OWNERSHIP STRATEGY OF JAPANESE FIRMS: TRANSACTIONAL, INSTITUTIONAL, AND EXPERIENCE INFLUENCES

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We compare the effects of transactional, institutional, and experience influences on the ownership strategies of Japanese investors. Our theoretical development suggests that the equity position of a foreign investor should increase as the specificity of the assets transferred to the foreign affiliate increases, but a lower equity position should be assumed when the foreign investor requires complementary assets to establish a foreign entry. International experience and a strong institutional environment also should lead to increases in the equity position of the foreign investor. These relationships were tested with data on more than 1000 Japanese investments in nine countries of East and South-East Asia. The results demonstrate that experience and institutional factors were the most important influences on the ownership position taken in the foreign investment, while transactional factors had a much less important and a more ambiguous role. Copyright © 1999 John Wiley & Sons, Ltd.

A firm entering a foreign market must make a decision concerning the degree of ownership if investing. The ownership strategy, commonly subsumed under the broader topic of entry mode strategy, is critical for foreign entrants as it affects both the foreign affiliate’s likelihood of success (Stopford and Wells, 1972) and its probability of survival (Li, 1995). Since early studies by internalization theorists (Buckley and Casson, 1976; Hennart 1982), most conceptual and empirical work in this area has sought to identify the firm-specific, transaction-related motives for full or shared ownership. However, there have been fewer empirical studies concerning how non-transactional factors have affected the ownership strategy.

The past focus on transaction-related motives is understandable. In making a direct investment in a foreign market, a firm is transferring firm-specific advantages to that market (Hymer, 1976). The assets that form the basis of the advantage are often proprietary and the degree of ownership assumed in the foreign operation confers a proportional degree of control over the uses to which the firm-specific assets can be put (Grossman and Hart, 1986). But the protection of firm-specific assets is just one consideration in structuring a foreign market entry. The need to acquire new assets on foreign entry (a second transactional influence), the international experience levels of the foreign firm, and the institutional environment of the host country are important influences on ownership strategies in themselves. The principal objective of this paper is to empirically investigate the relative importance of these three factors—transactional, experience, and institutional—on the ownership strategies of Japanese investors in East and South-East Asia.

In this analysis, ownership strategy is defined as the choice concerning the degree of ownership (percent equity holding) taken when a foreign investment is made. The implications of the transactional, experience, and institutional influences...
can be effectively determined by examining their relationship with the ownership levels in foreign investments. The TOBIT analyses that are conducted in this study shed light on the foreign ownership strategies of Japanese firms in Asia, an area that has received scant attention in the empirical literature despite the leading position of Japanese firms as foreign investors and Asian countries as recipients of foreign direct investment (UNCTAD, 1996). Also, this study contributes to the growing debate surrounding transaction cost theory (Kogut and Zander, 1993; Ghoshal and Moran, 1996; Madhok, 1997) by testing the predictions of this theory in a non-North American context, in a model with improved measures of asset specificity, and against competing explanations (institutional and experience influences).

This paper proceeds as follows. In the next section, we review developments in entry mode research, with particular emphasis on asset-related concerns, to identify key groups of variables that influence the ownership strategy of foreign investors. The third section develops hypotheses that relate ownership strategies to transactional and experience characteristics as well as to host country institutional factors. The fourth section introduces the data, methods, and variables used for hypothesis testing. The final two sections discuss implications of the empirical results, summarize the main conclusions, and suggest avenues for future research.

PREVIOUS RESEARCH

The entry mode choice has long been considered a critical decision for a firm expanding into international markets (Stopford and Wells, 1972; Wind and Perlmutter, 1977) and several studies have demonstrated that the entry mode choice has critical implications for the foreign investment’s performance (Root, 1987; Woodcock, Beamish, and Makino, 1994) and its survival (Li, 1995). A variety of mode choices exist for a firm. The choices range from no international involvement, to exporting/licensing, to direct investment via joint venture (minority, co- or majority) or by wholly-owned subsidiary. One of the principal issues faced by early researchers was understanding why differing degrees of ownership were utilized by multinational enterprises (e.g., see Vernon and Wells, 1976).

Early entry mode studies by internalization theorists concentrated on the choice between licensing and direct investment (Buckley and Casson, 1976; Rugman 1982); although scholars soon began to concentrate on the level of ownership question, specifically the choice between wholly-owned subsidiaries and the joint venture mode (Hennart, 1982). These and other studies in the internalization stream explained higher ownership levels as being a response to the need to protect firm-specific knowledge (essentially technological and R&D expertise) from unwanted dissemination. Hence, internalization theory stated that full ownership and control would be observed when a firm transferred unique, firm-specific knowledge to the host country when making its foreign investment.

The ideas of internalization theorists ran parallel to the precepts of transaction cost (TC) theory (Williamson, 1975; 1985). TC theory is concerned with explaining what is the most efficient governance structure—markets, hierarchies, or a hybrid—under which to govern a specific set of transactions. TC theory enriched internalization theory by providing several key concepts with which the entry mode choice could be more rigorously modeled. Scholars writing on the theory of multinational enterprise (Teece, 1986a), on theories of joint ventures (Beamish and Banks, 1987; Hennart, 1988; Kogut, 1988) and on entry mode strategies (Anderson and Gatignon, 1986) melded the ideas of TC theory with the previous work of internalization theorists.

In conceptual and empirical entry mode studies, TC theory has been particularly useful in understanding the determination of ownership levels (e.g., Anderson and Gatignon, 1986; Gatignon and Anderson, 1988; Gomes-Casseres, 1989). In bringing the ideas of TC theory to the entry mode question, Anderson and Gatignon (1986) provided an extensive review of the ownership literature. In this literature, the amount of equity ownership was equated with the amount of control that a firm could exert over its subsidiary’s operations. Control was considered important because it provided the foreign parent with the ability to influence systems, methods, and decisions (Anderson and Gatignon, 1986) and with a means to resolve disputes that could arise in the joint management of an enterprise (Davidson, 1982). However, with greater control came increased resource commitments and
increased risk. Hence, the ownership decision involved a trade-off between control and resource commitments made under different levels of risk and uncertainty (Anderson and Gatignon, 1986). Based on the conceptual developments made in these writings, various researchers empirically examined the ownership strategies of U.S. firms investing in developed and developing economies (e.g., Gatignon and Anderson, 1988; Gomes-Casseres, 1989) and the ownership strategies of Japanese firms investing in the United States (e.g., Hennart, 1991). Consistently, in these studies, support was found for the TC-based hypotheses.

While the need to safeguard assets transferred to the foreign investment was recognized as an important determinant of foreign ownership levels in the aforementioned conceptual and empirical studies, a second asset-related influence concerns the need to acquire complementary assets on foreign entry. When a firm expands into international markets, it is often faced with the need to acquire new assets (Stopford and Wells, 1972). However, these assets may be subject to market inefficiencies that make the cost of market-based exchange prohibitive. Hence, a common strategy of a firm on foreign entry is to form a joint venture with a local partner to secure locally based assets (Hennart, 1988). Several empirical studies (Beamish and Banks, 1987; Gomes-Casseres, 1989, 1990; Hennart, 1991) explored this influence on entry mode strategies and found that the foreign parent’s level of ownership declined with increased need to source complementary host country assets.

One critical locally based asset is knowledge of the host country environment. Deficiencies in knowledge of the local environment constitute a significant competitive disadvantage for the foreign firm (Hymer, 1976), and the accumulation of host country experience alleviates the foreign firm’s local-knowledge disadvantages (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). The internationalization approach argues that a firm’s level of commitment to investments in a foreign market increases with greater knowledge of that market. A firm’s internationalization process is one of experience and knowledge accretion—as experience and knowledge are gained in a host country the firm can make better strategic decisions and it develops the capability to operate independently in the host country. However, because of the difficulty of acquiring local knowledge, firms with little host country experience often must acquire local knowledge by partnering with local firms (Barkema, Bell, and Pennings, 1996).

Local knowledge encompasses a broad array of host country characteristics—political and legal rules and the social norms for business transactions. These variables constitute the host country’s institutional environment, which defines the conditions under which business occurs (North, 1990). Aspects of the institutional environment can have a direct effect on a foreign firm’s entry mode strategy. For example, legal restrictions on the foreign ownership of domestic enterprises establish definitive limits on foreign equity holdings and induce shared ownership structures (Contractor, 1990; Gomes-Casseres, 1990). Other aspects of the institutional environment have an indirect effect on entry mode strategy. These aspects relate to hazards that can accompany transactions because of weaknesses in the institutional environment (North and Weingast, 1989). Weaknesses in the institutional environment refer to conditions that undermine property rights and increase risks in exchange. Where property rights are weaker and environmental risks are greater, firms are less likely to make investments because assets face greater transactional hazards and returns are less predictable and certain (Williamson, 1996). In this manner, the nature of the institutional environment influences the comparative efficiency of governance structures. That is, the security of property rights in the broader institutional environment is as important a concern for foreign entrants as the protection of proprietary assets in an exchange between two firms (Oxley, 1995). Hence, consistent with the need to minimize transaction costs when constructing institutional arrangements for exchange, the firm’s entry mode strategy varies with the need to safeguard assets and minimize risks across differing institutional environments.

This section reviewed the extant literature to identify broad classes of influences on the relative efficiency of asset transfer across alternative governance structures. The review points to the considerable explanatory power of the standard TC model in explaining the ownership strategies of U.S. investors or of foreign investors in the United States. However, experience and institutional variables can be critical determinants of
entry mode strategies as well, and the comparative efficacy of these three viewpoints on the determinants of ownership strategies has not been tested within the same empirical setting. In the remainder of this study, we develop and test a conceptual model that compares the explanatory power of the three viewpoints in a non-U.S., multicountry research setting. The next section develops this study’s hypotheses.

HYPOTHESIS DEVELOPMENT

In this section, we develop four main hypotheses about the effects of transactional, experience, and institutional variables on ownership strategy. We consider transactional variables to comprise both assets transferred by the foreign firm to the host country (contributed assets), and assets required by the foreign firm upon investment in the host country (complementary assets). To be consistent with previous empirical studies of transaction cost theory, and to provide an even-handed test, the conceptual model discussed in the contributed assets and complementary assets sections develops hypotheses in line with the standard predictions of TC theory. However, in the empirical models we offer improved measures of the asset specificity construct.

Contributed assets

The main contribution of TC theory to the analysis of ownership levels has been the concept of asset specificity. A basic tenet of TC theory is that, as asset specificity increases, the greater will be the hazards associated with market-based exchange and the greater the incentives to internalize the transaction (Williamson, 1975, 1985). Anderson and Gatignon (1986), who modeled their TC framework on that of internalization theorists, considered the optimal degree of control (level of ownership) to be positively related to the degree of asset specificity. Davidson and McFetridge (1985), in comparing the licensing vs. direct investment option, provided some of the earliest evidence that asset specificity leads to higher ownership levels. Gatignon and Anderson (1988), in an empirical study of many of the propositions outlined in Anderson and Gatignon (1986), found the TC framework to be robust in explaining the ownership decisions of U.S. MNEs; that is, industries with high asset specificity were positively related to larger numbers of entries by high ownership modes. Other studies found similar relationships. For example, Anderson and Coughlan (1987) used the logic of TC to examine the propensity of foreign entrants to integrate forward into distribution. Increasing asset specificity was associated with greater integration (internalization). While Osborn and Baughn (1990) found less compelling evidence for the asset specificity–internalization relationship, Kim and Hwang (1992) and Erramilli and Rao (1993) observed a positive relationship between asset specificity and the level of ownership. The first hypothesis examines the relationship between asset specificity and the level of ownership.

Hypothesis 1: The greater the degree of asset specificity in the foreign investing firm’s assets, the higher the ownership position assumed in the foreign investment.

Complementary assets

The preceding hypothesis concerns the relationship between the foreign firm’s assets and the level of ownership. A separate but related aspect of the ownership decision concerns the foreign firm’s need to acquire new assets on foreign entry (Stopford and Wells, 1972). Hennart (1988) and other scholars argue that joint ventures are organizational modes that combine the complementary assets of two partners when exchange for these assets in factor markets is subject to high transaction costs. Consequently, firms are motivated to structure foreign entries as joint ventures, and to take lower equity positions, when faced with the need to acquire complementary assets that can not be obtained efficiently in factor markets. The second hypothesis examines this aspect of a firm’s ownership strategy.

Hypothesis 2: The greater the degree of market imperfections for complementary assets, the lower the ownership position assumed in the foreign investment.
Institutional environment

Host country political and economic risk is the aspect of the institutional environment that has received the most attention in conceptual and empirical studies of entry mode choice. As put forward in Anderson and Gatignon (1986: 15), in more externally uncertain and volatile environments firms are better off utilizing low control and ownership modes (e.g., joint ventures instead of wholly-owned subsidiaries) because of the increased flexibility provided to the firm by the low control mode. Similarly, Hennart (1988) and Hill, Hwang, and Kim (1990) argued that firms can reduce the level of host country risk and incur lower transaction costs by utilizing lower ownership modes in host countries with greater political risk and uncertainty. Empirical studies by Vernon (1983), Shan (1991) and Kim and Hwang (1992) also identified a negative relationship between political and economic risk and the level of ownership in the foreign investment. Hypothesis 3a outlines a relationship consistent with the above studies.

Hypothesis 3a: The greater the degree of risk in the host country, the lower the ownership position assumed in the foreign investment.

The effect of host country restrictions on foreign and local ownership has received considerable attention in entry mode studies. Government policies can effectively influence foreign ownership levels, and legal and political constraints in the host country may bring about local ownership, even where TC theory does not predict the existence of joint ventures (Contractor, 1990; Gomes-Casseres, 1989, 1990). We expect legal limits on foreign equity participation in domestic enterprises to be reflected in lower ownership levels in the foreign investment.¹

Hypothesis 3b: The greater the legal restrictions on foreign equity participation, the lower

A third aspect of the institutional environment concerns property rights protection. Property rights protection has received much attention as an influence on levels of foreign direct investment, but less attention has been given to its relationship with ownership levels. Effective property rights protection ensures that the owner of an asset has discretion over the uses to which the asset is put and is able to appropriate returns from the asset. Where the value of assets protected by patents and trademarks cannot be fully realized by the owner, the incentives to make investments involving these technological or marketing-based assets are reduced (Teece, 1986b). Under an institutional setting in which the protection of property rights is weaker, the cost of contracting and the cost of using a hybrid such as a joint venture increases because of the increased risk of leakage or unwanted dissemination of proprietary technological and marketing assets to rivals, suppliers, and buyers (Williamson, 1996). Given differences in host country environments with respect to the degree of protection for patented technology or trademarks, ownership strategies of foreign investors should vary accordingly. Under a weak property rights regime, higher ownership modes are more efficient because of the reduction in costs of unwanted dissemination. Where property rights protection is greater, lower ownership modes are more efficient as the risk of asset expropriation is less and costly governance structures do not need to be constructed to protect assets. Hypothesis 3c reflects these stated relationships.

Hypothesis 3c: The lower the level of intellectual property protection, the higher the ownership position assumed in the foreign investment.

International experience

When firms make international investments, specific knowledge of the host country is gained as is more general knowledge of conducting international operations (Barkema et al., 1996). As argued by the internationalization theorists, firms with more experience in a host country have

¹ The binding power of legal restrictions on foreign investors’ ownership positions is subject to the bargaining power of the host country government and the foreign firm. Hence, the amount of local ownership actually induced by formal government policies varies by country and by firm (Stopford and Wells, 1972). Accordingly, we present the legal restrictions relationship with ownership levels as an hypothesis, rather than as a control.
developed organizational capabilities suited to that country, and are able to make greater commitments to foreign investments (Johanson and Vahlne, 1977). This argument is supported by Chang (1995), who suggested that more internationally experienced firms face fewer local knowledge disadvantages. Further, Makino and Delios (1996) found that the comparative utility of structuring a foreign investment as a local partner joint venture, as opposed to a wholly-owned subsidiary, decreased with greater levels of international experience because of the foreign firm’s development of local knowledge. Finally, empirical research points to a positive relationship between the level of ownership and the level of host country experience (Davidson, 1980; Li, 1995). Hence, we construct the following hypothesis.

**Hypothesis 4:** The greater the level of international experience, the higher the ownership position assumed in the foreign investment.

**METHODOLOGY**

**Sample**

The majority of TC-based entry mode studies have involved an empirical setting in which the United States was either the host or the home country for the foreign direct investment. To expand the empirical context, we conducted our analysis on investments made by Japanese firms in nine countries of East and South-East Asia (Asia). The sample included all Japanese manufacturing subsidiaries located in China, Hong Kong, Indonesia, Malaysia, Philippines, South Korea, Singapore, Taiwan, and Thailand as listed in *Kaigai Shinshutsu Kigyou Souran, Kuni Betsu* (Toyo Keizai, 1994). This annual publication provides information on the foreign affiliates of private and public Japanese companies. The coverage of this data set is reputed to be close to the population of Japanese foreign affiliates (Hennart, 1991; Yamawaki, 1991).

From the 1994 edition of this data source, we identified 2594 greenfield manufacturing investments in Asia in which the Japanese parent held at least 5 percent of the equity. We next identified the Japanese parent firm for each investment and parent company information was collected from the *Analyst’s Guide* (Daiwa Institute of Research, 1996). The *Analyst’s Guide* reports firm-level data gathered in a 1996 survey of 1124 companies listed on the first section of the Tokyo Stock Exchange. Aggregates of industry-level information, also reported in the *Analyst’s Guide*, are based on a survey of 1515 firms.

After merging the information from Toyo Keizai (1994) with the parent company information from the *Analyst’s Guide*, the sample size became 1424. Table 1 compares the number of entries by country between the full and reduced samples. In Table 1, China and Thailand are depicted as the two most popular host sites for Japanese manufacturing investment in Asia. The distri-
bution of entries by country does not exhibit much variation between the two samples, although Thailand received proportionally more investment in the reduced sample than in the full sample, and China proportionally less. The proportion of wholly-owned subsidiaries is approximately equal in the two samples, and the mean equity holding of the Japanese parent is almost identical. While the demographics of the two samples are similar, the findings of this study’s empirical section are likely to be more applicable to the foreign investment experience of public Japanese firms listed on the first section of the Tokyo Stock Exchange.

Methods

We used the TOBIT regression procedure to test the hypothesized effects of the independent variables on the ownership position of the Japanese parent. TOBIT analysis is more suitable than OLS regression because the dependent variable takes a maximum value of 100 percent ownership. When the dependent variable is truncated at some value, OLS regression can lead to biased estimates of the coefficients (Greene, 1997). Using TOBIT analysis, we estimated several models that tested the individual and combined contributions of the four groups of independent variables.\(^2\) Table 2 defines each of the variables, and we describe these variables in more detail below. Descriptive statistics and inter-item correlations are provided in the Appendix.

Variables

Dependent

The dependent variable in all analyses is the percentage ownership of the Japanese parent(s) in the foreign investment. When more than two Japanese firms possessed equity in the foreign investment, we identified whether the firms shared a keiretsu affiliation. If the firms were part of the same keiretsu, the dependent variable was the sum of the equity holdings of the keiretsu affiliated firms; otherwise the dependent variable was the percentage ownership of the main Japanese parent.

Contributed asset variables

The specificity or proprietary nature of the Japanese parent’s assets was measured by two variables which were in turn operationalized in four ways. Following standard operationalization (e.g., Gatignon and Anderson, 1988; Gomes-Casseres, 1989), two industry-level variables—advertising intensity and R&D intensity—measure the degree of proprietary content in the firm’s technological and marketing assets. Both intensity variables were calculated as the ratio of the respective yen expenditure to total sales in the 2-year period prior to 1994 (1992 and 1993). Values were also determined for these variables from firm-level data. In addition, a normalized intensity term was created for the two variables. As an example, the advertising normalized intensity term was calculated in the following manner:

\[
\text{normalized advertising intensity} = \frac{(\text{firm-level advertising intensity} - \text{industry-level advertising intensity})}{\text{industry-level advertising intensity}}.
\]

Further, a dummy variable was created for the advertising and R&D variables. For each dummy variable, a value of one was assigned when a firm-level intensity was greater than the corresponding industry-level intensity. The normalized intensity terms and the dummy variables were used to identify those firms that had marketing and technological assets with a greater proprietary content than the industry mean.

The two variables, at both the industry level and the firm level, were collected from the Analyst’s Guide. We obtained the principal industry or main line of business of the parent firm from the same source; hence, coding of the firm’s industry was based on Daiwa’s 5-digit industrial classification. This level of classification is similar to the 3-digit SIC level, and it divides all manufacturing industries into 112 coherent industrial groups. The number of companies in a 5-digit group ranged from 68 in automobile parts to 1 in motorcycles (mean = 8.62).

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\(^2\) To test the sensitivity of the results to the selection of the modeling procedure, we also ran OLS regressions and LOGIT regressions (the choice between wholly-owned subsidiaries and joint ventures). The results were strongly consistent across OLS, LOGIT and TOBIT specifications. We report the TOBIT results because it is the most appropriate modeling procedure.
Table 2. Variable descriptions and expected signs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Hypothesis</th>
<th>Expected relation to level of ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contributed Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Advertising Intensity</td>
<td>Advertising expenses/sales</td>
<td>H1</td>
<td>(+)</td>
</tr>
<tr>
<td>2. R&amp;D Intensity</td>
<td>R&amp;D expenses/sales</td>
<td>H1</td>
<td>(+)</td>
</tr>
<tr>
<td><strong>Complementary Assets</strong></td>
<td>Entry into resource-based industry (resource-based = 1; otherwise = 0)</td>
<td>H2</td>
<td>(-)</td>
</tr>
<tr>
<td>3. Resource Industry</td>
<td>Investment made in parent’s main line of business (not related = 1; related = 0)</td>
<td>H2</td>
<td>(-)</td>
</tr>
<tr>
<td>4. Relatedness</td>
<td>Affiliate employment/parent employment</td>
<td>H2</td>
<td>(-)</td>
</tr>
<tr>
<td><strong>Institutional Environment</strong></td>
<td>Extent of political and economic risk</td>
<td>H3a</td>
<td>(-)</td>
</tr>
<tr>
<td>6. Host Country Risk</td>
<td>Extent of restrictions on foreign ownership</td>
<td>H3b</td>
<td>(-)</td>
</tr>
<tr>
<td>7. Host Country</td>
<td>Extent of intellectual property protection</td>
<td>H3c</td>
<td>(+)</td>
</tr>
<tr>
<td><strong>International Experience</strong></td>
<td>Export revenue/sales</td>
<td>H4</td>
<td>(+)</td>
</tr>
<tr>
<td>9. Export Intensity</td>
<td>Total number of Japanese parent’s foreign investments</td>
<td>H4</td>
<td>(+)</td>
</tr>
<tr>
<td>10. Number of Foreign Investments</td>
<td>Number of years of operational experience in the host country</td>
<td>H4</td>
<td>(+)</td>
</tr>
<tr>
<td>11. Years of Host Country Experience</td>
<td>General Trading Company is a partner (GTC main parent = 1; otherwise = 0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Sogo Shosha as Partner</td>
<td>Percentage ownership by affiliated Japanese firms</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dependent</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13. Equity Ownership</td>
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</tbody>
</table>

**Complementary asset variables**

As identified in Hypothesis 2, the foreign firm may be motivated to reduce its ownership position in the foreign investment to secure complementary assets via shared equity arrangements in its foreign investment. Complementary assets that foreign firms require can take a variety of forms and include such things as knowledge of markets, tacit technology, distribution systems, and other intermediate inputs (Hennart, 1988). We define three commonly utilized measures of requirements for complementary assets.

The first variable measuring requirements for complementary assets is the foreign firm’s need for raw material inputs supplied in noncompetitive local markets. A local firm is more likely than a foreign firm to have preferred access to these resources, and a JV with such a local firm is necessary to secure access to these raw material inputs. This form of JV, analogous to the link JV identified in Hennart (1988: 362), is expected to occur with greater frequency when entry is in resource-based industries such as food and beverages, textiles, wood, petroleum, rubber, primary metals, and pulp and paper (Gomes-Casseres, 1989). We used a dummy variable coded as 1 to identify investments made in resource-based industries.

A second resource requirement concerns the new knowledge and resources required to compete when the entry is a diversification from the parent firm’s main line of business. Foreign firms that expand into a product market not related to the parent’s main line of business incur a greater need for new knowledge and assets as well as a greater risk of unsuccessful entry (Li, 1995). To mitigate the need for new knowledge and assets, an entry into an unrelated industry is expected to utilize the JV option to a greater extent than a nondiversifying entry (Gomes-Casseres, 1989; Hennart, 1991). To establish whether the entry
was in an unrelated industry, we compared the main line of business of the Japanese parent with the affiliate’s industry as described in Toyo Keizai (1994). Unrelated entries were coded as 1 in this dummy variable.

The third variable measuring the need for complementary assets is the size of the investment as compared to the parent firm. If the investment is large relative to the parent firm, the parent is less likely to possess all the assets required on entry. Consequently, the larger the relative size of the investment, the greater the need to acquire complementary assets (Hennart, 1991). Initially, we computed two relative size measures: one was the ratio of total employment in the investment to that in the parent, and the other was a similar ratio computed from sales values. The two variables were moderately correlated \( r = 0.501; p < 0.01 \) and exhibited identical effects in the models. However, we used the employment-based relative size variable in all reported models because there were fewer missing values for this variable.

**Institutional environment variables**

We used three variables to assess the relationship between the institutional environment and the ownership strategy of Japanese investors. The first variable measured the level of host country political and economic risk in 1993. The risk variable was derived from the host country risk index published in *Euromoney* in 1993. Cosset and Roy (1991) demonstrated that *Euromoney*’s risk index is replicable using objective host country economic and political factors. The second variable accounted for the effects of local ownership restrictions and was constructed from the *World Competitiveness Report, 1994* (IMD and World Economic Forum, 1994). This yearbook provided information on the openness of 47 countries (including the nine host countries in this study) to foreign equity participation in domestic enterprises in 1993. The *World Competitiveness Report* was also the source for the third variable, which measured the degree of intellectual property protection in the host country environment. 3

**RESULTS**

In the models reported in Tables 3 and 4 positive signs on a coefficient point to a positive relationship between that variable and the equity holding of the Japanese parent. Discussion of the models reported in Table 3 identifies the effects of the four groups of independent variables. But as the effects of the latter three groups of variables (Complementary Assets, Institutional Environment and International Experience) were consistent across all specifications, discussion of the

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3 The *World Competitiveness Report* contains information on 381 criteria used to assess a nation’s international competitiveness. Individual criteria were developed from statistical indicators of international organizations and national institutions and from responses by 2850 executives worldwide to questionnaires concerning their perceptions of the international business community.
models reported in Table 4 focuses on the role of the Contributed Assets group of variables.

Table 3. The five models reported in Table 3 are nested models, and the chi-square tests show that each subsequent model is an improvement on the preceding model. We begin the analysis with transactional variables because this group of variables has received the most support in the empirical literature. All models in Table 3 estimate Japanese ownership levels using industry-level variables as measures of the proprietary content in the Japanese parent’s assets. Each model was significant, and, as indicated by the 0.32 adjusted $R^2$ value for the corresponding OLS regression, the full model was a substantive predictor of the Japanese firm’s ownership level. Advertising Intensity and R&D Intensity, the measures of the specificity of the Japanese firm’s assets, had positive and significant effects on ownership levels. As suggested by TC theory, a greater degree of proprietary content in marketing and technological assets both lead to higher owner-
Table 4. Japanese firm ownership levels: Firm-level data (N = 708)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>TOBIT analysis: Percent equity ownership as dependent</th>
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<tbody>
<tr>
<td></td>
<td>Firm-level untransformed</td>
</tr>
<tr>
<td><strong>Contributed Assets</strong></td>
<td></td>
</tr>
<tr>
<td>1a. Advertising Intensity (Firm-Level)</td>
<td>41.25</td>
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<tr>
<td>(0.52)</td>
<td></td>
</tr>
<tr>
<td>2a. R&amp;D Intensity (Firm-Level)</td>
<td>23.18</td>
</tr>
<tr>
<td>(0.56)</td>
<td></td>
</tr>
<tr>
<td>1b. Advertising Intensity (Industry-Level)</td>
<td>-</td>
</tr>
<tr>
<td>(1.22)</td>
<td></td>
</tr>
<tr>
<td>2b. R&amp;D Intensity (Industry-Level)</td>
<td>-</td>
</tr>
<tr>
<td>(1.29)</td>
<td></td>
</tr>
<tr>
<td><strong>Complementary Assets</strong></td>
<td></td>
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<tr>
<td>(-2.79)</td>
<td></td>
</tr>
<tr>
<td>4. Relatedness</td>
<td>-2.30</td>
</tr>
<tr>
<td>(-0.92)</td>
<td></td>
</tr>
<tr>
<td>5. Relative Size</td>
<td>1.65</td>
</tr>
<tr>
<td>(1.59)</td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Environment</strong></td>
<td></td>
</tr>
<tr>
<td>6. Host Country Risk</td>
<td>24.28</td>
</tr>
<tr>
<td>(1.59)</td>
<td></td>
</tr>
<tr>
<td>7. Host Country Restrictiveness</td>
<td>-48.19***</td>
</tr>
<tr>
<td>(-4.63)</td>
<td></td>
</tr>
<tr>
<td>8. Intellectual Property Protection</td>
<td>66.01***</td>
</tr>
<tr>
<td><strong>International Experience</strong></td>
<td></td>
</tr>
<tr>
<td>9. Export Intensity (Firm-Level)</td>
<td>59.64***</td>
</tr>
<tr>
<td>(7.87)</td>
<td></td>
</tr>
<tr>
<td>10. Number of Foreign Investments</td>
<td>0.75</td>
</tr>
<tr>
<td>(0.68)</td>
<td></td>
</tr>
<tr>
<td>11. Years of Host Country Experience</td>
<td>0.96***</td>
</tr>
<tr>
<td>(2.34)</td>
<td></td>
</tr>
<tr>
<td>(-5.66)</td>
<td></td>
</tr>
<tr>
<td>13. Constant</td>
<td>50.57***</td>
</tr>
<tr>
<td>(5.01)</td>
<td></td>
</tr>
</tbody>
</table>

Model indices

|                       |                       |                       |                       |                       |                       |
| Significance of model | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Adjusted $R^2$        | 0.31   | 0.31   | 0.32   | 0.32   | 0.33   |
| Model chi-square      | 289.00 | 294.72 | 298.90 | 302.26 | 305.10 |
| Incremental chi-square | –     | –     | 4.18   | –     | 2.84   |
| Significance of additional variables | – | – | N.S. | – | N.S. |

$t$-statistics in parentheses

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$; all two-tailed tests

Adjusted $R^2$ derived from corresponding OLS analysis

The five most R&D-intensive manufacturing industries were: pharmaceuticals, communications equipment, computerized office equipment, optical and copy machines, and heavy-duty electrical equipment. The five most advertising-intensive industries were cosmetics and toiletries, liquor, sporting and entertainment goods, instant foods, and beverages.

Significant, while Relatedness was not significant in any of the models. Consistent with the case of U.S. firms investing abroad (Gomes-Casseres, 1989) and Japanese firms investing in the United States (Hennart, 1991), the negative sign on the coefficient for Resource Industry reveals that Japanese firms in Asia took lower ownership levels and joint ventured with local firms to secure access to raw-material inputs. Counter to the complementary assets argument, subsidiaries large in size relative to the Japanese parent had a higher ownership level by the Japanese parent overall. As in Hennart (1991), large investment size did not induce the Japanese parent to reduce ownership either to secure assets or to secure additional sources of capital; rather, investments in which the foreign firm had a large stake were accompanied by higher ownership levels. Finally, the insignificance of Relatedness indicates that whether the entry was in the Japanese parent’s main line of business did not affect ownership levels. 5

As in the case of the Complementary Asset variables, the addition of the Institutional Environment variables improved the explanatory power of the models significantly (incremental $\chi^2(3) = 175.40$, $p < 0.01$) and two of the three variables were significant. The negative sign on the Host Country Restrictiveness coefficient indicates that in countries in which there were more stringent controls on foreign equity participation, the ownership levels of Japanese firms were indeed lower. A similar effect was observed concerning the degree of intellectual property protection. Higher ownership levels by the Japanese parent occurred in countries which had better protection of intellectual property. Host country risk did not have a significant effect in Table 3, although its insignificance is related to its correlation with host country restrictiveness. 6

The International Experience variables contributed positively to the explanatory ability of the models (incremental $\chi^2(3) = 121.80$, $p < 0.01$). The positive sign on the export intensity term indicates that firms with extensive international business activity and more international experience had a higher ownership position in foreign subsidiaries. More host country experience was also associated with higher ownership levels as indicated by the positive sign on the Years of Host Country Experience variable. Counter to expectations, however, the Number of Foreign Investments had a negative relationship with Japanese firm ownership levels.

The negative sign on the Number of Foreign Investments variable becomes more understandable when the role of the sogo shosha (General Trading Companies) is considered. Nine sogo shosha were involved in almost 20 percent of Japanese investments worldwide, and sogo shosha possess considerable international experience. 7 To account for any effects attributable to sogo shosha, we introduced a dummy variable, coded as 1 when a sogo shosha was an equity partner in a foreign investment. This model is reported in the right-most column of Table 3. The sogo shosha variable takes a negative sign in this model, and the Number of Foreign Subsidiaries coefficient is no longer significant. This indicates that when a sogo shosha was an equity partner in a foreign investment, the level of ownership taken by Japanese firms was lower. The role of the sogo shosha will be reviewed to a greater extent in the discussion section.

Table 4. The models in Table 4 are similar to the fifth model in Table 3 (the one with the greatest explanatory power) but with one important difference: the proprietary content of the Japanese firm’s assets are measured at the firm level. Most striking in the first model in Table 4 is the insignificance of the two firm-level intensity variables: Advertising and R&D. Even though the Contributed Assets group of variables were not significant in this model, the other three groups of variables maintained signs and significance levels consistent with the results in Table 3.

We explored the role of Contributed Assets

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5 All entries that had a sogo shosha as a main parent were coded as not related because the sogo shosha’s main line of business is wholesale trading. We removed all sogo shosha entries to test if the insignificance of the relatedness variable was due to the inclusion of sogo shosha in the sample. The variable was not significant in the subsample.

6 The insignificance of the host country risk variable may be attributed, in part, to its correlation with the host country restrictiveness variable ($r = -0.609$). When host country restrictiveness is removed from the equation, host country risk becomes significant.

7 These nine firms, and the worldwide number of foreign investments in which they had an equity stake, were: Itochu (331), Kanematsu (122), Sumitomo (326), Tomen (289), Nichimen (103), Nissho Iwai (242), Marubeni (395), Mitsui & Co. (635), and Mitsubishi Corporation (442).
Ownership Strategy of Japanese Firms

927

further using dummy variable and normalized firm-level intensity operationalizations. In the second model in Table 4, dummy variables were entered for Advertising and R&D Intensity. The Advertising dummy was insignificant, while the R&D dummy was significant and negatively signed, indicating that when a firm expended a lower than industry average of its sales on R&D, its ownership level in the investment was higher. Likewise, Hennart (1991) found nonsignificant relationships between firm-level measures of the specificity of R&D and advertising assets and the ownership position of Japanese firms.

The fourth and fifth models in Table 4 were run using firm-level normalized intensities for advertising and R&D expenditures. In both models, the normalized advertising and R&D intensities were significant and negatively signed. Contrary to Hypothesis 1, the negative signs on the asset specificity variables indicate that firms with a higher level of proprietary content in marketing and technological assets (as compared to industry counterparts) tended to have a lower level of ownership in their foreign investments. Even when we included industry-level controls (the fifth model) the two normalized intensity variables remained negatively signed and significant. The implications of these results are discussed in the next section.

DISCUSSION

This study reported new empirical evidence on determinants of ownership strategies. The results were obtained from data on 1043 foreign investments in Asia by Japanese firms. The evidence consistently supported a key tenet of the internationalization approach: increased international experience was accompanied by an increased ownership position in foreign investments. Also, the institutional environment played a substantive role in influencing ownership strategies. The evidence was less supportive of predictions derived directly from transaction cost theory.

In the international entry mode literature, several studies provide convincing evidence supporting TC theory. Consistently, these studies reported a positive relationship between measures of the specificity of assets and the level of ownership (Gatignon and Anderson, 1988; Gomes-Casseres, 1989, 1990; among others). This study diverged from previous TC-based entry mode studies in two ways. First, the empirical setting did not involve the United States as a home country or as a host country for the foreign direct investment. Second, we developed an improved measure of asset specificity. One of the reasons for the divergence of this study’s empirical findings may be related to differences in the operationalization of asset specificity.

Most large-sample, archival studies of entry mode determinants have utilized industry-level measures. In this study, the first set of models (Table 3) employed similar industry-level measures of the specificity of marketing assets (advertising intensities) and technological assets (R&D intensity). The results of these models tended to be consistent with the predictions of TC theory and consistent with the results of prior studies. However, when we employed firm-level measures of the specificity of assets—as absolute measures or as measures relative to industry averages—either no relationship was observed between asset specificity and ownership, or the relationship observed was opposite to the direction hypothesized (see also Hennart 1991).

One implication of this discrepancy between the results obtained for industry-level and firm-level measures concerns the interpretation of previous empirical research on entry mode. Studies that have reported positive relationships between the intensity of industry-level advertising and R&D expenditures and the level of ownership as an asset specificity–degree of ownership relationship (e.g., Gatignon and Anderson, 1988; Gomes-Casseres, 1989) may just have identified the sector-specific trends in entry mode behavior previously uncovered in early research on U.S. multinationals (Franko, 1971; Stopford and Wells, 1972; Lecraw, 1984). In light of the new evidence presented in this study, the results of these previous TC-based entry mode studies should be interpreted cautiously.

A second implication of this result concerns the predictability of the ownership patterns in Japanese subsidiaries in Asia using TC theory. When asset specificity was operationalized by firm-level measures, the observed patterns in ownership levels in the Asian subsidiaries of

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8 Extensive empirical support of transaction cost theory exists in studies reported in the economics, marketing, and strategic management literature (for a review see Masten, 1994).
Japanese firms were not consistent with the predictions of TC theory. When measured at an absolute level, the specificity of the Japanese parent’s assets did not have any relationship to ownership levels. When compared to industry norms concerning the degree of specificity, if anything, an inverse relationship was observed with the ownership level in the foreign investment. Further, even when industry-level measures were used, the explanatory power of these measures was low (adjusted $R^2 = 0.04$, compared to 0.33 for the fully specified model).

While the evidence in Tables 3 and 4 suggests that the ownership strategies of Japanese firms in Asia were not strongly influenced by transaction cost minimization objectives, we explored a number of alternative explanations for the insignificance of the Contributed Assets set of variables. The first exploration emerges from a limitation of the operationalization of the R&D and advertising intensity items. The technological and advertising intensity of the investments was gauged using expenditure data from the parent firm. While, this measure provides a good indication of expenditure patterns at the aggregate or corporate level within the home country, it imperfectly represents the technological sophistication or marketing capabilities for activities carried out in the subsidiary in the host country. That is, the foreign subsidiaries established in East and South-East Asia by Japanese investors may not have involved the same degree of technological or advertising intensity as the parent firm. This is likely to have been the case particularly in early investments in East and South-East Asia when Japanese firms’ investments in these countries were oriented more towards securing lower cost inputs, such as labor, as compared to later investments which would have involved a greater degree of technology and management skills transfer (see Beamish, Delios, and Lecraw, 1997).

We tested for this effect by partitioning our sample by the age of the subsidiary, with the expectation that more recent entrants would have made more technologically intensive investments. We utilized a variety of age cut-offs beginning with a subsidiary age of 14 years (i.e., subsidiaries established before 1980 or after 1980) and continuing to a cut-off for a subsidiary age of 4 years. Using these cut-offs, the results of the models depicted in Table 4 remained essentially unchanged. However, models limited to the Contributed Assets variables defined at the firm level (not normalized) did show that the intensity of R&D was significantly related ($p < 0.05$) to ownership levels for investments made after 1984, but not for investments made prior to 1984.

We next explored the advertising results by partitioning the sample by the industry in which the investment was made. We followed two forms of industry classification. The first was a partition into convenience and nonconvenience goods industries (Porter, 1976) and the second was a partition into consumer and producer industries (following Kohn, 1988, and Hennart, 1991). In the first partition, firms competing in convenience goods tend to be associated with high advertising expenditures because of the need for product differentiation and the need to develop a strong brand image (Porter, 1976). We expect that firms in convenience goods industries would be more likely to transfer specific marketing assets to the foreign subsidiary. Likewise, in the second partition, firms in consumer goods industries may be more sensitive to the transfer of advertising assets, and more likely to protect those assets by securing higher ownership levels. The empirical results of these two partitions were not materially different from those depicted in Table 4, although in a convenience goods model in which only the Contributed Assets variables defined at the firm level (not normalized) were entered, the advertising variable was significant. In the case of the industry-level variables, they were consistently signed and in the correct direction for the consumer goods sample but not for the producer goods sample.

The first two forms of partition were made along temporal and sectoral lines. The third partition was made along a geographical dimension. The host country context for this study comprised nine countries. It is possible that the mix of firm strategies by country could have contributed to the insignificance of the advertising and R&D items. We tested for this by examining the models in Table 4 on a country-by-country basis, and by dividing the sample into two groups: newly industrializing economies (NIEs) (Hong Kong, Korea, Singapore, and Taiwan); and a second group composed of the remaining five countries.

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*We thank an anonymous reviewer for many insightful suggestions for tests of alternative explanations concerning the results for the Contributed Assets set of variables.*
Ownership Strategy of Japanese Firms

(i.e., non-NIEs). The country-by-country results did not reveal any substantive changes in the full models, nor did the NIE vs. non-NIE comparison, with one exception. In models restricted to the Contributed Assets group of variables, entries made in NIEs had higher Japanese ownership levels as advertising intensity increased, whereas in non-NIEs we found a positive relationship between R&D intensity and ownership levels, but not between advertising and ownership.

Finally, the home country context of the study may have contributed to the lack of support for the transaction cost set of variables in another way. That is, part of the reason for the weak influence of asset specificity on the level of ownership may be related to the link between ownership levels and control in Japanese firms. As is well reported in the academic and practitioner literature (Abegglen and Stalk, 1985; Gerlach, 1987), Japanese firms are often linked by cross-equity holdings; they have strong inner-group corporate networks and are further connected by close buyer–supplier relationships. These interorganizational linkages, when replicated in foreign investments, provide the foreign firm with a secondary means of operational control, independent of the level of ownership, because the linkages establish markets for the firm’s outputs and sources for the firm’s inputs. Sogo shosha in particular are ‘able to exercise a great deal of managerial control without holding majority ownership, since they provide such critical services as supplies of inputs and working capital and access to markets’ (Kojima and Ozawa, 1984: 42–43). Hence, consistent with the findings of Kojima (1978) and Kojima and Ozawa (1984), we observed lower equity holdings by sogo shosha because of their ability to exercise control independent of ownership. Furthermore, because ownership levels may not directly equate to the amount of control exercised by Japanese firms in foreign investments, the observed effect of transactional variables is weak.

Like the influence of Contributed Assets, the need to secure new assets was a comparatively minor influence on the Japanese firm’s ownership strategy. When a direct investment entry was made in a resource-dependent industry, the ownership position of the Japanese firm was lower. However, the insignificance of the Related variable and the positive sign on the Relative Size variable may be artifacts of the composition of the sample. The Japanese parents comprised public firms listed on the first section of the Tokyo Stock Exchange. These firms were large and well diversified, and often were connected to other Japanese firms via cross-equity arrangements. The need for complementary assets when making a diversifying entry outside of the parent’s main line of business may not have been a substantive consideration for the Japanese parent. This is reflected in the insignificance of the Related variable. Similarly, larger subsidiaries did not lead to reduced ownership levels as a means to secure additional assets, financial or otherwise. The positive sign on the Relative Size variable indicates the need to hold greater ownership, and to reduce risks concomitant with shared ownership, when more of the firm’s assets are located in the host country.

The institutional environment exerted a strong influence on the level of ownership. Legal restrictions on foreign ownership effectively reduced the equity holdings of Japanese firms. The higher ownership levels associated with weaker intellectual property rights regimes suggest that the need to safeguard proprietary assets from suppliers, buyers, and competitors was more stringent when less effective regulations existed to protect patents and trademarks. While weaker intellectual property rights appeared to increase the threat of asset appropriation, and thereby induced higher ownership levels, increasing host country political and economic risk did not consistently lead to reduced ownership levels. As in Gatignon and Anderson (1988), host country risk was a less important institutional consideration than legal sanctions on foreign ownership, perhaps because of the reduced threat of expropriation (Minor, 1994).

The results of this study also suggest a strong experience effect on ownership strategy. Firms more experienced in international markets and in the host country market took a higher ownership position when making a foreign investment. The role of the local partner diminished when experience levels were higher, suggesting that experience was positively associated with learning and the development of knowledge about the host country environment. This observed effect corroborates findings of previous studies that experiential knowledge is important, and that it affects the entry mode strategy (Johanson and Vahlne, 1977) even in later stages of the inter-
nationalization process (Barkema et al., 1996).

CONCLUSION

This study analyzed data on manufacturing investments of Japanese firms made in nine countries in East and South-East Asia to determine how transactional, experience, and institutional factors influenced the ownership strategy of these firms. The principal finding in this study is that experience and institutional factors were the most important determinants of the ownership strategy. The results show that the institutional environment affected ownership levels both at a regulatory level and at a risk level. Foreign investors responded to the increased risk of unwanted dissemination of proprietary assets in countries in which intellectual property rights were less secure by taking a higher ownership position. Japanese firms also secured higher ownership levels when they had more experience in international markets and more experience in the host country market.

Transactional factors were a less important influence than experience and institutional factors. While firms that operated in technologically and marketing intensive industries tended to take higher ownership positions when making foreign investments, this effect was relatively weaker than institutional and experience-related effects. Further, within industry variance, and across firm differences, in the proprietary content of firms’ technological and marketing assets had an ambiguous relationship with the degree of ownership. Finally, the insignificance and ambiguous effect of technological and marketing assets persisted in more fine-grained analyses involving samples divided along temporal, sectoral, and geographical lines, although these analyses also pointed to potential differences in firm strategies depending on the time, industry, and region in which the investment was made.

One of the main tenets of the internalization approach and transaction cost theory concerns the positive relationship between the proprietary content of a firm’s assets and the level of ownership. While the results were consistent with past research when we used industry-level indicators, no evidence was found in support of this relationship using absolute and relative firm-level indicators of asset specificity. A remaining empirical question is to identify if the null effect of transactional variables is unique to Japanese firms, perhaps because of the attenuated relationship between ownership and control that can exist in these firms, or if transactional variables, when operationalized as in this study, also have a weak effect for the foreign investments of firms based in other nations. Hence, future research should continue to examine the relative importance of transactional, institutional and experience factors on the ownership and entry mode strategies of firms across a variety of host and home country settings.

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## APPENDIX: Pearson Correlation Coefficients and Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Advertising Intensity</td>
<td>0.199</td>
<td>0.029</td>
<td>-0.131</td>
<td>-0.052</td>
<td>0.075</td>
<td>-0.064</td>
<td>0.028</td>
<td>-0.105</td>
<td>-0.008</td>
<td>-0.098</td>
<td>-0.148</td>
<td>0.039</td>
<td></td>
</tr>
<tr>
<td>2. R&amp;D Intensity</td>
<td>0.232</td>
<td>-0.071</td>
<td>-0.025</td>
<td>-0.081</td>
<td>0.063</td>
<td>0.028</td>
<td>-0.052</td>
<td>0.094</td>
<td>0.172</td>
<td>0.076</td>
<td>-0.070</td>
<td>0.052</td>
<td></td>
</tr>
<tr>
<td>3. Resource Industry</td>
<td>-0.039</td>
<td>-0.109</td>
<td>0.101</td>
<td>-0.052</td>
<td>0.024</td>
<td>-0.055</td>
<td>-0.045</td>
<td>-0.240</td>
<td>0.076</td>
<td>0.013</td>
<td>0.188</td>
<td>-0.211</td>
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</tr>
<tr>
<td>4. Relatedness</td>
<td>-0.179</td>
<td>-0.134</td>
<td>0.147</td>
<td>0.067</td>
<td>-0.002</td>
<td>-0.005</td>
<td>-0.042</td>
<td>0.084</td>
<td>0.161</td>
<td>0.174</td>
<td>0.076</td>
<td>-0.016</td>
<td></td>
</tr>
<tr>
<td>5. Relative Size</td>
<td>-0.017</td>
<td>0.048</td>
<td>-0.038</td>
<td>0.038</td>
<td>0.060</td>
<td>-0.061</td>
<td>0.016</td>
<td>0.238</td>
<td>-0.067</td>
<td>-0.054</td>
<td>-0.052</td>
<td>0.103</td>
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</tr>
<tr>
<td>6. Host Country Risk</td>
<td>0.008</td>
<td>-0.003</td>
<td>0.079</td>
<td>0.035</td>
<td>0.037</td>
<td>0.327</td>
<td>-0.618</td>
<td>0.043</td>
<td>0.146</td>
<td>0.041</td>
<td>0.262</td>
<td>-0.183</td>
<td></td>
</tr>
<tr>
<td>7. Host Country Restrictiveness</td>
<td>-0.044</td>
<td>0.045</td>
<td>0.027</td>
<td>-0.023</td>
<td>-0.044</td>
<td>0.339</td>
<td>-0.467</td>
<td>-0.041</td>
<td>-0.067</td>
<td>0.019</td>
<td>0.156</td>
<td>-0.278</td>
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</tr>
<tr>
<td>8. Intellectual Property Protection</td>
<td>0.023</td>
<td>0.011</td>
<td>-0.090</td>
<td>-0.049</td>
<td>0.014</td>
<td>-0.609</td>
<td>-0.443</td>
<td>0.041</td>
<td>-0.063</td>
<td>-0.085</td>
<td>-0.193</td>
<td>0.347</td>
<td></td>
</tr>
<tr>
<td>9. Export Intensity</td>
<td>-0.037</td>
<td>0.176</td>
<td>-0.241</td>
<td>-0.028</td>
<td>0.075</td>
<td>0.059</td>
<td>-0.032</td>
<td>0.026</td>
<td>0.216</td>
<td>0.072</td>
<td>-0.163</td>
<td>0.350</td>
<td></td>
</tr>
<tr>
<td>10. Number of Foreign Investments</td>
<td>-0.172</td>
<td>-0.185</td>
<td>0.136</td>
<td>0.302</td>
<td>-0.092</td>
<td>0.193</td>
<td>-0.045</td>
<td>-0.092</td>
<td>0.131</td>
<td>0.352</td>
<td>0.165</td>
<td>0.063</td>
<td></td>
</tr>
<tr>
<td>11. Years of Host Country Experience</td>
<td>-0.136</td>
<td>-0.077</td>
<td>0.114</td>
<td>0.254</td>
<td>-0.074</td>
<td>0.109</td>
<td>0.011</td>
<td>-0.118</td>
<td>0.071</td>
<td>0.052</td>
<td>0.031</td>
<td>0.069</td>
<td></td>
</tr>
<tr>
<td>12. Sogo Shosha as Partner</td>
<td>-0.258</td>
<td>-0.204</td>
<td>0.246</td>
<td>0.232</td>
<td>-0.071</td>
<td>0.264</td>
<td>0.109</td>
<td>-0.179</td>
<td>-0.111</td>
<td>0.459</td>
<td>0.230</td>
<td>-0.314</td>
<td></td>
</tr>
<tr>
<td>13. Equity Ownership</td>
<td>0.150</td>
<td>0.176</td>
<td>-0.206</td>
<td>-0.101</td>
<td>0.095</td>
<td>-0.223</td>
<td>-0.286</td>
<td>0.339</td>
<td>0.323</td>
<td>-0.105</td>
<td>-0.039</td>
<td>-0.365</td>
<td></td>
</tr>
</tbody>
</table>

| Mean                            | 0.009 | 0.021 | 0.213 | 0.499 | 0.147 | 21.528 | 4.284 | 4.551 | 0.185 | 75.228 | 8.570 | 0.265 | 59.483 |
| S.D.                            | 0.013 | 0.024 | 0.410 | 0.500 | 0.769 | 10.482 | 1.344 | 1.531 | 0.155 | 138.166 | 24.321 | 0.441 | 28.414 |

Notes:
- Correlations in lower half of matrix are for advertising and R&D intensities measured at the industry level ($N = 1043$). Correlations $> 0.049$ significant at $p < 0.05$.
- Correlations in upper half of matrix are for advertising and R&D intensities measured at the firm level ($N = 708$). Correlations $> 0.071$ significant at $p < 0.05$. 