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Abstract: We empirically test the proposition that foreign direct investors should use joint ventures with local firms for their first investment in unfamiliar markets. By tracking the expansion paths of Japanese investors in the US, we find no evidence that the growth of Japanese firms which first entered the US in a joint ventures with local firms is different from that of Japanese counterparts which used wholly-owned subsidiaries for initial US market entry.

Keywords: Joint venture, Foreign market entry, Japan, Transaction costs

JEL Codes: F2, F21, L22, D2, L6

1. Introduction

It has sometimes been argued that the form taken by the initial investment in a foreign country may have an important effect on the subsequent growth and development of a foreign investor's manufacturing presence in that county.   This viewpoint is based on three alternative and related arguments, all which imply that a joint venture is the best initial form of entry into a new and unfamiliar market. The three arguments, which we will review shortly, are that joint ventures provide an efficient way to <u>learn</u> about local conditions (the learning hypothesis), that they are a superior way to access resources (the <u>resource access</u> hypothesis), and that they allow the foreign investor to exploit his local partner (the <u>exploitation</u> hypothesis).   All imply that joint ventures provide a favourable starting point for future market penetration. They also imply that a firm is relatively weak at the initial stage of entry, and thus requires a partner as the only way to deal with this weakness. If these theories are true, we should observe firms which choose joint ventures with local partners to make their first entry should subsequently attain larger market positions in the target market.

But does one size really fit all?   Both the institutional economics and the transactions cost literature imply that firms choose a variety of institutional forms, depending on their own resource base--and any expected increase in the resources they expect to gain from their foreign investment.   Firms will also evaluate the costs of each mode of market entry. Joint ventures pose special management challenges, as the investor must learn to work with a partner, while guarding against the possibility of unanticipated imbalance in the distribution of the gains from the venture.   The institutional economics and transaction costs approaches make it hard to argue that the joint venture form might be the best entry mode for all firms, since the appropriate mode of entry (joint venture or wholly-owned subsidiary) will depend on the set of resources at the firm's disposal for this specific foreign entry (including for instance managers familiar with the local environment and its social, legal, and economic characteristics) and the availability of potential partners willing to share that knowledge. For example, successful entry into the US market for personal computers requires an ability to clone IBM designs. Epson, who had

challenged the NEC standard for personal computers in Japan, was better able to do so since it knew more about the legal issues involved in cloning, and therefore was less in a need to take an American joint venture partner to learn this skill.

The two theoretical approaches are thus in clear contrast and call for a test which compares, over time, the growth of firms which choose the two alternative modes of entry, joint ventures with local partners vs. going it alone with wholly-owned subsidiaries. This is the intent of this paper. We examine the growth of a set of Japanese firms which have entered the U.S. market to see whether those that entered via joint ventures with locals achieved consistently faster growth, keeping constant all other factors that might affect that growth.

Japanese investment in the United States provides an ideal context to test these opposing theories. First, the two countries have such widely different economic, social, and cultural environments that substantial and quick learning must take place if foreign investments is to be successful. Hence, the benefits of joint venturing to learn about local conditions should be high in this case. Second, the evolution of Japanese investment in the United States is very much in the news: Japanese investment has increased dramatically in the 1980's. By 1994 Japanese investors were operating close to 1700 manufacturing plants with more than 400,000 employees {JETRO, 1995}. Perhaps because Japan is the first non-Western country to have such a significant investment stake in the United States, Japanese investors have been the subject of substantial scrutiny in the U.S. press. Their own government has also monitored the investment through required reports on new investment, so we are able to gather data on more firm specific variables than for investors from other countries. For reasons of both relevance and data availability, Japanese investment in the United States offers a good data set to shed light on the determinants of the growth of foreign manufacturing presence in an open economy.

The paper is organized as follows: the next section reviews the three main theoretical arguments that have been used to justify the use of joint ventures as a form of entry. We then outline the hypothesis in more detail. The third section describes the data and the variables, while the fourth presents the results. The final section provides our interpretation of the results and suggests areas for future research.

2. Why choose a joint venture as initial entry in a foreign market?

2.1 The Learning Hypothesis

The internationalization school (Johanson and Vahlne 1977) has argued that firms systematically change their form of international involvement as they acquire additional information on foreign markets (the establishment chain). Firms start with exports, and from exports they begin to gain an understanding of foreign markets.   They then use that experience to start manufacturing in the target market. However, while their exporting experience may have taught them how to sell their products in that target market, they typically do not know how to manufacture there. Manufacturing in a foreign market requires knowledge of local factor markets and of the institutional, political, and social environment, a knowledge that is accumulated by local firms as a by-product of operating there. Hence a joint venture with a local firm is an efficient way to acquire this knowledge. After this knowledge is absorbed, foreign investors are able to manage manufacturing operations in the foreign market on their own. Thus the final stage of the establishment chain is a wholly-owned subsidiary. The internationalization approach stresses the importance of the learning which takes place at each stage.   To move too quickly to the final wholly-owned subsidiary stage would be beyond the learning capabilities of the firm.

2.2 The Resource Access Hypothesis

A number of authors (e.g Contractor and Lorange 1988) have argued that firms enter into joint ventures to overcome the barriers they face when expanding abroad. Joint venturing offers significant time savings, as it makes it possible to access the complementary assets that the firm needs to enter, and that are held by local partners. As these authors state (1988, p. 15):

In general, it is an expensive, difficult, and time consuming business to build up a global organization and a significant international competitive presence. Joint ventures offer significant time savings in this respect. Even though one might consider building up one's market position independently, this may simply take too long to be viable. Even though acquisitions abroad might be another alternative in international expansion, it can often be hard to find good acquisition candidates at realistic price levels-many of the "good deals" may be gone. All of these considerations add to the attractiveness of the joint venture approach.

Foreign direct investors typically enter foreign markets to exploit some type of technological advantage, and they typically lack knowledge of local conditions, access to distribution networks, and political connections. While the foreign direct investor could replicate that knowledge, could create its own distribution network, and could build its own reputation from scratch in a de novo wholly-owned affiliate, all of these assets are of the public good variety, insofar as their replication requires high fixed costs, while the services of assets already put in place by the joint venture partner can be obtained at low marginal cost. Hence a novice foreign investor will find it is cheaper and quicker to access these services through a joint venture rather than replicate them in a wholly-owned subsidiary. In short, there are good reasons why a first entry into an unfamiliar market should take the form of a joint venture, and we would expect that firms that choose this form of entry would have a head start over their competitors that prefer to go it alone..

2. 3 Exploitation Theories: the Trojan Horse Hypothesis

The rapid increase of Japanese investment in the 1980's, the first major flow of investment from a non-Western country, was perhaps responsible for increased emphasis on the distribution of gains in joint ventures. Specifically, a number of authors (e.g. Reich and Mankin 1986, Hamel 1991 and Pucik 1988b) have argued that the Japanese use their equity joint ventures with American firms as Trojan Horses to penetrate the American market. They accuse Japanese joint venture partners of surreptitiously learning the skills contributed to the joint venture by their American partners and, when the learning is complete, of buying out their American partners, or of liquidating the venture to go it alone. This argument is summarized by the title of Reich and Mankin's <u>Harvard Business Review</u> 1986 article, "Joint Ventures with Japan Give Away our Future."

Reich and Mankin and other proponents of the "Trojan Horse" hypothesis see joint ventures as a vehicle to absorb the skills of one's partners, with the party that learns the fastest and is most efficient at hiding his contributions coming out the winner (Hamel 1991). One could wonder why, in American-Japanese joint ventures, it is the Japanese partner that always manages

to learn the fastest. Hamel's answer is that the Japanese have a greater intent to learn, that they are less transparent than their American partners, and that they are more receptive to learning than Americans.

While this thesis has received considerable exposure through a number of influential articles and through the prestigious affiliation of their proponents, no one up to now has attempted to check the general validity of this theory. Hennart, Roehl, and Zietlow (1995) looked at the evolution of U.S-Japanese joint ventures to see whether their evolution was consistent with the predictions of the proponents of the Trojan Horse hypothesis.

Hennart, Roehl, and Zietlow start by developing the implications of the Trojan Horse theory. If the Japanese use joint ventures with American firms as Trojan Horses, what would be the evolution of their joint ventures? Hennart, Roehl and Zietlow outline three possible scenarios. In the first one, the "expropriate and buy out" strategy, faster learning by Japanese joint venture partners allows them to persuade their American partners to sell to them their stake in the venture. Joint ventures are thus transformed into wholly-owned affiliates of the Japanese partner.

A second scenario is one where the Japanese partners, after having captured the contributions of their American counterpart, dissolve the ventures and recreate new wholly-owned affiliates. We would then expect the joint venture to be liquidated, and, shortly afterwards, a new parallel, but wholly owned Japanese affiliate to be established..

The third scenario is one where the Japanese use the increased bargaining power that comes from having captured the knowledge of the U.S. partner in order to exploit the latter through the overpricing of the assets transferred to the joint venture. In this scenario, however, the Japanese parent falls short of dissolving the partnership and the joint venture then continues with an unchanged ownership stake.

Hennart, Roehl and Zietlow argue that the first strategy is the most plausible. One defect of the second strategy is that the Japanese must recreate a venture. Establishing a subsidiary takes time (Biggadike 1979) and the time needed is even longer in the case of a foreign investment. The third scenario requires that the Japanese partner be able to gain more from overcharging the venture than it loses through the sharing of the losses shouldered by the joint

ventures as a result of this exploitation. In such cases the American partner is not without defences, since its equity stake gives it the power to block at least some of the decisions taken by its Japanese partner. It can also reduce its own contribution in retaliation. A Japanese partner overcharging for its sales to the joint venture would also run the risk of being denounced to the IRS by its American part-owner.

Given these considerations, Hennart, Roehl and Zietlow argue that the Reich/Mankin-Hamel Trojan Horse hypothesis can be tested by comparing the number of American-Japanese joint ventures which have been taken over by their Japanese partner, on one hand, with those in which the American partner has taken over the Japanese partner and those which have remained unchanged, on the other. This they name the strong version of the Trojan Horse hypothesis. The weak version assumes that when the joint venture goes bankrupt or is liquidated, it is at the instigation of the Japanese partner who then replaces it with a wholly-owned subsidiary. The weak version compares therefore the number of American-Japanese joint ventures which have been fully acquired by their Japanese parent and those which have been liquidated and gone bankrupt with the number which have been acquired by the American partner and those whose ownership shares have remained unchanged.

Hennart, Roehl and Zietlow identify the 58 US-Japanese joint ventures that were manufacturing in the United States in 1980. They trace the history of these ventures to 1989. By 1989, 13 had been fully acquired by their Japanese partners and four had been liquidated. On the other hand, seven ventures had been acquired by their American partners, and 21 had not experienced a change in ownership. Hence, the strong version of the Trojan Horse hypothesis is not verified, since there are 13 cases compatible with it, and 28 contradicting it. The weak version is not supported either, with 15 cases supporting it (13 full acquisitions plus 3 liquidations) and 28 cases that contradict it.

One criticism that can be levelled against Hennart, Roehl and Zietlow's findings is that the capture and transfer of the American partner's knowledge may be compatible, at least for a while, with unchanged equity stakes. The Japanese partner is secretly absorbing the know-how of its American partner while planning a parallel, wholly-owned venture. At some point the Japanese partner establishes the new, wholly-owned affiliate, and competes with the old joint

venture. While this scenario is not very plausible, since we would expect the American partner to then withdraw from the venture, causing the ventures to be fully acquired by the Japanese partner or to go bankrupt, the Hennart/Roehl/Zietlow data set does not allow us to refute it. One could investigate whether the Japanese can maintain the existing venture with the American firm while using the knowledge acquired from this partner to develop and strengthen a string of existing or new wholly-owned affiliates. This would, however, require detailed knowledge of the relationships between the joint venture partners, knowledge that would be not be likely to be shared with outsiders. The Hennart/Roehl/Zietlow data set thus does not allow us to definitely refute the Trojan Horse hypothesis.

There is, however, another way to test the exploitation analysis. If joint venture with an American partner provides an opportunity for exploiting the resources contributed by this partner, Japanese firms that use joint venture for initial entry would gain resources that would allow them to grow faster than their Japanese rivals which, having entered through a wholly-owned affiliate had to rely on their own resources. Hence by looking at the correlation between initial entry through joint venture and subsequent growth, we are testing the Reich/Mankin/Hamel hypothesis that joint venturing with a US firm, because it provides opportunities for exploiting the American partner, provides clear benefits for future growth. If we observe that the firms with joint ventures with U.S. firms are not able to grow faster than their counterparts who choose the wholly-owned subsidiary route to effect their initial entrance into the U.S. market, then we cast further doubt on the exploitation theories as well.

2. Testing the Theories

Assume that, as predicted by joint venture advocates, joint venturing with local partners is more appropriate for initial entry into the foreign (e.g. U.S.) market. Then firms which choose this form will be able to improve their position in the target market faster than other Japanese firms. This can come from faster learning, better access to complementary resources, or exploitation of the local joint venture partner, or from some of each. Once we control for other sources of growth, firms that entered through joint ventures should have a greater presence in the U.S. market than other Japanese firms.

The choice of U.S. market entry to test this theory is a good one, since there are no significant regulatory barriers which foreign firms need to hurdle. The foreign investor can choose any ownership form it chooses. Its only barrier is the one which we want to test, namely that it has 'foreignness' which slows its pace of growth if it fails to take a U.S. joint venture partner. Only firms which choose the wrong initial entry mode will find themselves disadvantaged and suffer slower growth. We thus test the following simple hypothesis:

> If joint venturing with local firms is systematically preferable for initial entry, Japanese firms whose first entry into the United States is through a joint venture with an American partner will see their U.S. manufacturing operations grow faster than those Japanese firms whose first entry is through a wholly-owned subsidiary.

Because the growth of the US presence by a Japanese investor can be affected by many other factors besides joint venturing with locals, we need to control for all these other influences.

The first control variable is the general international experience of the Japanese parent. Everything else constant, a parent whose products are widely exported abroad is likely to have a detailed knowledge of how conditions abroad vary from those in Japan. Firms that export may already have established brand names and distribution channels in the United States, which they can use to take full advantage of newly established manufacturing facilities

We would also expect the profitability of the parent in Japan to affect the rate of growth of Japanese manufacturing activities in the U.S. Since foreign operations take some time to generate profits, they require substantial up-front investments. Parents which are not able to generate sufficient cash flow may find it difficult to finance such investments, in part because such relatively unproved and risky projects are difficult to finance from external sources.

A third factor that might impact the growth rate of a Japanese parent's manufacturing presence in the Untied States is the rate of growth of the U.S. industry entered. Everything else constant, it is easier to grow in the U.S .if demand in the industry entered is fast growing as well.

3. Data and Methodology

Methodology and dependent variables

To test our hypothesis that entry in joint ventures with a U.S. partner leads to faster subsequent growth we used a multiple regression model where the functional relationship between the dependent variable (y) and the independent variables $(x_1, x_2,...x_p)$ is expressed in the form

$$y = b_0 + b_1 x_1 + b_2 x_2 + ... b_p x_p,$$

where $b_0, b_1, ...b_p$, the regression coefficients, are determined from the data. Table 1 lists all of the variables and the predicted signs of their coefficients.

Dependent variable

Our dependent variable is a measure of the size of the American manufacturing operations of Japanese parent firms in 1989. This size is measured in three ways:

(1) The total number of employees working for all American subsidiaries of the Japanese parent at year end 1989. We chose not to prorate employment in the case of affiliates partly owned by the Japanese parent. Note that this specification biases our results towards a positive and significant coefficient for initial entry through joint ventures.

(2) The total number of products (proxied by the total number of 4-digit SIC products manufactured by the Japanese parent in the United States; and

(3) The total number of subsidiaries in which the Japanese parent held an ownership interest at year- end 1989.
We ran three regressions, one for each of these three measures.

As argued above, the aggregate profitability of the Japanese parent's U.S. subsidiaries is not a reliable measure of success or growth, since this measure is greatly affected by the pricing of internal transfers, especially those of intangibles, which do not have verifiable market prices.

We collected information on growth, our dependent variable, from the population of all Japanese firms which had at least a ten percent ownership interest in at least one U.S. manufacturing subsidiary as of December 31, 1989. This list was established from secondary sources such as Toyo Keizai and Japan Economic Institute publications, and from information on

the Lexis-Nexis news retrieval service. We also made direct telephone inquiries to both parent and subsidiary firms for additional information and clarification.

Excluded from the sample are firms that were not publicly traded in Japan in 1989 (because data needed for some of the independent variables were only available for publicly traded firms) and those firms whose first manufacturing entry into the U.S. was after 1985. Such firms were excluded because the firms did not have sufficient time to establish a track record for growth, and because proponents of the exploitation or of the learning hypothesis would probably agree that these Japanese investors would not have had sufficient time to assimilate the know-how contributed by their American partners. We further reduced the population by excluding trading companies (whose strategy differs markedly from that of manufacturing firms) and parent firms for whom we could not determine the year of first U.S. entry or the ownership stakes in their U.S. affiliate. The number of firms remaining in the study and for which we have complete information is 65.

The number of 1989 employees of the Japanese investors in our data set ranged from 7 to 8,729; the number of products from 1 to 15; and the number of subsidiaries from 1 to 17. There were significant differences between Japanese investors in the size of their 1989 U.S. manufacturing presence, even within a given industry. Some firms, such as Matsushita, were early entrants (Matsushita's first entry was in 1959) and by 1989 had more than 7,500 employees. Matsushita's rival, Sharp, on the other hand, entered 20 years later and grew much more slowly. In 1989, Sharp had just 720 employees. Even keeping the length of time Japanese firms had been in the United States constant, there were clear contrasts between firms. Both Nichiro Corporation (a fisheries firm) and Honda entered in 1979, but ten years later, according to our secondary sources, the former had only 50 employees, while the latter had more than 7,200.

While our hypothesis suggests that entry through a joint venture with a US firm would result in faster growth, there is no theoretical reason to expect a linear relationship. To the extent that growth rates tend to fall as a firm grows due to entropy (Williamson 1975), it may make sense to take the logarithm rather than the absolute value of each of our dependent variables. Hence LEMP is the logarithm of the total employment of all the American subsidiaries of a given Japanese parent; LPROD is the logarithm of the total number of products they manufacture

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in the U.S.; and LSUB is the logarithm of the total number of their subsidiaries. Taking the logarithm of our dependent variables also results in a more normal distribution. As shown by Table 2, these three measures of our dependent variable are highly correlated: the correlation between LPROD and LSUB is .92; that between LPROD and LEMP) is .74; while that between LSUB and LEMP is .75.

Independent and Control variables

Table 1 lists our four independent variables and their predicted signs. JVEN is a dummy equal to one if the Japanese parent's first manufacturing affiliate in the U.S. was a joint venture with a U.S. firm, and zero otherwise. (3) Entry was deemed a joint venture if the Japanese parent's equity stake in the subsidiary was between 10 and 90 percent.

We expect the number of years (TIME) from the first entry to 1989 to have a positive effect on the dependent variables, because the longer the Japanese firm has been in the United States, the more opportunity it has had to grow. The mean value for TIME in our study was 13.8 years. The extremes were 5 years (the minimum time allowed for inclusion in the study) and 31 years (Matsushita Electric Corporation).

The ratio of export sales to total sales for the Japanese parent in the year of initial entry (XRAT) should enter with a positive sign. XRAT is one measure of the internationalization of the firm which has not yet made a commitment to foreign manufacturing. A more internationalized firm at entry may have less need to learn from a joint venture and be a more familiar face in financial and labour markets. Thus it will have less need for a joint venture partner in order to undertake a successful growth strategy. An export-intensive firm may already have the brand name recognition and the distribution channels available in the U.S., making a quick start more likely. The values for this variable ranged from zero to 66 percent, with a mean of 19.94 percent.

To measure the profitability (PROFIT) of the Japanese parent, we determined its cumulative cash flow from the date of its first entry into the U.S. to 1989. Cash flow was measured as operating income less tax, plus depreciation. Each annual profit figure was translated into 1990 Yen before adding. When initial entry was prior to 1974, cash flow was cumulated from 1974 on (the first year in the Nikkei Database from which these data were

obtained). Because we expect high profits to have a decreasing impact on growth, we took the logarithm of this variable (LPROF).

INGRO measures the growth of the U.S. industry (at the 3 or 4 digit SIC level and over the 1976 to 1987 period) corresponding to the main activity of the Japanese parent. The sign for this variable should be positive, as we expect that Japanese firms which are manufacturing in fast growing US industries can be expected to grow faster than those in more lethargic U.S. sectors.

The correlation matrix (Table 2) shows little co linearity between the independent variables. The highest, .31, is between LPROF and INGRO.

4. Results

The results of the regressions are presented in Table 3. Each of the three models (LEMP, LPROD, and LSUB) fit the data well, with R^2 values of .53, .42, and .37 respectively. In all three runs JVEN, whether the first entry of the Japanese parent was a joint venture with an American firm, is insignificant. In other words, we found no evidence, for either of our three measures of growth, that Japanese firms whose first entry is a joint venture with a US firm grow subsequently faster in the United States than those which enter through wholly-owned subsidiaries. The implications of the lack of significance of this variable are discussed in the next section.

While the growth of the Japanese parent in the United States does not seem to depend on whether its initial entry was through a joint venture with a U.S. firm, it is explained by two other variables, the total cash flow available to the parent (LPROF is significant in all three runs at the 0.01 level) and the amount of time the parent has been manufacturing in the U.S. (TIME is significant in runs 1 and 2 at the 0.05 level). On the other hand, the rate of growth of the U.S. industry entered (INGRO) is insignificant, and so is the parent experience at initial entry into the United States (XRAT), as proxied by the parent's percentage of sales that were exported the year it made its first U.S. manufacturing entry.

How can we explain the lack of significance of INGRO, the U.S. industry growth variable? This variable has been used successfully in studies of the determinants of Japanese foreign direct investment in the United States, both at the industry (Kogut and Chang 1991) and

at the product level (Hennart and Park 1994) levels, and by studies of the choice of mode of market entry (Hennart 1991). In our sample, however, the growth in Japanese manufacturing in the United States is not correlated with the rate of growth of shipments in the main industry of the Japanese parent. In other words, some Japanese investors have grown slowly in fast-growing U.S. sectors, while others have expanded rapidly in an environment of stagnant overall demand. Our results suggest that in some slow-growing industries Japanese investors, because of superior product or process technology, were able to specialize in fast growing segments, or they stole market share from their U.S. rivals. The overall slow demand growth may be caused by the lack of dynamism of American incumbents, or by their leaving the industry, offsetting the rapid growth of the Japanese entrants. Inversely, we find that rapidly increasing sectoral demand has not guaranteed Japanese success, as strong American players are responsible for much of this growth, leaving little for the Japanese entrants. Fast food, category- killer retailers, cellular phones, and computer software all come to mind. Hence the real determinant of the growth of Japanese investors in the U.S seems to have been their relative competitiveness, as suggested by the significance of LPROF, our cash flow variable, a variable that generally proxies for the Japanese parents' innovativeness.

The coefficient of the export intensity of the Japanese parent (XRAT) is also insignificant. One possible reason for the lack of significance of this variable is that the only data at our disposal is not broken down by region. The foreign market entry skills obtained from exporting may not help enter the U.S. market if the firm was primarily exporting to other markets. Likewise, exports would not have been of much use in gaining knowledge of U.S. market conditions if they were sold through OEM arrangements. A better proxy might have led to better results**.**

There is another reason why the initial level of exports is not a good predictor of future growth in manufacturing presence in the United States.   While internationalization theory posits a natural progression from exports to foreign direct investment (the establishment chain), transaction costs theory predicts that firms will choose the most efficient mode of serving foreign markets and that they will stay with this mode unless there are significant changes in the costs and benefits they face. If scale economies, relative production costs, transportation costs and

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tariffs, and other factors make it efficient to enter the U.S. market through exports, Japanese firms will continue to serve the United States through this mode unless there are major changes in the economics of doing so. Hence it is not surprising that the past level of Japanese exports has no impact on the growth of manufacturing investment in the United States. This is confirmed by Hennart and Park (1995) who found that the number of years during which a Japanese firm had been serving the American market through exports was not a good predictor of whether or not they would start manufacturing there (Hennart and Park 1995). In other words, firms that had been exporting to the U.S. for ten years were no more likely (in fact less likely) to start manufacturing there than firms that were new at U.S. exporting.

There are also reasons to believe that export levels are unlikely to have a positive impact on growth of foreign investments in the United States <u>after</u> the firm has decided to start manufacturing there. Assume that the Japanese parent was using exports to enter the American market, but is now forced, through the threat of trade barriers, or the actual imposition of them, to switch to manufacture in the United States. The firm may make a one-time shift to local manufacture to maintain the level of product flow into the U.S. This type of manufacturing site decision is defensive in nature, and may not lead to further increases in local production. If the plant is of the 'screwdriver' variety, the argument is even stronger. The intent here is to limit the damage to domestic production in Japan, shipping parts to be assembled in the U.S. For all the reasons stated above, a high export intensity may not always proxy for a firm's commitment to overseas manufacture, but may instead signal a firm committed to serving foreign markets with exports. We would not expect such a firm to expand rapidly in the United States.

5. Conclusions and Directions for Future Research

Previous work on joint ventures has emphasized the benefits of this entry mode as the initial vehicle to enter foreign markets.   Using arguments based on learning, on resource access, and on exploitation of the local joint venture partner, a number of authors have argued that joint ventures with local firms provide a solid base to grow and prosper in foreign markets. We tested this theory on Japanese manufacturing investments in the United States. Our results are not

consistent with the predictions of the theory. We find that the initial entry mode chosen by Japanese firms has no significant effect on subsequent growth in the American market..

What accounts for this lack of significance? We think there are two main reasons. First, as argued by both transaction costs and contingency theories, firms choose governance structures which are the most efficient, given their capabilities, environmental factors, and partner characteristics. This makes it hard to uncover the general patterns posited in all three theories of joint ventures outlined in this paper. Some Japanese firms are savvier about the American environment than others, perhaps because their senior managers have lived in the U.S. for extensive periods. Likewise, not all firms require access to an established distribution network. Unless we control for all these factors, we are unlikely to uncover significant effects.

Second, these three theories tend to underestimate the cost of implementing strategies of learning, resource access, and partner exploitation. The internationalization theory assumes that firms learn from their ongoing operations. Yet there is plenty of evidence that this learning is not automatic. Jones and Shill (1996, p. 131), for example, argue that American firms "doggedly insist on forgetting anything useful learned [through their joint ventures] in Japan." The resource access theory underplays the significant management costs involved in joint venturing across cultural differences. "Negotiating the joint venture contract is just spring training" is how one aerospace executive put it to one of the authors. Lastly, the exploitation hypothesis assumes that American firms do not recognize the potential for leakage of knowledge to the Japanese partner, and are not able to take steps to prevent it. In fact, there is good case study evidence that American firms that use joint venture have found highly effective ways to protect their core technology from their joint venture partners or to encourage balanced learning within the joint venture. Exploiting the American partner may not be always as easy as Reich/Mankin assume.

We should note that we are not denying the attractiveness of joint ventures in some situations. If joint ventures were always an inefficient form with which to structure an initial entry into foreign markets, we would have found a negative coefficient in our tests. Firms with initial joint ventures would have grown at a slower rate than their counterparts entering with wholly-owned subsidiaries. Firms look for efficient institutional forms for their international ventures, and choose a variety of forms depending on the options they are offered, and the

resources they bring to or expect to develop from the venture. Explaining this variety, rather than a search for some kind of a universally best entry mode, should be the goal of our research in this area.

Research on the dynamic patterns of foreign investment is still at its early stages. We do not claim that our analysis gives definitive answers to these questions. But by questioning the conventional theories, we are challenging ourselves and our colleagues to investigate in more detail the questions raised in this research. At least four areas suggest themselves for further research.

First, we need analyses which can sort out the three types of joint venture benefits described above. We have to admit that some of the impact of joint ventures could have offset each other: it is possible that entry through joint venture allows faster growth because it enlists the help of the partner, yet also hinders growth because it exposes the foreign investor to the theft of its proprietary knowledge by its American partner, thus leading to our insignificant results. We should note, however, that our results would still be important, since the assertion of these theories is that the joint venture form is per se better, and we have shown that this rather simple story does not fit our data set.

The issue of an appropriate data set is also an important one for this line of research. Finding the necessary data to do this type of research is a daunting task, but we need to search for as diverse sets of data as possible, covering a wide set of environmental changes. Cross national comparisons are a possibility here, as is a longer period of investment experience that would provide environmental changes in both the host and home country.

A third challenge to this line of research is the tracking of both sides of the relationships. It is inevitable that the foreign partner is the more studied, since governments tend to require that firms report what they do in foreign markets. Tracking the U.S. side of these joint venture relationships would be a natural extension of our work. Data sets which provide information on both sides of the relationship are an important source of future progress in this literature.

Lastly, the bulk of the studies on market entry have looked at the determinants of mode of initial entry. Variables which have logical interpretation as determinants of initial mode of entry may not be appropriate to explain subsequent growth.

Table 1
Summary of Variables and Expected Signs

VARIABLE	DESCRIPTION	EXPECTED SIGN
Dependent Variables		
LEMP	Log of employment in all US subsidiaries of Japanese parent in 1989	NA
LPROD	Log of number of products of all US subsidiaries of Japanese parent in 1989	NA
LSUB	Log of number of US subsidiaries of Japanese parent in 1989	NA
Independent Variable		
JVEN	Initial entry was with a U.S. joint venture partner	+
Control Variables		
TIME	Number of years between initial entry and 1989	+
LPROF	Log of cumulative parent cash flow from initial entry through 1989	+
INGRO	Growth rate of US industry entered, 1976-1987	+
XRAT	Parent's ratio of export sales to total sales in year of initial entry	+

Table 2
Correlation Matrix

	LEMP	LPROD	LSUB	JVEN	TIME	LPROF	INGRO	XRAT
LPROD	0.7429	1						
LSUB	0.7454	0.9208	1					
JVEN	0.0001	0.0367	0.1237	1				
TIME	0.3411	0.3422	0.2673	0.1876	1			
LPROF	0.7135	0.6508	0.6338	0.0763	0.2278	1		
INGRO	0.1436	0.18	0.1473	-0.0979	-0.084	0.3079	1	
XRAT	0.2311	0.1664	0.1007	-0.1794	-0.1225	0.2098	-0.0517	1
	LEMP	**LPROD**	**LSUB**	**JVEN**	**TIME**	**LPROF**	**INGRO**	**XRAT**

Table 3
Determinants of the Growth of a Japanese Firm's Manufacturing Presence in the U.S.

Table 3A   Dependent Variable = Log of number of employees (LEMP)

Variable Name	Description	Coefficients	t-statistics
Intercept		-3.34516	-2.988 ***
JVEN	Initial entry is joint venture with U.S. firm	-0.25927	-0.853
TIME	Years from initial entry to 1989	0.064583	2.311 **
LPROF	log of cumulative cash flow from initial entry to 1989	0.734682	6.724 ***
INGRO	Growth rate of US industry entered, 1976-1987	-0.01757	-0.479
XRAT	Parent's ratio of export sales to total sales for parent	0.009629	-1.104
Adjusted R^2 = 0.52604 F = 15.20656 N = 65		*** = $p<0.01$ ** = $p<0.05$ (one-tailed)	

Table 3B   Dependent Variable = Log of Product Count (LPROD)

Variable Name	Description	Coefficients	t-statistics
Intercept		-3.52055	-5.566 ***
JVEN	Initial entry is joint venture with U.S. firm	-0.06297	-0.367
TIME	Years from initial entry to 1989	0.035154	2.227 **
LPROF	log of cumulative cash flow from initial entry to 1989	0.330469	5.354 ***
INGRO	Growth rate of US industry entered, 1976-1987	0.00395	0.191
XRAT	Parent's ratio of export sales to total sales for parent	0.003217	0.653
Adjusted R^2 = .42452 F = 10.44218 N = 65		*** = $p<0.01$ ** = $p<0.05$ (one-tailed)	

Table 3 (continued)
Determinants of the Growth of a Japanese Firm's Manufacturing Presence in the U.S.

Table 3C   Dependent Variable = Log of Number of Subsidiaries (LSUB)

Variable Name	Description	Coefficients	t-statistics
Intercept		-3.39295	-5.058 ***
JVEN	Initial entry is joint venture with U.S. firm	0.090905	0.499
TIME	Years from initial entry to 1989	0.01813	-1.083
LPROF	log of cumulative cash flow from initial entry to 1989	0.353682	5.403 ***
INGRO	Growth rate of US industry entered, 1976-1987	-0.00553	0.802
XRAT	Parent's ratio of export sales to total sales	-2.97E-04	-0.057

Adjusted R^2 = 0.37222   F = 8.58927   N=65   *** = $p<0.01$ ** = $p<0.05$ (one-tailed)

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