



University of Pennsylvania
ScholarlyCommons

Management Papers

Wharton Faculty Research


10-2008

Risk and the Strategy of Foreign Location Choice in Regulated Industries

Esteban García-Canal

Mauro F. Guillén
University of Pennsylvania

Follow this and additional works at: https://repository.upenn.edu/mgmt_papers

 Part of the [Business Administration, Management, and Operations Commons](#), [Business Intelligence Commons](#), [Corporate Finance Commons](#), [International Business Commons](#), [Management Sciences and Quantitative Methods Commons](#), [Organizational Behavior and Theory Commons](#), and the [Strategic Management Policy Commons](#)

Recommended Citation

García-Canal, E., & Guillén, M. F. (2008). Risk and the Strategy of Foreign Location Choice in Regulated Industries. *Strategic Management Journal*, 29 (10), 1097-1115. <http://dx.doi.org/10.1002/smj.692>

This paper is posted at ScholarlyCommons. https://repository.upenn.edu/mgmt_papers/347
For more information, please contact repository@pobox.upenn.edu.

Risk and the Strategy of Foreign Location Choice in Regulated Industries

Abstract

We argue that firms in regulated industries react to macroeconomic and policy risks in sharply different ways. While they seek to avoid countries with high levels of macroeconomic uncertainty, we predict that they find it more attractive to expand into countries characterized by governments with discretionary policymaking capacities so as to be able to negotiate favorable conditions of entry. We also argue that firms are heterogeneous in their attitudes toward risk. We predict that firms in which the state holds a partial equity stake exhibit a more tolerant attitude. We also expect that as firms accumulate foreign experience, they develop an aversion toward further foreign entries into politically unstable markets. Support for these predictions is provided by an analysis of the Latin American market entries of all listed Spanish firms in regulated industries between 1987 and 2000.

Keywords

policy risk, foreign location choice, political strategy, regulated industries

Disciplines

Business Administration, Management, and Operations | Business Intelligence | Corporate Finance | International Business | Management Sciences and Quantitative Methods | Organizational Behavior and Theory | Strategic Management Policy

RISK AND THE STRATEGY OF FOREIGN LOCATION CHOICE IN REGULATED INDUSTRIES

Short title: *The political strategy of foreign location choice*

Esteban García-Canal
Universidad de Oviedo
Facultad de Ciencias Económicas y Empresariales
Avda. del Cristo s/n
33071 Oviedo, SPAIN
Ph: 34 985103693
Fax: 34 985102865
egarcia@uniovi.es

and

Mauro F. Guillén
The Wharton School
2016 Steinberg-Dietrich Hall
Philadelphia, PA 19104-6370
Ph: 215-573-6267
Fax: 215-898-0401
guillen@wharton.upenn.edu

September 2005 Version

* Julio García-Cobos and Witold Henisz provided excellent suggestions for improvement. Financial support provided by the Spanish Ministry of Science and Technology (Project SEC 2003-08069) is gratefully acknowledged.

RISK AND THE STRATEGY OF FOREIGN LOCATION CHOICE IN REGULATED INDUSTRIES

SUMMARY

While firms operating in regulated industries seek to avoid countries with high levels of macroeconomic uncertainty, they find it more attractive to expand into countries characterized by governments with discretionary policymaking capacities because they benefit from negotiating favorable conditions of entry. Firms in which the state holds a partial equity stake exhibit more tolerant attitudes towards both macroeconomic uncertainty and the policy risks derived from dealing with discretionary governments. Support for these ideas is provided by an analysis of the Latin American investments of all listed Spanish firms in regulated industries between 1987 and 2000.

KEYWORDS

Policy risk, foreign location choice, political strategy, regulated industries.

INTRODUCTION

Firms seek to formulate strategies conducive to superior performance taking into account not only market but also political factors (Baron, 1995; Hillman and Hitt, 1999; Bonardi *et al.*, 2005). Government policy is relevant to strategy formulation given its influence on the demand and supply of goods and services, which can be altered by a wide array of regulations, including product standards, production requirements, excise taxes, pricing guidelines, and entry and exit rules, to name but a few. While regulation has come to affect virtually every sector of the economy, the so-called “regulated” industries (e.g. telecommunications, electricity, water, oil, gas, and banking) are subject to an unusual degree of intervention and policy risk. In these industries governments have the ability to dramatically alter the profitability of firms (Henisz, 2000; Henisz and Zelner, 2001). Strategy scholars have long recognized that firms in such industries require specific theoretical and empirical analysis (Mahon and Murray, 1981; Reger *et al.*, 1992), especially when it comes to studying their patterns of international expansion and their exposure to regulatory risk in different countries (Bonardi, 2004; Henisz and Zelner, 2005).

During the last two decades, the predicament of firms in regulated industries has changed substantially. Until the 1980s they enjoyed what can be described as a “quiet life” (Hicks, 1935) due to their oligopolistic and even monopolistic advantages stemming from regulation and/or technology. Over the last twenty years, however, globalization, deregulation, privatization and technical change have altered their domestic competitive environment in substantial ways. International expansion has been a frequent response to

these challenges, as they sought to compensate falling margins in their deregulating home market by entering foreign markets where regulations kept margins at higher than competitive levels (Sarkar *et al.*, 1999; Bonardi, 2004).

Firms in regulated industries face a significant dilemma when expanding abroad. On the one hand, established theory and practice recommend following a gradual, staged model of international expansion so as to minimize risks and cope with uncertainty (Johanson and Vahlne, 1977; Chang, 1995; Rivoli and Salorio, 1996; Guillén, 2002; Vermeulen and Barkema, 2002), that is, to overcome the so-called liability of foreignness (Hymer, 1960; Zaheer, 1995). On the other, the regulated nature of these industries tends to require a strong commitment of resources and a fast pace of entry into foreign markets. This is the case for three interrelated reasons. First, these industries tend to be highly concentrated, and often they exhibit certain features of the “natural monopoly.”¹ Second, entry may be restricted by the government, frequently under a system of licenses. And third, the government may own significant parts of the industry. Under these circumstances, foreign entrants face strong incentives to commit large amounts of resources and to establish operations quickly, whenever and wherever opportunities arise, and frequently via acquisition as opposed to greenfield investment (Sarkar *et al.*, 1999). Thus, the regulated and oligopolistic nature of these industries generates strong first-mover advantages (Doh, 2000; Knickerbocker, 1973).

¹ A natural monopoly emerges when it is possible to exploit economies of scale over a very large range of output. As a result, the optimally efficient scale of production becomes a very high proportion of the total market demand for the product or service.

Recent research argues that firms in regulated industries follow “asymmetric strategies” in that they seek to defend their home-country position by preventing rivals from competing on a level playing field while pursuing entry into foreign markets as deregulation occurs. Given that deregulation has taken place at different moments in time and to different degrees from country to country, firms in regulated industries tend to follow a multidomestic strategy of foreign expansion, namely, they pick and choose which markets to enter depending on the specific circumstances present in each foreign country, arranging their operations with a local rather than a global logic in mind and engaging in limited cross-border coordination (Bonardi, 2004). Another distinctive feature of regulated industries is the role of the state as a shareholder. Some of the most active firms in regulated industries expanding abroad are former monopolies in which the state has or has had a controlling stake (Doh *et al.*, 2004).

In the next section we develop a theory of the effect of macroeconomic and policy risks on foreign location choice in the context of regulated industries. We build on Bonardi’s (2004) insight that, when expanding abroad, firms in regulated industries tend to follow a multidomestic strategy, negotiating separately for each market entry and arranging their operations as compartmentalized national organizations. We also examine the effect that equity control by the state has over their attitudes toward policy risk. Our point of departure is the well-established observation in the literature that firms in regulated (and concentrated) industries invest less in countries characterized by high macroeconomic and political risks (Henisz and Zelner, 2001). We test our predictions with data on the investment decisions of the 25 Spanish listed firms in regulated industries between 1987 and 2000.

THEORY AND HYPOTHESES

Established economic theory posits that the multinational enterprise (MNE) exists as a consequence of failures in the market for firm-specific competencies, whether technological or marketing-related (Caves, 1996; Buckley and Casson, 1976; Hennart, 1982; Teece, 1977). A superficial analysis of the evidence would suggest that this theory is not applicable to the phenomenon of MNEs from regulated industries such as utilities or telecommunications due to the facts that they generally lack proprietary technology and that their marketing abilities have not been fully developed because they have enjoyed a position of market power in the home country. However, recent research shows that these firms are trying to replicate in foreign countries the same advantages enjoyed in the home country and/or the experience accumulated at running the business (Sarkar *et al.*, 1999; Guillén, 2005). For instance, they may invest abroad so as to exploit some valuable firm-specific resource like the ability to manage relationships with regulators and customers (Boddewyn and Brewer, 1994; Henisz, 2003; Bonardi, 2004; Henisz and Zelner, 2005) or the ability to execute projects efficiently and in due course (Amsden and Hikino, 1994). Therefore, firms in regulated industries lacking technologies and marketing know-how may still expand abroad on the basis of other useful, firm-specific skills.

Similarly, received theory concerning foreign location choice indicates that MNEs pick and choose where and when to exploit their proprietary advantages depending on location-specific opportunities and risks (Dunning, 1988; Rivoli and Salorio, 1996). Holding constant for the opportunities, the received wisdom is that MNEs seek to minimize

the risks, entering macroeconomically and politically “safe” countries and avoiding problematic ones (Henisz and Zelner, 2005; Henisz and Delios, 2001). Although international expansion always entails risks, regulated firms are unusually exposed because of both the large size of their investments and their dependence on the host-country government for munificent regulations (Henisz and Zelner, 2001). Below we follow the extant literature in analyzing economic and policy risks separately, but we arrive at somewhat different predictions. We also consider the moderating effect of state ownership on the foreign investing firm’s response to economic and policy risks in the host country, given the fact that many firms in regulated industries are wholly or partly owned by the state.

Macroeconomic Uncertainty and Foreign Expansion

The literature on foreign direct investment (FDI) decisions highlights that firms prefer to invest in markets with low levels of macroeconomic uncertainty, especially those undertaking horizontal, i.e. market-seeking, investments (Dunning, 1993). The reason is that if the firm sets up operations in the foreign country in order to service the local market, unexpected variations in GDP growth rates and other macroeconomic magnitudes will make it more difficult for it to plan and to manage its investments. Most foreign investments by firms in regulated industries tend to be horizontal in nature, for they are undertaken as a necessary condition to be able to sell in the local market.

A specialized branch of the literature on international investment decisions known as the hysteresis hypothesis shows that when faced by uncertainty in the economic environment the best strategy is to “wait and see” (Dixit, 1989, 1992). Building on this

literature, Rivoli and Salorio (1996) argue that even firms with valuable assets and useful knowledge may postpone investments in countries characterized by economic uncertainty. Having such valuable knowledge, these firms can delay the investment because of the monopoly they have over it. Although not conclusive, there is some empirical evidence showing that firms tend to avoid investments in countries with high economic uncertainty, especially if the size of the investment is large (Campa, 1993). Given that regulated industries usually entail large initial capital outlays (Sarkar *et al.*, 1999), we expect that foreign investors will tend to avoid countries with high macroeconomic uncertainty. Several executives of the Spanish companies included in our sample for analysis are on record arguing that they prefer to avoid countries with macroeconomic uncertainty (Ontiveros *et al.*, 2004: 19).² Thus, we predict that:

Hypothesis 1: The greater the macroeconomic uncertainty in the host country, the less foreign firms will invest.

Policy Stability, Host-Government Discretion and Foreign Expansion

Although much of the literature dealing with country risk has traditionally analyzed financial and economic variables, e.g. foreign exchange volatility or macroeconomic uncertainty (Click, 2003), during the last decade empirical research has turned to analyzing

² See also Manuel Pizarro Moreno, President of the Association of Spanish Savings Banks, Diario de Sesiones del Senado: Comisión de Asuntos Iberoamericanos 186 (October 17, 2001):20.

the impact of host governments on FDI decisions. The concept of “policy instability” refers to the likelihood that the government might change the rules of the game in a way that adversely affects the interests of the foreign direct investor. In general, firms prefer the government to be credibly committed to a set of policies and rules because that reduces the risk of investing (Murtha and Lenway, 1994; Murtha, 1991; Henisz, 2000; Henisz and Zelner, 2005). The literature also points out that governments are more credible in their commitment when their actions are constrained by institutional checks and balances which make unilateral changes less likely. The idea is that when the executive branch of government is not constrained in its decision-making by other branches or institutions within the host country (e.g. the legislature or the judiciary), there is a greater possibility of negatively affecting the performance of foreign direct investments (Knack and Keefer, 1995). The chain of reasoning thus starts with the observation of the fact that governments differ in the extent to which they enjoy discretion in decision-making, which in turn reduces the credibility of their commitments, and ultimately increases the degree of policy instability affecting investors. Institutionally constrained governments are more credible, thus reducing uncertainty in the eyes of the foreign investor (Murtha and Lenway, 1994; Henisz, 2000; Henisz and Williamson, 1999). Previous research by Henisz and Delios (2001) has demonstrated that firms prefer to avoid countries with high levels of policy instability.

Although policy instability potentially affects firms in any industry, its influence is especially relevant in the case of regulated sectors (Sarkar *et al.*, 1999). Host governments can introduce general policy changes of an economic or fiscal kind. More specifically, they can affect prices and investment incentives in industries in which they have the authority to

regulate such matters, or can expropriate the assets of firms. For these reasons, firms operating in regulated industries will tend to minimize the risk they are assuming by investing only in countries where the stability of policymaking inspires enough confidence in them to commit to an investment.

Several of the top executives of the Spanish firms included in our sample for analysis have over the years emphasized that they prefer to operate in host countries in which the executive branch of government, which regulates their activities, is subject to legislative and judicial controls, i.e. where there is, in their own words, “political stability” (Ontiveros *et al.*, 2004: 4). For instance, in hearings at the Spanish Senate, the President of Endesa, the world’s 8th largest electrical utility and a major investor in Latin America, equated “certainty” with “the rule of law” and with an “impeccable institutional functioning.” “Most of our difficulties in Latin America have had to do with regulatory uncertainty.”³ Top executives of Gas Natural and electrical utilities Iberdrola and Unión Fenosa clearly indicated in their own writings that their companies prefer low regulatory risk (Brufau Niubó, 2002; Azagra Blázquez, 2002; Prieto Iglesias, 2002). In a prominent example, the Bolivia country manager for Repsol-YPF, the world’s ninth largest oil company, explained that government plans to change existing investment rules for companies operating in the country were “confiscatory” in that firms like his own had invested assuming certain conditions (International Gas Report, 24 September 2004). Further evidence of companies’ preference for policy stability comes from Telefónica’s

³ Rodolfo Martín Villa, President of Endesa, Diario de Sesiones del Senado: Comisión de Asuntos Iberoamericanos 155 (June 26, 2001):33.

reaction to the Peruvian government's unilateral decision to slash rates by 10 percent in 2004. The head of the local subsidiary noted that "we trust the regulator will reconsider its decision so that we can continue with our planned investments and persuade our shareholders that investing in Latin America is worthwhile" (*Expansión*, 12 August 2004). Given foreign direct investors' preference for policy stability, we predict:

Hypothesis 2a: The less institutionally constrained the executive branch of government in the host country, the greater the policy instability and accordingly the less foreign firms will invest.

Recent research on the international expansion of firms in regulated industries, however, challenges the notion that countries with high levels of policy instability are unattractive to foreign investors. Companies in regulated industries tend to pursue "asymmetric" strategies (Bonardi, 2004). On the one hand, they seek to protect their market position in the home market through political influence, i.e. they employ a defensive political strategy. On the other, they wish to enter foreign markets, though only if they can obtain special treatment relative to their competitors, i.e. they employ an aggressive economic and political strategy in foreign countries. Moreover, governments around the world have allowed foreign entry at different points in time, and often under vastly different operating conditions.

As a result, foreign investing firms in these industries tend to adopt a multidomestic, one-country-at-a-time approach to foreign expansion (Bonardi, 2004). This type of strategy works best if the foreign entrant negotiates directly with the host country government and

obtains preferential treatment, something that can be more easily accomplished if the executive branch is not constrained by the veto power of the other branches, that is, when policy discretion is high. Research has documented that technological or marketing skills are not as important in regulated industries as the ability to deal with governments and regulators (Henisz, 2003; Henisz and Zelner, 2005; Lyles and Steensma, 1996).

The paradox about these asymmetric strategies is that while the foreign investor would prefer a constrained executive branch during the operational phase of the investment, i.e. a government or regulator who cannot easily change the rules of the game, at the time of entry the foreign investor prefers a politically unconstrained executive branch in the host country so that they can obtain preferential treatment.

Not surprisingly, the Spanish MNEs in regulated industries seem to value direct access to host governments, especially institutionally unconstrained ones. For instance, the President of Agbar—one of the world’s largest multinational water utilities—candidly shared with senators during a hearing that “another surprise we came across in South America was that authorities are much more approachable than in Spain or Europe. I can tell you that in [Latin American] countries similar to Spain in terms of population, one finds it easier to meet with a cabinet minister; it is even easier to change the appointment time. This is not as easy in Spain, and it is likely not easy either in France or Germany.”⁴

In addition of the advantages of negotiating special treatment with an institutionally unconstrained government, managers of regulated firms also point out that privatization

⁴ Ricardo Fornesa Ribó, President and CEO of Aguas de Barcelona, Diario de Sesiones del Senado: Comisión de Asuntos Iberoamericanos 148 (June 12, 2001):3.

processes—which offer opportunities for foreigners to enter foreign markets—are less likely to occur when the executive branch is subject to the checks and balances of the other branches. For instance, the President of electrical utility Endesa suggested that, although during the operative phase of their foreign investments his company preferred governments with little discretion (as predicted by hypothesis 2a above), the reverse was true during the time leading up to initial entry: “The other big opportunity [besides Brazil] lies in Mexico, but [...] the privatization of Mexican firms requires a constitutional amendment [...] We shall see whether during the upcoming official visit of the [Spanish] Head of Government to Mexico we receive some signals regarding this issue, although I do not think it will happen immediately.”⁵ Executives at Repsol-YPF made the same point concerning the possibility of privatizations in the oil industry (Corporate Mexico, 22 October 2004).

The corollary to the preceding arguments is that firms in regulated industries would prefer to expand throughout the world with a global strategy in mind, but the different moments and ways in which governments make it possible for them to enter and to operate require a country-by-country negotiation and strategy. As a result, the managers of firms in regulated industries have a preference for striking deals that offer them a political advantage, both in terms of gaining entry into the country and in terms of operating conditions. They see the advantages of an institutionally unconstrained executive that can help them gain entry under favorable conditions, notwithstanding the possibility that the

⁵ Rodolfo Martín Villa, President of Endesa, Diario de Sesiones del Senado: Comisión de Asuntos Iberoamericanos 155 (June 26, 2001):32. At the time of writing, Mexico had not yet privatized electricity.

rules of the game might change precisely because the executive is not subject to checks and balances. In their calculation, the benefits of preferential entry under munificent conditions exceed the potential damages that might obtain if the executive unilaterally changes operating conditions in the future, such as prices, regulations concerning new entrants, investment requirements, and so on. Hence, we argue that in regulated industries, institutionally constrained executive governments are not in the best interest of firms:

Hypothesis 2b: In regulated industries, the less institutionally constrained the executive branch of government in the host country, the greater the policymaking discretion and accordingly the more foreign firms will invest.

State Ownership and Foreign Expansion. Firms are heterogeneous in their attitudes toward risk. Social influences and organizational control systems condition the way in which decision makers perceive and take risks (Sitkin and Pablo, 1992). A key characteristic of firms in regulated industries is whether they are state owned or not. A large body of literature indicates that state-owned enterprises (SOEs) exhibit a different propensity to take risks. Compared to publicly listed firms, SOEs are not subject to the discipline of the stock market. Moreover, they can borrow money on better terms because the state is ultimately responsible for their finances. Many countries around the world historically adopted the practice of using the state's budget to fund the investments of SOEs and to cover their (frequent) losses. As a result of their lack of accountability and the backing of the state, SOEs have traditionally tended to be less efficient than publicly listed companies (see Meggison and Netter, 2001 for a review of the empirical literature).

State ownership is also associated with inferior operating and financial performance because managers must pursue not only purely economic goals but also political ones, and there is no specific principal or owner in charge of monitoring (Sheshinski and López-Calva, 2003). Managers of wholly state-owned firms can rest assured that their financial underperformance relative to other comparable firms will not endanger their tenure as long as they successfully pursue the other goals imposed on them by the state.

Our analysis of the attitudes toward risk of the managers of SOEs focuses on the framing of foreign investment decisions. We borrow from prospect theory (Kahneman and Tversky, 1979; Wiseman and Gomez-Mejia, 1998), which posits that behavior towards risk changes with the framing of the situation. When it comes to international expansion, we argue that firms partially owned by the state have a different attitude towards risk than firms wholly owned by the state. The managers of firms wholly owned by the state and not undergoing a privatization process tend to have little interest in restructuring, investing abroad or introducing radical strategic changes (Cuervo and Villalonga, 2000; Zhara *et al.*, 2000). They have little to gain from such actions and much to lose: their position in the domestic market seems assured, and they must pursue political in addition to financial goals.

As a firm owned by the state undergoes partial privatization, its incumbent managers are confronted with a different type of situation. The literature documents that the new shareholders tend to push SOE managers to more aggressive strategies in order to improve financial performance, especially if some of the equity becomes publicly listed (Zhara *et al.*, 2000; Gupta, 2005; Roland and Sekkat, 2000). As a result, the incumbent management team members may fear losing their job if they do not deliver better results. In

fact, privatization processes, even partial ones, frequently bring about the replacement of incumbent managers (Cuervo and Villalonga, 2000), and in some countries as many as half of former SOE managers fail to get a job in the private sector subsequent to their dismissal (Gupta, 2005).

Our argument is that the incumbent managers of a partially privatized SOE tend to frame the situation confronting them in a different way than the managers of firms fully owned by the state. They face the possibility of an important loss—being fired. According to prospect theory, people are much less risk averse when it comes to minimizing or avoiding losses than when they seek to lock in gains (Kahneman and Tversky, 1979). In a situation of partial privatization, incumbent managers will downplay the risks of major strategic changes (including foreign expansion) in order to play to the interests of new shareholders and thus enhance their chances of staying on the job. Recent theoretical and empirical research on privatization shows that managers prepare themselves for privatization by restructuring their companies (Roland and Sekkat, 2000), and that partially privatized firms invest more in fixed assets. Our prediction is that the managers of partially privatized SOEs will perceive the risks associated with macroeconomic uncertainty and policy instability in the foreign countries in which they might potentially invest as being lower or more easily tractable than the managers of either firms fully owned by the state or firms in which the state holds no equity. Therefore, we formulate:

Hypothesis 3: As macroeconomic uncertainty and policy instability increase, firms in regulated industries that are partially owned by the state will invest more than other types of firms.

EMPIRICAL SETTING, DATA AND METHOD

Empirical Setting

We focus our analysis on the Latin American investments of the 25 Spanish companies in banking, electricity, water, oil and gas, and telecommunications. Most of these firms are among the biggest in the world in their respective industries. For instance, the largest Spanish telecommunications (Telefónica), electricity (Endesa, Iberdrola) and oil (Repsol) companies are among the top 12 within their respective industries as ranked in the Fortune Global 500 list, and the biggest Spanish banks (BBVA, Santander) among the top 25. Most of the foreign investments of these companies have taken place in Latin America, due to a variety of cultural, economic and timing factors (Guillén, 2005). This empirical setting provides an excellent opportunity for studying the impact of risk aversion and imitation in regulated industries, for the following reasons. First, Spanish firms in regulated industries have been among the largest foreign direct investors in the world. Overall, Spain ranks as the 7th largest foreign direct investor, behind France, the U.S., the U.K., Germany, the Netherlands and Canada, and ahead of Japan, South Korea, Italy or Sweden (UNCTD, 2004: 306). Second, prior to the late 1980s, foreign direct investments made by these firms were negligible due to the inward-looking character of the Spanish economy, making it possible to avoid left censoring problems altogether. Third, these industries have undergone a rapid process of deregulation starting in the late 1980s. Firms reacted to this change by pursuing foreign opportunities, especially in Latin America. Thus, Spanish firms in these

industries tried to replicate in Latin America the same advantages they had once enjoyed in the home country (Guillén, 2005). Finally, Latin American countries differ substantially in terms of the economic and political risks that they pose to foreign investors.

Data

Given that we seek to predict the occurrence of investments in specific foreign countries, the unit of observation is the firm-country-year. We took into consideration the foreign direct investments in a Latin American country undertaken by the 25 Spanish publicly listed firms in banking, electricity, water, oil and gas, and telecommunications that were included in the Madrid Stock Exchange's General Index during the second half of the eighties. Some of these firms were formerly wholly owned by the state, although by 1990 all of the state owned companies in the aforementioned industries where, at least, partially privatized and listed on the Madrid Stock Market (Vergés, 1999). Most of the foreign direct investments conducted by the firms in our sample were acquisitions of controlling stakes in existing companies, frequently as the result of privatization. We compiled information on each investment occurred between the beginning of 1987 and the end of 2000. If in a given firm-country-year combination no investment occurred, our dependent variable was coded as zero. Otherwise, it was coded as a nonnegative integer, depending on the number of investments that took place.

Our main source of information was the Prensa Baratz press database. This database includes all of the economic news published in all Spanish newspapers. Specifically, we introduced iteratively the name of each Latin American country, the name of each company, and the terms "investment," "subsidiary," "joint venture," or "acquisition." We

also searched each company's annual reports and web pages. We identified 190 investments in Latin American countries during the period under consideration, whose distribution is shown in Table 1.

Table 1 about here

Our independent variables were constructed as follows. First, we measured policy instability using Henisz's (2000) POLCON V index of political constraints, which ranges between 0 (no constraints on the executive's power to introduce policy changes) and 1 (full constraints). We subtracted the constraints index from unity in order to use it as a measure of policy instability or governmental policymaking discretion. Second, we used Servén's (1998) methodology for measuring macroeconomic uncertainty as the natural logarithm of the conditional variance of nominal GDP growth fitted by using a generalized conditional heteroskedasticity (GARCH) specification. These two variables were lagged one year in all analyses. Third, we measured full state ownership as a dummy variable taking a value of 1 if the state held all of the equity in the company at the end of the year preceding the investment, and 0 otherwise, and similarly partial state ownership when the state held some equity but not all of it. The information to build these two variables was obtained from Vergés (1999).

In addition to firm, host-country, industry and year fixed effects, we also used a series of time-varying control variables. At the country level, all regressions include: GDP in constant 1995 dollars to account for the size of the host country's economy; the GDP

growth rate to control for the business cycle; total inward foreign direct investment flows as a percentage of GDP to control for the overall attractiveness of the country to foreign investors; and imports plus exports as a percentage of GDP to account for openness to trade. These variables were obtained from the World Bank. At the firm level, we controlled for each firm's previous investments in any Latin American country and for inflation-adjusted total revenues. All of these variables were lagged one year. We also included a time-varying dummy to indicate whether the country had initiated the process of implementing market-oriented reforms, including privatization and deregulation, at the time the investment was made. The information to build this variable was obtained from Lora (2000) and from various press reports.

Method

The dependent variable is the count of foreign direct investments in each unique firm-country-year combination, which is nonnegative, integer-valued, overdispersed, and longitudinal. When the outcome variable is nonnegative and integer-valued, Poisson regression is more appropriate than ordinary least squares. To adjust for overdispersion, we used the negative binomial model, a generalization of the Poisson model in which the assumption of equal mean and variance is relaxed (Hausman *et al.*, 1984; Cameron and Trivedi, 1998). Finally, we dealt with the longitudinal character of the data with firm fixed effects. Missing data on one or more of the independent variables reduced the effective sample for analysis to 4,198 observations. The fixed-effects sample spans 21 potential host countries in which the firm could potentially invest and 14 years. We use the “fixed-effects” specification of Hausman *et al.* (1984), which includes a time-invariant variance-

to-mean ratio for each firm (Allison and Waterman, 2005). Due to the fixed effects specification of our models, the number of firms in our sample fell from 25 to 14, those that invested at least once in Latin America during the period of study.

Table 2 presents the descriptive statistics and the correlation matrix. Given the high correlation between each of the interaction terms calculated to test the last hypothesis and the main effects, we mean-centered the relevant continuous variables (policy instability and macroeconomic uncertainty) before calculating the interactions. Following established practice, the dichotomous main effects (full or partial state ownership) were not centered (Jaccard and Turrisi, 2003).

Table 2 about here

RESULTS

Table 3 reports the results from fixed-effects negative binomial regressions using four different specifications: control variables only, main effects added, hypothesized interaction effects added, and control interaction effects added. The results are consistent across specifications. The prediction that firms invest less as macroeconomic uncertainty increases (hypothesis 1) receives support. Firms invest more, not less, as political checks and balances invest (in support of hypothesis 2b and in contradiction of 2a), indicating that

chances and conditions of entry improve as a result of the presence of an institutionally unconstrained executive branch enjoying policymaking discretion. We find some support for hypothesis 3 in that firms partially owned by the state invest more as macroeconomic uncertainty and policy instability increase, although the latter interaction effect is significant at the .09 level only. However, we do not find the main effect of partial state ownership to be a significant predictor. It is important to note that the two interaction terms included as additional controls in the fully specified model (those involving full state ownership) are not significant, lending further credence to our argument that it is partially privatized firms which are most likely to respond favorably to rising economic and political risk in foreign countries.

Table 3 about here

The effects are not only statistically significant and robust to changing specifications but also large in magnitude. Using the fixed-effects coefficient estimates from the fully specified model in Table 3, a one-half standard deviation increase in macroeconomic uncertainty would lead to a 35.9 percent decrease in the number of foreign direct investments ($\{\exp[-1.02 \times 0.873 \times 0.5]-1\} \times 100$), and a 41.6 percent increase in the case of policy instability (or policymaking discretion). Firms partially owned by the state invest only 21.4 percent less (as opposed to 35.8 for the average firm in the sample) in response to a one-half standard deviation increase in macroeconomic uncertainty, that is, they perceive this risk as being less important. Also, they invest 51.3 percent more (as

opposed to 41.7 percent for the average firm) in response to a one-half standard deviation increase in policy instability, which also indicates that they minimize the importance of this other type of risk to a greater extent than other types of firms.

Concerning control variables, only openness to foreign direct investment and trade turned out to be significant. Reform, company sales, company previous investments, GDP and GDP growth failed to reach significance in the fully specified model.

DISCUSSION AND CONCLUSION

Our empirical results indicate that firms operating in regulated industries respond differently than other types of firms to the presence of risks in foreign locations. Specifically, the firms in our sample exhibited different attitudes toward different types of risk. They were definitely averse to macroeconomic uncertainty, like firms from other industries. However, over the years they displayed a preference to enter countries with discretionary governments, most likely because they place more value on the advantages that can be obtained at entry than on the risk that can potentially hurt their operations if the government changes the rules of the game subsequent to committing the investment. Moreover, firms partially owned by the state behaved in a less risk-averse way than other types of firms in that they invested more as macroeconomic uncertainty or policy instability increased. This empirical evidence is fully consistent with a view of firms in regulated industries emphasizing their need to deal effectively with the local government (Lyles and Steensma, 1996), and to pursue asymmetric strategies (Bonardi, 2004).

One possible alternative explanation for our findings is that SOEs are sometimes charged by governments with the task of investing abroad so as to prepare the ground for other types of firms to follow suit. This effect has been documented for the Spanish case (Casanova, 2002; Guillén, 2005). However, our statistical results are not fully consistent with this alternative view. While it might be true that being less averse to political risk could be the artifact of a government directive to “show the way” to other firms, the result that partially privatized firms are less risk averse than other types of firms, including those wholly owned by the state, contradicts this alternative explanation. Firms wholly owned by the state should be found to be more likely to serve as the leading foreign investors.

A more cynical reading of our empirical results would be that firms in regulated industries prefer governments with discretionary power because it is easier to lobby or to bribe them. Firms in any industry, and especially in regulated ones, value having direct access to government officials and being able to come to agreements with them without the interference of other veto players such as the legislature or the judiciary. Our results cannot rule out this alternative explanation. Managers of partially privatized firms could well be more willing to engage in backstage deals in order to obtain better financial returns even in situations in which they expose themselves to a higher risk of policy reversal. One possible way of reconciling this possibility with our theoretical framework is to argue that managers factor into their decisions the benefits and the costs of dealing with institutionally unconstrained executive branches of government, including the advantages of privileged entry conditions and the associated higher probability of future policy reversals. Whatever the case may be, our results confirm the argument that, when expanding abroad, firms operating in regulated industries exploit their knowledge and skills in dealing with

governments and regulators. Although these firms usually lack technological or marketing capabilities, they know how to deal with governments and how to operate in a regulated context (Henisz, 2003). For this reason, high policy instability is not a barrier impossible to overcome for these firms. An illustration of this argument comes from Telefónica's recent negotiations with the Argentine government, which the company is pursuing aggressively in order to ensure that regulatory conditions do not change adversely to its interests as a new Law of Public Utilities and a revised Law of Telecommunications are being drafted (Expansión, 27 August 2005).

Our study is limited in several respects. We analyzed a specific context: investments undertaken by Spanish regulated firms in Latin America. Although we have a detailed data set including all of their investments, our results may not be entirely generalizable to regulated firms from other home countries investing in other host regions. In addition, this paper has not taken into account information regarding entry mode, i.e. whether the investing firm was the only investor or not. Delios and Henisz (2000) show how firms adapt the percent equity ownership of their FDI to deal with foreign risks. Finally, we have analyzed the decision to invest, without studying the post-investment performance and its effects on subsequent investments. The rapid growth of Spanish FDI in Latin America during the last decade has allowed us to obtain very rich data to analyze the relationships among risk, imitation and the location of FDI. However, this rapid growth may have had negative consequences for some of these firms, as time compression diseconomies may emerge when the firm has a fast foreign expansion pace (Vermeulen and Barkema, 2002). It seems, therefore, that further research using data from other industries and countries, and

taking into account entry mode and performance could shed more light into these controversial issues.

Despite these limitations, our theoretical and empirical analysis advances the existing literature in two key ways. First, we document that, while regulated firms prefer to operate in countries characterized by policy stability, they are even more attracted to the advantages that might be obtained from negotiating entry on privileged terms with governments that enjoy discretionary power. Thus, this paper contributes an important qualification to existing theories of foreign investment risk. Second, our empirical evidence lends some support to the idea that state ownership moderates perceptions of risk and tends to magnify the preference for governmental discretion and macroeconomic uncertainty in the host country, though only in the case of partially privatized firms. These findings offer a more nuanced explanation of the effects of economic and political risk on the decisions of firms in regulated industries that goes beyond the conventional argument that less risk is always preferable.

REFERENCES

- Allison PD, Waterman R. 2005. Fixed-Effects Negative Binomial Regression Models. Working Paper, University of Pennsylvania.
- Amsden AH, Hikino T. 1994. Project Execution Capability, Organizational Know-How and Conglomerate Corporate Growth in Late Industrialization. *Industrial and Corporate Change* **31**: 111-147.
- Azagra Blázquez P. 2002. Internacionalización empresarial: ¿vencedores y vencidos?. *Información Comercial Española* **799**: 201-207.
- Baron DP. 1995. Integrated Strategies: Market and Nonmarket Components. *California Management Review* **37**(2): 47-65.
- Boddewyn JJ, Brewer TL. 1994. International-Business Political Behavior: New Theoretical Directions. *Academy of Management Review*. **19**: 119-143.
- Bonardi JP. 2004. Global and political strategies in deregulated industries: The asymmetric behaviors of former monopolies. *Strategic Management Journal* **25**: 101-120.
- Bonardi JP, Hillman AJ, Keim GD. 2005. The attractiveness of political markets: implications for firm strategy. *Academy of Management Review* **30**: 397-413.
- Brufau Niubó A. 2002. El grupo Gas Natural en Latinoamérica. *Información Comercial Española* **799**:173- 179.
- Buckley PJ, Casson M. 1976. *The future of the multinational enterprise*. McMillan: London.
- Cameron AC, Trivedi PK. 1998. *Regression Analysis of Count Data*. Cambridge University

Press: Cambridge.

- Campa JM. 1993. Entry by Foreign Firms in the United States Under Exchange Rate Uncertainty. *The Review of Economics and Statistics* **75**: 614-22.
- Casanova L. 2002. Lazos de familia: La inversión española en América Latina. *Foreign Affairs en Español* web edition, summer issue.
- Caves RE. 1996. *Multinational Enterprise and Economic Analysis* (2nd ed.). Cambridge University Press: Cambridge.
- Chang SJ. 1995. International Expansion Strategy of Japanese Firms: Capability Building through Sequential Entry. *Academy of Management Journal* **38**: 383-407.
- Click RW. 2003. *Financial and political risks in U.S. direct foreign investment*. Working Paper, George Washington University.
- Cuervo A, Villalonga B. 2000. Explaining the variance in the performance effects of privatization. *Academy of Management Review* **25**: 581-590.
- Delios A, Henisz WJ. 2000. Japanese Firms' Investment Strategies in Emerging Economies. *Academy of Management Journal* **43**: 305-323.
- Dixit A. 1989. Entry and Exit Decision Under Uncertainty. *Journal of Political Economy* **97**: 621-638.
- Dixit A. 1992. Investment and Hysteresis. *Journal of Economic Perspectives* **6**: 107-132.
- Doh JP. 2000. Entrepreneurial privatization strategies: Order of entry and local partner collaboration as sources of competitive advantage. *Academy of Management Review* **25**: 551-571.
- Doh JP, Teegen H, Mudambi R. (2004). Balancing private and state ownership in emerging

- markets' telecommunications infrastructure: country, industry and firm influences. *Journal of International Business Studies* **35**: 233-250.
- Dunning JH. 1988. The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies* **19**: 1-31.
- Dunning JH. 1993. *Multinational Enterprises and the Global Economy*. Addison-Wesley: New York.
- Guillén M. 2002. Structural inertia, imitation, and foreign expansion: South Korean firms and business groups in China, 1987-95. *Academy of Management Journal* **45**: 509-525.
- Guillén M. 2005. *The Rise of the Spanish Multinational Firm*. Cambridge University Press: Cambridge.
- Gupta N. 2005. Partial Privatization and Firm Performance. *Journal of Finance* **LX**: 987-1015.
- Hausman JA, Hall BH, Griliches Z. 1984. Econometric models for count data with an application to the patents-R&D relationship. *Econometrica* **52**: 909-938.
- Henisz WJ. 2000. The Institutional Environment for Economic Growth. *Economics & Politics* **12**: 1-31.
- Henisz W J. 2003. The power of the Buckley and Casson thesis: the ability to manage institutional idiosyncrasies. *Journal of International Business Studies* **34**: 173-184.
- Henisz WJ, Delios A. 2001. Uncertainty, imitation, and plant location: Japanese multinational corporations, 1990-1996. *Administrative Science Quarterly* **46**: 443-475.
- Henisz WJ, Williamson OE. 1999. Comparative Economic Organization Within and

- Between Countries. *Business and Politics* **11**: 261-276.
- Henisz WJ, Zelner BA. 2001. The Institutional Environment for Telecommunications Investment. *Journal of Economics & Management Strategy* **10**: 123-147.
- Henisz WJ, Zelner BA. 2005. Legitimacy, Interest Group Pressures and Change in Emergent Institutions: The Case of Foreign Investors and Host Country Governments. *Academy of Management Review* **30**: 361-382.
- Hennart JF. 1982. *A Theory of Multinational Enterprise*. University of Michigan Press: Ann Arbor.
- Hicks JR. 1935. Annual Survey of Economic Theory: The Theory of Monopoly. *Econometrica* **3**: 1-20.
- Hillman AJ, Hitt M. 1999. Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions. *Academy of Management Review* **24**, 4: 825-842.
- Hymer SH. 1960/1976. *The International Operations of National Firms: A Study of Direct Foreign Investment*. MIT Press: Cambridge MA.
- Jaccard J, Turrisi R. 2003. *Interaction Effects in Multiple Regression*. Sage: Thousand Oaks CA.
- Johanson J, Vahlne JE. 1977. The internationalization process of the firms. A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies* **8** (1): 23-32.

- Kahneman D, Tversky A. (1979) Prospect theory: An analysis of decisions under risk. *Econometrica* **47**: 262-291.
- Kindleberger C. 1969. *American Business Abroad*. MA: MIT Press.
- Knack S, Keefer P. 1995. Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures. *Economics and Politics* **7**: 207-227.
- Knickerbocker FT. 1973. *Oligopolistic Reaction and Multinational Enterprise*. Harvard University Press: Cambridge MA.
- Lora E. 2000. What Makes Reforms Likely? Timing and Sequencing of Structural Reforms in Latin America. Working Paper 424, Inter-American Development Bank Research Department.
- Lyles MA, Steensma HK. 1996. Competition for large scale infrastructure projects in the emerging Asian markets: factors of success. *Columbia Journal of World Business* **31**(3): 64-75.
- Mahon JF, Murray EA. 1981. Strategic Planning for Regulated Industries. *Strategic Management Journal* **2**: 251-262.
- Meggison WL, Netter JM. 2001. From State to Market: A Survey of Empirical Studies on Privatization. *Journal of Economic Literature* **39**: 321-389.
- Murtha TP. 1991. Surviving industrial targeting: State credibility and public policy contingencies in multinational subcontracting. *Journal of Law, Economics and Organization* **7**: 117-143.
- Murtha TP, Lenway SA. 1994. Country capabilities and the strategic state: How national political institutions affect multinational corporations' strategies. *Strategic Management Journal* **15**: 113-129.

- Ontiveros E, Conthe M, Nogueira JM. 2004. La percepción de los inversores de los riesgos regulatorios e institucionales en América Latina. Working Paper, Interamerican Development Bank.
- Prieto Iglesias JM. 2002. El compromiso con el conocimiento, clave para la expansión internacional de Unión Fenosa. *Información Comercial Española* **799**: 189-198.
- Reger RK, Duhaime IM, Stimpert JL. 1992. Deregulation, Strategic Choice, Risk and Financial Performance. *Strategic Management Journal* **13**(3): 189-204.
- Rivoli P, Salorio E. 1996. Foreign direct investment under uncertainty. *Journal of International Business Studies* **27** (2): 335-357.
- Roland G, Sekkat K. 2000. Managerial Career Concerns, Privatization and Restructuring in Transition Economies. *European Economic Review* **44**: 1857-1872.
- Sarkar MB, Cavusgil ST, Aluakh P. 1999. International expansion of telecommunications carriers: The influence of market structure, network characteristics and entry imperfections. *Journal of International Business Studies* **30**: 361-382.
- Servén L. 1998. Macroeconomic Uncertainty and Private Investment in LDCs: An Empirical Investigation. Working Paper, The World Bank.
- Sheshinski E, López-Calva LF. 2003. Privatization and Its Benefits: Theory and Evidence. *CESifo Economic Studies* **49**(3): 429-459.
- Sitkin SB, Pablo AL. 1992. Reconceptualizing the determinants of risk behavior. *Academy of Management Review* **17**: 9-38.
- Teece DJ. 1977. Technology Transfer by Multinational Firms: The Resource Cost of Transferring Technological Know-How. *Economic Journal* **87**: 242-261.

United Nations Conference on Trade and Development. 2004. *World Investment Report 2004*. United Nations: New York.

Vergés J. 1999. Balance de las políticas de privatización de empresas públicas en España (1985-1999). *Economía Industrial* **330**: 121-139.

Vermeulen F, Barkema H. 2002. Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation. *Strategic Management Journal* **23**: 637-653

Wiseman RM, Gómez-Mejía L. (1998): A behavioral agency model of managerial risk taking. *Academy of Management Review* **23**: 133-153.

Zaheer S. 1995. Overcoming the liability of foreignness. *Academy of Management Journal* **38**: 341-363.

Zhara SA, Ireland RD, Gutiérrez I, Hitt MA. 2000. Privatization and entrepreneurial transformation. Emerging issues and a future research agenda. *Academy of Management Review* **25**: 509-524.

Table 1: Foreign Direct Investments (FDIs) in Latin America, 1987-2000

	Number of FDIs
Banking	78
Argentaria (formerly Banco Exterior de España, BEX)	5
Banesto	2
BBVA (formerly Banco de Bilbao)	23
Banco Central Hispanoamericano (formerly Banco Central)	13
Banco de Fomento	0
Banco Hispano Americano	0
Bankinter	0
Banco Pastor	0
Banco Popular Español	0
BSCH (formerly Banco Santander)	35
Banco de Vizcaya	0
Banco Herrero	0
Banco Zaragozano.	0
Water	11
Aguas de Barcelona (Agbar)	11
Electricity	50
Hidrocantábrico	1
Endesa	16
Fuerzas Eléctricas de Cataluña (Fecsa)	0
Hidroeléctrica Española (Hidrola)	0
Iberdrola (formerly Iberduero)	12
Compañía Sevillana de Electricidad	0
Unión Fenosa	21
Petroleum and Gas	30
CEPSA	2
Gas Natural	6
REPSOL	22
Telecommunications	21
Telefónica	21
Total FDIs	190

Table 2: Sample Descriptive Statistics and Correlations (N = 4198 firm-country-years, 14 firms, 21 countries, 1987-2000)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Number of investments in firm-country-year	.04	.25															
2. Policy instability	-.02	.25	-.05***														
3. Macroeconomic uncertainty	.08	.87	.03†	-.09***													
4. Full State ownership	.03	.16	-.03†	.06***	.03*												
5. Partial State ownership	.22	.42	.02	.01	.00	-.09***											
6. Macroeconomic uncertainty × Partial State ownership	.02	.42	.04*	-.03*	.48***	-.01	.08***										
7. Policy instability × Partial State ownership	-.00	.12	-.02	.48***	-.04*	.01	-.07***	-.08***									
8. Macroeconomic uncertainty × Full State ownership	.01	.13	-.01	-.01	.15***	.29***	-.02	-.00	.00								
9. Policy instability × Full State ownership	.00	.04	-.01	.18***	-.02	.24***	-.02	-.00	.00	-.10***							
10. Market reforms initiated	.83	.37	.08***	-.32***	-.04*	-.19***	.03†	-.01	-.14***	-.03*	-.09***						
11. Firm sales	41798.2	40571.9	.12***	-.11***	-.05***	-.04*	.20***	-.01	-.06***	-.01	-.01	.17***					
12. Previous firm entries in Latin America	3.45	6.46	.15***	-.17***	-.07***	-.09***	-.07***	-.02	-.05**	-.02	-.02	.21***	.58***				
13. Host country's GDP ^a	7.15	1.50	.15***	-.23***	.08***	-.01	-.01	.04*	-.11***	-.00	-.05**	.14***	.03†	.04**			
14. Host country's GDP growth	2.98	4.14	.07***	-.16***	-.03*	-.03†	.02	-.02	-.07***	-.00	-.05**	.17***	.02	.02	-.00		
15. Host country's inward FDI	2.50	3.88	.05***	-.22***	-.04**	-.09***	-.04*	-.01	-.07***	-.04*	-.05**	.23***	.16***	.25***	-.08***	.24***	
16. Host country's trade openness	61.51	39.02	-.09***	.02	.03†	-.04**	.00	.01	.02	-.02	.01	.12***	.05**	.07***	-.38***	.08***	.53***

*** p < .001 ** p < .01 * p < .05 † p < .10

^a Mean and std. dev. divided by 100,000,000,000.

Table 3: Firm fixed-effects negative binomial regressions predicting foreign direct investments

	Hypothesis	A	B	C	D
Macroeconomic uncertainty	H1 (-)		-.72* (-2.40)	-1.01** (-2.98)	-1.02** (-3.09)
Policy instability	H2a (-)		3.20** (2.97)	2.83* (2.17)	2.83* (2.28)
	H2b (+)				
Full State ownership			.61 (.12)	.53 (.11)	-.11 (-.01)
Partial State ownership			.75† (1.73)	.66 (.67)	.66 (.79)
Macroeconomic uncertainty × Partial State ownership	H3 (+)			.64* (2.09)	.65* (2.14)
Policy instability × Partial State ownership	H3 (+)			1.54† (1.70)	1.55† (1.71)
Macroeconomic uncertainty × Full State ownership					1.18 (.16)
Policy instability × Full State ownership					2.82 (.04)
Market reforms initiated		1.64 (.76)	-.28 (-.11)	-.39 (-.15)	-.39 (-.14)
Firm sales ^a		7.05 (1.61)	9.15† (1.72)	10.1 (.63)	10.2 (.76)
Previous firm entries in Latin America		-.03 (-1.47)	-.05* (-1.97)	-.05 (-1.38)	-.05 (-1.55)
Host country's GDP ^b		-24.5*** (-3.97)	-5.94 (-1.04)	-7.01 (-1.16)	-7.02 (-1.19)
Host country's GDP growth		.08** (3.13)	.02 (.90)	.02 (.90)	.02 (.91)
Host country's inward FDI		.11* (2.22)	.11* (1.98)	.10† (1.80)	.10† (1.80)
Host country's trade openness		.05* (2.42)	.04† (1.95)	.04* (2.00)	.04* (2.00)
Number of observations		4198	4198	4198	4198
Log likelihood		-502.08	-460.24	-457.25	-457.22

Notes: z-scores shown in parentheses beneath regression coefficients.

*** p < .001 ** p < .01 * p < .05 † p < .10

^a Coefficient multiplied by 1,000,000.

^b Coefficient multiplied by 1,000,000,000,000.

All regressions include firm in addition to industry, host-country and year fixed effects.