Domestic Experience and International Investment Strategy: Evidence from the Electric Utility Industry

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FIRMS' DOMESTIC EXPERIENCE AND INTERNATIONAL INVESTMENT STRATEGY: EVIDENCE FROM THE ELECTRIC UTILITY INDUSTRY

ABSTRACT

We build on the internationalization literature by examining how firms' domestic experiences shape international investment strategy. We argue that firms' political and regulatory, as well as cultural, *home* environments affect their decisions to enter particular *host* countries. Using panel data on a population of firms from 30 home countries investing in 64 host countries during the 1990s, we find evidence that the type of domestic experience affects the sensitivity of foreign entry decisions to host country political risk: the negative impact of political risk on the probability of entry is significantly smaller for firms that originate from countries themselves exhibiting higher risks of political expropriation, from countries that are more culturally distant and for firms with highly regulated domestic businesses.

How do a firm's prior experiences shape subsequent international investment strategies? Recent work in the internationalization literature has argued that a firm's prior *international* experience – both the amount and type – affects decisions about whether to enter new countries and, if so, the method of entry. Various researchers have documented how firms with greater amounts of international experience are more likely to enter new countries and to take higher equity stakes in foreign subsidiaries (Chang, 1995; Delios and Henisz, 2000); such firms also tend to achieve higher subsidiary survival rates over time (Barkema, Bell and Pennings, 1996; Barkema, Shenkar, Vermuelen and Bell, 1997; Li, 1995); and firms with more extensive international experience of high political risk countries have higher entry rates into other high risk countries (Delios and Henisz, 2003). Prior international experience thus appears to make future expansion abroad more attractive, especially into countries whose profiles such as on political risk match the firm's experiential history.

While the nature of prior international investment experience may be influential for firms already active abroad, it naturally does not explain the expansion strategy of firms that have yet to invest outside their home countries. Similarly, for firms that are in the early stages of the internationalization process, international experience may prove to be only a limited guide when assessing potential foreign investment opportunities, depending on the rate at which firms absorb the experiential lessons from initial international activities.

In this paper we build on a small stream of literature that argues that *domestic* as well as international experience shapes firms' international investment strategies (Johanson and Vahlne, 1977; Wan and Hoskisson, 2003; Kogut and Singh, 1988). The theoretical focus of this literature has been on a single dimension of a firm's domestic experience, specifically its domestic cultural environment; firms decide whether and how to enter new countries based partly on the cultural relatedness to their home country. Although culture can be interpreted as a composite of a variety of variables such as societal values, language and history, it nonetheless represents only a limited view of the broader home country market and non-market environments within which firms operate. Here, we extend the underlying logic to incorporate two other dimensions of a firm's domestic environment, political and regulatory, which we argue affect the attractiveness of entering particular countries.

In order to test our hypotheses regarding the impact of domestic experience on international strategy, we use data on the global expansion paths of the population of firms in a single industry, electric power generation, that first began to internationalize during the 1990s. The dependent variable under consideration is the firm's decision to enter a given country in a particular year. The panel data set includes firms originating from 30 home countries in developed and developing parts of world, investing in over 350 generation projects across more than 60 host countries. The wide degree of heterogeneity in domestic experiences and host country environments provides the basis for robust statistical analysis.

BACKGROUND

Early research identified the firm's domestic cultural environment and hence cultural or 'psychic' distance between home and host countries as being an important predictor of the choice of which foreign countries to initially enter. Johanson and Vahlne (1977) and Davidson (1980) argued that the embedded experience of a firm's domestic culture affects expansion strategy since firms tend to enter new countries that are 'psychically' or culturally similar to their home environments. As firms gain experience of managing domestic businesses in a particular cultural context, they develop a competitive advantage over less experienced rivals in other countries with similar cultural profiles. Kogut and Singh (1988) also found a significant effect of domestic culture on the choice of entry mode by foreign investors in the U.S. Together, these and other studies imply that the experience-based skills firms acquire in their domestic businesses can have profound effects on the strategic design and performance of subsidiary international operations.

Despite widespread acceptance of the 'cultural distance' thesis, there has been little development of the argument to other dimensions of firms' domestic experience. In one of the few studies to explore aspects of domestic experience other than culture, Wan and Hoskisson (2003) found that firms from more 'munificent' home environments were better able to manage internationally diversified businesses. The underlying logic of the cultural distance literature, however, rooted in the Resource Based View (Barney, 2001; Wernerfelt, 1984), is relatively general: firms, having developed unique capabilities through domestic experiential episodes, are better able to leverage such experiences in host environments abroad that demand similar capability profiles. The argument is similar to that made in the product diversification literature whereby firms expand sequentially into new products that have technological similarities to existing product lines (Chatterjee and Wernerfelt, 1991; Hoskisson and Hitt, 1990): firms tend to invest in new products (countries) that 'match' extant products (countries). Why has there been relatively so little theoretical and empirical exploration of the relationship between other dimensions or types of domestic experience and international entry strategy? One explanation may lie in the data limitations of existing empirical investigations; the majority of studies of international expansion paths rely on firms from a single home country or sometimes several home countries (commonly the U.S. or Japan). Without sufficient heterogeneity in domestic experience, however, it is not possible to identify statistically the impact on international entry strategy of differing types of domestic experience. Instead, data sets including multiple home and host countries are required.

In the next section we develop hypotheses that relate the firm's type of home country experiences to the decision to enter a type of host country. In order to build on the cultural distance thesis we utilize a dimension other than culture that distinguishes between host countries, specifically political risk. Substantial research has demonstrated that, on average, host country political risk significantly reduces the overall amount of foreign direct investment and alters the methods by which multinational corporations make investments (Kobrin, 1979; Delios and Henisz, 2000). While recent studies have suggested that foreign firms differ in their sensitivity to host country risk (Delios and Henisz, 2003), domestic experiential sources of such variation have not been examined. The following hypotheses argue that firms' *domestic* experiences of political, regulatory and cultural environments influence the impact of *host* country political risk on foreign investment decisions.

HYPOTHESES

Impact of Domestic Experience on International Entry Strategy

In the same way that firms learn how to manage their domestic businesses in the context of a particular cultural environment, they also learn how to manage political risks (Ring, Lenway and Govekar, 1990). As competing domestic interest groups, such as labor unions and market-based competitors, pressure home governments for policy reforms that threaten to harm a firm's domestic profitability, firms learn how to manage political actors in a generic manner. By dealing with political actors at home, firms become more adept at identifying political preferences and behavior patterns in other institutional environments; at accurately assessing the sources and nature of potential expropriation hazards; and at successfully negotiating with or lobbying less familiar political officials. To the extent that firms encounter similar policy challenges in multiple environments – such as countering union opposition to new employment practices, developing cooperative relationships with environmental interest groups or obtaining operating permits from regulatory agencies – firms establish codified and uncodified practices that reflect prior managerial approaches to resolving these issues (Boddewyn and Brewer, 1994). Thus, while firms learn from their interactions with the political environment in each jurisdiction, the experiential benefits spill over into the development of more generic political capabilities.

Firms from high political risk countries, where domestic political management experience is relatively intense, will tend to build up particularly strong local as well as generic political capabilities. Such firms will be less sensitive to the perceived risks of foreign political expropriation when considering international investments than firms from more politically secure backgrounds. Hence:

H1: The foreign entry decisions of firms from higher political risk *home* countries will be less negatively affected by *host* country political risk, all else equal.

Firms learn how to manage political actors not just within their domestic national environment but also in the context of their domestic industry. Some industries are more susceptible to the risks of political expropriation than others. Industries that are highly regulated, in terms of price, ownership, quality or competitor entry controls, are more liable to political interference than industries where competitive market forces are relatively dominant for several reasons. First, government control of industries such as pharmaceuticals, utilities and agriculture can reflect political objectives, such as the wish to subsidize important constituent groups (e.g. voters or organized interest coalitions), to increase regional employment levels, or otherwise to prevent politically disadvantageous market-determined outcomes from obtaining (Stigler, 1971; Peltzman, 1976). When short-term political pressures increase, governments are more likely to curry favor with constituents by directly or indirectly transferring rents from regulated corporations (Henisz and Zelner, 2004) – for example, by shortening patent durations on prominent drugs in the pharmaceutical industry, or by “frustrating” private supply contracts in the power generation sector (Powers, 1998). Second, in industries that are regulated it is easier for governments to expropriate through indirect rather than direct means, and to limit the costs of public reputation loss. Regulatory institutions and rules provide an opportunity for governments to gain leverage by claiming that firms have not satisfied regulatory requirements. Governments may withhold operating permits, hold up payments to private suppliers or otherwise take advantage of loopholes in regulatory contracts.

Firms with domestic experience of highly regulated industries will be better able to mitigate the risks of political expropriation in other jurisdictions than firms whose experience is concentrated in competitive industries, making entry into higher risk countries more attractive for these firms. Hence:

H2: The foreign entry decisions of firms with greater domestic experience in highly regulated industries will be less negatively affected by host country political risk, all else equal.

The sensitivity of foreign investors to host country political risk may also be moderated by the 'cultural distance' between home and host environments. According to Kogut and Singh (1988), one effect of cultural distance is to increase the organizational costs of establishing and managing foreign subsidiaries as the parent learns to adapt domestic routines to new cultural practices. Barkema et al (1996, 1997) also find that survival rates of foreign subsidiaries fall with increasing cultural distance. Increased cultural distance should thus be associated, on average, with lower probabilities of firm entry. Another impact of cultural differences is to create uncertainty for foreign investors about the actual nature of underlying market and non-market environments in a country. Cultural differences can hinder the ability of firms to gather and to interpret tacit and codified knowledge about the nature of local customer idiosyncracies, competitor strengths, political attitudes towards foreign firms and so on. That is, cultural distance 'masks' important informational signals about the environment. This implies the presence of an interaction between cultural distance and political risk: given the greater difficulty of assessing true political conditions in culturally distant jurisdictions, firms will place less weight on political risk in formulating entry strategies. Thus, as firms find it harder to discriminate between differing levels of political risk with increasing cultural distance, entry decisions will become less sensitive to changes in the underlying risk of expropriation. Hence:

H3: The foreign entry decisions of firms from more culturally distant home countries will be less negatively affected by host country political risk, all else equal.

METHODS

Industry Setting and Sample

We test the above hypotheses by examining the international diffusion of foreign investments by firms in the electric power generation industry. This industry setting has several advantages for identifying the interaction between domestic experience and host country political risk in shaping firms' foreign entry strategies. First, given that governments have adopted deregulation and privatization policies in this sector only since the early 1990s, power generation firms are in the early stages of internationalization. A firm's experience of its domestic business is thus likely to weigh relatively heavily in assessments of foreign investment opportunities. Second, the power generation sector, with highly immobile assets and widespread consumption by voter-consumers, is especially susceptible to the political risk of expropriation (Holburn and Spiller, 2002), making investment decisions sensitive both to such risks and to firm abilities to manage them. A substantial proportion of new opportunities exist in developing countries where the risks of political expropriation are relatively high (International Energy Agency, 1998). Power generation firms that wish to expand internationally thus have relatively unconstrained opportunities to invest in high or low political risk jurisdictions.

Third, industry environments differ discretely in the degree of regulation: in most countries, foreign generators must sell electricity to a *monopsony* buyer, typically a state-owned electric utility, under terms that are negotiated before entry. In these situations, price, entry and investment decisions are heavily regulated by the government. A number of countries, however, such as Argentina and the U.K., have deregulated their electricity markets so that customers are able to choose between competing generation providers. In these lightly regulated *competitive* environments, new entry is liberalized and generation firms compete for customers' business, frequently through prices established on spot market exchanges. Since power firms have a higher level of interaction with governments in monopsony markets as compared to competitive markets, we suggest that experience gained in these countries will be particularly salient for firms learning how to manage their political environments.[1]

[1] In monopsony markets, IPPs negotiate long-term contracts with the government governing the rights and obligations of the parties involved during the lifetime of the investment project. These contracts are highly complex, reflecting the myriad of uncertainties and risks associated with large infrastructure projects, and cover agreements on issues such as the term of the contract (often 15 years or more), plant construction and completion dates, the agreed price per kWh at which electricity is to be purchased, maintenance schedules, fixed capacity payments to the IPP, penalties for non-performance, adjustment clauses for changes in input prices such as fuel costs, dispute resolution procedures and so on (Finnerty, 1996; World Bank, 1998). This process, frequently involving multiple investors, lenders and subcontractors,

My sample consists of 188 firms and 64 countries. The set of firms includes the population, referred to here as Independent Power Producers (IPPs), that have made international power generation investments between 1990 and 1999 outside the U.S. and Canada. Information on IPP investments was obtained from the World Bank's *Private Participation in Infrastructure* database and from Hagler Bailly, a private consulting firm that tracks international investment activity in the utilities sector. In 1991 there were less than a dozen firms with international generation investments. By 1999, 188 IPPs had invested in foreign power generation projects, accounting for 130 gigawatts of new capacity. The median IPP had investments in two foreign countries by 1999 while the most active were present in more than ten countries. The set of countries consists of those that have implemented deregulation reforms in power generation to enable foreign private investment since 1990. Deregulation of national electricity sectors began in 1990 with the U.K. being the first country to adopt fundamental deregulation and privatization policies. Following the U.K., many other countries have implemented deregulation reforms, most commonly in the generation component of the electricity industry. The median country to do so allowed foreign investment in 1994. The dataset thus covers the birth and early stages of this industry (using 1990 as the initial year in our period of observation therefore avoids left censoring bias). We collected information on power generation deregulation, including dates of legislative acts, executive decrees and administrative rule changes, from a variety of sources, including, APEC (1997), ADB (1999), Gilbert and Kahn (1996), International Private Power Quarterly and OECD (1997).

Analytical Procedures

We examine the impact of firm and country characteristics on investment decisions by estimating the probability that an IPP will invest in a specific country in a specific year. We assume that the IPP will enter a country if the expected profits net of cost of capital are greater than zero. While the returns to investing in a foreign generation project are a latent unobserved variable, we do observe the dichotomous entry decision. Assuming that the error term is distributed normally, this allows me to present the event history in a discrete-time model as a standard probit (Allison, 1984; Yamaguchi, 1991). The probit model is appropriate here given the relatively short time period that most countries have enabled IPP investment. In this formulation, each year is treated as an

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can take several years of negotiation. After entry, IPPs maintain close connections with the government as they supply electricity to state-owned utilities in accordance with the contract, and as disputes are resolved. In competitive generation markets, on the other hand, IPPs have more of an arms length relationship with the government since entry is deregulated and IPPs typically sell output to the private sector. IPPs thus gain more experience in managing political actors, and tend to develop stronger political capabilities, in monopsony than in competitive markets.

independent observation so we include year fixed effects to account for unobserved time-varying factors. The probit model is also particularly advantageous here compared to standard continuous time models such as the Cox proportional hazards model since the latter cannot easily handle "ties" in the dependent variable (Yamaguchi, 1991). If data is gathered at discrete time periods, such as years, then there is a likelihood that several units will appear to experience an event at the same time (creating a tie). In the phenomenon of interest here – IPP investment – there are multiple years when several IPPs entered the same country. Estimation of the Cox model on data sets containing many ties, however, can yield biased parameter estimates whereas discrete-time models such as the probit still produce unbiased estimates. The results are also robust to alternative discrete-time specifications such as the logit where disturbances are assumed to follow a logistic distribution (Greene, 1997). The significance levels and signs of coefficient estimates are highly comparable in both probit and logit models.

We construct a panel data set with 120,320 potential observations, representing every feasible firm-country-year combination of 188 firms, 64 countries and 10 years. Since not all countries liberalized their power generation sectors at the beginning of the period of observation (1990), we control for the first year in which firms were able to enter a country by deleting all country-year observations before that date. Deleting country-year observations before the year in which a country allowed private foreign investment in power generation assets reduces the number of observations to 58,996. After further accounting for missing data points and years before which some firms were established, 54,781 observations are included in the panel.

Measures

Dependent variable. The firm's decision to invest in a specific country in a specific year is the dependent variable, taking a value of one if the firm invested and zero otherwise. The year in which the firm reached financial closure on a generation project is taken as the year of entry since this is the point at which IPPs make a relatively firm commitment to entering a country. By reaching financial closure, firms bind themselves to providing future funds in the development of a power project, often in conjunction with other partners, and with penalties for subsequent withdrawal. It is also common for construction activities to commence during the period of financial negotiation, further raising the cost of withdrawal after closure. There were 699 foreign equity investments in more than 350 generation projects during the 1990 to 1999 period.