

FIRM OWNERSHIP PREFERENCES AND HOST GOVERNMENT RESTRICTIONS: AN INTEGRATED APPROACH

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Abstract. Two approaches may explain how multinational enterprises (MNEs) select ownership structures for subsidiaries. The first argues that MNEs prefer structures that minimize the transaction costs of doing business abroad. The second argues that ownership structures are determined by negotiations with host governments, whose outcomes depend on the bargaining power of the firm. This paper presents a framework integrating these two approaches and uses statistical methods to separate their effects empirically.

The statistical analysis supports an important hypothesis of the bargaining school—that attractive domestic markets increase the relative power of host governments. But it finds no support for other hypotheses of this school, such as those predicting that firms in marketing- and R&D-intensive industries have more bargaining power than others. These latter factors were apparently more important in determining firm ownership preferences. Furthermore, the paper measures when government ownership restrictions deter firm entry, concluding that relatively large firms, and those with high intra-system sales are deterred more than others.

In recent years, there has been a renewed interest in the determinants of ownership structures of foreign subsidiaries. The basic question of when and why multinational enterprises (MNEs) form joint ventures abroad is being addressed with a refined set of tools and with new theories. This

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renewed interest is partly due to two developments: (1) a new conception of the role of ownership in international business; and (2) a better understanding of the process of negotiation between MNEs and host country governments. These two new developments, however, have not been integrated into one framework. This article attempts to do that.

In the last decade, numerous authors have successfully used transaction cost ideas to analyze the role of ownership in international business (for example, Buckley & Casson [1976]; Hennart [1982]; and a recent review in Teece [1986]). This approach has also been applied specifically to MNEs' choice between whole and joint ownership in foreign subsidiaries [Gomes-Casseres 1989b; Anderson & Gatignon 1986; Hennart 1988]. Almost without exception, however, this stream of research has ignored the effects of host government ownership restrictions on MNE choices. None of these authors would deny, of course, that such restrictions can make an MNE form a joint venture even where transaction cost analysis would predict a wholly-owned subsidiary. But the tendency in this literature has been to focus on only one of these two effects at a time.

Another school of thought, using the bargaining power approach, has made the opposite omission. In an effort to explain the outcome of negotiations between MNEs and host country governments, virtually all the authors in this school have downplayed the factors that influence MNE ownership preferences (for example, Fagre & Wells [1982]; Grieco [1982]; Lecraw [1984]; and a recent review in Kobrin 1987). Again, most of them have acknowledged that firms may prefer something other than whole ownership, and that somehow this had to be taken into account. But they, too, have tended to focus on only one side of the equation.

This pattern of academic specialization would not have been surprising were it not for the complementarity of the two approaches. These two theories are not competing explanations of the same phenomenon, but address two distinct questions. To put it simply, the transaction cost model answers the question: What ownership structure *does the firm want*? The second approach, the bargaining power model, answers the question: What ownership structure *can the firm get*?

These two questions are not only distinct in substance, but usually also in time. At the risk of oversimplifying the decisionmaking process, one can visualize an MNE first deciding what it wants, and then seeking the host government's agreement. Conceptualizing the decision as a sequential process is the first step in integrating the two approaches.

The second step in integrating the two models lies in separating their predictions empirically. Kobrin recently recognized the complementarity of the two approaches in his study of bargaining power, but lamented that "it is difficult to determine whether differences in observed ownership stem from differences in preferences or bargaining power" [1987, p. 624]. The difficulty, of course, is that firm preferences are not directly observable. But without separating the effects, one cannot hope to test either theory.

This paper has four purposes. First, it discusses a conceptual synthesis of the transaction cost and bargaining models. Second, it presents a method for separating their effects in empirical tests. Third, it applies these methods and discusses results of new tests of the bargaining power model. Fourth, it extends existing tests of the bargaining approach by measuring the conditions under which host government policies deter entry by the MNE. A detailed discussion of my tests of the transaction cost model appears in Gomes-Casseres [1989b].

OWNERSHIP TRADE-OFFS AND NEGOTIATION

Ownership Preferences

Even when host governments do not impose restrictions on foreign ownership, an MNE choosing the ownership structure for a new subsidiary must make some key trade-offs. Take the example of an MNE venturing into a new country where there are established competitors. A joint venture may be an effective way to acquire local expertise, but there may be significant costs to shared management. In Stopford & Wells [1972], the MNE's choice would depend on a trade-off between the firm's "need for resources," and its "need for control." It will prefer a joint venture when the first is larger than the second, and a wholly-owned subsidiary otherwise.

In the transaction cost model, the problem is formulated slightly differently. Here the trade-off is between the costs of using market or internal channels for transferring organizational capabilities. In the example above, the MNE could get the needed local expertise either by hiring the services of a local firm (e.g., to supply market research and represent the MNE in negotiations with government), or by forming a joint venture with a local firm. In the first case it would be acquiring an organizational capability by using the market; in the second it would be using an internal channel, because the capabilities would be transferred from a party with an ownership share in the venture.¹ This distinction—between internal and market channels for transferring firm capabilities—is also critical to the transaction cost theory of the multinational enterprise [Hennart 1982].

In the transaction cost approach, too, the benefits of using ownership channels would be reduced by the cost of sharing equity. Foremost among these are "shirking" by the joint venture partners—each of which has less than a full stake in the venture—and conflicts of interest between them. Note also that this model relies not only on transaction costs, but also on arguments about firm capabilities and strategies. The latter determine when the MNE needs contributions from local firms; transaction costs then determine whether ownership channels will be used for these transfers. This model is discussed further in Gomes-Casseres [1989b]; similar arguments appear in Hennart [1988].

This process of weighing costs and benefits of various ownership structures results in the MNE's preference, i.e., what it *wants*. But two firms that both

prefer wholly-owned ventures may do so to different degrees, i.e., one may want it more intensely than the other.² It is therefore more useful to think of the firm's preferences as being a ranking among ownership options with varying distances between them. The MNE's capabilities and the transaction costs of different ownership structures can then be thought of as determining these distances.

Ownership Concessions

MNEs facing host government ownership restrictions³ can be expected to go through a similar process to derive their preference rankings. In addition, however, the relative power of firm and government helps determine in these cases what ownership structure the firm *can get*. It is critical to realize that the firms will make concessions on ownership based on their preference rankings. In other words, a firm ranking whole ownership significantly higher than a joint venture will be less likely to give in on the ownership issue than a firm that, while still preferring whole ownership, sees a joint venture as a close second choice.

As a result, the ownership structure that the MNE actually ends up with is a function of: (1) the intensity with which it prefers whole ownership (if at all); and (2) its bargaining power relative to the government's. Excluding the calculation of firm preferences from this synthesis is just as misleading as ignoring the bargaining power of the parties.

This framework recognizes that ownership is not an all-important issue to firms, or to governments for that matter. Both parties might be willing to accept something less than their top ownership preference in return for gains on other issues. Thus, the government might drop its insistence on a joint venture in return for increases in the MNE's contribution to other national goals.⁴ Or the firm might settle for its second choice in return for access to a lucrative market.

In this context, therefore, the slippery concept of "bargaining power" does not indicate how the total economic benefits of an investment are distributed. Rather, it refers simply to the ability of one party to skew the outcome of negotiations in the direction of the ownership structure it prefers [Lax & Sebenius 1986]. That ability depends not only on what the government has to offer the MNE, but also on how badly the MNE wants whole ownership.

Deadlocked Negotiations

The synthesis proposed above allows analysis of a phenomenon not adequately dealt with in either the transaction cost or the bargaining power model. Authors using the latter framework have pointed out that sometimes host government ownership restrictions seemed to deter entry by MNEs [Fagre & Wells 1982]. But when does this happen: when the firm has relatively more power than the government, or vice versa? These authors do

not answer this question, partly because the concept of bargaining power itself is misleading in this context.

In my framework, entry deterrence occurs when: (1) the MNE has a preference schedule where the joint venture form ranks below not investing at all; and (2) the government's ranking places whole ownership below the no-investment alternative. It is not a question of bargaining power at all, but one of comparing the cost-benefit calculations of the two parties. Each party considers not only the various ownership options, but also the alternative of foregoing investment. That alternative sets the "reservation value" for each party; an agreement will not be reached unless its net benefits exceed this value [Lax & Sebenius 1986].

One party's no-agreement alternative may, in turn, affect its bargaining power in ownership negotiations. When an MNE can go elsewhere with its investment, it is less likely to give in to government demands than otherwise. Similarly, if a restrictive government can find other firms that would accept a forced joint venture, it may not give in to one MNE's insistence on whole ownership. Host government ownership restrictions can thus have both *ownership effects* and *entry effects*. Because these two sets of effects are interrelated, tests of the bargaining model should attempt to estimate both, as is done below.

SEPARATING EFFECTS ON PREFERENCES AND BARGAINING

The statistical methods used here attempt to estimate how the ownership and entry effects of restrictive policies vary with characteristics of the MNE, its subsidiary, the industry, and the host country.

Estimating Ownership Effects

The main problem in estimating the separate ownership effects of transaction and MNE-government bargaining models is that they share a number of explanatory factors. For example, both models predict that the R&D-intensity of a subsidiary's business should affect ownership choice, but for different reasons. The first model claims that R&D intensity leads to whole ownership because MNEs prefer internal channels over contracts when transferring technological capabilities. The second model predicts the same final outcome, but credits the MNE's increased bargaining power with the result. Recognizing this problem, previous researchers have tested bargaining hypotheses by comparing ownership patterns in countries whose governments restricted foreign ownership with patterns elsewhere [Fagre and Wells 1982; Lecraw 1984; Kobrin 1987]. But this introduces a different problem. The ownership patterns in a restrictive host may be due to other features of the country's environment, or to systematic differences in the types of firms investing in each group of countries. Although most of these researchers recognized these possibilities, they were not able to deal with them in satisfactory ways.

The method used here resolves both these problems.⁵ It, too, makes a distinction between groups of "restrictive" and "open" countries, but it controls for differences in firm and country characteristics between the two groups. The method is analogous to that used in testing for structural change in time-series models [Johnston 1984]. Assuming only one explanatory variable, X , the regression model is:

$$Y = A_0 + (A_1 - A_0)D + B_0X + (B_1 - B_0)DX \quad (1)$$

where

Y = observed ownership level of subsidiary,

D = dummy variable equal to 1 if subsidiary is in a restrictive country, and 0 otherwise,

X = independent variable that is hypothesized to effect both bargaining power and firm preferences.

In this model, the terms A_0 and B_0 represent, respectively, the intercept and the effect of X on ownership level in non-restrictive countries, because $D=0$ for these observations. These coefficients can thus be interpreted as reflecting a model of firm preferences alone, because MNE-government bargaining plays no role in these countries. The terms A_1 and B_1 then represent, respectively, the intercept and the effect of X on ownership level in restrictive countries, because $D=1$ for these observations. These coefficients, therefore, can be interpreted as reflecting *both* firm preferences and bargaining power, because both processes are at work in these countries.

One can then test whether X affects either firm preferences, or bargaining power, or both, by considering whether the coefficients in the regression model are statistically significantly different from zero. If B_0 is zero, then X has no effect in open countries; this implies that X has no effect on firm preferences. If $(B_1 - B_0)$ is zero, then X has the same effect in open countries as it does in restrictive countries (i.e., $B_1 = B_0$). Because the ownership levels in restrictive countries appear to be affected by X in the same way whether or not bargaining takes place, X can be said to have no effect on bargaining power. If X affects both firm preferences and bargaining power, the coefficients on X as well as on DX should be significantly different from zero.

In the data set used here, Y was defined as a binary variable, which was equal to 1 if the subsidiary was a joint venture. This does not affect the interpretation of the model, but it required the use of a binary regression technique. In the binomial logit model used, the effects of the independent variables are assumed to be linear in the logarithm of the odds that the dependent variable is equal to one. As in ordinary least-square regressions, the one-tailed significance levels of the estimated effects represent the probabilities that the true effects have signs opposite those of the estimates; these are reported below. Similarly, the standardized beta coefficients give the estimated amount, in standard deviations, that the dependent variable changes

with one standard deviation change in the independent variable; these, too, are reported below.⁶

Estimating Entry Effects

The degree to which restrictive policies deter entry can also be expected to depend partly on characteristics of the MNE or of the proposed venture. For example, MNEs seem to prefer whole ownership of subsidiaries that trade extensively with other members of their global systems, because conflicts of interest are likely to arise between the partners in these situations.⁷ Consequently, an MNE can be expected not to place such subsidiaries in restrictive countries, unless, of course, it can gain an exception to the ownership rules through the bargaining process.

The methods used here attempt to measure the impact of a number of firm, industry, and subsidiary variables on the entry effect of ownership restrictions.⁸ One simple way to do this would be to compare the means of these variables in open and restrictive countries. The problem with this method is that this difference between means may be due to other factors. For example, the groups of open and restrictive countries may also differ systematically in economic terms, and this might be the reason behind the variance in subsidiary characteristics. The following regression model controls for such effects:

$$X = A + B_1D + B_2Z + B_3V \quad (2)$$

where

- X = firm or subsidiary variable hypothesized to affect the degree of entry deterrence,
- D = dummy variable equal to 1 if subsidiary is in a restrictive country, and 0 otherwise,
- Z = other host country characteristic,
- V = other firm or subsidiary characteristic.

In this model, the coefficient on the dummy variable indicating host country policy (B_1) measures the difference between the level of X in open and restrictive countries, while controlling for the effects of other country, firm, and subsidiary variables on X . If the coefficient is positive, then entry by subsidiaries with low levels of X are deterred more than entry by subsidiaries with higher levels of X . The reverse is true for negative coefficients. There can, of course, be several Z and V variables, but their coefficients are of no interest here.

The Sample and Variables

Sources of Data. The data used here came from several sources. The bulk of it was collected by the Harvard Multinational Enterprise Project. The 187 parent firms in this project were all U.S. *Fortune 500* companies with at least six foreign investments. Among other variables, the database contains

for each subsidiary the host country, ownership structure, industry (at 4-digit SIC level), and characteristics such as size of assets and extent of intra-system sales [Curhan, Davidson & Suri, 1977].

A select sample of the data collected in this project was used here. First, the sample includes only subsidiaries that did at least some manufacturing. Second, the sample is limited to subsidiaries that were still active in 1975, the last year for which there are data.⁹ These cross-sectional data thus contain ownership "corrections" that the MNEs might have made after initial entry [Gomes-Casseres 1987], and are therefore more likely to represent a long-run, stable pattern. Third, the sample excludes joint ventures between two or more MNEs.

A number of variables derived from the Profit Impact of Marketing Strategies (PIMS) project were added to the Harvard data. This project, administered by the Strategic Planning Institute, collected detailed business information on over 2,000 domestic strategic business units (SBUs) of some 200 large U.S. firms [Schoeffler, Buzzell & Heany 1974; Clark 1984]. Industry averages (4-digit SIC) of selected variables from these data were used as proxies for the characteristics of the subsidiaries in the Harvard data. As usual in this type of work, it would have been better to use the actual characteristics of the subsidiaries, as was indeed done whenever possible. But subsidiary-level information was not available on key variables like R&D and marketing intensity, so that proxies had to be used. Among available proxies, the PIMS data seem more appropriate than others, as they are based on information from SBUs of firms very similar to those in the Harvard data. Furthermore, the proxies used here were at the 4-digit SIC level, and so are more likely to reflect subsidiary characteristics than more aggregate proxies commonly used in the literature.

To measure the effects of the subsidiary's environment, the analysis uses economic information on host countries gathered by the World Bank [1978], and data on host government ownership policies from the U.S. Department of Commerce [1981]. Finally, a measure of how familiar U.S. firms were with different countries was derived from Davidson [1980].

Definitions of Variables. Following Franko [1971] and Stopford & Wells [1972], a joint venture is defined here as any subsidiary where the MNE owned less than 95% of the equity.¹⁰ Actual ownership level was not used because the difference, say, between 100% foreign ownership and 80% was likely to be perceived differently by firms and government than that between 80% and 60%. Separate tests with another qualitative dependent variable using a 50%-of-equity cutoff point yielded substantially the same results [Gomes-Casseres 1985].

This and all other variables used in the analyses below are defined in Table 1. The independent variables are numbered to facilitate comparison across tables. Each definition also gives the variable's source, and its sample mean and standard deviation (sd).

RESULTS AND DISCUSSION

Results of logit analyses to estimate the ownership effects of restrictive policies are shown in Table 2. Because the binary dependent variable is equal to one when the subsidiary is a joint venture, a negative coefficient in this table implies that the variable discouraged joint ventures (and encouraged whole ownership), while a positive coefficient implies that the variable encouraged joint ventures. The first analysis (shown in column 2.1) contained a series of independent variables thought to influence firm preferences, but without the interaction terms that would separate these effects from those of bargaining. In other words, only the X s from equation (1) above were included, in addition to the restrictive-country dummy D , but the interaction terms between these two (the DX s) were excluded. The other analysis (shown in column 2.2) included these interaction terms (DX s above) to estimate separately the effects of bargaining. These results are discussed in the next three sections.

Because all the interaction terms in column 2.2 are based on the *Restrictive Host Gov* dummy variable, one might expect some multicollinearity problems. But only two of the pairwise correlations between these interaction terms (no. 13 through no. 23) and the dummy variable (no. 12) are over .80 and four are over .60. Furthermore, the results in the two cases with high correlations—the *Familiarity* and *GDP Growth* terms—are still statistically significant at the .005 level (Table 2, discussed below), implying that the collinearity did not lead to high standard errors on the estimates. Elsewhere in the data there were few correlations over .50; most were well below .20. In each of the cases where the coefficients in Table 2 were statistically insignificant, this did not seem due to collinearity problems.

Firm Ownership Preferences

Elsewhere I discussed at length the results of tests of a model of firm ownership preferences [Gomes-Casseres 1989b]. The base regression in that paper contained the first seven variables in column 2.1 and the restrictive-country dummy.¹¹ The results were essentially the same as shown here, and were consistent with the arguments above on how firm strategies, capabilities, and transaction costs influence ownership preferences. They suggest that MNEs prefer whole ownership when they have a lot of experience in an industry or a country, when intra-system sales of the subsidiary are high, or when the subsidiary was in a marketing-intensive industry. But MNEs preferred joint ventures when they relied on local inputs of raw material and when local firms could contribute skills to a joint venture. Rather than discuss these conclusions in more detail here, it will be more useful to test some of the arguments about firm preferences using the results of the four additional variables not discussed in my previous paper (nos. 8-11).¹²

Stopford & Wells [1972] and Franko [1987] found that relatively *small firms* in an industry tended to favor joint ventures more than leading firms. This is consistent with the arguments above and in Gomes-Casseres [1989b].

TABLE 1
Definitions of Variables

Dependent Variable	
<i>MNE Owns < 95%</i>	Dummy variable equal to 1 if the parent MNE owned less than 95% of the subsidiary's equity in 1975. From Harvard MNE database. (mean=0.29; sd=0.46)
Independent Variables	
1. <i>R&D/Rev Sub Ind</i>	Average percentage share that R&D expenses represented in revenues of PIMS SBUs in the subsidiary's principal 4-digit SIC industry. Based on PIMS. (mean=2.6; sd=2.3)
2. <i>MNE's #Subs in Ind</i>	Number of foreign manufacturing subsidiaries that the parent MNE had in 1975 in the same 3-digit SIC industry as the subsidiary's principal product. From Harvard MNE database. (mean=14; sd=13)
3. <i>>10% Sales Intrasystem</i>	Dummy variable equal to 1 if more than 10% of the subsidiary's sales in 1975 were to other members of the parent MNE's system. From Harvard MNE database. (mean=0.18; sd=0.38)
4. <i>Resource-Based Sub</i>	Dummy variable equal to 1 if the subsidiary's main product was in one of the following 2-digit SIC groups, which can be considered "resource-based" industries: food and beverage (SIC 20), tobacco (SIC 21), textile mills (SIC 22), wood except furniture (SIC 24), pulp and paper (SIC 26), petroleum (SIC 29), rubber (SIC 30), leather (SIC 31), stone and glass (SIC 32), and primary metals (SIC 33). Subsidiary's product from Harvard MNE database. (mean=0.25; sd=0.43)
5. <i>Marketing/Rev Sub Ind</i>	Average percentage share that marketing expenses represented in revenues of PIMS SBUs in the subsidiary's principal 4-digit SIC industry. Based on PIMS. (mean=11.8; sd=9.9)
6. <i>Industrial GNP of Host</i>	Size of the host country's industrial sector in 1976, in millions of U.S. dollars. From World Bank (1978). (mean=69,300; sd=73,600)
7. <i>Familiarity with Host</i>	Index (from 0 to 16) of how "familiar" foreign host countries were to U.S. MNEs, based on how often these MNEs entered one country before another during 1900-1976. From Davidson [1980]. (mean=9.5; sd=5.5)
8. <i>Parent Assets < Indavg</i>	Dummy variable equal to 1 if the parent's assets in 1975 were less than the average for firms in the same principal 3-digit SIC industry as the parent. Based on Harvard data. (mean=0.39; sd=0.49)
9. <i>Sub Assets > \$10M</i>	Dummy variable equal to 1 if the subsidiary's assets in 1975 were greater than \$10 million. Based on Harvard data. (mean=0.34; sd=0.47)

TABLE 1
(continued)

10. #MNEs in Industry	Number of parent firms with at least one foreign subsidiary in the same 4-digit SIC industry as the subsidiary's main product. Based on Harvard data. (mean=14; sd=11)
11. GDP Growth of Host	Average annual percentage growth rate of the host country's real per capita GDP in 1960-76. From World Bank (1978). (mean=3.6; sd=1.5)
12. Restrictive Host Gov	Dummy variable equal to 1 if the subsidiary was in one of the following host countries, which in 1975 had policies restricting foreign ownership or encouraging joint ventures: Australia, Brazil, Colombia, Ecuador, France, Japan, India, Indonesia, Iran, Malaysia, Mexico, New Zealand, Nigeria, Pakistan, Peru, Philippines, South Korea, Spain, Sri Lanka, and Venezuela. (mean=0.45; sd=0.50)
Interaction terms between independent variables	
13. <i>RSTR</i> × <i>R&D/Rev</i>	Product of <i>Restrictive Host Gov</i> and <i>R&D/Rev Sub Ind</i> variables.
14. <i>RSTR</i> × <i>MNEs #Subs</i>	Product of <i>Restrictive Host Gov</i> and <i>MNEs #Subs in Ind</i> variables.
15. <i>RSTR</i> × <i>Intrasys</i> >10%	Product of <i>Restrictive Host Gov</i> and >10% <i>Sales Intrasystem</i> variables.
16. <i>RSTR</i> × <i>Res Based</i>	Product of <i>Restrictive Host Gov</i> and <i>Resource-Based Sub</i> variables.
17. <i>RSTR</i> × <i>Mktng/Rev</i>	Product of <i>Restrictive Host Gov</i> and <i>Marketing/Rev Sub Ind</i> variables.
18. <i>RSTR</i> × <i>Industr GNP</i>	Product of <i>Restrictive Host Gov</i> and <i>Industrial GNP of Host</i> variables.
19. <i>RSTR</i> × <i>Familiarity</i>	Product of <i>Restrictive Host Gov</i> and <i>Familiarity with Host</i> variables.
20. <i>RSTR</i> × <i>Par Assets < Indavg</i>	Product of <i>Restrictive Host Gov</i> and <i>Parent Assets < Indavg</i> variables.
21. <i>RSTR</i> × <i>Sub Assets > \$10M</i>	Product of <i>Restrictive Host Gov</i> and <i>Sub Assets > \$10M</i> variables.
22. <i>RSTR</i> × <i>MNEs in Industry</i>	Product of <i>Restrictive Host Gov</i> and <i>#MNEs in Industry</i> variables.
23. <i>RSTR</i> × <i>GDP Growth</i>	Product of <i>Restrictive Host Gov</i> and <i>GDP Growth of Host</i> variables.

Because of oligopolistic competition [Knickerbocker 1973], small firms can be expected to be pressed to expand abroad even though this stretched their organizational capabilities to the limit. In these situations, local partners might make valuable contributions to new ventures. Indeed, the coefficient on the variable measuring whether the MNE's assets are smaller than average for its industry (*Parent Assets < Indavg*) is positive and statistically significant at the .05 level in column 2.1. It remains positive, but declines in significance in column 2.2, which incorporates bargaining effects (see below).

TABLE 2
Logit Analyses: Ownership Effects of Firm, Country, and Industry Variables (standardized beta coefficients with *t*-statistics) (*N*=1,877)

Independent Variables	Dependent Variable: <i>MNE Owns</i> < 95%			
	Column 2.1		Column 2.2	
	Betas	<i>t</i> -stats	Betas	<i>t</i> -stats
1. <i>R&D/Rev Sub Ind</i>	-0.031	-0.97	-0.039	-0.75
2. <i>MNE's #Subs in Ind</i>	-0.135***	-4.22	-0.132**	-2.75
3. <i>>10% Sales Intrasystem</i>	-0.075***	-2.59	-0.083**	-2.08
4. <i>Resource-Based Sub Ind</i>	0.116***	4.00	0.153***	3.83
5. <i>Marketing/Rev Sub Ind</i>	-0.214***	-5.94	-0.229***	-3.82
6. <i>Industrial GNP of Host</i>	0.161***	4.74	0.185***	3.70
7. <i>Familiarity with Host</i>	-0.291***	-8.82	-0.400***	-7.84
8. <i>Parent Assets < Indavg</i>	0.052**	1.93	0.058*	1.38
9. <i>Sub Assets > \$10M</i>	0.075***	2.68	0.130***	3.25
10. <i>#MNEs in Industry</i>	0.061**	2.18	0.064*	1.56
11. <i>GDP Growth of Host</i>	0.114***	4.07	-0.035	-0.67
12. <i>Restrictive Host Gov</i>	0.266***	9.50	-0.041	-0.35
13. <i>RSTR × R&D/Rev</i>	—	—	0.012	0.20
14. <i>RSTR × MNE's #Subs</i>	—	—	-0.004	-0.07
15. <i>RSTR × Intrasys > 10%</i>	—	—	0.015	0.43
16. <i>RSTR × Res Based</i>	—	—	-0.062**	-1.59
17. <i>RSTR × Mktng/Rev</i>	—	—	0.021	0.30
18. <i>RSTR × Industr GNP</i>	—	—	-0.061	-1.07
19. <i>RSTR × Familiarity</i>	—	—	0.214***	3.06
20. <i>RSTR × Par Assets < Indavg</i>	—	—	-0.007	-0.16
21. <i>RSTR × Sub Assets > \$10M</i>	—	—	-0.081**	-2.03
22. <i>RSTR × MNEs in Industry</i>	—	—	-0.011	-0.21
23. <i>RSTR × GDP Growth</i>	—	—	0.315***	3.03
<i>R</i> ²	0.185		0.201	

Note: Because the dependent variable is equal to one when the subsidiary is a joint venture, positive effects indicate variables that encourage joint ownership and negative effects indicate those that encourage whole ownership.

*Statistically different from zero at .10 level (one-tailed)

**Statistically different from zero at .05 level (one-tailed)

***Statistically different from zero at .005 level (one-tailed)

Similar arguments would predict that MNEs investing in relatively *large subsidiaries* should prefer joint ventures. In pursuit of scale economies, firms may be forced to set up larger plants than they can support and manage by themselves. The coefficient on the variable measuring whether the subsidiary's assets exceed \$10 million (*Sub Assets* > \$10M) is indeed positive and statistically significant at the .005 level in the regression.

Another factor that can be expected to lead MNEs to prefer joint ventures may be a high *degree of competition* in the subsidiary's industry. Two separate arguments suggest that the costs of a joint venture may decline as the number of competitors rises. First, the incentive for internalization may decline as the opportunity for monopolistic pricing falls [Buckley & Casson 1976]. Second, transaction costs for transferring technology through contractual means may decline with a rise in the number of competitors [Stobaugh

1984], thus lowering the benefits of using ownership channels and reducing the costs of joint ventures. The coefficient on the variable measuring the number of MNEs in an industry (*#MNEs in Industry*) is indeed positive and statistically significant at the .05 level in column 2.1. It remains positive, but declines in significance in column 2.2, which incorporates bargaining effects (see below).

A fourth variable that appears to influence the ownership choice in column 2.1, serves as an excellent example of how bargaining effects can become entangled with firm preferences in a mis-specified statistical model. The coefficient on the variable measuring the *host country's growth rate (GDP Growth of Host)* is positive and significant at the .005 level in column 2.1, but the other regression shows that this is entirely due to the effect that this variable has in restrictive countries. In column 2.2, the coefficient on the interaction term with the restrictive-country dummy (*RSTR × GDP Growth*) is positive and significant at the .005 level, but that on the main variable is not significant. In open countries, therefore, this variable seems to have no effect on ownership patterns. (This result is discussed further below.)

Ownership Effects of Restrictive Policies

Comparison with Previous Studies. This last example illustrates why the specification in column 2.1 cannot distinguish between the independent variables' effects on ownership preferences and on bargaining. Yet this is essentially the specification used in Kobrin [1987]. The results discussed next suggest that, because of this mis-specification, many of the factors that Kobrin concluded affected the bargaining process, in fact influenced firm preferences. The adjustments that Fagre & Wells [1982] and Lecraw [1984] made to attempt to control for firm preferences also seemed to have been incomplete. Many of the results that they attributed to MNE-government bargaining seem also to be due to the process by which firms select their preferred ownership structures.

Overall, it is striking that the variables included in this study seem to affect firm preferences much more than they do relative bargaining power. Seven of the twelve main variables¹³ in 2.2 are statistically significant at the .05 level, compared to only three of the twelve interaction terms. As discussed above, the test of whether any variable affects bargaining power depends on the statistical significance of its interaction with the restrictive-country dummy. In other words, column 2.2 suggests that eight of the twelve independent variables in this study do *not* affect the relative power of MNEs and governments.¹⁴

What is remarkable is that many of the variables that here do not seem to affect bargaining over ownership are precisely those that previous researchers found did just that. For example, Fagre & Wells [1982] and Lecraw [1984] found that the extent of intra-system sales, the R&D- and marketing-intensity of the subsidiary's business, and the degree of competition in the industry all affected bargaining over ownership. None of the coefficients

on the corresponding interaction terms in column 2.2 are statistically significant even at the .10 level ($RSTR \times Intrasys > 10\%$, $RSTR \times R\&D/Rev$, $RSTR \times Mktng/Rev$, and $RSTR \times MNEs\ in\ Industry$).

In interpreting these differences, some of the limitations of this study should be kept in mind. Many of the proxies used here are crude, even though most are identical or similar to those used in previous studies. In particular, the measure of what constitutes a restrictive host government policy—which is central in this analysis—is binary and based on aggregate studies. Furthermore, although multicollinearity does not seem to have been a problem, it might still have inflated the standard errors, leading to low t -statistics. As a result, some of the insignificant coefficients may well be due to the methods and proxies used.

Factors Affecting Ownership Outcome. A substantial body of literature argues that technology, market power, and other factors affect MNE-government bargaining. How can these views be reconciled with the results in Table 2? It is best to examine this question separately for each factor. This study did find support for one of Fagre & Wells's hypotheses that failed their own tests. They expected that MNEs making relatively *large investments* would have greater bargaining power than others, but could find no conclusive evidence of this. The coefficient on $RSTR \times Sub\ Assets > \$10M$ in Table 2 is indeed negative and statistically significant at the .05 level. This implies that when making major investments abroad, MNEs in restrictive countries were less likely to form joint ventures than those in open countries, as implied by Fagre & Wells's hypothesis.

The estimate of the effect of *R&D intensity* is perhaps one of the most surprising. In Gomes-Casseres [1989b] I described how R&D can have two opposing influences on ownership preferences.¹⁵ Firms exploiting their own technology prefer whole ownership in industries with high R&D spending, but firms acquiring technology prefer joint ventures. These opposing effects seem to cancel each other out to yield a coefficient on $R\&D/Rev\ Sub\ Ind$ that is not significantly different from zero (Table 2). As a result, the effect on bargaining (measured with $RSTR \times R\&D/Rev$) can also be expected to be statistically insignificant.

Furthermore, substantial case evidence suggests that bargaining power of R&D-intensive firms varies within their industries. Grieco's [1982] study of the computer industry in India, for example, shows that while IBM refused to give in to the government's demand for local participation, other firms did. Similarly, Franko's [1987] study of a large group of countries found that "insider" firms refused joint ventures while "outsider" firms gave in to government demands in both the computer and pharmaceutical industries. Recently, IBM gained an exception to Mexico's ownership policies, but Apple and DEC did not.¹⁶ Such effects, of course, cannot be measured with an industry average such as used here.

A number of variables that were included to try to capture the effects of intra-industry differences in bargaining power also did not yield statistically

significant results. The *relative size of the MNE* affected ownership preferences as discussed above, but not bargaining power ($RSTR \times Par\ Assets < Indavg$). The same was true for the *international experience* of the MNE ($RSTR \times MNE's\ #Subs$), and the *degree of competition* in each industry ($RSTR \times MNEs\ in\ Industry$).¹⁷ All of these proxies may have been too crude to measure the kinds of effects described by Franko [1987]. Fagre & Wells [1982] reported similar problems with their measure of industry competition. Two variables included to measure the effect of vertical integration yielded somewhat mixed results. The extent of a subsidiary's intra-system sales seemed not to affect bargaining power in Table 2 ($RSTR \times Intrasys > 10\%$), contrary to expectations and earlier results [Fagre & Wells 1982; Lecraw 1984; Reuber 1973]. However, as discussed below, this variable affected entry deterrence significantly.

The other indicator of vertical integration, this time between the MNE and local raw material producers, did seem to affect the bargaining power of the MNEs. Two conflicting hypotheses might be reasonable in this case. On the one hand, MNEs depending on local raw materials might yield to government pressure in order to gain access to the inputs. On the other hand, governments seeking to develop and exploit their country's natural resources might yield to the firms' demands. In fact, investment in *resource-based industries generally led MNEs to prefer a joint venture*.¹⁸ But when, due to other circumstances, they chose whole ownership, MNEs investing in resource-based industries had greater bargaining power than others. The coefficient on $RSTR \times Res\ Based$ is negative and statistically different from zero at the .05 level, supporting the second hypothesis above.¹⁹ In other words, it appears that government reliance on MNEs for the development and export of resources increased the bargaining power of the firms.

While many of the results above are surprising, it is somewhat easier to understand why *marketing intensity* does not seem to affect the bargaining process. The coefficient on $RSTR \times Mktng/Rev$ is not statistically different from zero at the .10 level.²⁰ Here, too, there may be differences within industries. But, in addition, there are fewer reasons why host governments should be expected to give in to MNE demands. Unlike with high-technology industries, most governments do not set out to develop industries that create value through advertising. Some governments even argue that royalties paid to foreign firms for use of trademarks is a net loss to the country, unlike royalties for imported technology.

It seems more reasonable to assume that host governments have greater bargaining power than MNEs in such industries.²¹ In return for ownership concessions, host governments can grant consumer good firms protection against imports or restrict the number of domestic competitors. This seems to have been the pattern in India [Encarnation & Vachani 1985], and perhaps today in China. These countries, in effect, use the attraction of their domestic markets to gain concessions from MNEs.

There is strong evidence that the *attraction of the domestic market* increases the government's bargaining power across a broader range of countries, as suggested by previous researchers [Reuber 1973; Lecraw 1984; Kobrin 1987]. The more attractive a host country market, the more an MNE will be willing to trade away its ownership preferences for access to the market. But market attractiveness might be measured in various ways. The results in Table 2 suggest that the sheer size of a country's market does not affect bargaining, but that its growth rate does. The former was measured by *Industrial GNP of Host*, which appears to encourage joint ventures equally in both open and restrictive countries.²² Economic growth, on the other hand, seems to encourage joint ventures only in restrictive countries: the coefficient on the interaction term ($RSTR \times GDP\ Growth$) is positive and significant at the .005 level, but that on the main variable ($GDP\ Growth\ of\ Host$) is not significant. One reason for this result may be that the large number of competitors likely to be present in large markets might reduce the attractiveness of entry, while the capacity constraints likely in a rapidly growing market will increase it.

Another country variable also seems to affect bargaining over ownership. When countries are arranged according to their relative *familiarity* to U.S. firms [Davidson 1980], governments of the least familiar countries appear to have less bargaining power than others. Firms generally prefer whole ownership in familiar countries, as indicated by the negative coefficient on *Familiarity with Host*. One reason for this is that U.S. firms would have less to learn about these host environments [Gomes-Casseres 1989b]. But, MNEs can be expected to yield to the ownership demands of governments of familiar countries more often than to the demands of governments of less familiar countries. One reason for this is that familiarity with the environment is likely to result in better working relationships with local partners, and thus lower risks in "forced" joint ventures. This expectation is consistent with the positive coefficient on $RSTR \times Familiarity$, which is statistically significant at the .005 level.

It is striking that these two country factors—economic growth and familiarity—seem to have the greatest impact on bargaining than the other variables considered here. In the simple regression in column 2.1, the restrictive-country dummy (*Restrictive Host Gov*) had a positive coefficient, but in the regression with interaction terms it is effectively zero. This suggests that ownership policies do not have any *across-the-board effect* on ownership structure.²³ Rather, their effect depends completely on the characteristics of the industry, the subsidiary, and, especially, the host country. This broad conclusion affirms the thrust of the bargaining model, even though other results lead me to discount specific variables reported as significant by previous authors.

Entry Effects of Restrictive Policies

MNEs have two choices if their ownership preferences conflict with those of the government: (1) negotiate a compromise; and (2) decline to invest.

The results in Table 2 discussed above suggest that the ability of MNEs to gain ownership concessions did not vary much with firm characteristics. But their decisions of when to decline to invest did. Thus, some types of firms turned away more easily when faced with restrictive policies than other types. Such differential effects of ownership restrictions have received little attention in the literature.

The results of tests to measure the effect of restrictive policies on entry deterrence are shown in Table 3. The firm characteristics listed in this table were independent variables in separate OLS or Logit regressions. The independent variables were country and firm factors, as well as the dummy variable indicating a restrictive country (*Restrictive Host Gov*). As a result, the coefficients on this dummy variable measure the difference in the dependent variable between open and restrictive countries. This is model (2) described above.

Among the variables with strong effects on entry patterns, the proxies for vertical integration stand out. Subsidiaries in restrictive countries were much less likely to have high *intra-system sales* (>10% *Sales Intrasystem*) than those in open countries; this difference was statistically significant at the .005 level. On average, 12% of the subsidiaries in restrictive countries had intra-system sales exceeding 10%, compared to 22% in open countries. This result is consistent with other findings on the effect of this variable. MNEs investing in subsidiaries that were highly integrated into their global system preferred whole ownership [Gomes-Casseres 1989b]. Because they failed to gain concessions from host country governments (Table 2), they may have decided to avoid investing in restrictive countries. Where they did give in to government demands for a joint venture and went ahead with the investment, they could be expected to modify the subsidiary's strategy to reduce the extent of intra-system sales. That, too, would lead to the result observed here.

Vertical integration between the subsidiary and local firms also seemed to have had important effects on entry decisions. Firms investing in *resource-based* subsidiaries (*Resource-Based Sub*) were also more likely to invest in open countries than in restrictive ones; this effect was statistically significant at the .05 level. On average, 22% of all subsidiaries in restrictive countries were resource-based, compared to 27% in open countries. It appears that firms seeking resources abroad were concerned with the government intervention implied by the restrictive policies. This fear may have been accentuated by the fact that resource-based subsidiaries faced a relatively greater risk of expropriation than others [Bradley 1977]. This pattern may have contributed to the MNEs' ability to gain ownership concessions from host governments, as shown in Table 2. The governments' goal of exploiting national resources, combined with the MNEs' willingness to go elsewhere for raw materials, could well have tipped the balance of power in ownership negotiations.

Restrictive ownership policies also seemed to have deterred firms with relatively little *international experience*. The MNEs investing in restrictive

TABLE 3
Effects of Firm Characteristics
on Deterrent Effects of Restrictive Policies

Firm Characteristics (Dependent Variable)	Coefficients on <i>Restrictive Host Gov</i> Controlling for Effects of Country and Other Firm Variables		Regression Method Used
	Coefficient	t-statistic	
1. <i>R&D/Rev Sub Ind</i>	0.04	0.40	OLS
2. <i>MNE's #Subs in Ind</i>	1.51***	2.57	OLS
3. <i>>10% Sales Intrasystem</i>	-0.17***	-4.83	Logit
4. <i>Resource-Based Sub Ind</i>	-0.06**	-2.29	Logit
5. <i>Marketing/Rev Sub Ind</i>	0.26	0.58	OLS
8. <i>Parent Assets < Indavg</i>	0.05**	1.96	Logit
9. <i>SUB Assets > \$10M</i>	-0.03	-1.00	OLS
10. <i>#MNEs in Industry</i>	0.30	0.63	OLS

Notes: The regression analyses include variables 1 through 12. Natural coefficients are shown for the OLS regressions, and standardized coefficients for the Logit regressions. Because variable *Restrictive Host Gov* is equal to one in restrictive countries, positive coefficients indicate that the average of the firm characteristic is higher in restrictive countries than in open countries; the reverse is true for negative coefficients. For example, the results on variable 3 above indicate that subsidiaries in restrictive countries have lower intra-system sales than those in open countries.

*Statistically different from zero at .10 level (one-tailed)

**Statistically different from zero at .05 level (one-tailed)

***Statistically different from zero at .005 level (one-tailed)

countries had more subsidiaries worldwide than those investing in open countries, as shown by the positive coefficient on *MNE's #Subs in Ind*, which is statistically significant at the .005 level. There might be two explanations for this result. First, the experience of operating in a variety of environments might have helped these firms deal with restrictive host governments, even though they could not win ownership concessions (Table 2). For example, they may have learned how to manage relations with host governments, or how to manage joint ventures effectively. Second, while restrictive countries may not be locations of choice for a firm just beginning expansion abroad, they may offer positive marginal returns to a firm that is already active in all the choice locations.

But while the firms that refused to be deterred by restrictive policies had extensive international networks, they were typically not the largest in their industries. The positive coefficient on *Parent Assets < Indavg* suggests that the *largest firms* in an industry stayed away from restrictive countries more than smaller firms; this effect was statistically significant at the .05 level. On average, 47% percent of MNEs in restrictive countries had assets below their industry's average, compared to 37% in open countries. The smaller, second-tier firms were more likely to form joint ventures voluntarily than others (Table 2), and were also more likely to give in to government demands in order to gain market access [Franko 1987].

Along a number of *other dimensions*, the MNEs investing in restrictive countries were similar to those in open countries; in other words, the restrictive policies here had little deterrent effect. In particular, this deterrent effect did not vary with the R&D or marketing intensity of the subsidiary, with the number of firms in an industry, or with the size of the investment. Excepting this last factor, all of these also seemed to have little effect on ownership outcomes (Table 2), contrary to some arguments of the bargaining school. It is therefore not surprising to find that they also had little effect on entry. Firms investing in large subsidiaries, however, did gain ownership concessions (Table 2), and so may not have needed to avoid restrictive countries.

CONCLUSION

The choice of ownership structure for a foreign subsidiary depends on factors in two different, but interacting, processes. One set of factors affects *what the firm wants*, i.e., its preferred ownership structure for a subsidiary. These factors include the capabilities of the firm, its strategic needs, and the transaction costs of different ways of transferring capabilities. Another set of factors determine *what the firm can get*, which may be different from what it wants. In particular, when the firm prefers whole ownership but the host government's policies try to encourage joint ventures, then the ownership structure of the subsidiary will be determined in negotiations between firm and government. In this process, the relative bargaining power of the parties affect the outcome.

The existence of two distinct processes led to the development of two schools of thought about the ownership decision: the transaction cost and the bargaining power approaches. But because the ownership structures that we actually observe all stem from a mixture of the two processes, previous researchers have had difficulty testing the arguments of either school of thought. As a result, there has been considerable controversy about which approach best explains ownership patterns.

This paper develops a conceptual framework that combines the arguments of both schools of thought and uses statistical methods that empirically separate the effects due to the two processes. These methods are used here primarily to test the predictions of the bargaining school. Overall, the results suggest that several factors previously thought to affect the bargaining process (e.g., R&D intensity, marketing intensity, and intra-system sales), in fact do so only to a limited extent or not at all. But other factors (e.g., market attractiveness and subsidiary size) do seem to affect the outcome of ownership negotiations. This analysis thus constitutes a partial confirmation of the overall bargaining power approach.

The paper also explores the conditions under which firms facing restrictive governments decide to forego investing altogether instead of yielding to the ownership demands. This option has been suggested in the literature on bargaining, but it has not been examined empirically. The results suggest

that whether or not firms forego investing depends on their characteristics and those of the proposed subsidiary, such as the firm's size and the extent of intra-system sales of the subsidiary. Thus, some factors previously thought important in bargaining appear to affect not the ownership outcome, but the entry decision itself.

These results have important implications for international business theories and for business and government policies. They suggest that a theory about multinational enterprise behavior should consider not only the costs and benefits perceived by the firm, but also the impact of relations between firms and governments. Recognizing both these effects, managers should analyze the two aspects of global strategy, i.e., what is ideal for the firm, and what the firm can get. And government policymakers should consider that foreign investment policies may affect not only how firms organize their subsidiaries but also whether they will invest at all. Taking account of multiple processes in theory and policy is never easy, but integrated approaches such as that in this paper can help.

NOTES

1. This discussion assumes that the MNE's own capabilities, too, are best transferred through ownership channels. Otherwise, the MNE could write a licensing contract with the local firm. The example above also assumes that the MNE needs to acquire the local expertise. If it did not, it would prefer a wholly-owned venture.
2. Of course, the same may be true for one firm facing two different situations, such as subsidiaries in different countries or industries. Ownership preferences depend not only on firm factors, but also on industry and country factors. See Gomes-Casseres [1989b].
3. To use the terminology introduced above, these governments' preference is for a joint venture, although their reasons may vary, and their cost/benefit calculations on this score differ from those of the MNE.
4. In other words, in the government's preference ranking of ownership structures, 100% foreign ownership may rank close or far behind joint ventures, and the MNE's contributions may well reverse the ranking.
5. I am indebted to an anonymous referee for valuable suggestions on statistical methods.
6. Logit analysis and OLS regressions differ significantly, however, in the definition and interpretation of R^2 as a measure of goodness of fit. Amemiya [1981, pp. 1504-7] considers several definitions and finds all are flawed; but he offers no good alternative. The measure used here is that in Maddala [1983, pp. 37-8] which is defined analogous to R^2 in OLS regressions, i.e., the squared correlation between Y and $E(Y)$. Both Maddala and Amemiya report a controversy in the literature about whether the upper limit of this measure is one or less than one, and a suggestion that this R^2 may well be very low in logit models. At any rate, tests of the goodness of fit of the regressions presented here are not critical to the interpretation of the results. The paper depends much more on significance tests of the coefficients, which are analogous to tests in OLS models.
7. This hypothesis can, of course, be tested with the methods described above. See Gomes-Casseres [1989b].
8. Because the method relies on comparing characteristics of investments in open and restrictive countries, it cannot be used to estimate the impact of country factors on entry deterrence.
9. Unfortunately, there are not more recent data with the level of detail and the breadth of coverage of this database. However, there are good reasons to believe that results presented here are still valid today. Kobrin [1988] compares ownership patterns in the 1975 Harvard data with those in his more limited 1985 survey and finds no substantial differences. In Gomes-Casseres [1985] I tested whether the effects of a number of independent variables examined here changed over the years 1960-1975,

and found that they did not. The relationships examined here thus seemed to have been quite stable, even though there might have been change in numbers of subsidiaries, distribution across countries and industries, and so on. Further analysis of time trends is in Gomes-Casseres [1988].

10. Actually, the Harvard data did not collect information on subsidiaries with less than 5% foreign ownership, so that the joint ventures in this analysis have between 95% and 5% MNE ownership.

11. To reduce confounding effects of bargaining, the paper's sample excluded some of the most restrictive countries that are included here, i.e., Japan, Spain, Sri Lanka, India, Mexico, and Pakistan.

12. These variables are included here because there are compelling hypotheses about their effects on the bargaining process.

13. "Main variables" is used here to refer to the X 's in equation (1) above. They include all firm, industry, and country variables, except for the restrictive-country dummy (*Restrictive Host Gov*) and the interaction terms with that dummy variable.

14. Note that these variables might still affect the deterrence effect of restrictive policies, as discussed below.

15. Fagre & Wells [1982], too, reported that the relationship between technology and bargaining power was complex and non-linear. However, I found no evidence of such non-linearity in the residuals from the regressions in Table 2.

16. A comparison of IBM's bargaining with India in 1978 and Mexico in 1985 is in Gomes-Casseres [1989a].

17. Highly experienced firms were likely to prefer whole ownership, because they did not need the contribution of local firms. The coefficient on *MNE's #Subs in Ind* is negative and statistically significant coefficient at the .05 level. See also Gomes-Casseres [1989b].

18. Positive coefficient on *Resource-Based Sub Ind*. Dependence on local resources might imply a bilateral monopoly situation leading to high transaction costs that can be minimized by sharing ownership with producers of the local resources. See Gomes-Casseres [1989b].

19. Because of the two conflicting hypotheses, some might prefer to apply a two-tailed test here. In that case, the null hypothesis of no effect is rejected only at the 10% confidence level.

20. Fagre & Wells's, Kobrin's, and Lecraw's results to the contrary are almost certainly due to the strong effect of marketing intensity on firm preferences. The coefficient on *Marketing/Rev Sub Ind* is negative and statistically significant at the .005 level.

21. Using different statistical methods, I found some evidence for this. See Gomes-Casseres [1985], Chapter 7.

22. As discussed in Gomes-Casseres [1989b], the number of local firms that can contribute valuable skills to the MNE's operation is likely to be greater in countries with large industrial sectors. As a result, MNEs are more likely to prefer joint ventures in these countries than in smaller ones.

23. In terms of equation (1) above, the intercepts in open and restrictive countries are equal: $A_1 = A_0$, so that $(A_1 - A_0) = 0$.

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