CHAPTER 6

ENTRY MODE, SURVIVAL AND STABILITY: A STUDY OF JAPANESE MANUFACTURING SUBSIDIARIES IN FOUR ASEAN COUNTRIES

ABSTRACT

This study aims at examining the factors that affect the stability of multinational enterprises' foreign subsidiaries, particularly focusing on the impact of the selected entry mode. This paper provides a new contribution in the sense that it incorporates the concept of vertical keiretsu relationship into the study of entry mode. Based on the vertical keiretsu relationship between Japanese parents, a new entry mode classification is proposed. The results provide new evidence against the view that joint ventures, generally perform poorly. Both, wholly-owned subsidiaries and joint ventures formed by parents that have vertical keiretsu relationships show the highest rate of stability.

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Author: Pimonwan Mahujchariyawong, Yasuo Hoshino, Cristian Vega-Cespedes and Mizue Hoshino
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1. Introduction

The initial ownership structure (entry mode) used to go into international markets is considered by many scholars to have a great impact on the performance and stability of the multinational enterprises' subsidiaries. The ownership in a local entity usually reflects a parent firm's need for control over that subsidiary, as well as a parent firm's resource availability (Stopford and Wells, 1972). Based on the ownership structure of the subsidiary, entry mode is often classified into wholly-owned and joint venture, and joint venture is further divided into majority, balance-ownership and minority joint ventures.

With the above-mentioned classification, most empirical researches often restricted their studies to two-parent foreign subsidiaries. However, it is a well-known fact that many subsidiaries are indeed formed by more than two parents. Furthermore, in many cases, particularly in Japanese foreign direct investment (FDI), subsidiaries are established by parents that have some kind of interrelationship at the domestic boundary, i.e., they belong to the same vertical keiretsu. Very few studies have been concerned about the impact of the vertical keiretsu relationship between parties that form the ventures. The purpose of this paper is twofold. Firstly, it makes a comparison of the incidence of instability and divestment in each entry mode category, based on a classification that considers vertical keiretsu relations. And secondly, it attempts to determine the effect of entry mode on the probability of instability and divestment while controlling for other factors that affect the longevity of subsidiaries.

2. Theoretical Background

2.1. Japanese Business Community

Two types of relationship characterize the Japanese business community: 1) financial or horizontal keiretsu, and 2) enterprise or vertical keiretsu.

a) Horizontal keiretsu: Horizontal keiretsu or *kinyu keiretsu* consists of a large financial institution, called main bank, with numbers of firms operating in various sectors centered around it. There are six major groups: Mitsui, Mitsubishi, Sumitomo, Fuyo, Sanwa, and Daiichi Kangyo Bank. In general, each group has at least one bank and one general trading company, and diversifies group activities into various industries. There are close interactions between members, including *equity relationships* (reciprocal shareholding), in-group loans, in-group trading, management ties, and regular presidents' club meetings (Odagiri, 1992). First-tier members in each group are usually large manufacturing or service firms, which play key roles in major industries in Japan. Many of them have developed their own independent business network and also act as core firms in their vertical business groups.

b) Vertical keiretsu: Vertical keiretsu (Kimura and Pugel, 1995), also called hierarchical business group (Odagiri, 1992), consists of one core firm and subordinate firms which usually are affiliates of the core firm. In those long-term business relationships, the member firms have a high level of coordination in order to manage their non-financial resource flows to create a stable collective structure of coordinated action centered around the core or lead firm (Aoki, 1988; Gerlach, 1992; Odagiri, 1992). Companies that become a part of the keiretsu are primarily of two kinds: (1) companies that were part of the core firm and after separating from it continue in the keiretsu (Odagiri, 1992; Ito and Rose, 1994); and (2) companies that after having an increasing number of favorable transactions with the core firm voluntarily join the keiretsu (Banerji and Sambharya, 1998). Regarding the *equity relationships*, in some cases the subordinate firms are affiliated to the core firm by capital participation either total or partial, but that is not always the case; the interrelation between core and subordinate firms frequently exists in the absent of a capital investment. Personal ties are also strong because executives and other management staffs are sent from the core firm to subordinate firms (Odagiri, 1992).

As an alternative to internalizing all value-added activities in foreign markets to only one particular firm, it would be economic to transplant domestic relationships to the foreign countries, which are targeted locations for international production. Economies of scope can be fulfilled since member firms concentrate on their specialized activities and rely upon their distinctive competence. Keiretsu members have benefits from exploiting their firm-specific and keiretsu-specific advantages, and simultaneously accessing to strategic resources, that can be lack in a domestic boundary but that can be available in a foreign country. The behavior on FDI of Japanese MNEs has evidently reflected the internationalization process of domestic relationships. When a core Japanese firm established a value-added activity in a specific region overseas, subordinate firms followed to establish their own value-added activities to supply critical/specialized resources. However, some affiliates are small and medium enterprises (SMEs), which lack the resources required for international expansion. In those cases, the core firm often assists in several forms including partnering with the subordinate firm, in the establishing of a joint venture subsidiary in that region.

2.2. Conventional entry mode classification

As previously mentioned most empirical studies on joint ventures have restricted themselves to two parent subsidiaries, when in fact many subsidiaries are formed by more than two parents. The study of Makino and Beamish (1998) developed a special joint venture ownership classification scheme taking into account the existence of multiple-parents joint ventures. They based those non-conventional forms of joint ventures on two measures: nationality ratio and equity affiliation ratio. Those concepts are explained below from a Japanese perspective.

The nationality ratio is the percentage of the joint venture's equity possessed by partners with the same nationality, that could be Japanese (home-country), host-country

(based in the country where the Joint Venture is located), and third-country (those whose national origin is neither Japan nor the host-country). This perspective assumes nationality on the basis of the ultimate country of origin, not on the base of country of operation. To overcome difficulties in defining parent nationality, especially when a parent firm is a subsidiary of another firm, three criteria are applied (Beamish, Delios & Lecraw, 1997). When the joint venture parent is an independent firm, the nationality is the same as the parent's country of origin. When the joint venture parent is a subsidiary of another firm, the nationality is the country of origin of the joint venture parent's parent. And, when the joint venture parent is a joint venture between at least two other firms, the nationality is the country of origin of the parent that possesses the largest equity share. Once the nationality has been defined, the relationship among the Japanese partners should be taken into account.

The affiliation ratio is the percentage of the joint venture's equity possessed by the largest single partner or group of affiliated Japanese partners in the joint venture. Partners are considered to be affiliated when there is an *equity relationship* among parent firms (emphasis added). That determination was based on traditional accounting rules. In conventional accounting principles, firms are considered to be affiliated when one firm owns between 20 percent and 50 percent of the other. When one firm owns more than 50 percent of another, the former is considered as parent firm of the latter, and the latter as a subsidiary of the former. When equity ownership is under 20 percent, the investment is called a *portfolio investment*.

Based on those parameters, four joint venture types are identified. 1) *Intrafirm joint venture*; if the percentage of equity owned by a group of affiliated Japanese firms is greater than 95 percent, i.e., both the nationality and affiliation ratios of Japanese firms are at least 95 percent. 2) *Cross-national domestic joint ventures*; those are joint ventures formed by unaffiliated Japanese firms, i.e., the nationality ratio of Japanese

partners is at least 95 percent, but the affiliation ratio is less than 95 percent. 3) *Traditional international joint ventures*; joint ventures formed between Japanese and host-country firms, i.e., the nationality ratio of Japanese partners is less than 95 percent, and there are not third-country partners. 4) *Trinational international joint ventures*; joint ventures formed between Japanese partner(s) and partners from a third country. Beamish, Delios and Lecraw (1997) found that trinational international joint ventures were formed almost exclusively in Asia. In this form of joint venture, Japanese firms partnered with European or North American firms upon entry to Asia. In entries in North America and Europe, Japanese firms generally partnered with other Japanese firms or host-country firms (Beamish, Delios and Lecraw, 1997).
Nevertheless, there appears to be a number of joint ventures with multiple parents that are not affiliated by an *equity relationship* (horizontal keiretsu), but whose affiliated-liked relationship is based on close transactions (vertical keiretsu).

2.3. Proposed entry mode classifications

This paper continues with the idea that joint ventures should be classified according to the relationship that exists among the parent firms, but it approaches such classification from a vertical keiretsu perspective rather than from an equity relationship perspective. Additionally, this paper will not limit its attention to the sub-classifications of joint ventures, but it will also consider wholly-owned subsidiaries. Taking into consideration these two points, and based on the ownership structure at the time of entry reported in Kaigai Shinshutsu Kigyo Souran, two different entry mode classifications are proposed.

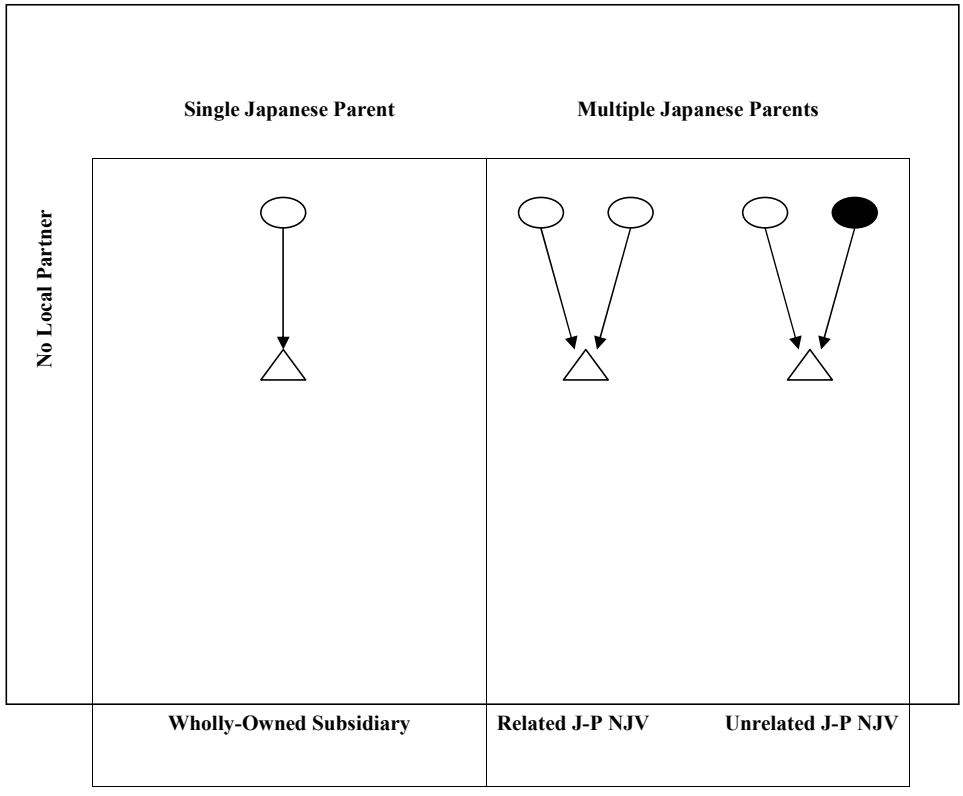
In *Classification 1*, depending on the presence of a local (host-country) partner and the existence of multiple Japanese parents, entry mode was classified into three types as follows. (1) wholly-owned subsidiary (WOS): there is no local partner; (2) national

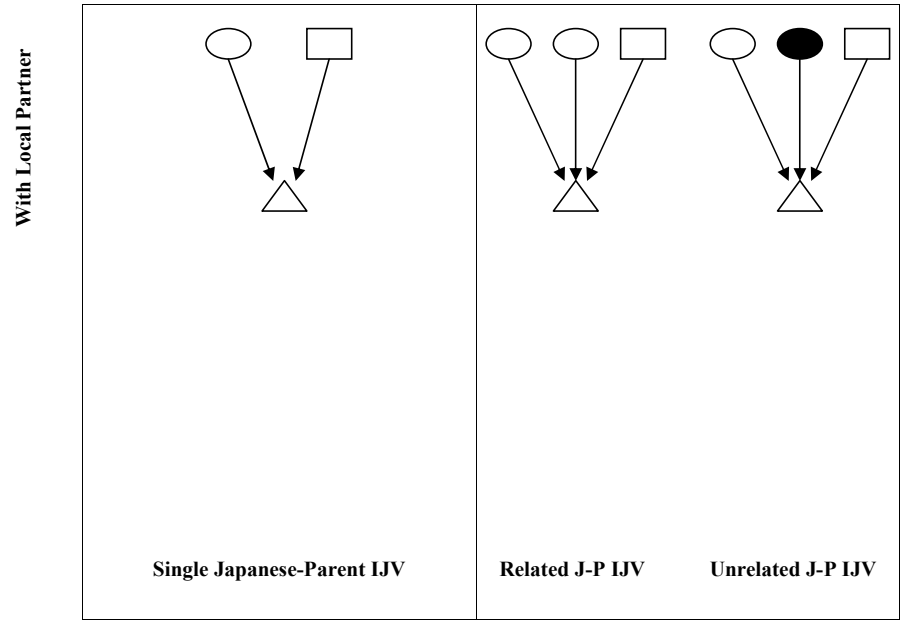
joint ventures (NJV): none of the parents is of local origin; and (3) international joint ventures (IJV): there is at least one local parent.

For *Classification 2*, depending on the presence of a local partner, the existence of multiple Japanese parents and on whether the Japanese parents have a vertical keiretsu relationship, this study classifies entry mode into six types as follows: (1) *wholly-owned subsidiaries*; (2) *related Japanese-parents national joint ventures*: joint venture formed by at least two Japanese parents that belong to the same vertical keiretsu. This is an equivalent to the Intrafirm joint ventures; (3) *unrelated Japanese-parents national joint venture*; joint ventures formed by at least two Japanese parents, but that do not belong to the same vertical keiretsu. This is an equivalent to the cross-national joint ventures; (4) *single Japanese-parent international joint venture*: joint venture formed by single Japanese parent and a local partner(s); (5) *related Japanese-parents international joint venture*: joint venture formed by at least two Japanese parents belonging to the same vertical keiretsu plus a local partner(s); (6) *unrelated Japanese-parents international joint venture*: joint venture formed by at least two Japanese parents that do not belong to the same vertical keiretsu plus a local partner(s).

To determine whether the Japanese parents of the joint ventures had a vertical keiretsu relationship, *Kigyo Keiretsu Souran* was used in the case of the listed Japanese firms. *Nihon No Kigyo Gurupu* and *Nikkei Kaisha Souran: Mijoujou* were used in the case of the unlisted ones.

Figure 1: Entry mode in consideration of vertical keiretsu





is a Japanese related parent, ● is an unrelated Japanese parent, □ is a local partner, and △ is a local subsidiary.

2.4. Stability of Foreign Operations

The extensive international expansion in the past few decades has been followed by a large number of evidence of organizational instabilities in MNEs' overseas subsidiaries. Instability in foreign operation refers to structural rearrangement in ownership structures (including partial sales) and foreign divestments. Boddewyn (1979) has defined foreign divestment as the deliberate and voluntary liquidation or sale (of the complete or of a major part) of an active foreign operation. According to Li's study (1995), foreign firms can exit/divest through (1) bankrupcy and liquidation, (2) closure and (3) divestiture (e.g. acquisition by other firms). The motive of divestment can be

either internal factors, i.e. poor performance, poor feasibility analysis, lack or loss of strategic resources and capabilities; or external factors such as better alternative prospects, change in economic conditions or government policies.
Building a production operation in a foreign country is part of the overall strategies of a particular MNE. Since international operation requires huge resources, a firm that engages in FDI should expect a reasonable benefit from this activity in a long-term basis. The adjustment actions, either by foreign divestment or structural rearrangement, inevitably create damage to an investing firm.

2.5. Entry mode effect on stability

Literature on entry modes and stability of foreign affiliates have usually found that joint ventures are more likely to be divested than wholly-owned subsidiaries, and that subsidiaries established through acquisitions are more likely to be divested than greenfield-established subsidiaries (Pennings *et al*., 1994; Li, 1995; Benito, 1997; Yamawaki, 1997; Hennart *et al*., 1998). The study of Makino and Beamish (1998) examined the survival of several non-conventional forms of joint ventures (see section 2.2.). They found that the termination rates of intrafirm joint ventures and cross-national domestic joint ventures were significantly lower than those of international joint ventures with local firms or with third country-based firms. Yet, they did not make a comparison with wholly-owned subsidiaries.

3. Hypothesis Development

Japanese industry has developed on the ground of keiretsu organizations, with long term and lasting relationships between the transacting parties in the business exchange process. Interfirm relationship is developed under the exchange process, in which the

parties transfer business transaction, social action, and information between each other. Johanson and Mattsson (1987) have mentioned that a continuous exchange process did not only lead to a learning process but also to an adaptation process. Adaptations among firms take place in different kinds of action including the modification in production or business processes, the cooperation in research and development or other investment activities, the interfirm transfer of personal knowledge or skills, and so forth. This leads to the higher asset specificity across the parties that causes switching to another party to become a substantial cost to the member firms. Repeated exchange process between the members in the vertical keiretsu, hence, develops a high level of interfirm trust and interdependency that creates mutual orientation across distinct but related firms (Johanson and Mattsson, 1987). This kind of *interfirm* relationship eventually comes close to the process of *intrafirm* industrial activities. The trust and dependency between firms in the same keiretsu can keep transaction costs to a minimum, probably approaching the case of internalization. This leads to the first hypothesis.

Hypothesis 1: The probability of instability will not present a significant difference between wholly-owned subsidiaries (category 1 of classification 2) and related Japanese-parent national joint ventures (category 2 of classification 2).

The existence of a number of individual firms sharing management authority and control over one affiliate can incur additional transaction costs. Those transaction costs can be created by the actions necessary to exercise contracts between partnering parties, the control and cooperation process, the communication process, and so forth. Trust and shared benefits between partners are very significant inputs for lasting fruitful relationship. However, long lasting of trust and mutual benefits is hard to guarantee when the parties are external and independent, i.e., they do not came from the same keiretsu. Although a joint venture with external parties facilitate access to the strategic resources that an individual firm or a particular keiretsu could lack, it incorporates

higher transaction costs if compared to a wholly-owned subsidiary or to a joint venture between firms from the same keiretsu. Joint ventures involving unrelated parties may be troubled not only by cultural difference among partners, but also by difficulties in sharing proprietary assets (Li, 1995). This leads to the second hypothesis.

Hypothesis 2: The probability of instability of wholly-owned affiliates and related Japanese-parents national joint ventures (categories 1 and 2 of classification 2) will be lower than that of the unrelated Japanese-parent national joint ventures and any type of international joint ventures (categories 3 through 6 of classification 2).

In the cases of joint ventures with external parties, partners can be other Japanese firms or local firms in the host country. There might also exist international joint ventures with firms from third countries, but their number is considerably small. Joint ventures with local partners have the benefit of providing access to the local market and to the resources specific to the individual firms of the host country. Joint ventures with firms from a different keiretsu have the benefit of allowing linkage to some strategic resources necessary for international expansion, either financial or non-financial, such as international marketing or management capabilities. Whatever type, joint ventures with external parties are subject to the risk of instability. The unrelated partners from Japan may differ in their corporate goals and strategies in domestic markets, or they may be competitors, what forces them to focus more on the corporate orientation as a whole rather than on a specific investment opportunity. In the case of joint ventures with local partners, the difference in their original markets can reduce the probability of corporate goals conflict between the foreign and local parents. Further, when MNEs invest in a less developed host country (like those in the sample), they usually possess strong bargaining power against the local parties. That is why in joint ventures under such circumstance, local firms with lower level of competence or proprietary assets (i.e. product differentiation, technological knowledge, and production know-how) will depend on foreign firms with superior firm-specific advantages. Resource dependency

will reduces opportunistic behaviors as well as incentives to switch to another party, due to the fear of losing the relationship with those foreign firms. This leads to the third hypothesis.

Hypothesis 3: The probability of instability of single Japanese-parent international joint venture and related Japanese-parent international joint ventures (categories 4 and 5 of classification 2), will be lower than that of the unrelated Japanese-parents national joint ventures and unrelated Japanese-parents international joint ventures (categories 3 and 6 of classification 2), i.e., those with a parent from a different keiretsu.

To analyze the keiretsu environment, it is important to note that each keiretsu has keiretsu specific advantages. Members of a keiretsu can exploit those advantages through the linkage to the specific advantages of a core firm as well as the specific advantages of the other members of the keiretsu. In many keiretsu, the core firm is generally a large firm with high-level of firm-specific advantages. On one hand, the core firm depends on subordinate firms for critical resources, which may be the basic components of proprietary assets for the core firm. On the other hand, via the linkage to the core firm, various resources can be transferred to the subordinate firm in the form of either financial resources or intangible assets, such as technological or managerial expertise. Those resources principally become the source of advantages for subordinate firms, many of which are small and medium size. Long-term interfirm relationship not only improve the internal knowledge and capabilities which strengthen the distinctive competence of an individual firm, but also retain a firm competitiveness in the sector where it operates. The interfirm linkage can create a bond and interdependence between the transacting parties, that promotes the pooling of resources (Pfeffer and Nowak, 1976) and the efforts to assure the performance of all members in the same keiretsu. As a result, the following hypothesis is postulated.

Hypothesis 4: The probability of instability will be higher for affiliates whose parents are not members of a major vertical keiretsu groups.

4. Methodology

4.1. The Proportional Hazards Model

The empirical analysis is aimed at determining how the probability of instability depends on several explanatory variables. The analysis applied an event history method, based on a longitudinal record of when events happened to a sample of individuals. Two central concepts in event history analysis are the risk set and the hazard rate. The risk set is the set of individuals who are at risk of event occurrence at each point of time. The hazard rate is the probability that an event will occur at a particular time to a particular individual, given that the individual was at risk at that time. The hazard rate over the period from t to t+s can be expressed as:

$$h(t) = \lim P(t, t+s)/s \qquad s \rightarrow 0$$

Cox's proportional hazard model allows the incorporation of the hazard function into the regression modeling approach, using the proportion of the events occurring at a particular point of time as the dependent variable (Allison, 1984; Hutchison, 1988; Hosmer and Lemeshow, 1999). A *status* variable is used to denote whether the event happened. The proportional hazard model may be written as:

$$h(t) = [h_0(t)]\exp(\beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_p X_p)$$

Where h(t) or death rate at time t tells how likely to experience an event a case is, given that it has survived to that time. For the terminated cases, the actual *survival time* is recorded. For the cases that survive at the end of the study, the survival time indicates the length of follow-up (which is an incomplete observation of the survival time). These incomplete observations are referred to as being censored.

The model is factored into two components. The first, designated as $h_o(t)$ in the equation is called the baseline hazard and it does not depend on the independent variable; it depends only on time. The baseline hazard is similar to the constant term in multiple regression as it is the reference value that is increased or decreased depending on the values of the independent variables and their relationship with the dependent variable. The second part of the equation, the term designated $\exp(\beta_1X_1+\beta_2X_2+\ldots+\beta_pX_p)$ depends not on time but on the value of the *independent variables* Xs and on the value of the regression coefficient βs. The model is called the proportional hazards because for any two individuals at any point in time, the ratio of their hazards is a constant (Allison, 1984).

As a measure of goodness of fit (predictive value), the chi-square statistic for the difference of log-likelihoods is included. The chi-square reported is the difference between –2 times the log-likelihood values for the intercept only (baseline) model and the final model (with the independent variables). A significant chi-square statistic indicates that the model gives a significant improvement over the baseline intercept-only model.

4.2. Information sources

The list of information sources for this research is as follow:

a) *Japanese Overseas Investment: Listed by Countries, 1987-1999* (Kaigai Shinshutsu Kigyou Souran: Kuni Betsu). This report, prepared by Toyo Keizai, covers Japanese overseas investments undertaken by Japanese firms listed on the Japanese Stock Exchange (Tokyo, Osaka and Nagoya), as well as other major unlisted Japanese firms. The information in this report has been compiled from public available information and a survey of the top Japanese manager of each foreign subsidiary as of the end of the previous fiscal period. The subsidiaries are listed by geographical location.

b) *Japan's Company Groups, 1995* (Nihon no Kigyou Gurupu). This report includes all listed and major unlisted Japanese firms with a list of the subsidiaries of each company.

c) *Company keiretsu, 1995* (Kigyou Keiretsu Souran). This report includes the ranking of the top 20 shareholders, a list of the main commercial-transactions partners (buyer-supplier relations), and the company of origin of the director board members, by every listed and major unlisted Japanese firms.

d) *Nikkei Annual Corporation Reports: Unlisted Companies, 1995* (Nikkei Kaisha Nenkan: Mijoujou). This report includes financial information of unlisted companies, as well as general information such as number of employees, keiretsu relations, etc.

e) *Directory of Japanese-Affiliated companies in Asia*, second, third and fourth editions (1990-91, 1994-95 and 1998-99 respectively): this report, prepared by JETRO, includes Japanese subsidiaries in Asia, and it gives their address, date of establishment, name of the manager, etc.

4.3. Sample

The appreciation of the Yen since 1985 was follow by the transplant of Japanese production bases to lower cost countries, among them, the following four ASEAN countries: Indonesia, Malaysia, Philippines and Thailand (in 1995, there were 2897 Japanese foreign subsidiaries operating in those four ASEAN countries). These four countries were on the top ranks of Japanese investment recipients in the world, with Thailand at the fourth, Malaysia at the eighth, Indonesia at the eleventh and Philippines at the seventeenth. However, aggregately, they were the second largest Japanese investment recipients in the world following the U.S. (Toyo Keizai, 1996). This study focuses on the Japanese manufacturing affiliates established in those four ASEAN countries from 1986 to 1994.

A total of 827 manufacturing subsidiaries were established in these four ASEAN countries by Japanese firms from 1986 to 1994. Out of those, 98 affiliates were

divested and 144 experienced rearrangement of contracts, whereas 585 survive without any rearrangement until the end of 1998 (see Table 1).

Table 1: Entry year and instability of the subsidiaries in the sample

	Instability											NO	Total
Entry	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Total**	**Change**	**Entry**
1986			1		2				1		4	16	24
					2	1				1	4		
1987					1	1	3			1	6	37	54
					1	1	2	1		6	11		
1988	1		4	3	3	2	3	3	1	3	23	98	147
				7	1	2	3	5	3	5	26		
1989			2		2	3	4	4	6	4	25	97	151
			2	2	5	2	1	2	7	8	29		
1990				1	1	3	4	2	4	4	19	112	156
				2	3	4	5	3	3	5	25		

1991					1	2	3		2	2	10	80	112
				1		1	5	5	4	6	22		
1992								1	2	2	5	52	72
						2	1	3	4	5	15		
1993									1	2	3	34	44
							1		2	4	7		
1994								1	1	1	3	59	67
								1		4	5		
Total	1		7	4	10	11	17	11	18	19	98		
Total			2	12	12	13	18	20	23	44	144	585	827

Note: The upper row in each year shows the number of divested subsidiaries, while the lower row shows the number of subsidiaries that suffered rearrangement of contract.

The unavailability of data for explanatory variables resulted in our sample of 806 subsidiaries established by 519 Japanese parents. Of those, 229 experienced instability, and out of them, 91 were divested. Table 2 shows the classification of instability and number of cases that experienced those conditions. The distribution of the number of

subsidiaries by country is as follows: Thailand 345, Malaysia 250, Indonesia 151 and Philippines 60.

Table 2: Patterns of instability and number of cases in each pattern

Patterns of Instability	No. of Cases
1. Divestment	91
2. Rearrangement	
a. Localization (Local partner owns at least 90 percent of shares)	4
b. Selloff by Japanese parent (to existing partners)	35
c. Selloff by local parent (to existing partners)	52
d. Add new Japanese partner(s)	27
e. Add (new) local partner(s)	8
f. Change Japanese partner(s)	6
g. Change from Japanese partner(s) to local partner(s)	1
h. Change from local partner(s) to Japanese partner(s)	2
i. Reposition of main parent	3
Total rearrangement	138
Total Instability	229

Data source: Based on Kaigai Shinshutsu Kigyo Souran, editions from 1987 to 1999.

4.4. Status and time variables

The dependent variables incorporate the status for instability and survival time. This data is derived from the Kaigai Shinshutsu Kigyo Souran. The status variable is a categorical variable, with value *one* if the subsidiary has suffered instability, or *zero* otherwise.

I*nstability* has been examined from two perspectives: 1) the probability of instability, in general, and; 2) the probability of divestment. 1) The instability of a subsidiary, in general, involves either the cases when a subsidiary was divested, or when it experienced rearrangement of contract. Rearrangement of contract takes place when a Japanese or a local parent sells their stakes to others, either Japanese or local parties, and that bring about a change in the ownership structure of that subsidiary. From the census of affiliates entering into the four ASEAN countries from 1986 to 1994, any change in their ownership structures was observed in consecutive editions since 1987 to 1999, to determine when, and by what pattern a rearrangement has occurred. 2) As for divestment, an affiliate is considered as divested if its exit was reported in the annual list of exits or if its record disappeared from Kaigai Shishutsu Kigyo Souran. All identified exits were cross-checked with the Directory of Japanese-Affiliated companies in Asia.

The *survival time* is recorded in years from establishment to the moment when instability was observed for the cases experiencing rearrangement or divestments, or to the end of 1998 for censored cases.

4.5. Independent variables

1) Entry mode: The data for entry mode is derived from the Kaigai Shinshutsu Kigyo Souran. It is a categorical variable indicating the category of entry mode. Two different entry mode classifications were employed, as stated in the theoretical background.

2) *Country*: To determine whether there is any special condition in each of the four entered ASEAN countries that is affecting the subsidiaries' probabilities of instability and divestment, the country where the subsidiary is located was included in the analysis as a categorical variable. No prediction is made about the direction of the effect (sign) of this variable on the probabilities of instability and divestment.

3) *Linkage to specific advantages*: A Japanese subsidiary is considered to possess a linkage to specific advantages if its Japanese parents are members of any major vertical keiretsu. It is recorded as a categorical variable with value one is the membership exits and zero otherwise. A list of the forty mayor vertical keiretsu is presented in Table 3. This variable is expected to have a negative impact (negative sign) on the probability of divestment and instability, i.e., subsidiaries which parents are members of a mayor vertical keiretsu would be less likely to experience instability.

Table 3: The forty major vertical keiretsu groups

1. Asahi Chemical Industry	15. Kirin Brewery	28. Nissan Motor
2. Asahi Glass	16. Kubota	29. NKK
3. Bridgestone	17. Matsushita Electric Industrial	30. NTT
4. Canon	18. Mitsui Trading Co.	31. Orix
5. Daiei	19. Mitsui Fudosan	32. Sekisui Chemical
6. Fujitsu	20. Mitsubishi Chemical	33. Sony
7. Fuji Photo Film	21. Mitsubishi Electric	34. Sumitomo Heavy Industries
8. Hitachi	22. Mitsubishi Heavy Industries	35. Taisei Construction
9. Honda Motor	23. Mitsubishi Materials	36. Takeda Chemical Industries
10. Ito-yokado	24. Mitsubishi Trading Co.	37. Tokyo Electric Power
11. Japan Paper Industry	25. NEC	38. Toray
12. Japan Railways (JR)	26. Nippon Oil	39. Toshiba
13. Japan Tobacco (JT)	27. Nippon Steel	40. Toyota Motor
14. KAO		

Source: Kigyou Keiretsu Souran, 1995*4) Diversification*:

When a firm expands the business to different product areas, it usually faces uncertainties of unfamiliar market conditions, and unfamiliar products and technology (Caves, 1982). Diversification into unrelated product areas can have a negative impact on the survival rate of foreign affiliates (Pennings *et al*., 1994; Li, 1995; Yamawaki, 1997; Hennart *et al*., 1998). The dummy variable for diversification takes a value of *one* when the products of an affiliate were different from the 4-digit industry classification level of its main Japanese parent; namely, the Japanese firm that holds the

largest share in the affiliate. This variable is expected to have a positive impact (positive sign) on the probability of instability and divestment, i.e., subsidiaries which products are different from those of the parent companies would be more likely to experience instability.

5) Degree of control: The degree of control in a local affiliate usually reflects resource commitment by the foreign parents in that affiliate (Caves, 1982). The level of resource transfer, particularly the transfer of intangible assets, and even emotional attachment to a local affiliate would be lower if the foreign parent holds a minority control in the affiliate. This could make foreign parents feel less reluctant to divest in local affiliates in which they hold minority control. The dummy variable for minority control is used to capture subsidiaries in which local parents hold a dominant control. It takes value one when the Japanese parent holds a minority position, and zero otherwise. This variable is expected to have a positive sing, i.e., subsidiaries in which the Japanese parent holds a minority position would be more likely to experience instability.

6) Subsidiary's size: The size of an affiliate may also affect the decision of the foreign parent on divestment or rearrangement of ownership structure in that affiliate. The capital investment in durable tangible assets represents a sunk cost, that becomes one of the main barriers to exit (Shepherd, 1979). Therefore, foreign parents will be less reluctant to divest in local affiliates that are comparatively small. The dummy variable for subsidiary size takes a value of one for subsidiaries with less than 100 employees. This variable is expected to have a positive sing, i.e., small subsidiaries would be more likely to experience instability.

7) Parent's size: The parent firm size may have an impact on the performance of the foreign affiliates. While some studies (Pennings et al., 1994; Li, 1995) found that larger-sized firms were more likely to survive, the study of Hennart et al. (1998) found that larger firms were more likely to sell off their stakes in foreign affiliates. Nevertheless, large firms usually possess specific advantages that can lead to their success in the market they serve. Also, large firms have strong asset power, helping

them bear against periods of unsatisfactory performance or economic downturn such as the Asian financial crisis of 1997. The parent firm size is measured by the number of employees of the main Japanese parent at the time of entry. This variable is expected to have a negative sign, i.e., subsidiaries of *big* parents would be less likely to experience instability.

5. Results

5.1. Pair-wise comparison of modes

A *Mann-Whitney Rank-Sum test* was used to compare pairs of modes against one another. This test is a non-parametric test based on comparing the rank sums of two groups. With just two categories, it tests if two independent samples follow the same distribution (i.e., they have been drawn from the same population or from two different populations having the same distribution), without making any reference to the means. The null hypothesis would be Ho: $p = 0.5$, i.e., there is no difference between the two modes. Failing in rejecting the null hypothesis would mean that the two compared categories have the same distribution, and consequently that they tend to generate the same amount of instability cases.

The results of the test between each paired group of entry mode in *Classification 2* are as follows. There is no statistically significant difference between *wholly-owned subsidiaries* and *related Japanese-parents national joint ventures* neither for instability nor for divestments. That is, they tend to generate the same amount of cases in both categories, what supports Hypothesis 1.

Both *wholly-owned subsidiaries* and *related Japanese-parents national joint ventures* are significantly different from all the other categories of the classification in the case of instability, i.e., they tend to generate a smaller amount of cases with instability problems. As for divestments, *wholly-owned subsidiaries* and *related Japanese-parents*

national joint ventures are significantly different from all the other categories, with exception of *related Japanese-parents international joint ventures*; they tend to generate the smaller amount of divestment cases. The fact that *related Japanese-parents international joint ventures* do not differ significantly from *wholly-owned subsidiaries* and *related Japanese-parents national joint ventures* in the divestments case, indicates that the majority of the instability cases in this category consists of rearrangements of contract. It is concluded, then, that Hypothesis 2 is supported for the instability case, and partly supported for the divestment case.

Regarding Hypothesis 3, the *single Japanese-parent international joint venture* and *related Japanese-parent international joint venture* categories tend to produce a smaller amount of instability cases, compared to the *unrelated Japanese-parent national joint venture* and *unrelated Japanese-parents international joint venture* categories. The difference is significant in all the cases, with exception of *single Japanese-parent international joint venture* versus *unrelated Japanese-parent national joint venture*. However, the four categories tend to produce the same amount of divestments, with the difference being significant only for *related Japanese-parent international joint venture* versus *unrelated Japanese-parent national joint venture*. Those findings support Hypothesis 3 for the case of instability, but do not support it for the case of divestments.

Table 4: Cases of instability and divestments by entry mode category

	Instability			**Divestment**		
	No-instability	**Instability**	**Total**	**No-divestment**	**Divestment**	**Total**

Wholly-owned	207	22	229	218	11	229
Subsidiaries	**(90.4%)**	**(9.6%)**	**(100.0%)**	**(95.2%)**	**(4.8%)**	**(100.0%)**
Related J-P National	43	6	49	48	1	49
Joint Ventures	**(87.8%)**	**(12.2%)**	**(100.0%)**	**(98.0%)**	**(2.0%)**	**(100.0%)**
Unrelated J-P National	28	25	53	46	7	53
Joint Venture	**(52.8%)**	**(47.2%)**	**(100.0%)**	**(86.8%)**	**(13.2%)**	**(100.0%)**
Single J-P International	146	80	228	189	37	226
Joint Ventures	**(64.6%)**	**(35.4%)**	**(100.0%)**	**(83.6%)**	**(16.4%)**	**(100.0%)**
Related J-P International	83	34	117	110	7	117
Joint Ventures	**(70.9%)**	**(29.1%)**	**(100.0%)**	**(94.0%)**	**(6.0%)**	**(100.0%)**
Unrelated J-P Internl Joint Ventures	70	62	132	104	28	132
	(53.0%)	**(47.0%)**	**(100.0%)**	**(78.8%)**	**(21.2%)**	**(100.0%)**
TOTAL	557	229	806	715	91	806

Table 5: Results of the Mann-Whitney test

INSTABILITY						
	Wholly-owned Subsidiaries	**Related J-P National Joint Ventures**	**Unrelated J-P National Joint Ventures**	**Single J-P International Joint Ventures**	**Related J-P International Joint Ventures**	**Unrelated J-P International Joint Ventures**
Wholly-owned Subsidiaries						
Related J-P National Joint Ventures	5462.5					
Unrelated J-P National Joint Ventures	3739.5 ***	822.5 ***				
Single J-P International Joint Ventures	19159.0 ***	4235.0 ***	5166.0			

Related J-P International Joint Ventures	10686.0 ***	2337.0 **	2607.5 **	12693.0		
Unrelated J-P International Joint Ventures	9456.0 ***	2106.0 ***	3353.5	13286.0 **	6644.5 **	
DIVESTMENTS						
	Wholly-owned Subsidiaries	**Related J-P National Joint Ventures**	**Unrelated J-P National Joint Ventures**	**Single J-P International Joint Ventures**	**Related J-P International Joint Ventures**	**Unrelated J-P International Joint Ventures**
Wholly-owned Subsidiaries						
Related J-P National Joint Ventures	5455.5					
Unrelated J-P						

National Joint Ventures	5558.5 **	1153.5 **				
Single J-P International Joint Ventures	22883.5 ***	4743.5 ***	5799.5			
Related J-P International Joint Ventures	13238.5	2753.5	2876.5	11847.5 ***		
Unrelated J-P International Joint Ventures	12634.0 ***	2614.0 ***	3218.0	14194.0	6546.0 ***	

5.2. Cox regression

When a categorical variable is used in regression, the coefficient of each category represents the effect of that category compared to a reference category. The coefficient for the reference category is zero and its choice is arbitrary.

Model 1: Model 1 uses the proposed entry mode *Classification 1*. For the purpose of this model, the selected reference category is *international joint ventures*. In this case, the coefficient for *wholly-owned subsidiaries* represents the change in the probability of instability or divestment when the used entry mode was *wholly-owned* compared to the use of *international joint venture* entry mode. Similarly, the coefficient for *national joint ventures* is the change in the probability of instability or divestment when the used entry mode was *national joint venture* compared to *international joint venture*. The

coefficient for *international joint venture* is necessarily zero, since it does not differ from itself. In the case of divestment, the coefficients of both *wholly-owned subsidiaries* and *national joint ventures* are significant and with negative sign. That means that using those two entry mode categories instead of *international joint venture* have a significant negative impact on the probability of divestment. In the case of instability, the coefficients follow the same pattern but only *wholly-owned subsidiaries* is significant.

Model 2: Model 2 uses the proposed entry mode *Classification 2*. The interpretation of the coefficients in this case follows the same rationale explained above, but in this case, all the categories are compared with *unrelated international joint ventures*, which serves as the reference category. In both instability and diversification, all categories show a negative sign, that means that using any kind of entry mode instead of *unrelated international joint ventures* will have a negative impact on the probabilities of instability and divestment. Model 2 shows a statistical improvement in the goodness-of-fit. The partial likelihood ratio tests for the difference between two models yield values of 17.52 for the case of divestment and 24.74 for the case of instability, which are significant at the 10% and 1% levels respectively. This suggests that the entry mode *Classification 2* can better explain the relationship between entry mode and instability.

Model 3: In the full model with control variables, the coefficients for the categories of entry mode show similar directions as in Model 2. None of the categories of the variable *country* is significant, that means that there is no special country-related condition in any of the four entered ASEAN countries that is affecting the subsidiaries' probabilities of instability and divestment. The *linkage to specific advantages* of the Japanese parents seems to have no impact on the stability of the affiliates. This finding does not support Hypothesis 4. The subsidiaries whose product areas are different from those of their main parents (*diversification*) are significantly more likely to experience divestment or rearrangement in ownership structures. The fact that the Japanese parent holds a minority *degree of control* over the subsidiaries has no significant impact on

stability of the subsidiaries, or on the probability of divestment. As for the *subsidiary's size*, small subsidiaries are more likely to be divested and more likely to experience rearrangement in their ownership structures. The size of main Japanese parent (*parent's size*) has a significant negative impact on the probability of divestment and instability. This implies that the larger Japanese parents have lowest likelihood of divesting their foreign subsidiaries, as well as of rearranging their ownership structures.

Table 6: Proportional hazards regression model for divestment and instability

	Model 1		Model 2		Model 3	
	Instability	**Divestment**	**Instability**	**Divestment**	**Instability**	**Divestment**
ENTRY MODE 1						
Wholly-owned	-1.497***	-1.196***	-	-	-	-
Subsidiaries	(43.808)	(13.634)				
National Joint	-0.239	-0.721*	-	-	-	-
Ventures	(1.508	(3.738)				
International Joint Ventures	0	0	-	-	-	-

ENTRY MODE 2						
Wholly-owned			-1.844***	-1.607***	-1.489***	-0.920**
Subsidiaries			(55.095)	(20.369)	(30.802)	(5.421)
Related J-P National	-	-	-1.589***	-2.475**	-1.238***	-1.820*
Joint Ventures			(13.798)	(5.912)	(7.972)	(3.114)
Unrelated J-P National	-	-	-0.049	-0.614	-0.084	-0.320
Joint Venture			(0.043)	(2.111)	(0.109)	(0.516)
Single J-P International	-	-	-0.435**	-0.368	-0.178	-0.105
Joint Ventures			(6.598)	(2.148)	(0.999)	(0.151)
Related J-P International	-	-	-0.617***	-1.354***	-0.339	-0.974***
Joint Ventures			(8.360)	(10.268)	(2.376)	(5.093)
Unrelated J-P Internl Joint Ventures	-	-	0	0	0	0

COUNTRY						
Thailand	-	-	-	-	0.254	0.404
					(0.746)	(0.673)
Malaysia	-	-	-	-	0.315	0.737
					(1.098)	(2.252)
Indonesia	-	-	-	-	0.137	0.506
					(0.179)	(0.891)
Philippines	-	-	-	-	0	0
OTHER VARIABLES						
Linkage to advantages					-0.025	0.227
(membership = 1)					(0.030)	(0.913)
Diversification	-	-	-	-	0.935***	1.167***
(diversification = 1)					(39.712)	(25.890)

Degree of control	-	-	-	-	-0.130	0.376
(minority = 1)					(0.521)	(2.090)
Subsidiary's size	-	-	-	-	0.265*	0.713***
(small = 1)					(3.433)	(10.274)
Parent's size	-	-	-	-	-1.70E-05*	-3.13E-05*
					(3.771)	(2.606)
-2 Log Likelihood	2819.41	1139.04	2794.67	1121.52	2743.44	1067.03
Chi-square	63.351***	19.636***	88.087***	37.155***	139.322***	91.645***
No. of Cases	806	806	806	806	806	806
Events	229	91	229	91	229	91

Notes: *significant at the 10% level, **significant at the 5% level, * significant at the 1% level**

Wald-statistics in parenthesis

6. Discussion and Conclusion

This study provides new evidence regarding the instability of foreign subsidiaries with different entry modes. Firstly, the instability of *wholly-owned subsidiaries* is similar to that of joint ventures formed by Japanese parent firms that have a keiretsu relationship

(related *Japanese-parent national joint ventures*). *Wholly-owned subsidiaries* and *related Japanese-parent national joint ventures* appear to have more stability than other types of joint ventures, while *related Japanese-parent international joint ventures* incline to have more stability than both *unrelated Japanese-parent national joint ventures* and *unrelated Japanese-parent international joint ventures*. Secondly, comparing the rate of divestment, there is no difference among *wholly-owned subsidiaries*, *related Japanese-parent national joint ventures*, and *related Japanese-parent international joint ventures*. *Wholly-owned subsidiaries* and *related Japanese-parent national joint ventures* are less likely to be divested than *unrelated Japanese-parent national joint ventures*, *single Japanese-parent international joint ventures* and *unrelated Japanese-parent joint ventures*, while *related Japanese-parent international joint ventures* are significantly less likely to be divested than the other two types of international joint ventures.

A major implication of this study is the fact that poor performance in joint ventures is not due to their condition of joint venture itself. The view that joint ventures are generally poor performed has been rejected under the evidence from this study. Indeed, the benefit of joint venture formation can lead to a synergy effect as long as the partners share common goals and benefits, and the need for partners are realized by both sides. In the situation where transaction costs of collaborative arrangement can be minimized or eliminated, the benefit of joint venture can be efficiently fulfilled. The managerial issue that challenges MNEs that employ the joint venture mode, is how to minimize transaction costs in the operation of a joint venture. Trust and interdependency between the parties allow external control over each other. The closer the inter-firm relationship is, the more it approaches the industrial process in the internal organization. Consequently, joint ventures of parent firms that possess a prior relationship, as well as mutual orientation, are less subjected to the need of partnership renewal, and thus to instability in the organization.

This study also analyzed the effects of other firm-related factors on the instability of Japanese subsidiaries. The size of the Japanese parent firm, which is one indicator of firm-specific advantages, has a positive influence on the stability of the subsidiaries. However, when a foreign parent engages in diversification investments, there is a lower possibility that the existing specific advantages can be exploited, compared to an investment in a related product. This causes a lower stability in subsidiaries with diversified products. Small subsidiaries also have low stability. A small subsidiary usually has less importance, both in terms of its strategic meaning to the parent firm and in the scale of its capital investment, which represents a sunk cost for the parent firm.

One noteworthy point is the impact of changes in economic conditions on the instability of overseas subsidiaries. The data of this study shows that the Japanese subsidiaries divested in 1997 and 1998 accounted for a 39 percent of the overall divestments by those firms that had entered into the four selected ASEAN countries from 1986 to 1994 (see Table 1). Similarly, 46 percent of the subsidiaries that experienced rearrangement in their ownership structure made the rearrangement in 1997 and 1998. This reflects that the Japanese subsidiaries in the four ASEAN countries have suffered from the Asian financial crisis. Some subsidiaries that could not bear on the situation immediately adopted a withdrawal strategy, while some struggled to survive by rearranging their ownership structures. However, it could be argued that the financial crisis just accelerated the divestment of poor performed subsidiaries, which would occur anyway later on even without the crisis.

Concerning the generalizability of the findings of this paper, the conceptual framework of this study can be applied to the analysis of joint ventures, as well as other forms of collaborative arrangements, in general cases. Although it could be argued that the

vertical keiretsu is a specific phenomenon of the Japanese industrial organization, in other parts of the world, there appears to be a number of firms that have also adopted similar practices, such as long-term or reciprocal relationship between buyer and suppliers. As mentioned before, a long-term interfirm relationship generates trust and long-term orientation between the parties. The joint venture between firms that had a prior interfirm relationship can be considered as a mutual strategic move toward more long-ranged and more sustainable goals.

This study has some limitations. First, the study investigates only the relationship between foreign parent firms that form a particular joint venture. The relationship between foreign parents and local parents can also have an impact on the instability and performance of joint venture subsidiaries. Using Japanese databases, the interfirm relationship between Japanese firms can be detected, and information regarding domestic business groups and business transactions is available, as well. Nevertheless, information about the relationship between foreign partners and local partners, in a particular joint venture, is hard to obtain. That would require a survey research covering each joint venture subsidiary in a specific host country. The study of Beamish (1987), which investigated the partner related factors and performance of joint ventures in less developed countries (LDCs), suggests that high-performing joint ventures perceived the importance of partner contributions in the long-term, while low-performing joint ventures did not. A second limitation is that the empirical study did not distinguish the causes of instability. In many cases, instability has been attributed to poor performance of the parent company or improper feasibility studies prior to the foreign investment. However, in some cases, the instability might be the outcome of the subsidiary's poor business performance. Additionally, some adjustments in the ownership structure of an individual subsidiary could be a strategic move of the parent firm. A further study regarding the causal effects of instability should be considered.

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