# Comparative Evolution of Japanese-European Joint Ventures In Japan and Europe

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Abstract
Competing theories of equity joint ventures (EJVs) have diverging implications for the evolution of EJVs. Unfortunately, there is a relative scarcity of longitudinal data to test these theories. This paper looks at the comparative evolution of European-Japanese EJVs in Japan and in Europe. We find that Japanese firms have a high propensity to acquire the stakes of their European EJV partners both in Japan and in Europe. We advance some possible reasons.

**Comparative Evolution of Japanese-European Joint Ventures in Japan and Europe**

### 1. Introduction

What is the raison d'etre of equity joint ventures (EJVs)? Are they an efficient way to bundle complementary capabilities when markets for them fail, as argued by transaction cost theorists (Hennart, 1988)? Or are they primarily mechanisms that firms use to absorb the knowledge contributed by their partners? The first view, sometimes called the cooperative specialization view (Zeng and Hennart, 2002; Hennart and Zeng, 2005) sees EJVs are intrinsically stable institutions. One strand of the second view, the learning race view, sees EJVs as instable and temporary institutions used by firms to steal the capabilities their partner contributes to the EJV. If EJVs are learning races, then shouldn't the fabled capacity of Japanese firms to absorb knowledge (Reich and Mankin, 1986) put them in a particularly favorable position? Wouldn't we expect Japanese EJV partners to quickly dissolve the ventures they have with non-Japanese partners? This paper throws light on this debate by looking at the evolution of EJVs between one Japanese and one European parent and located in both Japan and Europe. We find that Japanese firms have a high propensity to acquire the stakes of their European partners both in Japan and in Europe. One possible interpretation is that the Japanese exhibit a greater commitment to penetrating the host economy and/or a greater ability to absorb the knowledge held by their European partners.

We first do a rapid survey of the various rationales for EJVs that have been advanced by the literature and develop their implication for EJV evolution. We then

describe how we gathered the data, present our findings, and speculate on how to account for our results.

## 2. Theory

Internalization and transaction cost theories argue that firms establish operations in foreign markets to exploit their firm-specific advantages when such advantages need to be incorporated into products or services because they cannot be profitably sold in disembodied form on markets (Hennart, 1982; Dunning, 1993). However, firms that seek to manufacture and sell in foreign markets do not usually have in-house the full set of resources that they need to successfully exploit their advantages in those markets. To profitably manufacture and sell in a foreign market, a foreign investor needs what can be called local complementary assets, such as a labor force, land, utilities, permits, and access to suppliers and customers. In some cases the services of these complementary assets can be accessed on competitive markets. In that case the foreign investor can keep all rights to profits (equity) and enter with a wholly-owned affiliate. In other cases markets for complementary assets are quite inefficient. Both foreign investors and local owners of complementary assets would find it difficult to strike a bargain for their acquisition. For example, knowledge of local customers is generally tacit, and hence difficult to describe. One would then expect their supplier to act opportunistically. One efficient way to reduce incentives to act opportunistically is to pay suppliers of difficult-to-measure inputs through an ex-post share of the profits of the venture (Hennart 1988; 1991). Paying suppliers of complementary inputs through a share of the profits reduces their incentives to under-supply or over-price the complementary local inputs they supply to the venture since by doing this they would reduce the profits of the venture which is

now their remuneration. Arrangements where input suppliers do not get compensated ex-ante through payment for service, as in contracts, but instead ex-post through a share of the profits generated by their joint effort are called equity joint ventures (EJVs). The EJV solution thus consists in three rules: (1) do not define precisely ex-ante what partners contribute to the venture but instead (2) pay them ex-post out of the profits to the venture and (3) have partners co-manage the venture (Hennart and Zeng, 2005).

These three rules make EJVs efficient mechanisms to ensure the bundling of the complementary assets held by the foreign investor and the owner of local assets. But they also can cause problems. Because both parties are remunerated through ex-post profits, they will want to have a say in the way the EJV is run. Co-management of the EJV by the joint venture partners can be a plus, because it gives a voice to the local partner who usually has a better knowledge of local conditions. But it also means that both the foreign investor and the local partner must find a way to work together. Conflicts will arise whenever their goals diverge, and these conflicts may lead to the dissolution of the venture, with either partner buying the stake held by the other or both partners liquidating the venture.

We have seen that EJVs arise whenever the complementary inputs contributed by their suppliers are difficult to describe and measure ex ante, and their supply difficult to enforce ex-post. The EJV solution consists in not defining precisely the contribution of the parties, but instead in aligning incentives by rewarding collaborators with a share of the output. The lack of precise definition of what partners must contribute to the venture makes it possible for them to perform less than promised. If both partners behave this way, this will endanger the EJV.

We have also argued that EJVs are institutions used to bundle resources, for example tacit knowledge, whose market exchange is characterized by high transaction costs because they are difficult to define and enforce. If resources are hard to define, control over their use may be hard to enforce. This makes it possible for one partner to internalize the contribution of the other and to use it in its own separate wholly-owned operations. For example it is difficult to prevent the general marketing knowledge that one partner learns from the other to spill over to the parent. This will cause problem if a wholly-owned operation of one partner competes with that of the other partner or with the EJV. Then one of the partners may absorb the knowledge of the other partner, transfer it to its wholly-owned operations, and start competing with the EJV, thus leading to its demise.

The fact that it is relatively easy in EJVs for one partner to capture the capabilities contributed by the other has led to the idea that EJVs should be used by partners to that end. This has led to "learning race" theories of EJVs (Khanna, Gulati and Nohria, 1998; Khanna, 1998). These authors do not see EJVs as mechanisms used by firms to contribute complementary assets to successfully sell products in a given market, but instead see EJVs as ways to systematically steal the capabilities partners bring to the EJV. Once the EJV is started, parents will race to absorb the capabilities of their partners while at the same time preventing access to their own. The first party who successfully internalizes its partner's capabilities then dissolves the EJV (Khanna, Gulati and Nohria, 1998; Khanna, 1998). Learning race theory is a sub-category of organizational learning insofar as it assumes that learning takes place without the consent of the partner.

A special strain of these learning race theories is what Hennart et al. (1999) have called the Trojan Horse Hypothesis (THH). Hamel et al. (1989) and Reich and Mankin (1986) have argued not only that Japanese firms use EJVs with Western firms to absorb their capabilities, but that they are always better at it than their Western partners, and that they will dissolve the EJV soon after they have finished learning.

Why are Japanese firms better at learning? For Hamel et al. (1989), firms learn faster than their partners when (1) they have a greater intent to learn, (2) they are more open than their partners to new information, and (3) their own capabilities are harder to understand than their partners. Hamel et al. (1989) argues that Japanese firms have greater intent to learn and are more receptive to learning than their Western counterparts, while the capabilities of Japanese firms are more difficult to access than those of Western firms.

Another assumption of THH proponents is that Japanese partners will quickly dissolve the EJV after they have internalized their partners' competences because by then the JV is no longer necessary.

## 3. Empirical evidence

The literature has thus identified two views of EJVs. One, the cooperative specialization (CS) view (Hennart, 1988; Zeng and Hennart, 2002), stresses that EJVs, including those between Japanese and European parents, are efficient mechanisms to bundle the resources brought by foreign investors and those contributed by local asset owners when the markets for both of these resources are inefficient. EJVs allow partners to specialize in their unique competences, and hence EJVs should be relatively long-lived. The learning race view, and its THH variant, predicts that EJVs between Japanese and

European parents will be short-lived, with Japanese parents quickly dissolving their EJVs with their non-Japanese partners because they will be the first to have absorbed their partners' capabilities.

Which of these two views is the correct one? One way to investigate this is to look at how long EJVs survive, and if they are dissolved, which of the partners seems to instigate their dissolution. In one of the few explicit empirical tests of the THH hypothesis, Hennart et al. (1999) looked at the evolution of Japanese-US EJVs in the United States between 1980 and 1989. They argued that if Japanese entrants into the United States were following the THH scenario, they would dissolve their EJVs with US firms by buying out the stakes of their American partners. The authors thought that the Japanese would prefer this option to that of dissolving the venture by selling out their stakes to their US partners, since such a strategy would allow their former US partners to use the capabilities embedded in the former EJV to compete with them. Dissolving the EJV was also an inferior solution since it forced the Japanese entrant to set up a new affiliate (unless it already had a pre-existing one). They therefore hypothesized that the THH hypothesis would be verified if the number of Japanese-US EJVs that were bought out by their Japanese parents was higher than the number of cases where the Japanese partner sold its shares to his American partner or where ownership shares remained unchanged. They found that the most common evolution was one of unchanged equity stakes. The next most common outcome was one where the Japanese stake reverted to zero. Acquisitions of the US stake by Japanese parents, the outcome predicted by THH theorists, only accounted for 22 percent of the cases. A more detailed investigation of all of these cases of acquisition of the US stake by the Japanese parent showed that an

explicit policy of absorption of the knowledge held by the US partner could only be inferred in about half of the cases, the other cases being explained by other reasons. Hennart et al. (1999) conclude that their results throw doubt on THH.

One way to rescue THH is to argue that THH should be understood in relative, but not in absolute terms. THH may not be a dominant EJV strategy for Japanese firms, but this does not mean that Japanese firms do not have a higher intent and capability than their Western rivals to absorb the knowledge of their partner, and a greater willingness to dissolve the EJV when they have achieved that goal. To test this relative version of THH requires comparing the EJV behavior of Japanese firms entering a given host market with that of other firms entering the Japanese market. In this paper we therefore compare the evolution of Japanese-European two-partner EJVs located in Japan with that of similar EJVs located in Europe. Japanese-European EJVs in Japan are undertaken by European firms to enlist the capabilities of Japanese incumbents in order to enter the Japanese market. Japanese-European EJVs in Europe are undertaken by Japanese firms to access the complementary local assets held by European incumbents to enter the European market. If the Japanese are better at absorbing the capabilities of their European partners than European firms are at absorbing those of Japanese firms, one would expect to see a larger number of Japanese-European EJVs both in Europe and Japan ending up fully acquired by their Japanese parents than the number of EJVs fully acquired by their European parents.

## 4. Methodology

We developed a list of Japanese EJVs with European partners in Japan and their ownership changes between 1987 and 1996 (Ishii and Hennart, 2007) and a list of

European JVs with Japanese partners in Europe and their ownership changes between 1987 and 1996 (Ishii and Hennart, 2008). Seventy-six European-Japanese EJVs located in Japan are listed in *Gaishikei Kigyo Soran (Foreign-affiliated companies in Japan)* and 38 Japanese-European JVs located in Europe are listed in *Kaigai Shinshutu Kigyo Soran (Japanese multinationals, facts and figures).* Both censuses are based on questionnaires addressed to firms by Toyo Keizai Shinposha every year and are widely seen as comprehensive.

From these lists we selected EJVs which met the following criteria. First the EJV partners had to be in manufacturing industries. We distinguished between fabrication (machinery, electrical equipment, automotive, non-automotive transport machinery, precision measuring equipment), process industries (food, textiles, paper, chemicals, pharmaceuticals, petroleum/coal, plastic, rubber, glass, steel, nonferrous metals, metals), and all other industries. We excluded EJVs owned by general trading companies or by financial companies. Second, the EJV had to be owned by one Japanese partner and one European partner with the EJV stake of each being in the range 20-80%. Third, the EJV had to manufacture in its own plant or by outsourcing to a local firm in the market where it was located. Fourth, the EJV had to have more than 10 employees.

We observed changes in the equity distribution of Japanese-European EJVs over a nine-year period, that is up to 1996. This is a sufficiently long period to capture ownership changes since Kogut (1989) showed that the instability rates of EJVs peak after six years and Takeda (1996) found that more than half of the EJVs he followed were dissolved after nine years (we also looked at the evolution of ownership levels up to 1999, 2002 and 2005). To find whether the ownership of the EJV had changed, we checked the

list of Japanese and European affiliates in the Toyo Keizai Shinposha lists and directly

contacted the EJVs, their parents, and their customers and suppliers by e-mail, telephone,

and fax. We also obtained information from branches of the Japan External Trade

Organization (JETRO), the trade-related departments of Embassies and the Chamber of

Commerce of European countries in Japan and those institutions of Japan in Europe,

trade publications, and local governments of the places where EJVs were located. We

also consulted secondary sources such as newspapers and magazines, mostly searched

through the Nikkei and Lexis-Nexis electronic databases, and the internet homepages of

the EJVs and of their parents.

**5 Findings**

In this section, we describe changes in the ownership of Japanese–European EJVs

in Japan over the 1987-1996 periods and compare them with changes in the ownership of

Japanese-European EJVs in Europe over the same period.

In Tables 1 and 2 the level of Japanese ownership of Japanese-European EJVs is

arranged in five categories, [1]: 0 to 5%, [2]: 5.1 to 49.9%, [3]: 50%, [4]: 50.1 to 94.9%

and [5]: 95% and greater. Table 1 shows the number of Japanese-European EJVs in Japan

in each category at the beginning (1987) and the end of the observation period (1996).

**Table 1. Change in ownership levels of Japanese partners in Japanese-European EJVs in Japan (1987-1996)**

|  |  | Final level (1996) | | | | | |
|---|---|---|---|---|---|---|---|
|  |  | 0–5% | 5.1–49.9% | 50% | 50.1–94.9% | 95–100% | Total (1987) |
| Initial level (1987) | 20–49.9% | 6 | 4 | 1 | 0 | 0 | 11 (14%) |
|  | 50% | 9 | 5 | 30 | 0 | 4 | 48 (63%) |
|  | 50.1–80% | 1 | 1 | 0 | 11 | 4 | 17 (22%) |
|  | Total (1996) | 16 (21%) | 10 (13%) | 31 (41%) | 11 (14%) | 8 (11%) | 76 |

Table 1 shows that Japanese firms changed their ownership levels in 31 affiliates (40.8% of the total cases) and kept it in the same category in 45 cases (59.2% of the total cases). In 8 cases (10.5% of the total cases) Japanese firms increased their stakes to 95-100 percent, in four cases from a 50 percent stake and in four cases from the 50-80% category. In 16 cases (21.1% of the total cases) they decreased their stake to the 0-5% category, in six cases from a minority stake, in nine cases from 50 percent stake, and in one case from a 50-80 percent category.

Table 2 presents changes in the European partner stake in 38 Japanese–European EJVs in Europe between 1987 and 1996.

**Table 2. Change in ownership levels of European partners in Japanese-European EJVs in Europe (1987-1996)**

| | | Final level (1996) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0–5% | 5.1–49.9% | 50% | 50.1–94.9% | 95–100% | Total (1987) |
| Initial level (1987) | 20–49.9% | 5 | 5 | 0 | 0 | 0 | 10 (26%) |
| | 50% | 5 | 1 | 7 | 0 | 0 | 13 (34%) |
| | 50.1–80% | 9 | 1 | 1 | 4 | 0 | 15 (39%) |
| | Total (1996) | 19 (50%) | 7 (18%) | 8 (21%) | 4 (11%) | 0 (0%) | 38 |

European firms changed their EJV ownership levels in 22 cases (57.9% of the total cases) and kept their EJV ownership levels in the same category in 16 cases (42.1% of the total cases). There were no instances of European firms increasing their stakes to 95-100 percent. In 19 cases (50.0% of the total cases) they decreased their stake to less than 5 percent, in five cases from a 20-49.9 percent stake, in five cases from a 50 percent stake and in nine cases from a 50.1-80 percent stake.

Table 3 shows the evolution of the ownership stakes taken by Japanese firms in Japanese–European EJVs in Japan and of those taken by European firms in European–Japanese EJVs in Europe. Total A in Table 3 is the total number of EJV ownership

changes excluding those that are due to causes beyond those examined in this paper. The excluded categories are "Focal partner acquired original partner", "Focal partner was acquired by original partner", and "Focal partner was acquired by firms other than original partner". Total A is used as the denominator to measure the EJV termination rate of the focal firms. Total B is the total sample size. We also indicate the number of EJVs in different industries (fabrication, process, and others) as F, P and O following the total number in each category.

**Table 3 Summary of the change in ownership levels of Japanese partners in Japanese-European JVs in Japan (1987-1996) and European partners in Japanese-European JVs in Europe (1987-1996)**

| | N | |
|---|---|---|
| | Japanese (F/P/O) | European (F/P/O) |
| Focal partner's stake increased to 95-100% | 10 (5/4/1) | 0 (0/0/0) |
| Stake bought from original partner | 10 (5/4/1) | 0 (0/0/0) |
| Focal partner acquired original partner | 0 (0/0/0) | 0 (0/0/0) |
| Stake bought from firms other than original partner | 0 (0/0/0) | 0 (0/0/0) |
| Focal partner's stake increased but not to 95-100% | 1 (0/1/0) | 1 (1/0/0) <Note 3> |
| Focal partner's stake decreased but not to 0-5% | 6 (1/5/0) <Note 1> | 6 (3/3/0)) |
| Focal partner's stake became zero | 15 (4/11/0) | 19(13/6/0) <Note 4> |
| Stake sold to original partner | 8 (1/7/0) | 11 (8/3/0) |
| Stake sold to firms other than original partner | 2 (2/0/0) <Note 2> | 2 (0/2/0) |
| Focal partner was acquired by original partner | 0 (0/0/0) | 3 (3/0/0) |
| Focal partner was acquired by firm other than original partner | 0 (0/0/0) | 1 (1/0/0) |
| JV was liquidated or went bankrupt | 5 (1/4/0) | 3 (1/2/0) |
| Focal partner's stake unchanged | 44 (10/34/0) | 12 (6/6/0) |
| Total A (excludes cases of focal partner acquired original partner or focal partner was acquired by original partner or by firm other than original partner from Total B) | 76 (18/55/3) | 34 (19/15/0) |
| Total B (all observations) | 76 (18/55/3) | 38 (23/15/0) |

Notes to the Table

<Note 1> In one case in the food industry, the 50-50 EJV was dissolved through liquidation in order to allow for the entry of a third partner. Subsequently each of the three JV partners held a 33.3% share. This case is counted as one wherein the Japanese EJV stake decreased but not to 0–5%.

<Note 2> In one case in the precision measurement equipment industry, the original European partner was acquired by another firm in 1988 and the Japanese partner sold off its EJV stake to the original partner. Therefore, we counted this case as "Japanese EJV stake sold to firms other than original partner".

<Note 3> In one case in the electrical equipment industry, the focal European firm and its original Japanese partner sold part of their JV stake to another European firm to make the JV as three partner EJV (each partner has a one-third share). Then, the original Japanese partner sold its JV stake to the focal European firm and the new European partner. Actual ownership of the focal European firm hence decreased from 51% to 33.3%, then, increased from 33.3% to 50%. Because of this, this case is not counted as the European buy out although we treated this as Japanese sell off JV stake to the original European partner and to firms other than the original European partner when we observe Japanese JV behavior in Europe. Therefore, the number of the European buy out JV stake in Europe does not mirror the Japanese sell off JV stake in Europe in this case.

<Note 4> In one case in the textile industry, the focal European firm sold its JV stake to its original Japanese partner. However, a part (30%) of the JV stake was sold to other Japanese firm to form Japanese-Japanese JV shortly after this sell-off. Hence, we count this case as one case in each of the following categories (1) Focal partner's stake became zero (2) Stake sold to original partner (3) Stake sold to firms other than original partner.

Table 3 shows that one of the main differences between the ownership changes in the EJVs in Japan and Europe is in the number of cases where partners bought out their partner's stake, transforming the EJV into their wholly owned subsidiary. In 10 cases (13.2% of Total A), the Japanese increased their EJV stake to 95-100 percent by buying out the stakes of their original European partners. On the other hand, no European firms bought out the EJV stake of their original Japanese partners in Japan to transform the EJV into a wholly-owned affiliate. In 15 cases (19.7% of Total A) Japanese firms decreased their ownership in their EJV in Europe to less than 5 percent, and this frequency is much lower than the 19 cases (55.9% of Total A) of European firms decreasing their ownership to less than 5 percent in Japan. This difference mainly comes from the fact that in 8 European-Japanese EJVs in Europe the Japanese sold off their EJV stakes to their original partners (10.5% of Total A), while there were 11 cases of European firms selling their stake to their original Japanese partner (35.3% of Total A). There were five cases (6.6% of Total A) of liquidations or bankruptcies of Japanese-European JVs in Japan. This frequency is almost the same to the three cases (8.8% of Total A) of liquidations or bankruptcies of European-Japanese EJVs in Europe. In 44 cases (57.9% of Total A), the Japanese kept their EJV stake unchanged, a frequency much higher than the 12 cases (35.3% of Total A) of European firms keeping their EJV stake unchanged. If we add the number of ownership increases (but not over 95%) and decreases (but not under 5%) to the number of unchanged cases, there are 51 such Japanese cases (67.1% of Total A) and 19 such European cases (55.9% of Total A). To summarize, while Japanese firms tend to continue their EJV investments in Europe and to

transform them into wholly-owned affiliates, Europeans are more likely to sell-off stakes

in their EJV in Japan to their Japanese partners.

We can also look at the termination rates of EJVs by Japanese partners in

different Japanese industries. The EJV termination rate is the ratio of the number of EJV

terminations (which result from the Japanese partner buying out the European partner

EJV stake, selling off his own stake, or from the EJV being dissolved due to voluntary

dissolution or bankruptcy) over total A. Figure 1 shows these rates for all EJVs in Japan

and for those in the fabricating and process industries between 1987 and 1993 (6 years),

1987 and 1996 (9 years), 1987 and 1999 (12 years), 1987 and 2002 (15years), and 1987

and 2005 (18 years).

**Figure 1 Termination rates by Japanese partners of Japanese-European EJVs in Japan, 1987 to 2005**
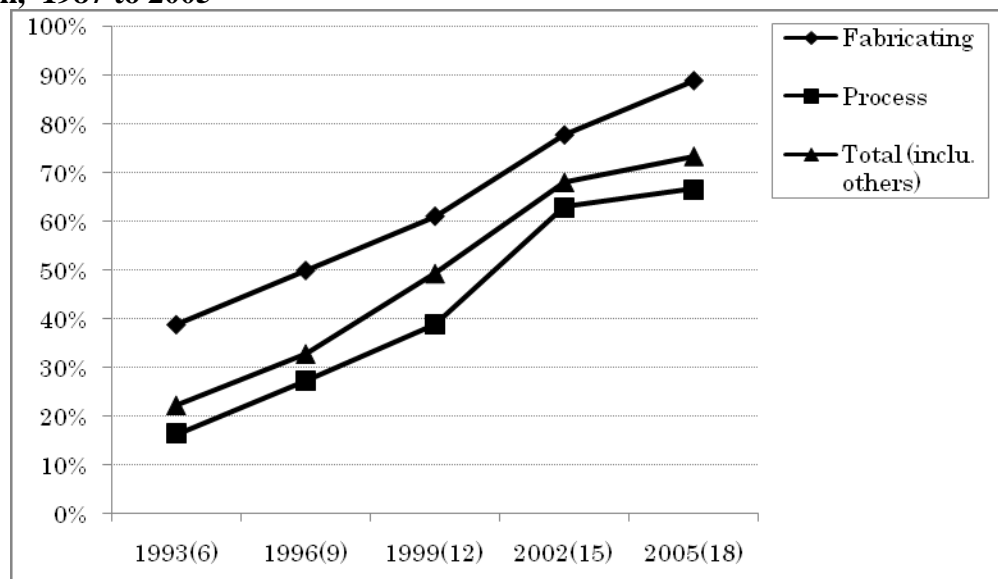


Figure 1 shows that the termination rates for EJVs in the fabricating industry are

relatively high and exceed that in the process industry in all periods. This result implies

that Japanese firms tend to discontinue EJVs in Japan in the fabrication industry and tend

to continue them in the process industry. It also implies that this difference in EJV

termination rates influences the difference noted in Table 3 between the evolution of

EJVs in Japan and Europe because a greater proportion of EJVs in Japan are in the

process industry. Seventy-two percent (55/76) of European-Japanese EJVs in Japan were

in the process industry compared to 44 percent (15/34) in the case of Japanese-European

EJVs in Europe.

Table 4 shows the EJV termination rate of Japanese-European EJVs in Japan (the

Japanese termination rate) and in Europe (the European termination rate) by industry of

the EJV from 1987 to 1996.

**Table 4: Japanese and European EJV termination rates in home market**

|  | Japanese | European |  |
|---|---|---|---|
| Total | 32.9% (25/76) | 44.1% (15/34) | Japanese rate < European rate |
| Fabrication industry | 50.0% (9/18) | 47.4% (9/19) | Japanese rate > European rate |
| Process industry | 27.3% (15/55) | 40.0% (6/15) | Japanese rate < European rate |

Table 4 shows that the overall termination rate of EJVs in Europe was 44.1% and

that that of EJVs in Japan was 32.9%. This means that European firms have a higher

tendency to dissolve their EJVs in their home market than Japanese firms do in Japan.

Conversely, this result also means that Japanese firms have a greater propensity than

European firms to continue their EJV partnerships. In the process industry the European

termination rate at 40.0% is much greater than the Japanese rate of 27.3%. The results are

inversed in the fabrication industry. There the Japanese termination rate of 50.0% slightly

exceeds the European rate of 44.1%. This suggests that there are industry-specific factors

that need to be taken into account. Note that none of the preceding differences in

termination rates (total, for the fabrication industry, and for the process industry) are

statistically significant.

Table 5 shows the EJV buy out rate, the ratio of the number of EJVs where one

partner bought out the stake of the other over the total number of EJVs (total A).

**Table 5: Japanese and European JV buy out rates in home market**

| | Japanese | European | |
|---|---|---|---|
| Total | 11.8% (9/76) | 0% (0/34) | Japanese rate > European rate |
| Fabrication industry | 27.8% (5/18) | 0% (0/19) | Japanese rate > European rate |
| Process industry | 7.2% (4/55) | 0% (0/15) | Japanese rate > European rate |

Table 5 shows that the EJV buy out rate of Japanese firms exceeds that of European firms in all categories. The Japanese EJV buy out rate is 11.8% in total, 27.8% in the fabrication industry, and 7.2% in the process industry. On the other hand, the European EJV buy out rate is zero in all categories as there are no cases of European partners buying outs their Japanese partners in Europe.

**6 Discussion and conclusion**

In this paper we have investigated changes in the ownership stakes of European and Japanese firms in European-Japanese EJVs located in Japan and Europe between 1987 and 1996, a 9 year period. The most salient of our findings can be summarized as follows:

First, there is a clear asymmetry between the behavior of Japanese and European firms. Japanese foreign direct investors in Europe have transformed one-third of their EJVs into wholly-owned affiliates by taking over the stake of their original European EJV partner. There are no corresponding cases of Europeans buying out the stakes of their Japanese EJV partners in Europe to transform their EJV into wholly-owned operations (Table 3).

Second, more than half of the European-Japanese EJVs in Europe exited through sale to the Japanese partner or through liquidation, compared to 20% in the case of European-Japanese EJVs in Japan (Table 3).

Third, there were significant differences across industrial sectors. For example, Japanese joint venture partners of European firms in Japan had a much greater propensity to sell off their EJV stake to their European partners when the EJV was in process industries than if it was in fabrication. Similarly, Japanese firms were more likely to buy out their European EJV partner if their European EJV was in fabrication than if it was in process industries (Table 3).

How do we make sense of these results? The greater tendency of Japanese firms to take over their European EJV partners and to transform the EJV into their wholly-owned affiliate is consistent with the THH hypothesis that Japanese firms are better at learning and will generally come up winners in learning races. However, there are at least two other ways to interpret Japanese behavior. First, buying out your partner is a sign of long-term commitment to the target market, while selling your stake within a nine year stretch may signify greater flexibility, or a short-term orientation. It is well known that the Japanese tend to have a much longer strategic horizon than say British or Dutch firms. This may explain their tendency to increase their stake in the EJVs they have used to enter Europe.

Second, buying out your partner is a way for a Japanese parent to continue the relationship with its affiliate. Our sample includes cases where the Western partner told his Japanese counterpart that he was contemplating selling off his share. The Japanese partner then took full equity to avoid having to deal with a new partner. This Japanese tendency to continue relationships, which is in stark contrast with the idea expressed by THH theorists that Japanese EJV partners will not hesitate to close the EJV the moment they have internalized their partner's knowledge, has been stressed in the literature on

Japanese long-term inter-organizational relationships. For instance, Asanuma (1989), Clark and Fujimoto (1991), and Dyer and Nobeoka (2000) have pointed out that Japanese automobile manufacturers tend to develop long-term and close relationships with their component suppliers. The recent case of NUMMI is instructive. NUMMI was started as an EJV of General Motors and Toyota. Because of its financial difficulties, General Motors has recently announced that it wishes to pull out of the EJV. Even though it is generally thought that Toyota does not need NUMMI's production capacity, Toyota initially sought a way to continue the venture, but had to finally decide to close it by March 2010.

A third interesting finding is that of differences between industrial sectors. Japanese EJV partners of European firms in Japan have a greater tendency to sell their stakes in European-Japanese EJVs to their European partners in process than in fabricating industries. This suggests that the competitive strengths of European foreign direct investors is greater in process than in fabricating industries, perhaps because of the greater scale of the investment and/or the lesser need for the local market knowledge contributed by the Japanese EJV partner, since the output of process industries is generally sold to industrial customers, while that of fabricating industries is sold to final consumers. Further research on inter-industry differences in market-entry EJVs would seem warranted.

While our results are intriguing, a number of caveats are also in order. First, by using the category "European firms" we have implicitly assumed that all European firms behave similarly. This is unlikely to be the case. A more fine-grained study that compares the behavior of European firms of different nationalities might be instructive.

Second, there were substantial difference in home market conditions between
Europe and Japan during the period under study. Pucik (1988) has noted the difficulties
experienced by foreign firm in accessing human resources in Japan, and the reliance of
most foreign investors on the employees of their Japanese EJV partner. Such reliance
makes it difficult to go on one's own by taking over the Japanese partner's stake in the
EJV. These differences may account for some of our findings. To neutralize such
differences, it may be interesting to compare the dynamics of EJVs between, say,
Japanese and US firms, and European and US firms, in the United States.

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**Appendix**

**Statistical test of JV termination frequencies**

(1) We tested the difference of JV (total data) termination frequencies between Japanese and European firms in the following calculations.

H assumes that there is no difference of THH behavior frequencies between Japanese and European firms.

$p$ is an unbiased estimator of test statistic calculated:

$$ p = \frac{(X_j + X_e)}{(N_j + X_e)} = \frac{(15 + 25)}{(34 + 76)} = 0.3636 $$

$Z_0$ is a test statistic calculated:

$$ Z_0 = \left( \frac{X_j}{N_j} - \frac{X_e}{N_e} \right) \div \sqrt{ p(1 - p) \times \left( \frac{1}{N_j} + \frac{1}{N_e} \right) } = 0.7146 $$

$| Z_0 | < | Z_{(\alpha)} | = 1.28$

(2) We tested the difference of JV (fabrication industry data) termination frequencies between Japanese and European firms in the following calculations.

H assumes that there is no difference of THH behavior frequencies between Japanese and European firms.

$p$ is an unbiased estimator of test statistic calculated:

$$p = \frac{(X_j + X_e)}{(N_j + X_e)} = \frac{(9+9)}{(18+19)} = 0.3636$$

$Z_0$ is a test statistic calculated:

$$Z_0 = \left(\frac{X_j}{N_j} - \frac{X_e}{N_e}\right) \div \sqrt{p(1-p) \times \left(\frac{1}{N_j} + \frac{1}{N_e}\right)} = 0.1116$$

$|Z_0| < |Z_{(\alpha)}| = 1.28$

(3) We tested the difference of JV (process industry data) termination frequencies between Japanese and European firms in the following calculations.
H assumes that there is no difference of THH behavior frequencies between Japanese and European firms.

$p$ is an unbiased estimator of test statistic calculated:

$$p = \frac{(X_j + X_e)}{(N_j + X_e)} = \frac{(6+15)}{(15+55)} = 0.3$$

$Z_0$ is a test statistic calculated:

$|Z_0| < |Z_{(\alpha)}| = 1.28$