14

Entering the United States by Joint Venture: Competitive Rivalry and Industry Structure

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To cooperate is a choice among alternatives. These alternatives include acquisition, internal development, joint ventures, licensing, and nonequity contracts. In a sense, any kind of economic transaction that is not motivated by coercion is a form of cooperation. It is not cooperation per se, but rather the design and characteristics of the cooperation that differentiate among institutional alternatives.

Recent explanations of the choice among ways to structure cooperation have focused prominently upon differences in costs assigned to each alternative. These costs are often characterized as of two kinds. One consists of the costs of economic production, including R&D and distribution, as well as transportation and fiscal levies. The other consists of transaction costs, which are derived from the precautions required to monitor and bond parties to an agreement so that they will meet their fiduciary promises, as well as the loss attached to defections from the agreement that cannot be economically observed. This type of analysis, which is labeled transaction-cost theory, leads to the prediction that parties will choose the alternative that minimizes the sum of production and transaction costs.

The framing of cooperation as choice among alternatives that minimizes costs is especially pertinent to the penetration of firms into foreign markets because the initial market share cannot frequently justify the high fixed costs of relying upon internal development. These costs are derived not only from the building of plants, but in the distribution of experience regarding the host country and culture. For many companies, the costs of acquiring experience are most tangibly realized in the hiring and training of managers and workers and in the adaptation of products to the local market.

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However, costs are not the only criterion that might differentiate alternatives. The competitive rivalry and structure of the market may also influence the choice among institutional alternatives, especially if the timing of the investment is of importance. For example, competitors may pursue strategies of international preemption in which acquisitions of national firms are promoted in order to speed the process of establishing a market presence. Or, in growing industries where R&D investment is important, foreign entrants may create joint ventures with larger firms in order to acquire technology from incumbents for use in their home markets or to gain marketing arms for their own innovations. Which institutional alternative is chosen, therefore, depends subtly on the structure of competition and the maturity of the market.

Little is empirically known regarding the relationship between strategic timing and the choice among institutional alternatives. This chapter provides a preliminary investigation into strategic motivations. The first section reviews the central findings of previous studies. The second section statistically investigates the significance of strategic contextual variables on entry choice. The next details the empirical investigation. The concluding section discusses future directions.

Summary of Previous Work

There have been surprisingly few statistical studies of the determinants of entry choice into a foreign country. Despite the paucity, there has been a reassuring consistency in the significance of particular variables. Because some studies compare acquisition versus wholly owned greenfield (a new start-up investment) while others compare joint ventures and acquisitions, the main results must be understood with some care. For the sake of exposition, only studies regarding greenfield, acquisition, and joint ventures are described.  

Experience. In a number of studies, previous investments in a country have been shown to encourage subsequent decisions to favor wholly owned investments. Davidson (1980) found evidence for a pattern of internationalization whereby firms move from exporting to partial equity investments to wholly owned operations. Dubin (1976) found that greater international experience favors wholly owned greenfield investments over acquisitions. Steuber et al. (1973) found that the percentage of equity share in a U.K. subsidiary by a foreign firm increased with the multinationality of the parent. However, neither Caves and Mehra (1986) nor Kogut and Singh (1986) found that previous investment in the United States influenced the choice of entry. (Caves and Mehra looked at acquisition versus greenfield, controlling for degree of ownership; Kogut and Singh looked at joint venture versus wholly owned greenfield/acquisition.) Wilson (1980) also did not find support for the theory that experience encourages greenfield over acquisition for a sample of entries made by U.S., British, German, and Japanese firms.

Size. Size of the investing firms and the target investment also have been found to be influential. In a sample of entry decisions by large multinational corporations, Dubin (1976) found that relatively smaller firms tended to acquire relatively more frequently than larger firms, though he did not control for other factors. In a multivariate test, Wilson (1980) confirmed Dubin's findings, which were also corroborated by Caves and Mehra (1986). In comparing joint ventures and acquisitions by non-U.S. firms entering the United States, Kogut and Singh (1986) found that the larger the investing firm, the more likely it was to enter by acquisition; the smaller the U.S. firm, the more likely the non-U.S. firm was to acquire than to utilize a joint venture.

Diversification. Studies have looked at the influence of both regional and product diversification on entry choice. Since acquisitions require a payment for exiting assets in excess of the valuation by the market, a firm will acquire only if there is a contribution to reducing risk that shareholders themselves cannot achieve or if it has existing resources that can put the acquired assets to better economic use. Dubin (1976) found, in fact, that firms with extensive multinational operations are less likely to enter by acquisition than by greenfield investments, presumably because they have already achieved regional diversification. However, Caves and Mehra (1986) did not confirm this result in their study on acquisition and greenfield entries into the United States and Kogut and Singh (1986) also found no influence on the acquisition versus joint venture decision.

Numerous studies have found that diversified firms, in general, reveal higher rates of acquisition, a pattern confirmed for international activity as well. Dubin (1976), Wilson (1980), and Caves and Mehra (1986) found that the greater the product diversity, the more likely a firm will acquire rather than enter by greenfield investment. Kogut and Singh (1986) did not find that product diversity influenced the joint venture versus acquisition choice in their sample. Stopford and Wells (1972) found, however, that firms tend to rely on local equity participation if the foreign subsidiary is diversified into other product lines than the parent. In their study of foreign investment in the United States, Stopford and Haberich (1978) found that joint ventures are used more commonly relative to wholly owned investments for diversified subsidiaries.

Product Differentiation. Stopford and Wells (1972) found the greater the product differentiation, the greater the likelihood of requiring local assistance in the form of a joint venture partner for the provision of local marketing know-how.

Strategic (or Intangible) Assets. Another explanation for entry choice is derived from the transaction costs of transferring certain assets between firms. Brand labels, technology, or the production or provision of quality are subject to degradation or undesired diffusion unless controlled through equity ownership. Alternatively, control over strategic assets is required in order to affect the market position.
of the firm vis-à-vis rivals. Most empirical studies have indeed confirmed the relationship of strategic assets to increasing ownership levels. Stopford and Wells (1972) and Fogre and Wells (1982) both found that increasing R&D and marketing and advertising intensity of the U.S. parent led to a greater likelihood of wholly owned entry. Using the same but updated data base, Gatignon and Anderson (1986) confirmed the relationship of increasing equity ownership to the intensity of R&D, marketing, and advertising. Franko (1971) found that ventures were more likely to revert to wholly owned status when marketing and advertising were perceived as important to the parents; a similar result was not found by Franko for R&D.

Intrafirm Coordination. Franko (1971) and Stopford and Wells (1972) noted that joint ventures posed obstacles to the intrafirm coordination of the international activities of the U.S. firm investing overseas. Hladik (1985) indeed found that the greater the interdependence of the foreign subsidiary on the U.S. parent, the more likely was entry by a wholly owned operation.

Industry Structural Variables. Numerous studies of foreign direct investment have found a positive relationship between FDI and industry characteristics. Few studies have, however, researched the relationship between industry structure and choice of entry. Kohut and Singh (1986) found no relationship between industry marketing and advertising intensity and acquisition/joint venture choice, though some evidence for a positive relationship between industry R&D and joint venture was suggested. In their study, Caves and Mehra (1986) found no relationship between R&D, marketing intensity, and the acquisition/greenfield choice.

Country Factors. Despite strong evidence for country variation in the relative frequency of entry modes, few studies have investigated the underlying motivations. Franko (1976) found a higher use of joint ventures by European firms than by U.S. firms. Wilson (1980) also found significant country differences. In part, these patterns might reflect differences in the direction of investment flows, since many developing countries restrict equity shares. But even when controlling for host-country effects, country patterns emerge. The statistical investigations by Kohut and Singh (1986) of entry into the United States showed significant support of the theory that cultural distance leads to a greater use of joint ventures or wholly owned greenfield investment over acquisition, presumably because acquisitions require substantial costs involved in the integration of foreign management. Other reasons (such as illiquidity or differences in industry structures across countries) have been suggested, but not substantially studied.

An Investigation of Strategic Motivations

The preceding summary shows an impressive degree of replication of results across studies. However, replication of these results has not led to agreement on interpretation.

In particular, the findings regarding the relationship of intangible assets to a preference for wholly owned entry and on concentration in consumer durable industries to acquisition is consistent with either a transaction-cost or strategic-behavior explanation for entry choice.

The importance of competitive rivalry on international investment behavior has well known support, despite the lack of empirical studies. The Hymer-Kindleberger/Caves theory of foreign direct investment and Vernon's theory of international product life cycle of trade and investment rests (implicitly in the case of the former and explicitly in the case of the latter) on the presumption that international investment is a response to oligopolist rivalry. The research by Knickbocker (1973) showed that competitive rivalry in moderately concentrated industries led to a follow-the-leader pattern in the overseas investment behavior of U.S. multinational corporations. Graham (1978) found that European direct investment into the United States followed previous U.S. investment in Europe and that this pattern was more pronounced for industries of higher concentration, R&D expenditures, and product differentiation.

However, whereas the relationship of investment behavior to competitive rivalry is well documented, the implications for the choice of entry mode are less clear. Though there is little theoretical guidance on the exact relationship of timing to institutional choice, some recent work suggests a number of structural variables, principally industry growth and market structure, that are likely to be of importance. Spence (1979) showed analytically that preemptive strategies are more viable in industries that are growing and yet not mature. Das Gupta and Stiglitz (1980) analyzed the influence of market structure and competition on R&D expenditures and the rate of innovation and found the greater the degree of monopoly or of competition in R&D, the greater the R&D expenditure level. These studies suggest that conditions of industry growth, technological intensity, and degree of rivalry are important influences on investment behavior.

A few analytical studies have considered the relationship of competitive rivalry to institutional choice. Eaton and Kierzkowski (1984), for example, argue analytically that a firm will transfer technology to another firm if demand is highly varied and if there are significant set-up costs to entering new market segments. Vickers (1985) analyzed the use of joint ventures as a way for incumbents to curtail preemptive behavior in R&D investments that might lead to lower industry profits. He found that joint ventures are encouraged if the nature of technological innovation is likely to be incremental rather than radical. The results of Vickers and Eaton and Kierzkowski suggest that innovation, future market size, and the structure of rivalry influence institutional choice.

Empirical Investigation

The robustness of the conclusions of analytical models of competitive rivalry is highly sensitive to assumptions regarding the nature of the technology, the degree of
competition, and the nature of demand. Though the theory is not sufficiently detailed to provide precise guidance for empirical studies, a number of structural variables are suggested as important for influencing the choice of institutions. For the purposes of a preliminary investigation, we focus upon four variables that analytical theories have argued to be significant: the ratios of R&D, and marketing/advertising expenditures, to industry sales; market concentration; and industry growth.

The influence these variables on institutional choice is analyzed in the context of foreign entry into the United States. Previous studies have found that foreign firms enter the United States frequently for the acquisition of technology or for market access (Ajami and Ricks, 1981). For the purposes of a preliminary investigation, we focus on the choice between joint venture versus acquisition or greenfield investment. By a joint venture, we mean the pooling of assets into a distinct legal institution with ownership shared between two or a few parties which possess varying degrees of control over the use and fruits of the assets. Acquisition refers to the direct purchase of the assets of a company. By wholly owned acquisition, we mean that the foreign firm has bought 100 percent equity or majority equity with the remainder dispersed across many shareholders. Wholly owned greenfield entry is a de novo investment which is under the control of only the foreign firm. We do not consider entry by equity participation where the foreign firm buys a minority percentage in an existing firm. (Data are discussed shortly.) Whether they enter by a joint venture or a wholly owned operation is likely to be sensitive to structural conditions. We hypothesize the following relationships between structural variables and the choice of entry by joint venture versus wholly owned acquisition or greenfield investment.

Size (LGREL). Two important determinants of entry choice are the size of the entering firm and the target investment. The larger the entering firm, the more managerial and financial resources are available for an acquisition or greenfield investment. On the other hand, the larger the required investment, the more a joint venture is required. These considerations are reflected in the variable LGREL, which is the natural log of the ratio of the asset size of the foreign firm over the asset size of the acquired firm, joint venture partner, or the minimum efficient scale of investment.

Industry R&D Intensity (R&D). Previous studies have found that the greater the R&D intensity, the more likely entry will be by a wholly owned activity (Stopford and Wells, 1972; Gatignon and Anderson, 1986). This relationship has largely been explained by the transactional hazards of selling technology through a market. However, most of these studies assumed that the entering firm possessed the technology. From a strategic standpoint, whether a joint venture or wholly owned entry is encouraged depends on the motivational assumption and the structure and maturity of the industry. In the case of the United States, foreign entry is often motivated by the desire to access U.S. technology in order to compete more effectively in other regional markets or to acquire the capability to adapt products to the U.S. market. When controlling for relative size of the foreign firm and requisite investment, it can be expected that the foreign firm will prefer a joint venture with an incumbent with proven technological resources rather than an investment insofar as the value of the technology to the foreign firm may not justify paying a premium over market price for ownership of all the U.S. partner's assets, especially when postacquisition costs of international coordination and integration are included. If these assumptions are correct in the aggregate, then it can be expected that the higher the ratio of R&D expenditures to sales (R&D) for an industry, the more likely the entry will be a joint venture.

Industry Marketing and Advertising Intensity (MAD). Stopford and Wells (1972) found that firms with high marketing expenses tend to prefer wholly owned activities. Caves and Mehta (1986) found a tendency toward acquisition over greenfield in consumer-durable industries where brand labelling is likely to be of strategic value. Unless competing through an international brand label, a firm is likely to enter by an acquisition of a firm with existing brand recognition rather than enter by a de novo investment. A joint venture is discouraged, however, since the U.S. partner, as the national firm, is unlikely to share control over its marketing expertise and brand labelling in a marketing-intensive industry. Moreover, since the foreign firm can be expected to be entering the United States for market penetration when the industry is marketing- and advertising-intensive, the long-term benefits of joint venturing relative to an acquisition or greenfield investment are weaker. Therefore, we can expect a negative relationship between MAD and entry by joint venture.

Industry Growth (SHIPG). A major structural feature stressed by theoretical work is the degree of industry growth. Again, which institutional alternative is promoted is dependent upon the competitive assumptions. Rivalry among foreign firms in a growing industry may lead to an international acquisition strategy as firms compete to establish a presence in different national markets. On the other hand, if foreign firms are competing against U.S. incumbents, joint ventures may speed entry by eliminating start-up and integration costs attached to greenfield investments and acquisitions, respectively. As a result, no prediction of the sign of the relationship between industry growth and entry choice is made. Shipment growth is measured as the percentage increase in price-deflated industry shipments, evaluated as the average of the shipments at the time of the venture and two years prior over the average of the shipments five or seven years prior, minus one.

Degree of Industry Concentration (CONC). Degree of industry concentration will also influence the competitive behavior of entrants. Industries that are concentrated are likely to be characterized by a high degree of interdependence. Greenfield entry is therefore to be competitively destabilizing and, thus, discouraged
through the threat of retaliation. Acquisitions are less likely to threaten the industry consensus, but, given the implication that the number of important targets is small, the premium paid for control may arguably increase with concentration, thus discouraging an acquisition. (The empirical work on this supposition is, however, far from clear.) A joint venture, on the other hand, represents a cooperative entry with one of the incumbents and may be favored under conditions of interdependence. We predict, therefore, that concentration should be positively signed. Concentration is measured as the percentage of four-digit SIC industry sales of the top eight firms in 1982. To test these hypotheses, we regressed the choice of entry by a wholly owned investment versus joint venture using a logit model on a sample of 108 manufacturing entries in the United States between 1981 and 1984. The results are given in table 14–1. A positive sign means that the variable encourages entry by joint venture; a negative sign means that it encourages entry by acquisition or a wholly owned greenfield investment. The results of the first regression show some support for a strategic-behavior explanation. R&D is positively signed and significant at the .01 level. SHIPG is positively signed, but is shy of significance at the .1 level. MAD is signed as expected, but is insignificant. LIGREL is correctly signed and significant at .01. CONC is positively signed, but insignificant.

These results show that joint ventures are encouraged under three conditions: when the target investment is large relative to the size of the investing firm, when the industry is intensive in R&D, and, with weak evidence, when the industry is growing. The finding regarding industry growth suggests that foreign firms tend to enter growth markets by teaming up with U.S. incumbents. The incentive for a U.S. partner to use a joint venture is likely to increase the more the joint venture may serve to stabilize competition in a growing industry.

The finding on R&D suggests that firms may not seek complete ownership if entry is for the purpose of accessing technology, possibly for application elsewhere in the world or possibly for adapting products to the U.S. market. Another interpretation is that the foreign firm is seeking a marketing joint venture partner in order to sell its product innovations manufactured in wholly owned operations. The latter interpretation preserves the transaction-costs arguments that activities intensive in technology increase the need for control and, thus, discourage joint ventures.

These considerations suggest an interaction between shipment growth and the other strategic variables. When an industry is growing, joint venture incentives increase if cooperation preserves stability in concentrated industries. Incentives for joint ventures for technological access are greater in growing and R&D-intensive industries. Incentives for joint ventures in mature and R&D-intensive industries, if such ventures occur at all, are more likely to reflect considerations of market access. In mature and marketing-intensive industries, acquisitions are promoted as a way to acquire brand labels. The importance of brand-label recognition increases, arguably, with the maturity of the industry. Since entry is likely to be less destabilizing in growing industries than in mature ones, no prediction is made for CONC in high-growth sectors.

To test the interactive effects of shipment growth on the structural variables, the sample was partitioned into high-growth and low-growth industries, with median shipment growth as the breakpoint. LIGREL is maintained as a control variable. The results, given in regressions in table 14–1, show that the effect of only R&D differs depending on the growth of the industry. This finding suggests that foreign firms tend to joint venture for rapid technological access or product adaptation in growing and R&D-intensive industries. However, the incentives for cooperation lessen as the industry matures. None of the other estimations suggest significant interactions between industry age and the remaining structural variables. In short, the results suggest that timing is critical in growing and technologically intensive industries.

### Table 14-1
Logit Estimates of Influences on Decision to Enter by Joint Venture

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
<th>High-growth Industries</th>
<th>Low-growth Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIGREL</td>
<td>-7.60</td>
<td>-6.71</td>
<td>-6.59</td>
</tr>
<tr>
<td></td>
<td>(-2.69*)</td>
<td>(-2.11*)</td>
<td>(-2.26*)</td>
</tr>
<tr>
<td>RND</td>
<td>.51</td>
<td>.65</td>
<td>.41</td>
</tr>
<tr>
<td></td>
<td>(2.40*)</td>
<td>(1.84*)</td>
<td>(.84)</td>
</tr>
<tr>
<td>MAD</td>
<td>-.48</td>
<td>-.49</td>
<td>-1.23</td>
</tr>
<tr>
<td></td>
<td>(-.85)</td>
<td>(-.78)</td>
<td>(-.43)</td>
</tr>
<tr>
<td>SHIPG</td>
<td>2.62</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(1.61)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CN892</td>
<td>.02</td>
<td>.06</td>
<td>.03</td>
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<tr>
<td></td>
<td>(.83)</td>
<td>(.77)</td>
<td>(.86)</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>3.10</td>
<td>.60</td>
<td>3.31</td>
</tr>
<tr>
<td></td>
<td>(1.53)</td>
<td>(.23)</td>
<td>(1.37)</td>
</tr>
<tr>
<td>n = 108</td>
<td></td>
<td>n = 55</td>
<td>n = 53</td>
</tr>
</tbody>
</table>

*p < .01,

*p < .05,

*p < .1.

### Conclusion
The preceding results show some support for the importance of strategic motivations on entry choice. Any interpretation is, of course, preliminary and is dependent upon the assumptions concerning rivalry among foreign firms and U.S. incumbents. For example, whether joint ventures in R&D-intensive industries are a means by which foreign firms seek technology to preempt rivals at home can only be confirmed by specifying directly the structure of the overseas markets. Clearly, to address empirically these issues is of greater complexity than can be resolved by the preceding tests.
Unquestionably, our results can be interpreted as supportive of a transaction-cost perspective. In this view, the tendency to create joint ventures in R&D-intensive and growing industries reflects the opportunity costs due to delays when entry is by greenfield investment. If greenfield and acquisition entries were to be separated (which we could not do, given the size of the sample), this hypothesis could be tested. But, it should be noted that, in any event, although it is possible to transform the problem into a transaction-cost framework, the value of the opportunity cost derived from delays in entry is strategically determined. The influence of timing on the choice of entry is an outcome of competitive rivalry and is only indirectly, via the notion of opportunity costs, amenable to transaction-cost explanations. (See chapter 10 by Kogut in this book.) The results of this chapter warrant a closer examination of the influence of competitive behavior in product markets on the choice among institutional alternatives.

Notes

1. The literature in this area is extensive and is split between writers concentrating on international transactions and those concentrating generally on the question of institutional choice. Seminal examples of the former are Buckley and Casson (1976), Rugman (1981), and Hennart (1982); of the latter, Williamson (1975, 1985).
3. The following summary has benefited from Caves (1982, chapter 3).
4. For a statement of these kinds of risks, see Walker (1987).
5. See Caves (1982, p. 85) for a brief discussion of some of these studies.
6. Caves and Mehra (1986) provide some suggestive evidence that competitive rivalry influences the acquisition versus Greenfield investment choice.
7. The data is described in detail in Kogut and Singh (1986).

References
