<td>-.04*</td>
<td>.02</td>
<td>-.04*</td>
<td>-.04*</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>12. Korean industry concentration squared</td>
<td>3,134.46</td>
<td>1,385.00</td>
<td>.10*</td>
<td>.14*</td>
<td>.10*</td>
<td>.07*</td>
<td>-.03*</td>
<td>.02</td>
<td>-.04*</td>
<td>.01</td>
<td>-.05*</td>
<td>-.05*</td>
<td>.99*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Korean industry labor intensity</td>
<td>1.24</td>
<td>0.38</td>
<td>-.00</td>
<td>-.03</td>
<td>-.05</td>
<td>-.06</td>
<td>.15*</td>
<td>.06*</td>
<td>.27*</td>
<td>.04*</td>
<td>.16*</td>
<td>.27*</td>
<td>-.66*</td>
<td>-.66*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. China industry growth</td>
<td>1.12</td>
<td>0.13</td>
<td>.06*</td>
<td>.02</td>
<td>.04*</td>
<td>.03</td>
<td>.11*</td>
<td>.08*</td>
<td>.21*</td>
<td>.05*</td>
<td>.11*</td>
<td>.20*</td>
<td>.10*</td>
<td>.12*</td>
<td>.07*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Relative wage ratio&lt;sup&gt;c&lt;/sup&gt;</td>
<td>88.70</td>
<td>12.82</td>
<td>.10*</td>
<td>.01</td>
<td>.20*</td>
<td>.01</td>
<td>.18*</td>
<td>.15*</td>
<td>.34*</td>
<td>.08*</td>
<td>.15*</td>
<td>.34*</td>
<td>-.01</td>
<td>-.01</td>
<td>.27*</td>
<td>.06*</td>
<td></td>
</tr>
<tr>
<td>16. Real exchange rate&lt;sup&gt;d&lt;/sup&gt;</td>
<td>751.69</td>
<td>71.64</td>
<td>-.05*</td>
<td>-.01</td>
<td>-.17*</td>
<td>-.01</td>
<td>-.15*</td>
<td>-.13*</td>
<td>-.30*</td>
<td>-.08*</td>
<td>-.14*</td>
<td>-.30*</td>
<td>.00</td>
<td>.01</td>
<td>-.18*</td>
<td>-.03*</td>
<td>-.79*</td>
</tr>
</tbody>
</table>

<sup>a</sup> n = 4,440 (spells).  
<sup>b</sup> Logarithm; in millions of won.  
<sup>c</sup> Logarithm; in years.  
<sup>d</sup> 1990 = 100.  
<sup>e</sup> Won per dollar.  
<sup>*</sup> p < .05
### TABLE 3
Proportional Hazard of Entry of South Korean Manufacturing Firms in China, 1987–95<sup>a</sup>

<table>
<thead>
<tr>
<th>Variable&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Expected Sign and Hypothesis</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real sales</td>
<td>+</td>
<td>0.42***</td>
<td>0.39***</td>
<td>0.37***</td>
<td>0.39***</td>
<td>0.40***</td>
<td>0.38***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(6.44)</td>
<td>(5.47)</td>
<td>(5.18)</td>
<td>(5.50)</td>
<td>(5.62)</td>
<td>(5.33)</td>
</tr>
<tr>
<td>R&amp;D over sales</td>
<td>+</td>
<td>0.07</td>
<td>0.01</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.55)</td>
<td>(0.16)</td>
<td>(-0.11)</td>
<td>(0.31)</td>
<td>(-0.24)</td>
<td>(-0.29)</td>
</tr>
<tr>
<td>Member of a business group</td>
<td>+/−</td>
<td>-0.10</td>
<td>-0.23</td>
<td>-0.21</td>
<td>-0.25</td>
<td>-0.21</td>
<td>-0.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.49)</td>
<td>(-1.03)</td>
<td>(-0.96)</td>
<td>(-1.13)</td>
<td>(-0.96)</td>
<td>(-0.95)</td>
</tr>
<tr>
<td>Previous firm entry</td>
<td>+</td>
<td>1.36***</td>
<td>1.03***</td>
<td>0.83***</td>
<td>1.55***</td>
<td>1.03***</td>
<td>1.35***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7.77)</td>
<td>(5.19)</td>
<td>(3.41)</td>
<td>(4.99)</td>
<td>(5.22)</td>
<td>(3.96)</td>
</tr>
<tr>
<td>Firm age</td>
<td>+, H1</td>
<td>0.12</td>
<td>0.13</td>
<td>0.14</td>
<td>0.17</td>
<td>0.18</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.60)</td>
<td>(-0.64)</td>
<td>(-0.66)</td>
<td>(0.61)</td>
<td>(0.65)</td>
<td></td>
</tr>
<tr>
<td>Previous group entry</td>
<td>+, H2</td>
<td>0.64**</td>
<td>0.40</td>
<td>0.62**</td>
<td>0.67**</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.53)</td>
<td>(1.28)</td>
<td>(2.45)</td>
<td>(2.66)</td>
<td>(1.14)</td>
<td></td>
</tr>
<tr>
<td>Percent same-industry entry</td>
<td>+, H3</td>
<td>0.02**</td>
<td>0.03***</td>
<td>0.03***</td>
<td>0.11*</td>
<td>0.13**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.18)</td>
<td>(3.28)</td>
<td>(3.92)</td>
<td>(2.29)</td>
<td>(2.59)</td>
<td></td>
</tr>
<tr>
<td>Previous group entry × previous firm entry</td>
<td>+, H4</td>
<td>0.60</td>
<td></td>
<td>0.69†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.57)</td>
<td></td>
<td>(1.80)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent same industry entry × previous firm entry</td>
<td>−, H5</td>
<td>-0.03*</td>
<td></td>
<td>-0.03*</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(-2.06)</td>
<td></td>
<td>(-2.06)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent same industry entry × firm age</td>
<td>−, H6</td>
<td>0.03*†</td>
<td></td>
<td>0.03*†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.77)</td>
<td></td>
<td>(-1.89)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Korean industry concentration

-0.18*** & -0.16*** & -0.16*** & -0.16*** & -0.16*** & -0.15***

Korean industry labor intensity

0.16*** & 0.14*** & 0.14*** & 0.14*** & 0.14*** & 0.13***

China industry growth

2.68*** & 2.22*** & 2.29*** & 2.20*** & 2.16*** & 2.20***

Relative wage ratio

0.05** & 0.06** & 0.06** & 0.05** & 0.05** & 0.05**

Real exchange rate × 100

-0.50 & -0.13 & -0.14 & -0.15 & -0.11 & -0.16

Partial log-likelihood

-1,270.61 & -1,261.57 & -1,260.31 & -1,259.48 & -1,260.01 & -1,256.30

Number of spells

4,440 & 4,440 & 4,440 & 4,440 & 4,440 & 4,440

Number of firms

460 & 460 & 460 & 460 & 460 & 460

Number of events<sup>c</sup>

170 & 170 & 170 & 170 & 170 & 170

---

<sup>a</sup> Parameter estimates are shown, with t's in parentheses.

<sup>b</sup> Sales and age are logarithms.

<sup>c</sup> Plants in China.

† p < .10

* p < .05

** p < .01

*** p < .001

The empirical results regarding the interaction effects are also mixed. Firm and group-level effects (Hypothesis 4) tend to reinforce each other in increasing the rate of foreign expansion, but the interaction does not reach significance at a level of 5 percent or better (models 3 and 6). It is important to note that the main effect of previous group entry ceases to be significant when the interaction with previous firm entry reaches significance (model 6). This is most likely the result of multicollinearity (the Pearson correlation is .50). Hypothesis 5 receives strong support from models 4 and 6. Industry imitation effects are diminished after a firm's first plant is established, with the main effect remaining significant. These results imply that the information and legitimacy value of the actions of other firms from the same home country industry decrease as the firm gains first-hand knowledge.
and experience in a foreign country. These findings are consistent with an institutional view of multinational firms as organizations straddling several country environments (Westney, 1993). The third interaction effect falls just short of reaching significance at the 5 percent level and thus fails to provide support for Hypothesis 6 (models 5 and 6). The evidence in this sample does not enable one to conclusively assert that the greater a firm’s age, the smaller the effect of the proportion of same-industry entry on the rate of foreign expansion.

The results reported in Table 3 are robust to changes in control variables and model specifications. Including industry dummies instead of the time-varying industry controls did not affect the results, and the dummies were not jointly significant as a set. Dummy variables accounting for every three years of observation did not alter the results either. Regression analyses including a set of 54 dummy variables accounting for each of the groups yielded results similar to those reported, indicating that the groups do not differ in terms of their ability to plan or to mobilize resources for foreign expansion. Given that the set of 54 group dummy variables was never significant, results without fixed effects are reported in Table 3. (Models with fixed group effects are available from the author upon request.)

The impact of the interorganizational variables on the hazard of foreign expansion is sizable. For example, a firm tied to a group containing another firm that has a plant in China experiences a hazard of setting up subsequent plants that is nearly three times greater than that of a firm with no such tie. This multiplier effect is calculated from the parameter estimates in model 6 ($\exp[0.35 + 0.69] = 2.83$).

Figure 1 depicts the effects of the proportion of firms with a foreign plant that are from the same home country industry at different levels of the previous firm entry variable (0 versus 1) and firm age; the estimates for model 6 are used. The horizontal scale measures the percentage of same-industry entry and varies between 0 and 50, which is the range observed in the sample. As discussed above, the hazard increases with the percentage of same-industry entry, especially before the firm’s first entry and the lower the firm’s age. The hazard rises most rapidly with the percentage of same-

**FIGURE 1**

Effect of Percentage of Same-Industry Entry on Hazard Rates of Foreign Expansion

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$^a$ Based on estimates from model 6.
industry entry before the firm has established a plant in China and when the firm is relatively young (for example, at the mean sample age minus one standard deviation). At the other extreme, the combined attenuating effects of the firm's first entry and a relatively high (sample mean plus one standard deviation) are actually estimated to reduce the hazard rate slightly as the percentage of same-industry increases.

Comparing the full model (model 6) to the baseline model (model 1) yields a significant improvement in goodness of fit (−2 times the difference in partial log-likelihood yields a value of 29.02, following a chi-square distribution with six degrees of freedom; \(p < .001\)). Thus, the evidence in this sample indicates that the baseline model containing economic control variables provides only a partial account of the process of foreign expansion of firms. Going above and beyond economic variables, organizational effects shape their foreign expansion. Thus, including both economic and organizational variables in the analysis provides a more complete picture of the foreign expansion process.

**DISCUSSION AND CONCLUSION**

The internationalization of firms has rarely received the attention of organizational theory. This article has addressed the effects of structural inertia and imitation on Korean firms' entry into China and found them to significantly add explanatory power to economic explanations. Establishing operations in a foreign country requires a considerable amount of new knowledge. A firm may acquire the relevant knowledge and experience not only by itself but also from others in its organizational environment. Although economics and international management have considered the macroeconomic environment and other economic characteristics at the industry level, organizational theory emphasizes that firms operate in environments structured by other relevant firms. In particular, firms are responsive to the signals received from other firms in the same interorganizational group and organizational field. That responsiveness, however, varies over time and across firms. Imitation effects within the organizational field were found to decrease in strength after a firm's first entry. Thus, an organizational perspective has key insights to offer to the study of the process by which firms expand abroad.

The results concerning business group effects are mixed and require careful interpretation. On the one hand, the main business group effect is highly significant when the distinction between first and subsequent entries by the same firm is not made. Firms in the same chaebol seem to take each other's actions into account when it comes to entering a foreign country. The chaebols are depicted in the literature not as fully integrated enterprises, but certainly as business groups with some level of coordination of member firms. Many chaebols have established general planning offices and organize regular meetings of their members' presidents, which tend to offer opportunities to share information, experiences, and future plans (Janelli, 1993: 129–130; Kang, 1996: 102–103; Kim, 1994). On the other hand, the regression results indicate that the group effect loses significance before a firm's first entry, and it remains marginally significant after first entry. Since the loss in significance of the main group effect may be an artifact of multicollinearity, one should not draw strong conclusions from it. In future research, scholars ought to see if operational coordination subsequent to first entry (that is, after at least two chaebol firms have already established plants) is more important and valuable than coordination during the planning stage prior to first entry. The literature on foreign firms in China suggests that operational coordination is indeed important, especially when it comes to meeting regulations regarding foreign currency flows and procurement of inputs (Lardy, 1996; Pearson, 1991).

The empirical results reported here offer an opportunity to enrich theories of organization. The effects of home country industry imitation on the rate of foreign expansion were found to decrease after a firm's first entry. This result suggests that a dynamic rather than a static assessment of the effects of organizational fields on foreign investment decisions is in order. The organizational environment that is most relevant to understanding foreign expansion seems to be different depending on whether one is analyzing the first or subsequent entries into a foreign country. When the reasons behind a firm's first entry are addressed, institutional variables in the home country exert a discernible impact on foreign investment decisions. Prior to the firm's first entry, information about the foreign country is mainly obtained from, and interpreted through, the firm's interaction with other organizations in its home country. Once a direct presence in the foreign country has been established, the institutional context of learning seems to shift, at least in part, to the foreign country. Suddenly, the firm is directly exposed not only to the home country environment but also to a foreign one. This exposure allows managers to gather information on site, opening up a range of new opportunities. A firm with a foreign plant is in a position to gather and use local knowledge.

The implications of the finding that first and
subsequent plant establishments are qualitatively different may spill over into other research questions as well. Most previous research on organizational events has not been concerned with the difference between first and subsequent occurrences because the dependent variable under consideration was not of a repeated nature. Examples include the adoption of such artifacts as the multidimensional form (Fliqstein, 1985), the poison pill (Davis, 1991), total quality management programs (Westphal, Gulati, & Shortell, 1997), and the matrix structure (Burns & Wholey, 1993). When organizational researchers have studied repeated events, such as strategic alliances between firms (Gulati, 1995a, 1995b), the difference between first and subsequent events has proved to be empirically important, although the problem of overlapping or competing environments has not been explicitly considered.

The impact of inertia on the foreign expansion process was not supported by the empirical evidence presented in this article. This does not necessarily mean that inertia does not play a role in internationalization. The data used here contain two basic limitations that may account for the lack of a finding of significance for firm age. First, the period of observation (nine years) is too short to observe the full range of behavior during a typical firm’s lifetime. Second, the sample only includes publicly listed firms, which may have introduced unknown biases if firms belonging to a certain age group are more likely to be listed than others. Thus, in the future researchers could perhaps better evaluate the effects of ecological variables by constructing a database that is representative of all firms and covers a long period of time.

Although the exact operational definition of some of the variables, such as previous group entry, is highly specific to the Korean context (the chaebols are unique, self-contained business groups with no ties between them), the theoretical arguments and the rest of the empirical indicators are applicable to other research settings. Thus, the arguments and results reported in the article—especially those concerning industry imitation and how it is moderated by previous firm entry and structural inertia—may inform future research aimed at replicating the findings in different national contexts or at refining and testing some of the predictions.

This study has provided an understanding of the likelihood and rate of foreign expansion in terms of economic and organizational variables. A similar approach could be used to study three more specific questions related to the foreign expansion process. First, firms enter countries using different forms of ownership, ranging from wholly-owned subsidiary to minority joint venture. Decisions about the form of ownership that serves as entry mode may be affected not only by economic factors but also by organizational ones. In particular, do firms imitate each other’s entry modes? Do they change their behavior as they accumulate experience in using one entry mode? Second, for a variety of mostly political reasons, China tends to attract few trading investments that are not accompanied by manufacturing activities. Therefore, it would be instructive to apply the approach developed in this study to the situation of a host country or area in which foreign firms establish a more balanced mix of trading and manufacturing activities, such as the United States or Europe. Do firms consider each others’ experiences in pursuing a sequence of trading and manufacturing investments abroad? Lastly, additional research on the effects of interorganizational groups and organizational fields in different home countries would help better explain the role that institutions play in the process of foreign expansion. Do different institutional structures in a home country—interorganizational networks, patterns of ownership, regulation—affect the chances that a firm will go abroad and the frequency of foreign investment?

The phenomenon of the foreign expansion of firms provides fertile soil for the organizational imagination. Although this study has focused on inertia and imitation, other organizational concepts and predictions could be brought to bear on the questions of why and how firms go abroad. With its examination of business group effects, this study has only scratched the surface of the possible ways in which social network analysis can be applied to the study of foreign expansion. Similarly, research designs more specifically geared toward testing ecological effects might provide a better way of gauging the impact of density, measured either in the home country of the expanding firm or in the target market. In addition to mimetic effects, coercive and normative institutional variables could also be explored as predictors of foreign manufacturing activity. These research extensions would help establish a solid tradition of organizational inquiry into the foreign expansion of firms, an area that has received token attention thus far.

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