

The Institutional Environment for Multinational Investment

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This article posits that the effect of political hazards on the choice of market entry mode varies across multinational firms based on the extent to which they face expropriation hazards from their potential joint-venture partners in the host country (the level of contractual hazards). As political hazards increase, the multinational faces an increasing threat of opportunistic expropriation by the government. Partnering with host-country firms that possess a comparative advantage in interactions with the host-country government can safeguard against this hazard. However, as contractual hazards increase, the potential benefit to the joint-venture partner of manipulating the political system for its own benefit at the expense of the multinational increases as well, thereby diminishing the hazard-mitigating benefit of forming a joint venture. A two-stage bivariate probit estimation technique is used to test these hypotheses on a sample of 3,389 overseas manufacturing operations by 461 firms in 112 countries.

1. Introduction

Despite a dramatic resurgence in the share of world investment that crosses national boundaries,¹ our understanding of the driving forces of these investment decisions and the hazards that they face is still limited. This article empirically tests a recently extended version of transaction cost theory (Henisz and Williamson, 1999) that explicitly addresses the added complications surrounding the market entry mode choice (the choice between entering a given country using minority or majority equity control) of multinational corporations relative to domestic firms. Specifically this framework analyzes the mechanisms by which political hazards (defined as the feasibility of policy change by the host-country government which either directly—seizure of assets—or indirectly—adverse changes in taxes, regulations or other agreements—diminishes the

An earlier draft of this article formed Chapter 4 of my doctoral dissertation: “The Institutional Environment for International Investment.” I thank Oliver Williamson, Pablo Spiller, David Teece, Henry Brady, Joanne Oxley, Bennet Zelner, Patrick Moreton, Bruce Kogut, Rebecca Henderson, and seminar participants at the Sloan School of Management, Massachusetts Institute of Technology for their comments.

1. Since 1986, global foreign direct investment inflows have grown three times as fast as gross fixed capital formation (United Nations, 1996:5).

multinational enterprise's expected return on assets) in the host country influence this decision. Henisz and Williamson (1999) argue that the effect of political hazards differs across firms based on the structure of their asset portfolio. The extent to which these firms face expropriation hazards from their potential joint-venture partners in the host country (subsequently referred to as contractual hazards) is shown to be the key feature. Therefore the impact of political hazards on the market entry mode decision of multinational firms is a function not just of the structure of the institutional environment but also of the characteristics of the investment transaction.

However, with the exception of Gatignon and Anderson (1988), Hill, Hwang, and Kim (1990), and Smarzynska and Wei (2000), few empirical studies have simultaneously considered the effect of industry-, firm-, and transaction-level attributes as well as the political institutions and economic development of the host country on the market entry mode decision. One contributing factor to the relative paucity of empirical studies of this form is the requirement to gather data on both political hazards and on the overseas operations of multinational enterprises. Both have proven elusive. An important contribution made by this article is the introduction of two novel sets of data that offer substantial improvements on extant measures in the breadth of their coverage.

In response to the difficulty in clearly defining and measuring political hazards (Knack and Keefer, 1995), the literature has moved away from attempts to directly quantify hazards and has, instead, adopted the proxy of managerial perception of hazards (Agarwal and Ramaswami, 1992; Brouthers, 1995). The improved results using this proxy offer indirect support for the hypothesis that political institutions matter, but at the cost of severing the explicit link between those institutions and the observed outcomes of multinational manager's strategic choices. Specifically the subjective measures introduce an endogeneity problem as, *ceteris paribus*, multinational managers will clearly tend to invest differently in countries they perceive as hazardous. The question remains as to whether their perceptions of hazards in a given country—which are based on some set of national-level political, economic, and policy variables—are strongly correlated with certain observable characteristics of that country's political system.

Henisz (2000) finds that such characteristics—the structure of a country's political institutions and the preferences of the actors that inhabit them—can be incorporated into a simple spatial model of political interaction to generate an internationally comparable measure of the feasibility of policy change. In contrast to the limited coverage provided by subjective measures, this more objective measure is available for more than 90% of countries for the entire postwar period. Cross-national variation in this measure is shown to effect cross-national variation in economic growth (Henisz, 2000) and telecommunications investment (Henisz and Zelner, 2001).

The second data limitation of the extant literature derives from the lack of reporting requirements or incentives to accurately report data on the overseas manufacturing operations of multinational enterprises. Datasets that fall short of full coverage are unable to disentangle the effect of the dependent variables on the probability of entry from their effect on the probability of choosing a majority-owned market entry mode. The Conference Board gathered the dataset used in this study from its member firms under a strict confidentiality agreement. It is therefore distinguished by its breadth at the country level (operations in 112 countries are reported), industry level (all manufacturing industries), and firm level (a population of the largest 1,250 publicly traded American manufacturing firms and a sample that includes data on more than 80% of these firms).

In Section 2 I review the relevant theoretical arguments regarding the impact of political hazards on the market entry mode decision of multinational firms. I present three hypotheses linking the level of contractual and political hazards to the choice by these firms of a majority- versus minority-owned entry mode. Section 3 presents an empirical test of these hypotheses employing a two-stage qualitative choice estimation technique that corrects for selection bias (Van de Ven and Praag, 1981; Shaver, 1998). Section 4 concludes.

2. International Transaction Cost Economics

2.1 Independent Contractual Hazards

Though the main emphasis in this article is the impact of political hazards on multinational market entry mode, the study of country-specific effects cannot proceed independently of their transaction-specific counterparts. Several categories of contractual hazards have been suggested by the theoretical literature (Williamson, 1985; Anderson and Gatignon, 1986; Oxley, 1995) and tested empirically (Gatignon and Anderson, 1988; Murtha, 1991; Oxley, 1997). The most prominent of these is asset specificity. Where “the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive value” (Williamson, 1996:59) is limited, the multinational faces a risk of ex-post opportunistic² recontracting from their partners in trade in the amount of the quasi-rents at stake (Murtha, 1991). A second category of independent contractual hazards suggested by the literature is the hazard of technological leakage (Oxley, 1997). A third category is the hazard of free-riding on brand name and reputation (Klein and Leffler, 1981; Gatignon and Anderson, 1988).

In all three of these cases, the multinational parent is exposed to the hazard that the present returns on its sunk costs (either property, plant and equipment in the host country, technology, or brand-name reputa-

2. “Self-interest seeking with guile” (Williamson, 1996:6).

tion) will be devalued or expropriated by a joint-venture partner. Because every joint-venture contract is necessarily incomplete³ and these hazards cannot be reliably safeguarded through contract, each of these characteristics of a given transaction increases the potential returns to the host-country joint-venture partner of opportunistic behavior. Therefore, as the independent contractual hazards of asset specificity, technological leakage, and free riding on brand-name reputation increase, the potential for maladaptation that arises due to contractual incompleteness in a minority-owned joint venture rises. This relationship implies that the probability of choosing a majority-owned plant as a market entry mode—a choice which reduces the hazard of contractual maladaptation by partially substituting internal coordinating mechanisms for bilateral negotiations—increases in the level of independent contractual hazards.⁴

Hypothesis 1. The probability of choosing a majority-owned plant as a market entry mode is increasing in the level of independent contractual hazards.

2.2 Independent Political Hazards

A second important category of hazards faced by multinational corporations originates not from the nature of their overseas activity but from the location of that activity in a specific political system (Kobrin, 1979; Hill, Hwang, and Kim, 1990; Murtha, 1991; Phillips-Patrick, 1991; Henisz and Williamson, 1999). The state itself—given its monopoly power on legal coercion⁵ and its implicit presence in the background of every economic transaction—poses a threat to multinational corporations either through policy shifts in taxation or regulation, or through

3. By reason of bounded rationality [“behavior that is *intendedly* rational but only *limitedly* so (Simon, 1961:xxiv, emphasis in original)].

4. To a lesser extent, the same characteristics that give rise to independent contractual hazards in a minority-owned joint venture also increase managerial or bureaucratic costs in a majority-owned plant. Shifting to a majority- or wholly owned subsidiary does not eliminate the relationship between these hazards and the costs of writing, monitoring, and enforcing contracts. Whereas there no longer exists an equity partner with equity rights over operations, long-term contractual relationships and other hybrid forms of organization may still be utilized by the multinational parent. Trading partners in any of these cases may still behave in an opportunistic manner (Oxley, 1995). However, assuming a positive relationship between the degree of equity ownership and the control over the assets in question, the ease of monitoring and the enforcement strategies available yields a positive relationship between independent contractual hazards and the governance costs of minority-owned joint ventures relative to majority-owned plants.

5. While cases where alternative enforcement mechanisms have arisen are quite numerous, they are presumed to represent failures by the state to provide low-cost third-party enforcement mechanisms, not a more cost-effective alternative.

outright expropriation.⁶ Firms that look ahead and perceive these contracting hazards will take hazard-mitigating actions. These actions should be designed to shift the decision calculus of the potential expropriating government either by raising their political and/or economic costs to or lowering their benefits from the expropriation of assets or the revenue from those assets under consideration.

Expropriation may benefit the government directly by transferring revenue from the multinational to the government budget or the bank accounts of government officials. The government may also receive indirect political benefits by transferring assets or property rights of a foreign company to domestic ownership. However, it may also incur costs in terms of lost future revenue from multinational corporations or their domestic partners and the actual and potential employees of either entity. The amount of these benefits and costs is, to some extent, under the influence of the managers of these multinational corporations.

For example, the multinational could form a relationship with host-country partners who would also suffer in the event of an expropriation of the subsidiary's assets or its return on assets due to their dependence on a continuing relationship with the parent for the same set of complementary assets. In exchange, these host-country partners would provide a valuable service. Host-country firms tend to use, on average, a greater percentage of domestic inputs. Because of superior information regarding the availability of, terms of, and procedures for acquiring goods in the domestic market, they rely more heavily than the multinational on domestically sourced labor, intermediate products, and trading partners. While multinationals may pay to acquire this information, pursuing such a strategy raises their production costs relative to domestic firms.

Depending on the size of this cost wedge, the multinational corporation shifts some positive quantity of inputs from domestic to international sourcing. Expropriation of the assets or revenue stream of a joint venture between a multinational and a host-country partner will therefore result in greater expropriation of assets or revenue streams owned by domestic constituents than expropriation of a solely foreign venture. As more domestic constituents are implicated in the expropriation, a partnership between a multinational and a host-country firm is, on

6. Note that if the counterparty is the state (i.e., a multinational enters into a joint venture with a state-owned enterprise) traditional transaction cost logic applies. The modifications to the analysis provided in this article are solely relevant for multinationals considering forming partnerships with privately owned host-country firms.

average, politically more costly to expropriate for the government than a solely multinational enterprise.^{7, 8}

Note that this adaptive move involves shifting activities that might otherwise occur inside the host firm outside of the subsidiary and into a local partner. As independent political hazards cannot easily be internalized (the government always retains its monopoly power on the legal use of force), the firm must seek alternative safeguards. Reducing the level of equity control of the host-country subsidiary by transferring previously internal functions to a host-country partner can, by increasing host-country content, shift the political decision calculus of the government and reduce the probability of expropriation of assets or of revenue streams. As a result, firms faced with institutional environments posing high independent political hazards, *ceteris paribus*, are more likely to choose a minority-owned joint venture as a market entry mode.

Hypothesis 2. The probability of choosing a majority-owned plant as a market entry mode is decreasing in the level of independent political hazards.

2.3 The Magnification of Contractual Hazards in the Presence of Political Hazards

The above analysis assumes that the level of contractual hazards is independent from the level of political hazards. In reality, the two hazards are closely intertwined (Gatignon and Anderson, 1988; Henisz and Williamson, 1999). As the potential gain from expropriation of assets or of revenue streams increases, an opportunistic host-country joint-venture partner will use all available cost-effective means to seize that return. In countries with high political hazards, one avenue through which expropriation of assets or of revenue streams may occur is through manipulation of the political system. As political hazards increase, transactions that may have been effectively organized through contractual agreements or partnerships with third parties after taking into account independent political and contractual hazards now involve more political gaming and more frequent appeals to arbitration or the courts.

7. The strength of political ties (particularly the extent of deference) between the host country and home country governments may influence the magnitude or even direction of this effect (Nigh, 1985). Extending the analysis presented here to incorporate such effects is left for future research.

8. This hypothesis is strongly supported by the only available empirical study, conducted by Bradley (1977). The author finds that expropriation of joint ventures exclusively between foreign multinationals is eight times as likely as expropriation of joint ventures that involve local partners.

The multinational corporation is thereby required to undertake involved and costly (due to unfamiliarity with local laws and customs) preparation for these appeals and disputes. These factors increase the cost of minority-owned joint ventures relative to majority-owned market entry modes. The magnitude of this effect is positively correlated with the level of independent contractual hazards. The larger the quasi-rents enjoyed by the multinational, the greater the returns from market or nonmarket strategies by the joint-venture partner who attempts to expropriate those rents (Teece, 1986; Williamson, 1996:114–115).⁹

Hypothesis 3. The positive effect of contractual hazards on the probability of choosing a majority-owned plant as a market entry mode is magnified in the presence of political hazards.

2.4 Net Effects and Their Strategic Implications

To summarize the previous discussion, the effect of political hazards on the strategic choice of market entry mode can be separated into two effects. First, independent political hazards decrease the probability of choosing a majority-owned plant relative to a minority-owned joint venture because the latter market entry mode offers a safeguard against expropriation of assets or of revenue streams by political actors. However, this positive benefit of choosing a minority-owned joint venture as a market entry mode is attenuated, and potentially more than offset by the hazard that the joint-venture partner will itself expropriate the returns from the partnership. The net effect of political hazards therefore depends crucially on the level of contractual hazards in the transaction. For transactions with low contractual hazards, the choice between a majority-owned plant and a minority owned joint venture is more strongly influenced by the effect of independent political hazards. The probability of choosing a majority-owned plant as a market entry mode falls as firms seek partners to safeguard themselves against opportunistic expropriation of assets or the revenue stream of those assets by the host-country government. By contrast, when contractual hazards are high, the choice between a majority-owned plant and a minority owned joint venture is more strongly influenced by the magnification of contractual hazards that the political hazards engender.

9. Another factor that supports this argument is the additional strain placed on complex international contracts by higher uncertainty regarding future policy (Gatignon and Anderson, 1988). Changes in taxation, regulation, or property rights require adaptation to the new external environment. Given the condition of bounded rationality and the potential for opportunistic behavior, the ability of joint-venture partners to agree on a potentially unforeseen change in business strategy without discord is a declining function of the quasi-rents at stake in the transaction.

3. Empirics

3.1 Econometric Specification

A formal test of the hypothesized relationship between political hazards and market entry mode is conducted using a two-stage bivariate probit specification¹⁰ in which the probability of entering a given country and the probability of choosing a market entry mode (minority-owned joint venture or a majority owned plant) in a given country are a function of a set of firm- and country-level attributes. Specifically I assume that the entry decision will be a function of the relative governance costs of entry versus no entry, Entry^* , is itself a function of a set of observed firm and country characteristics $\mathbf{w}$:¹¹

$$\text{Entry}^* = \gamma \mathbf{w} + \mu, \text{Entry} = 1 \text{ if } \text{Entry}^* > 0, 0 \text{ otherwise.}$$

The literature that has examined country effects as drivers of internationalization (Root and Ahmed, 1978; Dunning, 1981; Schneider and Frey, 1985; Wheeler and Moody, 1992) typically finds that firms are more likely to enter wealthier countries with larger populations and more stable political environments. The literature that has focused on firm and/or industry effects (Horst, 1974; Wolf, 1975; Swedenborg, 1979; Ball and Tschoegl, 1982; Marion and Nash, 1983; Grubaugh, 1987; Kimura, 1989; Belderbos and Sleuwaegen, 1996) finds that large firms with high stocks of intangible assets and strong dependency on foreign sales are the most likely to go abroad.

The choice of market entry mode for an overseas operation will be determined by an unobservable measure of governance costs, G , which is determined by an observed set of measures of contractual and

10. Gatignon and Anderson (1988) employ a multinomial logit choice model so as to allow for a two-stage model in which the firm first decides whether to enter as a wholly owned subsidiary or with a foreign partner. In the second stage, the firm decides whether to enter with a minority share, balanced share, or majority ownership. This article confines its specifications to two-stage ordered-response models in which the decision to enter or not enter is followed by the choice between using a minority-owned versus a majority-owned market entry mode. The logit specification that assumes the independence of irrelevant alternatives and that the underlying probability distribution is logistic instead of, as with the probit specification, normal was also estimated. As the specifications differ substantially only in the tails of the cumulative distributions, the results should not be sensitive to the choice between models. No significant differences in the results were observed. Nor did any qualitatively important differences emerge when the models were estimated using a linear or extreme-value underlying probability distribution. Attempts to secure a limited sample of data on ownership shares to allow for a TOBIT estimation created a selection bias in favor of operations in low-risk countries. This bias undermined the empirical relationship between political hazards and the choice of market entry mode. Similar difficulties are reported by Asiedu and Esfahani (1998). Attempts to secure datasets with more microeconomic detail on overseas operations in a broad sample of countries are ongoing.

11. The notation draws from Shaver (1998).

political hazards as well as other firm- and country-specific variables. The governance costs (G) associated with entering the market using a minority-owned joint venture (JV) and entering the country using a majority-owned manufacturing plant (MAJ) are therefore given by

$$G^{JV} = \alpha^{JV} + \mathbf{CH} \gamma^{JV} + \mathbf{PH} \beta^{JV} + [\mathbf{PH} * \mathbf{CH}] \delta^{JV} + \Psi \zeta^{JV} + \epsilon^{JV}$$

$$G^{MAJ} = \alpha^{MAJ} + \mathbf{CH} \gamma^{MAJ} + \mathbf{PH} \beta^{MAJ} + \Psi \zeta^{MAJ} + \epsilon^{MAJ},$$

where α^i represents the fixed governance costs of choosing market entry mode i ; γ^i is a vector of coefficients capturing the additional governance costs that result from having independent contractual hazards specified by the vector of determinants $\mathbf{CH}$;¹² β^i is the marginal increase in the governance costs of market entry mode i , having political hazards $\mathbf{PH}$;¹³ δ^{JV} is a vector of coefficients that captures the marginal addition to governance costs of a joint venture caused by the magnification of the contractual hazards $\mathbf{CH}$ by the political hazards $\mathbf{PH}$;¹⁴ ζ^i is the marginal addition to governance costs of market entry mode i caused by having the vector of firm- and country-specific variables Ψ ; and ϵ^i is a well-behaved error term.¹⁵

Various firm and country effects are suggested by the extant literature. Space constraints prohibit a detailed presentation of the rationale for their inclusion, but cites are provided for interested readers. Firm-level data on size (Gatignon and Anderson, 1988; Kogut and Singh, 1988; Agarwal and Ramaswami, 1992; Oxley, 1997), capital intensity (Asiedu and Esfahani, 1998), product diversity (Johanson and Vahlne, 1977; Gomes-Casseres, 1989; Hennart, 1991; Chang, 1995; Barkema, Bell, and Pennings, 1996; Asiedu and Esfahani, 1998), and foreign experience (Gatignon and Anderson, 1988; Kogut and Singh, 1988;

12. A simple additive specification is chosen for the purpose of analytical tractability and is consistent with the extant literature. Correlation of these measures is relatively low, thus offering support for a specification in which the three proxies are independent. See Appendix A for exact correlation values. Similar specifications are utilized in Gatignon and Anderson (1988), Kogut and Singh (1988), Gomes-Casseres (1989, 1990), and Hennart (1991).

13. As the putative safeguard to contractual hazards (increased equity control) is not feasible in the presence of independent political hazards and the putative safeguard to independent political hazards (reduced integration) is ineffective in the presence of contractual hazards, it seems plausible, and I will assume that their effects on governance costs would be additively separable.

14. Note that the additional hazard of manipulation of the political system by the joint-venture partner can be reduced by assuming majority equity control. Any increase in bureaucratic costs suffered by or variation in efficacy in managing political hazards afforded to the majority-owned plant is already incorporated in the governance cost curve defined above.

15. Assume that governance costs are expressed as logs to eliminate the nonnormality imposed on the error term if G^i is everywhere positive. Since governance costs are unobserved, this has no impact on the estimating equation.

Gomes-Casseres, 1989, 1990; Hennart, 1991; Agarwal and Ramaswami, 1992; Oxley, 1997; Delios and Henisz, 2000), country-level data on income (Kobrin, 1976; Gomes-Casseres, 1989, 1990), population (Kobrin, 1976), and political instability (Asiedu and Esfahani, 1998), as well as regional (Asia, Latin America, the Caribbean, the Middle East, South America, western Europe, eastern Europe, and Africa, with English-speaking former British colonies—Australia, Canada, New Zealand, and South Africa—excluded) and industry [food, tobacco, textile and apparel, lumber and furniture, paper and printing, chemicals, rubber and plastics, leather, glass and stone, primary and fabricated metals, nonelectric machinery, electric and electronic equipment, instruments and related products, and transportation equipment, with other (SIC = 39) as the omitted category] dummies are incorporated into the analysis.

Assuming managers choose the low governance cost mode of entry, the probability of observing a majority-owned plant can be expressed as the probability that the governance costs of that market entry mode will be less than that of a minority-owned joint venture:¹⁶

$$\begin{aligned}
 & \Pr\{G^{JV} > G^{MAJ} \mid \text{Entry} = 1\} \\
 &= \Pr\{[\epsilon^{MAJ} - \epsilon^{JV}] \mid \mu > -\gamma'w\} < (\alpha^{JV} - \alpha^{MAJ}) \\
 &\quad + CH(\gamma^{JV} - \gamma^{MAJ}) \\
 &\quad + PH(\beta^{JV} - \beta^{MAJ}) + [PH' * CH']\delta^{JV} \\
 &\quad + \Psi(\zeta^{JV} - \zeta^{MAJ})\} \\
 &\Pr\{G^{JV} > G^{MAJ}\} = \Pr\{[\epsilon^{MAJ} - \epsilon^{JV}] < (\alpha^{JV} - \alpha^{MAJ})/\tau \\
 &\quad + (CH/\tau)(\gamma^{JV} - \gamma^{MAJ}) \\
 &\quad + (PH/\tau)(\beta^{JV} - \beta^{MAJ}) \\
 &\quad + [(PH' * CH')/\tau]\delta^{JV} \\
 &\quad + (\Psi/\tau)(\zeta^{JV} - \zeta^{MAJ}) + \lambda\}
 \end{aligned}$$

16. An often-cited critique of this simple specification is that the content of a given transaction (the level of capital, advertising, or research embedded within it) is likely a function of the market entry mode chosen. Specifically, if the choice of market entry mode is taken as exogenous, a multinational manager is more likely to embed assets with high independent contractual hazards within the transaction. Unfortunately estimation of a simultaneous system of equations is beyond the capabilities of the given dataset, as the operation-level value of independent contractual hazards is unobserved and proxied for with the firm-level value. To the extent that firms have more flexibility in choosing a market entry mode compared to choosing the operation-level value of independent contractual hazards, the biases introduced by ignoring the simultaneity in the system should be small. Further empirical research will strive to identify the size of this bias and correct for it by obtaining operation-level data on independent contractual hazards and estimating a simultaneous system.

where

$$\lambda = \rho \sigma_{\epsilon} [(\phi(-\gamma' \mathbf{w}) / \Phi(\gamma' \mathbf{w}))]$$

$$\tau = (1 + \rho^2 \lambda [(-\gamma' \mathbf{w}) - \lambda])^{1/2} \text{ [see Heckman (1979:156–157)]}$$

ρ = correlation coefficient between $[\epsilon^{\text{MAJ}} - \epsilon^{\text{JV}}]$ and μ assuming that they are distributed bivariate normal

ϕ and Φ are the probability density function and the cumulative distribution function of the standard normal distribution, respectively

$\cdot$ signifies a variable expressed as a deviation from its mean. For example, $\mathbf{PH}^{\cdot}$ equals $\mathbf{PH} - E[\mathbf{PH}]$. This transformation is employed in the interaction terms to alleviate problems of multicollinearity.¹⁷

The final term on the right-hand side of the second equation corrects for the bias introduced by sampling only those market entry mode decisions in which entry actually occurred.¹⁸ In the absence of this correction, the impact of right-hand side variables or unobserved firm- or industry-level heterogeneity that influence both the entry and the entry mode decision (i.e., proprietary technology embedded in research and development expenditure or better international capabilities) would bias the results due to the correlation between the error terms in the first- and second-stage equations. However, the introduction of this term causes the expected variance of the error term to equal τ instead of 1. After dividing all terms by this value, one can obtain estimates of the coefficient of interest in the second-stage entry mode equation by using an OLS regression to obtain a consistent estimate of ρ followed by a probit regression on the final equation. More detailed discussion may be found in (Van de Ven and Praag, 1981; Shaver, 1998).¹⁹

Positive estimated coefficients ($\gamma^{\text{JV}} - \gamma^{\text{MAJ}}$) on the vector of independent contractual hazards provide support for Hypothesis 1, that these hazards raise the governance costs of minority-owned joint ven-

17. Prior to this transformation, the tolerance (the value obtained by subtracting $1 - R^2$ in an equation in which one of the independent variables is used as a dependent variable with all other independent variables on the right-hand side) falls as low as 0.04 (an order of magnitude below the common threshold for concern of 0.40) for some of the interaction terms. However, after the transformation the minimum tolerance obtained for any independent variable equals 0.48.

18. The assumption that the error terms in the entry and entry mode equations are distributed bivariate normal allows for the above derivation.

19. Unfortunately the error term ($\epsilon^{\text{MAJ}} - \epsilon^{\text{JV}}$) in the selection corrected model is not normally distributed. The coefficient estimates will therefore be consistent but not efficient (Van de Ven and Praag, 1981; Shaver, 1998).

tures relative to majority-owned plants.²⁰ Negative estimated coefficients on the vector of independent political hazards ($\beta^{JV} - \beta^{MAJ}$) provide support for Hypothesis 2, that independent political hazards raise the governance costs of a majority-owned plant relative to a minority-owned joint venture. Estimation of a positive set of coefficients (δ^{JV}) on the product of the vector of political hazards and the vector of contractual hazards would support Hypothesis 3, that the former magnifies the effect of the latter.

3.2 Data Sources

Several different datasets are combined for the purposes of empirical testing. First, the dependent variable is the market entry mode chosen by a multinational firm for its operations in a given country. Second, data on political institutions and preferences are used to assign each country scores of political hazards (**PH**). Finally, firm-level data including proxies for contractual hazards (**CH**) are also required. Wherever possible, variables are 1980–1992 averages²¹ to address the concern that the dependent variable (multinational market entry mode) is a stock not a flow.²² I describe each of the variable categories in turn.

3.2.1 Dependent Variables. Multinational entry and entry mode are discrete variables drawn from the Conference Board Manufacturers' Database²³ that take on the following values:

Entry = 0, no entry by firm into a given country
 = 1, entry by firm into a given country

20. As Masten, Meehan, and Snyder (1991) and Poppo and Zenger (1998) point out, this support for a relative cost advantage does not preclude the invalidation of the transaction cost hypothesis that the coefficients themselves are positive, nor does it offer information on the relative magnitude of the individual effects. Specifically the only econometrically identified relationship is the effect of independent contractual hazards on the governance costs of a minority-owned joint venture relative to a majority-owned plant (assumed to be positive).

21. Both annual data (1991 and 1992) and other ranges (1985–1992, 1982–1992, and 1980–1990) were used with no significant variation in results.

22. Unfortunately the data on overseas operations is only a cross section for 1992 offering no information regarding the age of the international operation. It therefore seems prudent to assume that the current mode of organization is a function of both current and recent historical independent variables.

23. This database covers "1,250 publicly listed U.S. corporations with 1991 sales of more than \$10 million that conduct more than 50 percent of their sales in Standard Industrial Classification industries 2000–3999 [(manufacturing)]. Most information was collected from May to September 1992 through mailed questionnaire and follow-up telephone interviews. Responses were received on a confidential basis" (Henisz and Taylor, 1994:6). Nonmanufacturing subsidiaries (sales infrastructure or research and development) were omitted from the analysis.

Mode = 0, minority-owned joint venture
 = 1, majority-owned plant²⁴

The database includes information on 3,389 overseas manufacturing operations by 461 firms in 112 countries, of which 1,090 are minority-owned joint ventures and 2,299 are majority-owned plants. Entry was observed in 3,146 of 51,632 possible country-firm pairings (multiple entries accounted for 243 observations).

3.2.2 Political Hazards. Following Levy and Spiller (1994), measures of both formal and informal constraints on executive discretion are employed in the analysis. The first measure of political hazards is taken from Henisz (2000).²⁵ It estimates the feasibility of policy change (the extent to which a change in the preferences of any one actor may lead to a change in government policy) using the following methodology. First, extracting data from political science databases, it identifies the number of independent branches of government (executive, lower and upper legislative chambers, judiciary and subfederal institutions) with veto power over policy change. The preferences of each of these branches and the status quo policy are then assumed to be independently and identically drawn from a uniform, unidimensional policy space. This assumption allows for the derivation of a quantitative measure of institutional hazards using a simple spatial model of political interaction.

This initial measure is then modified to take into account the extent of alignment across branches of government using data on the party composition of the executive and legislative branches for up to 167 countries in each year from 1960 to 1998. Such alignment increases the feasibility of policy change. The measure is then further modified to capture the extent of preference heterogeneity within each legislative branch that increases (decreases) decision costs of overturning policy for aligned (opposed) executive branches.

The main results of the derivation (available in Henisz, 2000) are that (1) each additional veto point (a branch of government that is both constitutionally effective and controlled by a party different from other branches) provides a positive but diminishing effect on the total level of constraints on policy change and (2) homogeneity (heterogeneity) of party preferences within an opposition (aligned) branch of government is positively correlated with constraints on policy change. These results echo those produced in closely related theoretical work by Tsebelis

24. For a plant to be coded as majority-owned in the sample, the U.S. firm must own an equity share of more than 50% in an overseas manufacturing facility.

25. Note that political hazards equal $-(\text{political constraints})$, which was the variable of interest in that article.

(1995, 1999), Hammond and Butler (1996), and Butler and Hammond (1997).

Possible scores for the final measure of political hazards range from 0 (no risk) to 1 (extremely risky). Results will also be reported using the indexes of the *International Country Risk Guide* to demonstrate that the empirical results are not sensitive to the measure employed.

The second measure examines the perceived level of corruption in a country. However, as formal constraints on policy change resulting from the structure of a nation's political institutions and the preferences of the actors that inhabit them are a primary cause of corrupt behavior, the level of "unexpected" corruption in a country given the level of formal constraints is employed rather than the raw corruption score. This allows for the empirical analysis to recognize differences between countries such as Venezuela and other parliamentary democracies that have similar political hazard scores such as Denmark and Finland, but far higher perceived levels of corruption.²⁶ The measure of corruption is taken from *The International Country Risk Guide* and is scaled so as to range from 0 (low corruption) to 1 (high corruption). The level of political hazards is then subtracted from this measure to calculate the variable ("unexpected corruption") used in the analysis which ranges from -1 (much less corrupt than expected) to 1 (much more corrupt than expected). Nicaragua, Mozambique, Algeria, and South Africa are cases where informal constraints are relatively high compared to formal constraints (corruption is lower than expected). Trinidad and Tobago, Papua New Guinea, Venezuela, Italy, and Brazil are examples of countries where informal constraints are relatively low compared to formal constraints (corruption is higher than expected). Values of political hazards and "unexpected corruption" levels for the countries analyzed in this article are provided in Table 1.

3.2.3 Contractual Hazards. The proxy of property, plant, and equipment intensity, while failing to sufficiently distinguish between assets whose ease of disposal may vary, may be expected to be positively correlated with the level of locational asset specificity.²⁷ Where operating costs are low relative to total costs (property, plant, and equipment intensity is high), there exists a wide range of contractual renegotiations favoring the host-country joint-venture partner that the multinational would

26. Thanks to an anonymous referee and the editor for this suggestion.

27. In the international arena, barring an ability to choose highly mobile or rapidly depreciating assets (Salant and Woroch, 1991), U.S. multinationals face additional difficulties in disposing of assets relative to those that they face in their domestic market. Foreign markets may be thinner, increasing uncertainty regarding the existence of a buyer who values the asset at its fair market value and increasing the potential for collusion among buyers. In addition, the multinational may lack information on prospective domestic buyers due to its dearth of knowledge of the market.

Table 1. 1980–1992 Average Values of Political Hazards and “Unexpected” Corruption

	Political Hazards	“Unexpected” Corruption	Political Hazards	“Unexpected” Corruption	Political Hazards	“Unexpected” Corruption
Afghanistan	1.00		Guatemala	0.78	Oman	1.00
Algeria	1.00	–0.67	Guinea	1.00	Pakistan	0.87
Angola	0.98	–0.48	Guinea-Bissau	1.00	Panama	1.00
Argentina	0.72	–0.39	Guyana	0.75	Pap. N. Guinea	0.15
Australia	0.14	0.03	Haiti	1.00	Paraguay	1.00
Austria	0.22	–0.05	Honduras	0.75	Peru	0.84
Bahrain	0.33	0.15	Hungary	0.33	Philippines	0.88
Bangladesh	0.93	0.03	Iceland	0.23	Poland	0.32
Belgium	0.13	–0.00	India	0.59	Portugal	0.25
Benin	0.99		Indonesia	1.00	Rwanda	1.00
Bolivia	0.80	–0.07	Iran	1.00	Saudi Arabia	0.33
Botswana	0.30	–0.01	Ireland	0.25	Senegal	1.00
Brazil	0.16	0.17	Israel	0.50	Sierra Leone	1.00
Burundi	1.00		Italy	0.23	Singapore	0.33
Cameroon	1.00	–0.40	Jamaica	0.87	South Africa	0.75
Canada	0.15	–0.15	Japan	0.20	Spain	0.21
C. African Rep.	1.00		Jordan	1.00	Sri Lanka	0.76
Chad	1.00		Kenya	1.00	Swaziland	1.00
Chile	0.31	0.19	Korea, Rep.	0.82	Sweden	0.24
China, PR	1.00	–0.65	Kuwait	1.00	Switzerland	0.13

Continued

Table 1. *Continued*

	Political Hazards	"Unexpected" Corruption	Political Hazards	"Unexpected" Corruption	Political Hazards	"Unexpected" Corruption
Colombia	0.58	-0.08	Lesotho	1.00	Syria	-0.35
Comoros	1.00		Liberia	1.00	Tanzania	-0.56
Congo	1.00	-0.50	Luxembourg	0.24	Thailand	-0.24
Costa Rica	0.27	-0.10	Malawi	1.00	Trinidad & Tobago	0.37
Cote d'Ivoire	0.33	0.15	Malaysia	0.30	Tunisia	-0.50
Cyprus	0.79	-0.31	Mali	1.00	Turkey	-0.21
Denmark	0.23	-0.22	Mauritania	1.00	Uganda	-0.43
Dominican Rep.	0.56	-0.06	Mauritius	0.65	U.A.E.	0.19
Ecuador	0.28	0.22	Mexico	0.79	United Kingdom	-0.18
Egypt	1.00	-0.36	Morocco	0.51	Uruguay	-0.22
El Salvador	0.68	-0.01	Mozambique	1.00	Venezuela	0.27
Ethiopia	1.00	-0.50	Nepal	0.94	Yemen, Arab R.	-0.33
Finland	0.23	-0.22	Netherlands	0.18	Yugoslavia	-0.50
France	0.22	-0.12	New Zealand	0.27	Zaire	0.00
Gabon	1.00	-0.33	Nicaragua	0.92	Zambia	1.00
Germany, FR	0.17	0.02	Niger	0.33	Zimbabwe	-0.38
Ghana	0.96	-0.39	Nigeria	0.88		-0.45
Greece	0.63	-0.38	Norway	0.24		

Full panel data is available at <http://www-management.wharton.upenn.edu/henisz/>.

accept short of terminating the venture. So long as the venture is covering its operating costs, the multinational enterprise is willing to continue operations in the short term. This provides an opening for the joint-venture partner to claim temporary difficulties in meeting their obligations, unexpected shortfalls in key inputs, or the need for one last infusion of capital.

More traditionally, the proxy of research and development intensity (as a percentage of sales) captures transaction-specific variance in the ability of the multinational to contract for technology. Similarly, the proxy of advertising intensity (as a percentage of sales) captures the presence of an asset with a value that is difficult to protect or describe contractually. Each of these variables is drawn from the COMPUSTAT database.

3.2.4 Remaining Independent Variables. Additional data on U.S. manufacturing firms in the sample comes from the Conference Board's Manufacturing Database, DISCLOSURE, and COMPUSTAT. The Conference Board database includes data on total annual sales (broken down into domestic and foreign) that are used to compute the ratio of foreign to total sales. The log of total assets, the average five-year sales growth, the firm-diversity measure (count of four-digit SIC codes), and the capital:labor ratio are taken from the DISCLOSURE database. Property, plant, and equipment, research and development, and advertising intensity relative to sales are drawn from COMPUSTAT. Finally, national data on the log of per capita income and of current population are taken from the Penn World Tables Mark 5.6. The number of changes in the executive of the country was determined using the Polity III database. Summary statistics for all variables included in the econometric analysis are presented in Table 2.

3.3 Results

3.3.1 Estimation Results: Entry. Linking the Conference Board Multinational Database to the political and economic databases described above and implementing casewise deletion for missing values reduced the sample size to between 6,571 and 14,348 as indicated in Table 3. Column 1 reports the results of the probit estimation²⁸ for the first-stage estimating equation detailed above. Consistent with a wide body of empirical literature on the process of internationalization (see page 343), the results are consistent with the hypothesis that firms are more likely to enter wealthier countries with larger populations and (weakly) more stable political environments.²⁹ Consistent with a wide body of

28. Using E-Views 3.1.

29. Of interest, in contrast to much of the extant literature that does not take the selection effect considered here into account, no independent effect on the market entry mode decision was observed for the income and population measures (results are available from the author upon request).

Table 2. Summary Statistics for Variables Included in Econometric Analysis

	Mode	Log of Real GDP per capita	Log of Population	Political Instability	Log of Total Assets	Capital Intensity	Foreign Sales Ratio	Parent Diversity	Political Hazards	"Unexpected" Corruption
Mean	0.70	5.39	17.19	0.22	14.18	4.27	0.39	4.17	0.41	-0.12
Median	1.00	5.33	17.47	0.17	14.40	4.25	0.41	5.00	0.25	-0.13
Maximum	1.00	10.76	20.88	0.75	18.52	5.56	0.96	7.00	1.00	0.37
Minimum	0.00	0.03	12.47	0.00	8.80	2.30	0.00	1.00	0.13	-0.73
Standard Deviation	0.46	1.67	1.36	0.17	1.65	0.51	0.16	2.06	0.16	0.19
Mode	1.00									
Log of Real GDP per capita	0.00	1.00								
Log of Population	0.09	-0.87	1.00							
Political Instability	-0.02	-0.02	0.08	1.00						
Log of Total Assets	0.05	0.00	-0.13	-0.05	1.00					
Capital Intensity	-0.33	0.07	-0.14	0.01	0.35	1.00				
Foreign Sales Ratio	0.24	-0.04	-0.03	-0.00	0.37	0.08	1.00			
Parent Diversity	0.32	-0.01	0.03	0.03	0.28	-0.19	0.16	1.00	1.00	
Political Hazards	-0.16	-0.47	0.09	-0.12	0.15	0.09	0.08	-0.02	-0.64	
"Unexpected" Corruption	0.09	0.11	0.03	0.21	-0.02	-0.03	0.03	0.05	-0.09	1.00
PPE Intensity (PPERAT)	0.31	-0.01	0.07	0.02	-0.22	-0.24	0.02	0.47	0.08	0.06
R & D Intensity (RDRAT)	-0.13	0.02	-0.07	0.02	0.18	0.20	-0.12	0.01	0.08	-0.01
Advert. Intensity (ADRAT)	0.03	0.01	0.00	0.03	0.20	0.28	0.12	-0.03	-0.04	0.01
PPERAT* Political Hazards	0.19	0.13	0.01	0.09	-0.13	-0.09	0.01	0.08	-0.33	0.21
RDRAT* Political Hazards	0.03	-0.06	0.04	0.01	-0.14	0.01	0.00	0.02	0.10	-0.02
ADRAT* Political Hazards	0.07	-0.05	-0.01	-0.05	0.09	-0.03	-0.03	0.06	0.10	-0.05
PPERAT* Unex. Corruption	-0.07	-0.04	-0.03	-0.06	0.06	0.02	-0.06	-0.04	0.20	-0.28
RDRAT* Unex. Corruption	-0.02	0.00	-0.01	-0.05	0.05	0.00	0.02	0.01	-0.02	0.07
ADRAT* Unex. Corruption	-0.00	-0.01	0.04	0.07	-0.03	0.03	-0.02	-0.04	-0.05	0.08
Investment Restriction Index	-0.12	-0.31	0.27	-0.01	-0.01	0.01	-0.00	-0.02	0.19	0.05

Continued

Table 2. *Continued*

	PPE Intensity (PPE)	R & D Intensity (RDRAT)	ADV Intensity (ADRAT)	PPE RAT* Political Hazards	RDRAT* Political Hazards	ADV RAT* Political Hazards	PPERAT* Unex. Corruption	RDRAT* Unex. Corruption	ADVRAT* Unex. Corruption	Investment Restriction Index
Mean	0.05	0.24	0.04	-0.00	0.00	-0.00	0.00	-0.00	0.00	0.26
Median	0.03	0.22	0.03	0.00	0.00	0.00	0.00	-0.00	0.00	0.27
Maximum	0.19	0.61	0.32	0.13	0.08	0.06	0.10	0.05	0.03	0.61
Minimum	0.00	0.05	0.00	-0.12	-0.03	-0.05	-0.13	-0.07	-0.05	0.06
Standard Deviation	0.05	0.11	0.03	0.03	0.01	0.01	0.02	0.01	0.01	0.14
Mode										
Log of Real GDP per capita										
Log of Population										
Political Instability										
Log of Total Assets										
Capital Intensity										
Foreign Sales Ratio										
Parent Diversity										
Political Hazards										
"Unexpected" Corruption										
PPE Intensity (PPERAT)	1.00									
R & D Intensity (RDRAT)	-0.20	1.00								
Advert. Intensity (ADRAT)	0.20	-0.17	1.00							
PPERAT* Political Hazards	0.03	-0.02	0.07	1.00						
RDRAT* Political Hazards	-0.01	0.17	-0.06	-0.16	1.00					
ADRAT* Political Hazards	0.06	-0.05	-0.04	0.20	-0.19	1.00				
PPERAT* Unex. Corruption	0.03	-0.00	-0.01	-0.63	0.07	-0.14	1.00			
RDRAT* Unex. Corruption	-0.00	-0.04	0.02	0.08	-0.59	0.11	-0.18	1.00	1.00	
ADRAT* Unex. Corruption	0.00	0.02	0.08	-0.14	0.11	-0.59	0.27	-0.19	1.00	
Investment Restriction Index	-0.02	0.05	0.01	-0.05	0.02	0.03	0.01	-0.00	0.01	1.00

Correlations of greater than 0.05 (0.07) or less than -0.05 (-0.07) are significant at $p = 0.5$ (0.1).

Table 3. Estimation Results for Entry Decision

Dependent Variable = Entry [0 (no entry), 1 (entry)]	(1)	(2)	(3)	(4)
Constant	25.38*** (1.25)	-24.20*** (1.48)	-27.77*** (1.83)	-27.46*** (1.83)
<i>Independent contractual hazards</i>				
Ratio of property, plant and equipment to total sales	-1.64*** (0.24)	-1.63*** (0.24)	-1.08*** (0.27)	-1.08*** (0.27)
Ratio of R & D expenditure to total sales	2.63*** (0.56)	2.64*** (0.56)	3.00*** (0.64)	3.02*** (0.64)
Ratio of advertising expenditure to total sales	-2.40*** (0.58)	-2.39** (0.58)	-1.46* (0.65)	-1.47* (0.66)
<i>Independent political hazards</i>				
Political hazards ^a	-0.19 (0.17)	-0.63** (0.24)	0.36 (0.24)	0.29 (0.24)
"Unexpected" corruption	0.10 (0.16)		0.72*** (0.21)	0.77*** (0.21)
<i>Other variables</i>				
Log of total assets	0.39*** (0.02)	0.39*** (0.02)	0.36*** (0.02)	0.36*** (0.02)
Capital intensity	-0.11* (0.04)	-0.11* (0.04)	-0.14** (0.05)	-0.14** (0.05)
Ratio of foreign to total sales	0.78*** (0.13)	0.79*** (0.13)	0.84*** (0.15)	0.85*** (0.15)
Log of real per capita gross domestic product	0.62*** (0.05)	0.57*** (0.06)	0.77*** (0.07)	0.77*** (0.07)
Log of total population	1.00*** (0.05)	0.94*** (0.06)	1.11*** (0.08)	1.10*** (0.08)
Political instability (count of changes in executive)	-0.28* (0.12)	-0.22# (0.12)	-0.39** (0.13)	-0.41** (0.13)
Index of investment restrictions				-0.67*** (0.18)
<i>N</i>	14,348	14,207	6,571	6,571
Correctly predicted	91.8%	91.7%	84.8%	85.0%
Percent gain over constant probability assumption	16.0%	15.9%	18.0%	19.0%
Log-likelihood	-2885	-2881	-2261	-2253
Likelihood ratio index (McFadden R^2)	0.371	0.370	0.282	0.284

#, *, **, *** represent p -values of .10, .05, .01, and .001, respectively.

Coefficient estimates for regional and industry dummies not reported.

^aPolitical hazards measured using political hazards index in columns 1, 3, and 4 and using International Country Risk Guide index in column 2. See text for details. Standard errors in parentheses.

empirical literature on the internalization approach to foreign direct investment (see page 342), large firms with a higher level of R & D intensity and higher dependency on foreign sales are more likely to go abroad. However, firms with high levels of advertising or property, plant, and equipment intensity are found to be less likely to go abroad.

3.3.2 Estimation Results: Market Entry Mode. Linking the Conference Board Multinational Database to the political and economic databases described above and implementing casewise deletion for missing values reduced the sample size to between 1,139 and 1,305 as indicated in Table 4. Column 1 reports the results of the probit estimation for the second-stage estimating equation detailed above. Eighty-three percent of the cases are correctly categorized compared to 50% by chance and 70% if all multinationals are assumed to enter using majority-owned plants. This represents a 41% improvement in mischaracterized cases.

Due to the presence of the (mean-deviated) interaction terms as well as the main effects, it is not possible from the sign and significance of the individual coefficient estimates to reach conclusions regarding the empirical support for individual hypotheses. However, Table 5, which presents the predicted probabilities of choosing a majority-owned plant for various observed levels of political and contractual hazard holding all other variables constant at their median values, provides strong support for each of the three hypotheses.

Increases in property, plant, and equipment, research and development, and advertising intensity (proxies for contractual hazards) are associated with increases in the probability of choosing a majority-owned plant as a market entry mode in countries with political hazards in or above the 0th, 25th, and 0th percentiles, respectively.³⁰ These results are consistent with the hypothesis that, in the case of subsidiaries who possess assets or revenue streams that may easily be expropriated by trading or joint-venture partners, multinationals are willing to sacrifice some local knowledge and the benefits of autonomous coordination as well as pay the higher bureaucratic costs associated with more hierarchical governance of their overseas operations in exchange for the benefits of more day-to-day control over these assets.

The marginal effect of a change in political hazards varies in both magnitude and sign with the level of contractual hazards, as discussed in Section 2.4. Note that as discussed in that section, the marginal effect of increasing political hazards is negative for low values of contractual hazard and positive for high values of contractual hazards (using all proxies). Specifically, for a hypothetical firm at the 25th percentile in property, plant and equipment intensity and at the mean in all other

30. The conditionality of the support for Hypothesis 1 in the case of research and development intensity may partly be explained by the rough proxies used in this study in contrast to the more microanalytic measures of Oxley (1997) and Murtha (1991). Alternatively, one could argue that this proxy for contractual hazards is also a proxy of firm-level capabilities. In this case, in countries with relatively low political hazards, the dominant effect of high technological capabilities is to provide incentives for partnering with other similar firms so as to foster learning and capability development (Kogut and Zander, 1992, 1993, 1996). Hazard mitigation strategies, which are the focus of the theoretical arguments provided in this article, may be second order in these cases.

Table 4. Estimation Results for Mode Decision

Dependent Variable = Mode [0 (JV), 1 (MAJ)]	(1)	(2)	(3)	(4)	(5)	(6)
Constant	4.42*** (0.66)	4.31*** (0.67)	4.42*** (0.67)	4.35*** (0.68)	4.39*** (0.85)	4.81*** (0.75)
Ratio of property, plant and equipment (PPE) to total sales	1.34* (0.57)	1.54*** (0.59)	1.36* (0.56)	1.56*** (0.59)	1.04# (0.62)	1.02# (0.62)
Ratio of R & D expenditure (R & D) to total sales	-0.25 (1.14)	0.09 (1.17)	-0.24 (1.13)	0.07 (1.17)	0.19 (1.28)	0.31 (1.28)
Ratio of advertising expenditure (ADV) to total sales	3.33* (1.62)	3.30* (1.51)	3.22* (1.63)	3.34* (1.52)	3.16# (1.85)	3.07# (1.82)
Political hazards ^a	-0.16 (0.32)	-0.03 (0.29)	0.07 (0.40)	0.13 (0.37)	0.01 (0.37)	0.01 (0.37)
"Unexpected" corruption	-0.20 (0.37)	-0.04 (0.33)			0.27 (0.43)	0.52 (0.44)
Political hazards ^{a*} ratio of PPE to total sales	4.39* (1.97)		5.44* (2.18)		2.30 (2.32)	2.44 (2.32)
Political hazards ^{a*} ratio of R & D to total sales	8.98* (4.19)		7.81# (4.39)		11.48* (5.13)	11.02* (5.14)
Political hazards ^{a*} ratio of ADV to total sales	22.82*** (8.21)		20.99* (9.12)		22.93* (9.61)	22.26* (9.29)
"Unexpected corruption" ratio of PPE to total sales	3.45 (2.75)				1.62 (3.21)	1.91 (3.24)
"Unexpected corruption" ratio of R & D to total sales	7.59 (5.84)				9.19 (6.91)	8.48 (6.94)
"Unexpected corruption" ratio of ADV to total sales	22.02* (9.42)				19.36* (10.56)	18.18# (10.49)

Continued

Table 4. *Continued*

Dependent Variable = Mode [0 (JV), 1 (MAU)]	(1)	(2)	(3)	(4)	(5)	(6)
<i>Other variables</i>						
Capital intensity	-1.03*** (0.11)	-1.05*** (0.11)	-1.01*** (0.11)	-1.06*** (0.11)	-1.05*** (0.12)	-1.04*** (0.12)
Ratio of foreign to total sales	2.13*** (0.33)	2.09*** (0.32)	2.04*** (0.32)	2.07*** (0.33)	2.01*** (0.39)	2.02*** (0.39)
Parent diversity (count of 4-digit SICs)	0.08** (0.03)	0.09*** (0.03)	0.08** (0.03)	0.09*** (0.03)	0.08** (0.03)	0.08** (0.03)
Political instability (county of changes in executive)	-0.46# (0.24)	-0.47# (0.24)	-0.45* (0.23)	-0.46* (0.24)	-0.53* (0.26)	-0.66** (0.26)
Index of investment restrictions						-1.26** (0.41)
λ	-0.71# (0.39)	-0.73# (0.40)	-0.77# (0.40)	-0.78# (0.42)	-0.49 (0.50)	-0.51 (0.50)
N	1,305	1,305	1,304	1,304	1,139	1,139
Correctly predicted	82.5%	83.1%	82.6%	83.2%	81.8%	81.7%
Percent gain over constant probability	41.3%	43.6%	41.7%	43.7%	30.1%	29.4%
Log-likelihood	-527	-541	-528	-541	-473	-469
Likelihood ratio index (McFadden R^2)	0.338	0.321	0.336	0.320	0.275	0.281

See Table 3; herein, political hazard index used in columns 1, 2, 5, and 6, while ICRG index used in columns 3 and 4. Standard errors in parentheses.

Table 5. The Predicted Probability of Choosing Majority-Owned Plant

Contractual Hazards Political Hazards	Minimum	25%	Median	75%	Maximum
<i>Property, Plant, and Equipment Intensity</i>					
Minimum (Switzerland, Belgium)	84.4%	84.9%	85.2%	85.6%	86.3%
	83.2%	84.1%	84.8%	86.5%	90.5%
25% (New Zealand, U.K.)	84.0%	84.6%	85.2%	86.3%	89.1%
	83.2%	84.1%	84.8%	86.5%	90.5%
Median (S. Africa, Honduras)	83.6%	84.4%	85.2%	86.7%	90.7%
	83.2%	84.1%	84.8%	86.4%	90.5%
75% (Mexico, Bolivia, S. Korea)	79.7%	82.3%	85.2%	90.8%	98.8%
	83.2%	84.1%	84.8%	86.4%	90.5%
Maximum (Many)	77.4%	81.1%	85.2%	92.6%	99.7%
	83.2%	84.1%	84.8%	86.4%	90.5%
<i>R & D Intensity</i>					
Minimum (Switzerland, Belgium)	85.2%	85.2%	85.2%	85.0%	84.0%
	84.0%	84.4%	84.8%	85.8%	88.3%
25% (New Zealand, U.K.)	84.7%	84.9%	85.2%	85.7%	86.9%
	84.0%	84.4%	84.8%	85.8%	88.3%
Median (S. Africa, Honduras)	84.4%	84.7%	85.2%	86.2%	88.6%
	84.0%	84.4%	84.8%	85.8%	88.3%
75% (Mexico, Bolivia, S. Korea)	80.5%	82.6.3%	85.2%	90.3%	98.0%
	84.0%	84.4%	84.8%	85.8%	88.3%
Maximum (Many)	78.1%	81.4%	85.2%	92.1%	99.4%
	84.0%	84.4%	84.8%	85.8%	88.3%
<i>Advertising Intensity</i>					
Minimum (Switzerland, Belgium)	84.9%	85.1%	85.2%	85.4%	86.3%
	83.7%	84.1%	84.8%	86.2%	90.6%
25% (New Zealand, U.K.)	84.4%	84.8%	85.2%	86.1%	89.1%
	83.7%	84.1%	84.8%	86.2%	90.6%
Median (S. Africa, Honduras)	84.1%	84.6%	85.2%	86.5%	90.7%
	83.7%	84.1%	84.8%	86.2%	90.6%
75% (Mexico, Bolivia, S. Korea)	80.2%	82.5%	85.2%	90.6%	98.8%
	83.7%	84.1%	84.8%	86.2%	90.6%
Maximum (Many)	77.9%	81.2%	85.2%	92.4%	99.7%
	83.7%	84.1%	84.8%	86.2%	90.6%

Probabilities in the top row of each cell are calculated using statistically significant coefficient estimates obtained using the specification of column 1 of Table 4 (includes interaction of political and contractual hazards), while probabilities in bottom row of each cell (*in italics*) were calculated using statistically significant coefficient estimates obtained using specification of column 2 (no interaction terms). All variables other than contractual and political hazards are held constant at their median level.

variables, the predicted marginal impact for the probability of choosing a majority-owned plant as its market entry mode into a hypothetical country at the mean level of growth and population, but at the 25th percentile of political hazards (the level of New Zealand or the United Kingdom) of increasing political hazards to the 75th percentile (the level of Mexico, Bolivia, or South Korea) is a 2.3 percentage point decrease in the probability of choosing a majority-owned plant. The same change in political hazards yields a 4.5 percentage point *increase*

in the predicted probability for a hypothetical firm at the 75th percentile in property, plant, and equipment intensity and an 9.7 percentage point *increase* in the predicted probability for the firm with the maximum level of property, plant and equipment intensity.

Managers' predicted strategic response to the presence of political hazards therefore depends critically on the type of assets under their purview in the host country. In the presence of high levels of political hazards, firms with few sunk costs and/or little nonredeployable capital such as physical, research and development expenditure, or brand-name capital should seek host-country partners who can provide them with safeguards against opportunistic behavior by the host-country government. Such a strategy is, however, shown to be less or even counterproductive for firms that can easily be expropriated by these counterparties. In such cases, the effect of independent political hazards may be outweighed by the effect of the magnified contractual hazards; increased and not decreased equity control obtains.

Column 2 of Table 4 reports results for a more conventional specification of the impact of political hazards on market entry mode. Neglecting the magnification of contractual hazards by political hazards leads to the erroneous conclusion that political hazards are an insignificant determinant of multinational strategy. The cause for this conclusion should be apparent from Table 5. The effect of political hazards on the probability of choosing a majority-owned plant as a market entry mode varies in magnitude and sign with the level of contractual hazards.³¹

The bottom half of each cell in Table 5 contains the predicted probability of choosing a majority-owned plant when the interaction effects included in column 1 are omitted. These results highlight the magnitude of the potential bias that is introduced when one misspecifies the mechanism by which political hazards influence multinational entry strategy. Specifically, while increasing the level of contractual hazards now increases the probability of choosing a majority-owned plant at all levels of political hazards, the impact of political hazards is also invariant in the level of contractual hazards. The misspecification would overpredict the probability of a firm at the 75th percentile of property, plant, and equipment intensity and at the median level of all other variables entering emerging markets such as Mexico, Bolivia, and South Korea (all near the 75th percentile in political hazards) using a majority-owned plant by 4.4 percentage points. In riskier countries such as Russia, China, or Indonesia (all near the maximum value of political hazards), the magnitude of the overprediction rises to 6.2 percentage points.

31. The restrictions that the coefficients on the three interaction terms equal zero can be rejected at the 99.99 and 99.52% confidence interval, respectively ($\chi^2 = 28.27$ and 12.93).

3.3.3 Robustness. Neither the original nor the misspecified (through the omission the interaction terms) results are sensitive to the use of the political hazards variable derived in this article. Column 2 of Table 2 and columns 3 and 4 of Table 4 report the analogous results using an average of the five commonly used country risk indexes (risk of government expropriation, risk of contract repudiation by the government, government corruption, bureaucratic efficiency, and law and order) compiled by the *International Country Risk Guide* (scaled so as to range from 0—low risk—to 1—high risk).³² There are no substantive differences between these results and those computed using the original measure of political hazards.³³

One alternative potential explanation for the observed effect of the political hazards variable is that managers are responding to variation in local legal restrictions on majority owned plants that are correlated with measures of political hazards. Should this be the case, the observed choice of market entry mode would be driven not by strategic concerns, but by legal restrictions on the level of equity allowed for operations in a given country. Evidence for such a hypothesis would thus substantially undermine the empirical support for the theory presented in this article.

To test for the relative importance of legal restrictions versus the proposed strategic effect of political hazards, the original specification was estimated on a subsample of the data for which a measure of legal restrictions was available. Specifically, only overseas operations in countries for which the *World Competitiveness Report* provided scores on the ability of foreign companies to acquire controlling interests in domestic manufacturing companies were included.³⁴ Unfortunately such ratings are available for only 47 of the 112 countries in the sample. Nevertheless, despite the inclusion of only 42% of the countries, 86% (1,139) of the overseas operations remained in the subsample. Column 3 of Table 2 and column 5 of Table 4 rerun the original specification on this subsample, while columns 4 and 6 report the results when the index of investment restrictions (scaled so as to range from 0—no restrictions—to 1—heavy restrictions) was included in the analysis.³⁵ While the coefficient estimate on the investment restriction index is negative (restrictions reduce the probability of entry and of a majority-owned plant) and highly significant, the coefficient estimates on the other regressors are highly similar across the two specifications. This suggests

32. Coefficient magnitudes are not strictly comparable due to differences in the mean and variance of the two measures of political hazards.

33. Similar results were also obtained using the Gastil Index of Political Rights.

34. 1992 scores were used where available. Those countries ranked only in subsequent years received the score for their first year in the rankings. Thanks to Andrew Delios for providing this data.

35. Scaled average response of a panel of 2,515 executives to “Foreign investors are free to acquire control in a domestic company.”

that if such data were available for the full sample, the effect of political hazards on the choice of market entry mode would be robust to the inclusion of measures of legal restrictions on majority-owned plants.

3.4 Current Limitations and Future Research

3.4.1 Imperfect Proxies. As discussed at several points above, the use of property, plant, and equipment, research and development, and advertising as proxies for contractual hazards presents some limitations in the interpretation of the results. Specifically these same proxies could be used to measure firm capabilities in these areas. In support of this conjecture, in countries with low political hazards, these proxies for contractual hazards do not have the expected effect on the probability of choosing a majority-owned market entry mode. Further research will seek to identify datasets or survey instruments that could identify separate constructs for contractual hazards and firm capabilities so as to isolate the impact of both factors on the strategic choice of market entry mode for a range of economic transactions and host-country political environments.

Another possible source of concern relating to the confounding of contractual hazards and firm-level capabilities may be partly allayed. Specifically, if firms with larger international capabilities possess a greater degree of bargaining power, we may observe that they are able to obtain a higher level of equity ownership for their overseas subsidiaries. If countries with less credible institutional environments possess relatively less bargaining power then the interaction effect also obtains. To explore the possibility that bargaining power and not hazard mitigation were driving the observed results, the sample was split into high-performing and low-performing parents (using five-year sales growth, return on assets before interest, and taxation and return on equity before interest and taxation). The results across these various subsamples, though statistically weaker than the results reported here, were qualitatively similar (results available from author upon request). This stability of the results across both high- and low-performing parents partially allays the concern that the results, due to the use of imperfect proxies, may be capturing an alternative theoretical relationship than described in this article.³⁶

3.4.2 Breadth Versus Depth. Most existing datasets comparable to the one analyzed in this article offer data only on overseas operations in a given industry or in a subsample of (usually low-risk) countries. The breadth of the Conference Board Multinational Database offers the possibility of corroborating the hypothesis regarding the differential impact of political hazards on multinational market entry mode for

36. Thanks to an anonymous referee for suggesting this test.

firms with varying levels of contractual hazards. In fact, the results displayed in Table 5 highlight that the main difference between the empirical results obtained using the theoretical framework presented in this article and more conventional specifications is found in host countries in the top two quartiles of political hazards. Unfortunately the lack of depth of this dataset prevents a conclusive refutation of several alternative explanations. As discussed earlier, the hypotheses of omitted country effects or simultaneity of choice of market entry mode and contractual hazards cannot conclusively be rejected. Future research will attempt to compile a dataset distinguished in its breadth and depth that will be able to address these concerns.

3.4.3 The Dynamics of Political Risk. Finally, the current dataset is cross-sectional in nature, limiting the ability to test for the appropriate lag structures between the time of an institutional change and the time of a purported multinational strategic response. A better understanding of the strategic symmetry between increases and decreases in political risk and the symmetry in response time across different categories of firms and investment types will be an important subject for future research.

4. Conclusion

Despite these limitations, this article makes four important contributions. First, it allows for comparative institutional analysis at the level of the economic transaction, incorporating variation both in the content of that transaction and in the structure of the institutional environment. Such a unified theoretical perspective that allows for the incorporation of country-, industry-, firm-, and subsidiary-level effects has long been sought by researchers in multinational strategy (Dunning, 1981). Second, it employs a new objective measure of political hazards derived from a simple spatial model of political interaction. This measure is available for a broader set of country-years than more subjective risk ratings and is not subject to the critique of endogeneity leveled against these indexes. Furthermore, the measure was developed to capture not political science constructs such as autocracy versus democracy, but a variable of particular interest to the formation of multinational business strategy: the ease with which a policymaker in a given country can change taxation, regulatory, or other policies in a way that reduces the expected returns of the multinational subsidiary. Third, the empirical results employ a novel dataset distinguished by the breadth of country coverage. Finally, these results were calculated using econometric techniques that take into account the possibility that the same variables influence the entry and entry mode decision of multinational corporations.

The results are consistent with the theoretical arguments presented herein. As independent political hazards increase, multinationals face an increasing threat of opportunistic expropriation by governments

through changes in taxation, regulation, or other financial constraints. Partnering with host country firms that possess a comparative advantage in interactions with the host-country governments can safeguard against this hazard. However, as independent contractual hazards increase, the potential hazard that the host-country joint venture partners will manipulate the political systems for their own benefit at the expense of the multinationals increases as well. Eventually the latter effect outweighs the former and majority-owned plants become the favored market entry mode. Multinational managers choosing a market entry strategy for a given overseas operation should consider not just the nature of that operation, nor merely the structure of the institutional environment of the host country, but also the mechanisms by which the two interact to pose novel and heretofore unrecognized hazards to the parent corporation.

References

- Agarwal, Sanjeev, and Sridhar N. Ramaswami. 1992. "Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internalization Factors," 23 *Journal of International Business Studies* 1-27.
- Anderson, Erin, and Hubert Gatignon. 1986. "Modes of Foreign Entry: A Transaction Cost Analysis and Propositions," 11 *Journal of International Business Studies* 1-26.
- Asiedu, Elizabeth, and Hadi Salehi Esfahani. 1998. "Ownership Structure in Foreign Direct Investment Projects," mimeo, University of Illinois.
- Ball, Clifford A., and Adrian E. Tschoegl. 1982. "The Decision to Establish a Foreign Bank Branch or Subsidiary: An Application of Binary Classification Procedures," 17 *Journal of Financial and Quantitative Analysis* 411-424.
- Barkema, Harry G., Bell, and Pennings. 1996. "Foreign Entry, Cultural Barriers, and Learning," 17 *Strategic Management Journal* 151-166.
- Belderbos, Rene, and Leo Sleuwaegen. 1996. "Japanese Firms and the Decision to Invest Abroad: Business Groups and Regional Core Networks," 78 *Review of Economics and Statistics* 214-220.
- Bradley, David. 1977. "Managing Against Expropriation," *Harvard Business Review* 75-83.
- Brouthers, Keith D. 1995. "The Influence of International Risk on Entry Mode Strategy in the Computer Software Industry," 35 *Management International Review* 7-28.
- Butler, Christopher K., and Thomas H. Hammond. 1997. "Expected Modes of Policy Change in Comparative Institutional Settings," working paper, Michigan State University.
- Chang, Sea Jin. 1995. "International Expansion Strategy of Japanese Firms: Capability Building Through Sequential Entry," 38 *Academy of Management Journal* 383-407.
- Delios, Andrew, and Witold J. Henisz. 2000. "Japanese Firms' Investment Strategies in Emerging Economies," 43 *Academy of Management Journal* 305-323.
- Dunning, John. 1981. *International Production and the Multinational Enterprise*. London: Allen & Unwin.
- Gatignon, Hubert, and Erin Anderson. 1988. "The Multinational Corporation's Degree of Control Over Foreign Subsidiaries: An Empirical Test of a Transaction Cost Explanation," 4 *Journal of Law, Economics, & Organization* 305-336.
- Gomes-Casseres, Benjamin. 1989. "Ownership Structures of Foreign Subsidiaries," 11 *Journal of Economic Behavior and Organization* 1-25.
- _____. 1990. "Firm Ownership Preferences and Host Government Restrictions," 21 *Journal of International Business Studies* 1-23.

- Grubaugh, Stephen G. 1987. "Determinants of Foreign Direct Investment," 69 *Review of Economics and Statistics* 149–152.
- Hammond, Thomas H., and Christopher K. Butler. 1996. "Some Complex Answers to the Simple Question, 'Do Institutions Matter?': Aggregation Rules, Preference Profiles, and Policy Equilibria in Presidential and Parliamentary Systems," working paper, Michigan State University.
- Heckman, James J. 1979. "Sample Selection Bias as a Specification Error," 47 *Econometrica* 153–161.
- Henisz, Witold Jerzy. 2000. "The Institutional Environment for Economic Growth," 12 *Economics and Politics* 1–31.
- _____, and Charles Taylor. 1994. *United States Manufacturers in the Global Marketplace*. New York: The Conference Board.
- _____, and Oliver E. Williamson. 1999. "Comparative Economic Organization—Within and Between Countries," 1 *Business and Politics* 261–277.
- _____, and Bennet A. Zelner. 2001. "The Institutional Environment for Telecommunications Investment," 10 *Journal of Economics & Management Strategy*.
- Hennart, Jean-Francois. 1991. "The Transaction Costs Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States," 37 *Management Science* 483–497.
- Hill, Charles W. L., Peter Hwang, and W. Chan Kim. 1990. "An Eclectic Theory of the Choice of International Entry Mode," 11 *Strategic Management Journal* 117–128.
- Horst, T. 1974. "The Theory of the Firm," in J. H. Dunning, ed. *Economic Analysis and the Multinational Enterprise*. London: Allen & Unwin.
- Johanson, Jan, and Jan-erik Vahlne. 1977. "The Internationalization Process of the Firm—A Model of Knowledge Development and Increasing Foreign Market Commitments," 8 *Journal of International Business Studies* 23–32.
- Kimura, Y. 1989. "Firm-Specific Strategic Advantages and Foreign Direct Investment Behavior of Firms: The Case of Japanese Semiconductor Firms," 20 *Journal of International Business Studies* 296–314.
- Klein, Benjamin, and Keith B. Leffler. 1981. "The Role of Market Forces in Assuring Contractual Performance," 89 *Journal of Political Economy* 615–641.
- Knack, Stephen, and Philip Keefer. 1995. "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures," 7 *Economic and Politics* 207–227.
- Kobrin, Stephen. 1976. "The Environmental Determinants of Foreign Manufacturing Investment: An *ex post* Empirical Analysis," 7 *Journal of International Business Studies* 29–42.
- Kobrin, Stephen. 1979. "Political Risk: A Review and Reconsideration," 10 *Journal of International Business Studies* 67–80.
- Kogut, Bruce, and Harbir, Singh. 1988. "The Effect of National Culture on the Choice of Entry Mode," 19 *Journal of International Business Studies* 411–432.
- _____, and Udo Zander. 1992. "Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology," 3 *Organization Science* 383–397.
- _____. 1993. "Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation," 24 *Journal of International Business Studies* 625–645.
- _____. 1996. "What Firms Do? Coordination, Identity and Learning," 7 *Organization Science* 502–518.
- Levy, Brian, and Pablo T. Spiller. 1994. "The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation," 10 *Journal of Law, Economics, & Organization* 201–246.
- Marion, B.W., and H.J. Nash. 1983. "Foreign Investment in U.S. Food-Retailing Industry," 31 *American Journal Industrial Economics* 437–451.
- Masten, Scott, Mehan, and Edward Snyder. 1991. "The Costs of Organization," 7 *Journal of Law, Economics, & Organization* 1–25.

- Murtha, Thomas. 1991. "Surviving Industrial Targeting: State Credibility and Public Policy Competencies in Multinational Subcontracting," 7 *Journal of Law, Economics, & Organization* 117–143.
- Nigh, Douglas. 1985. "The Effects of Political Events on United States Direct Foreign Investment: A Pooled Time-Series Cross-Sectional Analysis," 16 *Journal of International Business Studies* 1–17.
- Oxley, Joanne Elizabeth. 1995. "International Hybrids: Transaction Cost Treatment and Empirical Study," Ph.D. dissertation, University of California.
- _____. 1997. "Appropriability Hazards and Governance in Strategic Alliances: A Transaction Cost Approach," 13 *Journal of Law, Economics, & Organization* 387–409.
- Phillips-Patrick, Frederick J. 1991. "Political Risk and Organizational Form," 34 *Journal of Law and Economics* 675–693.
- Poppo, Laura, and Todd Zenger. 1998. "Testing Alternative Theories of the Firm: Transaction Cost, Knowledge-based and Measurement Explanations for Make-or-Buy Decisions in Information Services," 19 *Strategic Management Journal* 853–877.
- Root, Franklin R., and Ahmed A. Ahmed. 1978. "The Influence of Policy Instruments on Manufacturing Direct Foreign Investment in Developing Countries," 9 *Journal of International Business Studies* 81–93.
- Salant, David, and Glenn Woroch. 1991. "Crossing Dupuit's Bridge Again: A Trigger Policy for Efficient Investment in Infrastructure," 9 *Contemporary Policy Issues* 101–114.
- Schneider, Friedrich, and Bruno S. Frey. 1985. "Economic and Political Determinants of Foreign Direct Investment," 13 *World Development* 161–175.
- Shaver, Myles. 1998. "Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival?," 44 *Management Science* 571–585.
- Simon, Herbert. 1961. *Administrative Behavior*. New York: Macmillan.
- Smarzyska, Beata K., and Shang-Jin Wei. 2000. "Corruption and Composition of Foreign Direct Investment: Firm-level Evidence," mimeo, The World Bank.
- Swedenborg, B. 1979. *The Multinational Operations of Swedish Firms: An Analysis of Determinants and Effects*. Stockholm: Industrial Institute for Economic and Social Research.
- Teece, David J. 1986. "Transaction Cost Economics and the Multinational Enterprise: An Assessment," 7 *Journal of Economic Behavior and Organization* 21–45.
- Tsebelis, George. 1995. "Decision-Making in Political Systems: Veto Players in Presidentialism, Parliamentarism, Multicameralism and Multipartyism," 25 *British Journal of Political Science* 289–325.
- _____. 1999. "Veto Players and Law Production in Parliamentary Democracies: An Empirical Analysis," 93 *American Political Science Review* 591–608.
- United Nations. 1996. *World Investment Report 1996*. New York: United Nations.
- Van den Ven, Wynand, P. M. M., and Bernard M. S. Van Praag. 1981. "The Demand for Deductibles in Private Health Insurance," 17 *Journal of Econometrics* 229–252.
- Wheeler, David, and Ashoka Mody. 1992. "International Investment Location Decisions: The Case of U.S. Firms," 33 *Journal of International Economics* 57–76.
- Williamson, Oliver E. 1985. *The Economic Institutions of Capitalism: Firms, Markets and Relational Contracting*. New York: Free Press.
- _____. 1996. *The Mechanisms of Governance*. New York: Oxford University Press.
- Wolf, B. N. 1975. "Size and Profitability Among U.S. Manufacturing Firms: Multinational versus Primarily Domestic Firms," 28 *Journal of Economics and Business* 15–22.