A comparative analysis of Japanese automotive component suppliers' ownership of foreign affiliates in the U.S.

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1. Introduction

This paper investigates ownership evolution in Japanese automotive component suppliers' (JACSs') foreign affiliates. In the Japanese automotive industry, it has been generally accepted that with regard to foreign operations, JACSs tend to act in concert with Japanese automotive assemblers. Studies such as Cusumano and Takeishi (1991), Dyer and Nobeoka (2000), and Martin, Mitchell, and Swaminathan (1995) have analyzed JACSs' internationalization from the viewpoint of automotive assemblers. In practice, many JACSs have aggressively expanded foreign operations; indeed, some have even expanded their foreign operations earlier than automotive assemblers. However, few studies have analyzed JACSs' management as an aspect of multinational enterprises (MNEs) in the context of foreign direct investment (FDI) strategies.

MNEs must decide about the degree of ownership when they set up foreign affiliates. An ownership mode strategy, which means a joint venture or wholly owned subsidiary, is critical for MNEs because it affects the performance and survival of their overseas subsidiaries (Anderson and Gatignon, 1986; Li, 1995). Many studies (e.g., Anderson and Gatignon, 1986; Delios and Beamish, 1999; Hennart, 1988, 1991; Stopford and Wells, 1972) have investigated this topic from various theoretical perspectives. Recently, one comprehensive analytical framework for MNEs' foreign affiliate ownership, called the "bundling model," has been proposed by Hennart (2009). In this model, transactional characteristics of the resources that are required by MNEs' foreign operations are viewed as key factors in the analysis of foreign affiliate ownership modes. When MNEs engage in

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FDIs in a market, they need to transfer their firm-specific advantages to that market. At the same time, they also need to procure resources such as local-oriented management skills and distribution networks from the local market. These resources are known as complementary local assets in the bundling model. They are usually owned by local firms and may not be freely available to MNEs. We propose that Hennart's bundling model is an effective way of explaining our data regarding JACSs' affiliate ownership evolution in the U.S. This is because complementary local assets are crucial for JACSs' successful manufacturing and selling activities in foreign markets. This paper investigates the choice of ownership mode and its subsequent changes in the context of JACSs' local operations in the U.S. We discuss how JACSs have chosen ownership modes of foreign subsidiaries that enable them to access complementary local assets in the initial, and subsequent, stages of foreign production.

In this paper, we briefly review prior research on the international business expansion of JACSs and the ownership modes of FDIs. Then, we propose a framework to analyze the foreign affiliated ownership modes adopted by JACSs and the results of our data analysis. Finally, this paper's findings and directions for further research are discussed.

2. Literature review

2.1 International business expansion of JACSs

Studies have discussed the internationalization of the Japanese automotive supply chain management from the viewpoint of automotive assemblers. For instance, Cusumano and Takeishi (1991) suggested that Japanese automotive assemblers have established effective supply chain operations for local production in the U.S. based on their business relationships with JACSs in Japan. In addition, Dyer and Nobeoka (2000) conducted an in-depth case study of Toyota's supply chain management in the U.S., showing that Toyota has made several institutional reforms to facilitate knowledge transfer and sharing activities between component suppliers. Other research has conducted investigations from the standpoint of the international business expansion of JACSs. For example, Yamazaki (2005) analyzed the international business expansion patterns of 10 JACSs and suggested that their internationalization proceeded in three stages. These stages started with exports in the 1960s, progressed to overseas production in order to cope with local content regulations in the 1970s, and developed into aggressive overseas production from the 1980s onward. Yamazaki (2005) also argued that JACSs mainly expanded their business operations to North America in the 1980s and quickly increased

geographic expansion in the 1990s because of the economic depression in Japan. Saeki (2008) investigated the foreign subsidiaries of Japanese automotive electrical equipment suppliers and suggested that the internationalizations of JACSs and Japanese automotive assemblers are not always advanced simultaneously; however, the international business expansion of JACSs is influenced by that of Japanese automotive assemblers. In addition, Iwata (2013) investigated the global business expansion of five small and medium-sized JACSs, focusing on foreign subsidiaries. The author suggested that parent firms' size and their products' characteristics and technologies influence their foreign business expansion strategies.

Although these studies focused on the international business expansion of JACSs, they did not dwell sufficiently on the dynamic process of JACSs' international business operations. In particular, scant attention has been paid to ownership modes and the subsequent evolution of JACSs' foreign affiliates. This issue is one of the main topics in the area of international business studies, as we argue in the next section.

2.2 Theories of FDI ownership

MNEs have two options for foreign affiliate investment. These options are called ownership mode choice; namely, MNEs either form wholly owned subsidiaries (WOSs) alone or form joint ventures (JVs) with partners (local firms, in many cases). The selection of the ownership mode for foreign affiliates has been viewed as one of the most important management strategies of MNEs (Brouthers, 2002; Chen, 2008; Kawai and Jonas, 2009); indeed, many studies have investigated this topic. For instance, Anderson and Gatignon (1986) and Gatignon and Anderson (1988) discussed ownership modes by focusing on asset specificity in terms of transaction cost theory.[2] They argued that when the specificity of foreign investors' advantageous assets—for example, superior technologies and know-how—is high and transfers to foreign subsidiaries, MNEs tend to choose WOSs to protect their assets from unwanted diffusion. However, Hennart (1988), Hennart (1991), and Stopford and Wells (1972) pointed out that MNEs entering foreign markets also need to acquire new assets (e.g., plant, natural resources, and local production knowledge) from these markets. They suggested that MNEs tend to choose JVs in order to obtain new assets when their requirements for these assets are high.

Recently, Hennart (2009) proposed a comprehensive perspective to discuss foreign affiliate ownership from the aspects of MNEs' internal assets and the assets that are necessary for foreign affiliates. He argued that when MNEs set up new foreign operations,

they transfer their assets that have firm-specific advantages and need to bundle their imported assets with such complementary local assets as labor, land, distribution networks, and knowledge of host markets. Such assets are often owned by local firms and are not freely available to MNEs. If the assets contributed by MNEs have difficulty transacting with local firms while complementary local assets easily transact with MNEs through licensing in the market, MNEs may select WOSs for FDIs. In contrast, JVs are chosen by MNEs to access the assets of their local partners when the assets owned by both parties have difficulty transacting in the market. In other words, the markets for assets owned by MNEs and local firms may be subject to failure, and the way in which MNEs procure complementary local inputs determines the MNEs' ownership mode choice for foreign subsidiaries (Hennart, 2009; Hennart, Sheng, and Pimenta, 2015).

In addition, Hennart (2009) argued that foreign affiliate ownership evolution in specific host countries is also affected by the changes in the transactional characteristics of resources devoted by the MNEs and the owners of local complementary resources. Specifically, if MNEs have accumulated complementary local assets through the experience of international operations, or if resources are now available from the market for MNEs, MNEs probably convert the ownership mode of their foreign subsidiaries from JVs to WOSs. Conversely, WOSs will be switched to JVs or even liquidated[3] if the superiority of MNEs' advantageous assets, or the market efficiency of local assets, has deteriorated.

2.3 Establishment and ownership modes for foreign affiliates

Acquisition and greenfield investment in terms of MNEs' foreign affiliates are called establishment modes. These modes have also been discussed in Hennart's (2009) bundle model. "Greenfield" refers to the establishment of a foreign affiliate from scratch. In this case, the parent firm acquires complementary local assets that are required for international operations from the market or creates these assets in-house through its own business experience. "Acquisition" refers to the establishment of an affiliate by buying an existing local firm or part of its business. With regard to acquired foreign affiliates, MNEs can use the existing resources once owned by acquired firms or business units in every respect. Thus, Hennart's bundling model suggests that the accessing of local resources by MNEs is also affected by the establishment modes of foreign subsidiaries. For instance, the acquisition of local firms could be an alternative way to access local assets when MNEs set up foreign affiliates in new markets instead of coming to JV arrangements with local partners. Although this current study mainly analyzes the ownership

modes in JACSs' foreign subsidiaries, we also consider the establishment modes in our data analysis because they could be critical factors that influence the access of MNEs to local resources.

3. JACSs' foreign affiliate ownership

In this section, we elaborate our framework to analyze JACSs' ownership of their affiliates in the U.S. This framework is mainly derived from Hennart's (2009) bundling model (see Figure 1).

Figure 1. Classification of ownership mode and establishment mode

Establishment Mode	Ownership Mode: Wholly owned subsidiary	Ownership Mode: Joint venture
Greenfield	1. Wholly owned greenfield	2. Greenfield joint venture
Acquisition	3. Full acquisition (WOS)	4. Partial acquisition (JV)

Source: Compilation based on the bundling model of Hennart (2009).

The horizontal dimension of Figure 1 indicates MNEs' ownership mode of focal foreign subsidiaries (WOSs or JVs), while the vertical dimension shows the establishment mode of focal foreign subsidiaries (greenfield or acquisition).

Cell 1 presents wholly owned greenfield investments. In this case, MNEs establish foreign affiliates from scratch by themselves and access complementary local assets by buying them from a market of assets or creating them in-house through their business activities in focal host markets. Cell 2 presents greenfield JVs. In this case, MNEs share the ownership of newly built subsidiaries with local partners. Moreover, MNEs and their local partners combine their mutual assets in order to use them in the JVs. Hence, such MNEs have more chances to access complementary local assets compared with wholly owned greenfield affiliates. However, the management of greenfield JVs is not easily compared with the management of greenfield WOSs. Cell 3 presents the full acquisition of existing subsidiaries/business units (of external firms) in host markets. In this case, we infer that MNEs can use the management resources of acquired affiliates in every respect. The presentation of partial acquisition in cell 4 illustrates the situation where MNEs

acquire partial equity of local firms and can use complementary local assets obtained from local partners or acquired firms.

4. Data

We drew up a list of JACSs' (tire, lamp, and seat firms) manufacturing affiliates in the U.S. The major reasons for choosing these three industries are that they are relatively highly specialized businesses and all the appropriate markets have oligopolistic tendencies. In other words, the market and business environments of foreign affiliates that may affect JACSs' FDI strategies can be better grasped when we focus on these three industries. Our sample was collected from various issues of Toyo Keizai's *Japanese Overseas Investment* (1976－2014). We compiled the stock shareholding ratios of the Japanese parent firms of each manufacturing affiliate and traced their evolution. We also observed the establishment mode of each affiliate. In addition, we used the parent firms' homepages, annual reports, and other resources, such as articles from magazines and newspapers, to complement our database.

We used the following data criteria for JACSs' affiliates in the U.S. First, subsidiaries that manufacture products that differ from the main components of parent firms (e.g., golf products) have been excluded from our sample because our analysis focuses on automotive-related production affiliates. Second, we defined the ownership mode of a focal subsidiary as WOS if the parent firm has more than 95 percent of the subsidiary's stake, and JV if the parent firm owns between 5 percent and 95 percent of the subsidiary's stake (Brouthers, 2002; Chen and Hennart, 2002; Hennart, 1991). Finally, we removed from our sample the JV cases (one case in the lamp industry and two cases in the seat industry) that are partnered only by Japanese automotive component firms.

Following these criteria, we investigated affiliates in the U.S. established by Japanese tire manufactures *(Bridgestone Corporation, The Yokohama Rubber Co., Ltd., Toyo Tire and Rubber Co., Ltd., Sumitomo Rubber Industries, Ltd.)*, lamp manufactures *(Ichikoh Industries, Ltd., Koito Manufacturing Co., Ltd., MITSUBA Corporation, Stanley Electric Co., Ltd.)* and seat manufactures *(TACHI-S Co., Ltd., TS TECH Co., Ltd., Toyo Seat Co., Ltd., Toyota Boshoku Corporation)*. As a result, from these 12 Japanese parent firms, we obtained 49 manufacturing affiliates established over the 1975－2013 period, as seen in Table 1.[4)]

According to Table 1, of the 49 U.S. production affiliates, Japanese tire, lamp, and seat suppliers have invested in 32 WOSs and 17 JVs. Of these affiliates, 40 have been

Table 1. New production affiliates established by Japanese tire, lamp and seat suppliers in the U.S. (1975-2013)

			1975-1980	*1981-1990*	*1991-2000*	*2001-2013*	*Total*
Tire	Greenfield (11)	Wholly owned greenfield	0	3	1	2	6
		Greenfield joint venture	0	4	1	0	5
	Acquisition (5)	Full acquisition (WOS)	0	4	0	1	5
		Partial acquisition (JV)	0	0	0	0	0
Lamp	Greenfield (7)	Wholly owned greenfield	0	2	0	2	4
		Greenfield joint venture	0	3	0	0	3
	Acquisition (2)	Full acquisition (WOS)	0	0	0	2	2
		Partial acquisition (JV)	0	0	0	0	0
Seat	Greenfield (22)	Wholly owned greenfield	1	2	1	9	13
		Greenfield joint venture	0	5	0	4	9
	Acquisition (2)	Full acquisition (WOS)	0	0	0	2	2
		Partial acquisition (JV)	0	0	0	0	0
Total	Greenfield (40)	Wholly owned greenfield	1	7	2	13	23
		Greenfield joint venture	0	12	1	4	17
	Acquisition (9)	Full acquisition (WOS)	0	4	0	5	9
		Partial acquisition (JV)	0	0	0	0	0

created through greenfield investments, while nine have been created through acquisition investments. Of the total 49 affiliates, 16 were established by Japanese tire manufacturers, nine by Japanese lamp manufacturers, and 24 by Japanese seat manufacturers.

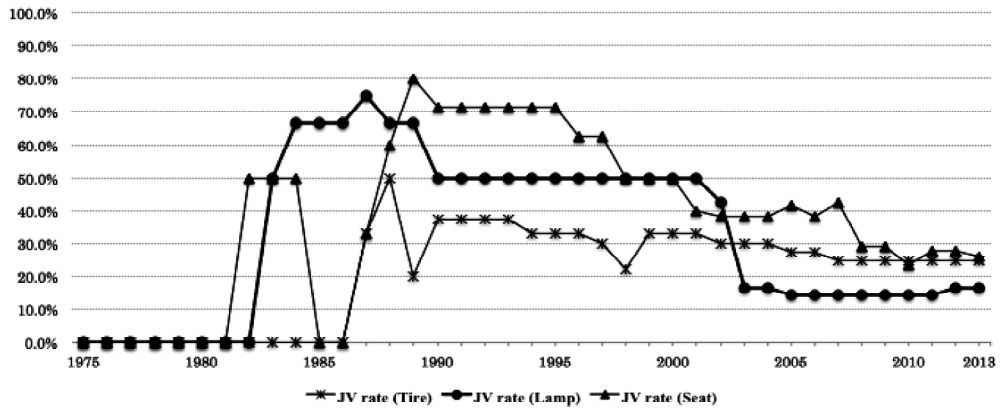
5. Results

In this section, we show the results of our data analysis of Japanese tire, lamp, and seat suppliers' ownership and establishment modes for their manufacturing affiliates in the U.S. Figure 2 shows the rate of JV investments (the number of JVs divided by the total number of affiliates including JVs and WOSs) of Japanese tire, lamp and seat suppliers from 1975 to 2013 in the U.S.

5.1 Tire suppliers

The first U.S. affiliates of Japanese tire suppliers started manufacturing in the U.S. in 1983. As indicated in Figure 2, the rates of JV investments of Japanese tire suppliers are just lower than 50 percent in the 1980s. This means that Japanese tire suppliers more often chose WOSs over JVs in the initial FDI stage in the U.S. From such a result, we can infer that Japanese tire suppliers could use WOSs and obtain the complementary local assets that they needed in the U.S. Figure 2 also shows that the JV rate of tire

Figure 2. Rate of JV investments of Japanese tire, lamp and seat suppliers in the U.S. (1975-2013)



Notes to Figure 2:

As regards the tire suppliers, there is one case of JV called *GTY Tire Company*, which was founded by *Toyo Tire & Rubber Co., Ltd.*, The *Yokohama Rubber Co., Ltd.* and a local firm named *General Tire and Rubber Company*. We counted this JV as two joint venture cases during the years of its existence (1990-2013), because our unit of analysis is the parent stake.

As regards the lamp suppliers, there is one case of JV called *North American Lighting, Inc.*, which was founded by *Ichikoh Industries, Ltd.*, *Koito Manufacturing Co., Ltd.* and a local firm named *Hella North America*, Inc. We also counted this JV as two JV cases during the years of its existence (1984-2002).

As regards the seat suppliers, *Toyota Boshoku Corporation* (TBC) was created in 2004 by the merger of *Araco Corp.* (AC), *Takanichi Co. Ltd.* (TC) and *Toyota Boshoku* (TB). Therefore, we focused on these root companies when calculating the data about the information before 2004. To be specific, TB has one case of wholly owned greenfield from 2002 (the operation year, similarly hereinafter), AC has respectively one case of greenfield JV from 1988 and 2002. TC has one case of wholly owned greenfield from 2002 and one case of greenfield JV from 2003. Meanwhile, we calculated TBC's investment after its merger of 2004.

suppliers continues to decline after the 1990s. This means that the propensity of Japanese tire suppliers to choose WOSs as a means of affiliate ownership continued, or even strengthened, in this period compared with the prior stage. It is proposed that the tendency to choose WOS ownership for U.S. affiliates is influenced by the environment of fierce global mergers and acquisitions in the tire industry, as we shall see later. One representative case is *Bridgestone Corporation*'s full acquisition of *US Firestone* in 1988. Another is the full acquisition of *Dunlop Tire Corporation* (DTC) by *Sumitomo Rubber Industries, Ltd.* (SRI) in 1986. Such complete acquisitions of foreign tire manufacturers by Japanese tire suppliers may have increased the instances of WOSs in the U.S.

Next, we observe the establishment modes of Japanese tire suppliers' production subsidiaries in the U.S. According to Table 1, we can see that, of the 16 manufacturing affiliates of Japanese tire suppliers, five are established via the (full) acquisition of local

existing firms or plants. Further, four of these acquisitions are made in the 1980s. SRI and Bridgestone started manufacturing plants in the U.S. by acquiring local tire manufacturers or plant.[5] These cases of full acquisition seem to have given Japanese tire suppliers access to local resources in the U.S., which were required in the early stages of overseas production. Overall, recent global competition has become fierce, and mergers and acquisitions at the global level in the tire industry seem to prompt Japanese tire suppliers to choose full ownership of U.S. affiliates.

5.2 Lamp suppliers

Japanese lamp suppliers started local production in the U.S. in 1982, which is almost the same time as Japanese tire suppliers began U.S. production. However, the JV rates of Japanese lamp suppliers are just higher than 50 percent in the 1980s, as seen in Figure 2, showing lamp suppliers' tendency to choose JVs during this period. This is in contrast to tire suppliers' tendency to choose WOSs in the initial FDI stage in the U.S. From this result, it is proposed that Japanese lamp suppliers intended to procure local assets through joint ventures with local partners when entering the U.S. Actually, the JV rate of Japanese lamp suppliers subsequently decreases to 50 percent in the 1990s, showing that Japanese lamp suppliers chose the WOS ownership mode more often compared with the prior period. This result implies that Japanese lamp suppliers had accumulated complementary assets from prior business experience, especially with regard to JVs with local partners. A further implication is that the necessity of partnering with local firms decreased. In the 2000s, the JV rate of Japanese lamp suppliers continues to decrease and reaches its lowest value, 14.3 percent, in 2005. This means that the tendency of Japanese lamp suppliers to select WOSs as their affiliate ownership mode in the U.S. increased during this period. We can also infer that at the same time, Japanese lamp suppliers became less reliant on access to local partners' complementary assets in the U.S. market.

Interestingly, we found some cases in the U.S. where the ownership mode of Japanese lamp suppliers' affiliates had changed. In particular, *North American Lighting, Inc.* (NAL)[6] was a JV of a Japanese lamp supplier that became a WOS. NAL was set up in 1983 by *Koito Manufacturing Co., Ltd.* (Koito) and *Hella North America, Inc.* (a subsidiary of a German lamp manufacturer named HELLA that provided components for American automotive assemblers). In 1984, *Ichikoh Industries, Ltd.* (Ichikoh) invested in NAL. The ownership of each parent firm then became 10 percent for Ichikoh, 39 percent for

Koito, and 51 percent for HELLA. In the early stage of this JV, Koito manufactured components for Nissan in the U.S. by using HELLA's local plant. In 1998, Koito bought out the JV stake of HELLA, and in 2003 Koito dissolved its partnership with Ichikoh, thereby making NAL a WOS of Koito. It is proposed that for Koito, operating a WOS in the U.S. became relatively easy after the firm had experienced local production methods and engaged in a joint venture with HELLA. The joint venture had enabled Koito to access complementary assets, such as customer information and a distribution network, which would otherwise have been difficult to obtain from the market.

Next, we examine the establishment modes of Japanese lamp suppliers' affiliates in the U.S. from 1975 to 2013, as presented in Table 1. This table shows that the number of greenfield affiliates (seven cases) is larger than that of acquired affiliates (two cases). This propensity of Japanese lamp suppliers to establish affiliates from scratch seems to be correlated with the characteristics of the industry's production system. Although automotive lamp production lines are now equipped with various automated systems, manufacturing activity in this field is characterized as a labor-intensive assembly line. Hence, Japanese lamp suppliers chose the greenfield establishment mode because the transference of management resources from mother plants to U.S. plants with new equipment and organizational structures was relatively easier than transferring such equipment and structures to existing plants previously operated by other firms.

5.3 Seat suppliers

In the U.S., Japanese seat suppliers' local production started in 1977. This is relatively early compared with the tire and lamp suppliers (see Table 1). However, Japanese seat suppliers' business expansion in the U.S. after 1977 is less aggressive compared with Japanese tire and lamp suppliers, although the number of Japanese seat suppliers' affiliates in the U.S. increases from the late 1980s. Why is the pace of the Japanese seat suppliers' affiliate expansion in the 1980s so slow? We infer that the deployment of Japanese seat suppliers' production in the U.S. was closely related to Japanese automotive assemblers' production. The reason for the strong production link between seat suppliers' and automotive assemblers stems from the product characteristics of seats as a component. For example, the value/price of each component and its transportation cost is high; moreover, the component's design and technical features (such as driving quality) are closely related to the final automotive product. There are only two production affiliates of Japanese seat suppliers in the U.S. that started manufacturing before 1982, both of which are related

to Honda's local automotive production (which was the first such production among Japanese automotive assemblers). *TACHI-S Co., Ltd* invested in both these production affiliates. One of them, *Tri-Con Industries*, started manufacturing in 1977 and initially provided components to Honda's motorcycle plants for the most part. The other affiliate, *Bellmar Parts Industries Inc.*, started manufacturing in 1982 and provided automotive components to Honda's Ohio plant. As we can see in Figure 2, the JV rate of Japanese seat suppliers rises sharply in the late 1980s and reaches 80 percent in 1989. From these results, we can infer that during this period, Japanese seat suppliers, like Japanese lamp suppliers, chose JVs (all of which were greenfield JVs) in order to access local complementary assets that were contributed by local partners. After the late 1990s, the JV rate of Japanese seat suppliers declines, becoming less than 30 percent after 2010. This result implies that Japanese seat suppliers had accumulated complementary assets from prior local production experience, including their experience in JVs, and, like Japanese lamp suppliers, were able to set up WOSs without partnering with local firms.

It is also interesting that the tendency of Japanese seat suppliers' affiliate ownership differs from that of lamp suppliers. According to Figure 2, the JV rate of Japanese seat suppliers remains at a relatively high level after 2000, although WOS is the major ownership mode of their affiliates. This is because Japanese seat suppliers kept their JVs for relatively long periods and maintained their cooperative relationships with local partners while setting up WOSs. For instance, before their merger in 2004, *Toyota Boshoku Corporation* (TBC) (previously *Araco Corp.* (AC), *Takanichi Co. Ltd.* (TC), and *Toyota Boshoku* (TB)) is one such case. AC started its JV affiliation with a local seat supplier, JCI, in the U.S. in 1988. AC then set up another JV in 2002. However, TC established a WOS in 2002 and a JV with another local seat supplier, Lear, in 2003 in the U.S. After the merger of all three firms, and after setting up a WOS in the U.S., TBC continued the JVs with the local seat suppliers, Lear and JCI, and kept its JV ownership stake. One reason for maintaining this JV ownership for the long term may be that Toyota-centric affiliated firms emphasize long-term relationships in component transactions and strategic alliances (Dyer and Nobeoka, 2000; Ishii, 2003, 2009).

With regard to the establishment modes of Japanese seat suppliers' manufacturing affiliates in the U.S., of 24 affiliates, 22 were greenfield. We propose that the reason why Japanese seat suppliers tended to choose the greenfield option as their affiliate establishment mode is that seat manufacturing, like that of lamp suppliers, has the features of a labor-intensive production system. Japanese seat suppliers may have preferred newly

established subsidiaries with new organizational structures and equipment, compared with existing firms, in order to transfer their production knowledge and skills from their mother plants in Japan to their U.S. affiliates. In addition, the tendency of Japanese seat suppliers to choose JVs in the initial stages for their affiliate ownership mode presented opportunities to access the local market knowledge of their local partners; hence, the attraction of the acquisition mode was relatively low.

6. Discussion

In this section, we will discuss the theoretical implications drawn from our data analysis, especially with regard to the discussion of JACSs' foreign affiliate ownership.

First, the foreign affiliate ownership mode choice of JACSs in the U.S. showed different characteristics among the tire, lamp, and seat suppliers. In the early stages of local production in the U.S., Japanese lamp and seat suppliers tended to choose JVs while Japanese tire suppliers mostly chose WOSs for their U.S. affiliates. This result implies that the level of need to access complementary local assets differed between the three types of supplier. One reason for such differences may be the business characteristics of each industry. For instance, the market constitution of customers differs between the tire suppliers and the seat and lamp suppliers. The distribution channels of tires are clustered into three types: original equipment (sold directly to automotive assemblers), replacements (sold to the aftermarket), and exports (sold to the overseas market). Within these categories, the replacement tire market is relatively large in the U.S. Indeed, Japanese tire suppliers, including the four parent firms in our data, exported tires to the U.S. market. In order to manage exports to this market, Japanese tire suppliers set up sales and market research subsidiaries, and distribution channels. They also accumulated local business experience before they started local production so that they could set up WOS plants with their own local complementary assets in the U.S. In contrast, Japanese lamp and seat suppliers exported to the U.S. much less actively before starting local production compared with Japanese tire suppliers.[7] Thus, Japanese lamp and seat suppliers chose JVs rather than WOSs in the early stages of their production affiliates in the U.S. in order to access the local distribution networks and the production and management knowledge owned by their JV partners.

Second, it seems that tire suppliers' business characteristics in terms of B-to-C (business-to-consumer) and B-to-B (business-to-business) also influenced their affiliate ownership mode choice. The tire industry has the business transaction features of the B-to-B

industry and the B-to-C industry because the aftermarket of the tire industry is relatively large and Japanese tire suppliers sell products not only to automotive assemblers but also to retailers or individual consumers. However, the customers of the lamp and seat industries are almost all automotive assemblers; thus, their businesses are categorized as B-to-B. It seems that long-term relationships with customers are relatively important in the B-to-B business sector compared with the B-to-C business sector because interfirm specific assets are important for reducing transaction costs between firms. Thus, we infer that Japanese lamp and seat suppliers chose more JVs than WOSs in order to utilize local partners' local business networks with local automotive assemblers and Japanese assemblers' U.S. plants in their initial stages of U.S. production. By doing so, they could expect to obtain information on local markets and customers, which is difficult to acquire in the markets and important for starting businesses in the U.S.

Third, it seems that the establishment and ownership modes complement each other as ways to access local resources when MNEs initiate foreign affiliates. In the tire industry, 11 manufacturing affiliates (seven WOSs and four JVs) were founded in the 1980s in the U.S. Of the seven WOSs, four were established through full acquisition. In comparison, all the local manufacturing subsidiaries of the Japanese lamp and seat suppliers were established from scratch in the 1980s. So why did Japanese tire suppliers adopt the acquisition mode more often in the early stages of local production in the U.S.? One proposition is that they chose the acquisition mode in order to access local knowledge, thereby offsetting the ownership mode of WOSs, whose local resource access is limited compared with JVs. Chen (2008) pointed out that full acquisition is mainly driven by capability acquisition rather than other strategic considerations such as accelerating MNEs' entry into foreign markets. In other words, Japanese tire suppliers used full acquisition in the U.S. to enable the rapid purchase of local resources such as brands, plant, and distribution networks once owned by the acquired firms. In contrast, Japanese lamp and seat suppliers mostly built subsidiaries from scratch and preferred to choose JVs for their early-stage manufacturing affiliates in the U.S. in order to access local resources. In other words, we propose that they chose the greenfield ownership mode in order to transfer Japanese management skills because they could access local knowledge provided by their JV partners.

Fourth, industry consolidation among global tire suppliers seems to be another factor behind the tendency of such suppliers to choose acquisition in order to set up manufacturing affiliates in the U.S. Actually, four cases of Japanese tire suppliers' acquisitions

(Sumitomo Rubber Industries, Ltd.'s acquisition of *Dunlop Tire Corporation* in 1986, *Bridgestone Corporation*'s acquisition of Firestone in 1988 and Bandag in 2007, and *The Yokohama Rubber Co., Ltd.*'s acquisition of *Mohawk Rubber Company* in 1989) were caused by interfirm level (including business unit purchasing) acquisitions that were beyond affiliate-level investment. In this sense, it is hard to conclude that Japanese tire suppliers chose the acquisition mode in order to access complementary local assets because such decisions may have been partly influenced by their global competition structure and market reorganization. In a way, this proposition suggests a limitation of the bundling model to explain MNEs' FDI modes in the context of industry-level, or global, consolidation.

Finally, the difference of accumulation patterns of JACSs' JVs among three industrial categories suggests distinctive network strategies to construct local production capabilities in the U.S. Although all JACSs of the three categories chose JVs in their initial stages of local production in the U.S., seat suppliers tended to continue their JV ownership compared with lamp and tire suppliers. Actually, local JV partners of Japanese seat suppliers are very large and experienced American automotive seat manufacturers (such as JCI and Lear). In a way, it seems that the attractiveness of local partners' resource access in the seat industry continued relatively longer than in the other two industries. Moreover, a seat is one of the key system components for interior design and strongly contributes to the quality, performance, and cost of the final product. In addition, automotive assemblers have recently outsourced interior design and promoted joint design and styling in order to utilize the specialized capability of seat suppliers. Thus, we infer that keeping JVs with local partners continued to have a significant impact for Japanese seat suppliers when they began local production in order to supply Japanese automotive assemblers and when they later expanded their customer base to American automotive assemblers in the U.S.

7. Conclusion

In this study, we have used the bundle model to compare ownership evolution of Japanese tire, lamp, and seat suppliers with regard to their manufacturing affiliates in the U.S. We have also investigated the establishment modes of these suppliers' foreign affiliates. Japanese tire suppliers chose more WOSs than JVs in the early stages of affiliate ownership in the U.S. However, more than half of these WOSs were established by acquisition, which gave the Japanese tire suppliers access to local market assets. In contrast,

Japanese lamp and seat suppliers often chose JV ownership, which gave the suppliers opportunities to access local market assets in the early stages of affiliate operations in the U.S. Although Japanese suppliers of these three component categories tended to choose WOSs in the later stages of local production in the U.S., seat suppliers tended to continue their JV ownership compared with tire and lamp suppliers. These differences of foreign affiliate ownership and establishment mode dynamism between the three component categories indicate the different methods or paths to procure local market assets. In addition, the bundling model seems to explain the JACSs' affiliate ownership and establishment mode characteristics to some extent, although we need to consider competitive and technological aspects of the industry. In our future research, we need to consider the data of the ownership evolution of foreign affiliates with a greater variety of component suppliers and with different markets in order to discuss the internationalization of JACSs. In addition, we need to pay attention to aspects such as the institutional factors of a market or intermarket that may influence MNEs' foreign affiliate investment strategies.

Notes

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2) Other studies, such as Makino and Neupert (2000), Padmanabhan and Cho (1996), and Yiu and Makio (2002) have argued that cultural and institutional factors can also influence MNEs' choice of ownership mode. In this paper, we do not review these studies in detail because we focus only on one investing country (Japan) and one host country (the U.S.).

3) For example, MNEs choose to license proprietary assets to local firms or even withdraw from a particular host country.

4) We have excluded cases from our sample that lack information about a parent firm's stake, the main product, the operational year, and the production situation. There are two such cases. In addition, we have removed 10 cases of affiliates that do not meet any of our data criteria.

5) However, SRI made a strategic alliance with the *Goodyear Tire and Rubber Company* (GTRC), and the DTC became a JV (named *Goodyear Dunlop Tire North America, Ltd.*) between SRI and GTRC in 1999. This case of Japanese ownership change occurred in the context of a global alliance formation between parent companies.

6) Koito and HELLA had 49 percent and 51 percent of NAL stock ownership respectively in 1983.

7) According to our data, there is only one Japanese manufacturer *(MITSUBA Corporation)* in the lamp or seat industries that founded a sales subsidiary before setting up a manufacturing affiliate in the U.S.

References

Anderson, E. and H. Gatignon (1986) "Modes of Foreign Entry: A Transaction Cost Analysis and Propositions," *Journal of International Business Studies*, 17(3), pp. 1-26.

Brouthers, K. D. (2002) "Institutional, Cultural and Transaction Cost Influences on Entry Mode Choice and Performance," *Journal of International Business Studies*, 33(2), pp. 203-221.

Chen, S. F. S. (2008) "The Motives for International Acquisition: Capability Procurements, Strategic Considerations, and the Role of Ownership Structures," *Journal of International Business Studies*, 39(3), pp. 454-471.

Chen, S. F. and J. F. Hennart (2002) "Japanese Investors' Choice of Joint Ventures versus Wholly-owned Subsidiaries in the US: The Role of Market Barriers and Firm Capabilities," *Journal of International Business Studies*, 33(1), pp. 1-18.

Cusumano, M. A. and A. Takeishi (1991) "Supplier Relations and Management: A Survey of Japanese, Japanese-transplant, and U.S. Auto Plants," *Strategic Management Journal*, 12(8), pp. 563-588.

Delios, A. and P. W. Beamish (1999) "Ownership Strategy of Japanese Firms: Transactional, Institutional, and Experience Influences," *Strategic Management Journal*, 20(10), pp. 915-933.

Dyer, J. H. and K. Nobeoka (2000) "Creating and Managing a High-performance Knowledge-sharing Network: The Toyota Case," *Strategic Management Journal*, 21(3), pp. 345-367.

Gatignon, H. and E. Anderson (1988) "The Multinational Corporation's Degree of Control over Foreign Subsidiaries: An Empirical Test of a Transaction Cost Explanation," *Journal of Law, Economics, & Organization*, 4(2), pp. 305-336.

Hennart, J. F. (1988) "A Transaction Costs Theory of Equity Joint Ventures," *Strategic Management Journal*, 9(4), pp. 361-374.

——— (1991) "The Transaction Costs Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States," *Management Science*, 37(4), pp. 483-497.

——— (2009) "Down with MNE-centric Theories! Market Entry and Expansion as the Bundling of MNE and Local Assets," *Journal of International Business Studies*, 40(9), pp. 1432-1454.

Hennart, J. F., H. H. Sheng, and G. Pimenta (2015) "Local Complementary Inputs as Drivers of Entry Mode Choices: The Case of US Investments in Brazil," *International Business Review*, 24(3), pp. 466-475.

Ishii, S. (2003) *Kigyoukan Teikei no Senryaku to Soshiki* (Strategy and Organization of Corporate Alliance), Tokyo: Chuo keizai sha.

Ishii, S. (2009) *Nihon Kigyo no Kokusai Goben Kodo* (International Joint Venture Partnership of Japanese Firms), Tokyo: Chikurashobou.

Iwata, N. (2013) "Chusho Jidosha Buhin Meka no Kaigai Shinshutsu: Yonsha no Jirei o Chushin ni (The Global Strategies of Small Auto-parts Makers: Case Studies of Four Firms)," *Journal of Management Research Institute*, 20, pp. 25-35.

Kawai, N. and M. Jonas (2009) "Market Entry Strategies in Post-financial Crisis Southeast Asia: The Case of Japanese Manufacturing Firms," *Asian Business & Management*, 8(3), pp. 247-275.

Li, J. (1995) "Foreign Entry and Survival: Effects of Strategic Choices on Performance in International Markets," *Strategic Management Journal*, 16(5), pp. 333-351.

Makino, S. and K. E. Neupert (2000) "National Culture, Transaction Costs, and the Choice between Joint Venture and Wholly Owned Subsidiary," *Journal of International Business Studies*, 31(4), pp. 705-713.

Martin, X., W. Mitchell, and A. Swaminathan (1995) "Recreating and Extending Japanese Automotive Buyer-supplier Links in North America," *Strategic Management Journal*, 16(8), pp. 589-619.

Padmanabhan, P. and K. R. Cho (1996) "Ownership Strategy for a Foreign Affiliate: An Empirical Investigation of Japanese Firms," *Management International Review*, 36(1), pp. 45-65.

Saeki, Y. (2008) "Nikkei Jidosha Denso Buhin Mmeka no Kokusai Tenkai: Hokubei Oshu Higashiajia no Kaigai Genchi Hojin Bunseki (International Deployment of Japanese Automotive Electrical Equipment Suppliers: Analyzing Overseas Subsidiaries in North America, Europe (EU), and East Asia)," *Institute of International Relations and Area Studies*, 27, pp. 65-89.

Stopford, J. M. and L. T. Wells (1972) *Managing the Multinational Enterprise*, New York: Basic Books.

Toyo Keizai (various years) *Kaigai Shinshutsu Kigyo Soran* (Japanese Overseas Investment), Tokyo: Toyo Keizai.

Yamazaki, K. (2005) "Jidosha Buhin Sangyo no Kokusai Tenkai (International Expansion of the Auto Parts Industry)," *The Journal of Ohara Institute for Social Research*, March 2005, pp. 24-40.

Yiu, D. and S. Makino (2002) "The Choice between Joint Venture and Wholly Owned Subsidiary: An Institutional Perspective," *Organization Science*, 13(6), pp. 667-683.

A comparative analysis of Japanese automotive component suppliers' ownership of foreign affiliates in the U.S.

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Summary

This paper examines the foreign affiliate ownership evolution of Japanese automotive component suppliers. Our discussion is based on international business studies of supply chain management in the automobile industry and the foreign affiliate ownership of multinational enterprises. After reviewing previous studies in these areas, we propose a theoretical framework that is based on Hennart's bundling model. We analyze the ownership mode of Japanese production affiliates in the tire, lamp, and seat industries in the U.S. from 1975 to 2013. One of the distinctive characteristics of affiliate ownership modes is that tire suppliers tended to choose wholly owned subsidiaries while lamp and seat suppliers tended to choose joint ventures in the initial stages of foreign direct investments. In addition, we also find that seat suppliers tended to maintain their joint venture ownership unlike tire and lamp suppliers. We argue that our data implies that the different ownership policies used by Japanese automotive component suppliers of these three industries in the U.S. are closely related to the access to complementary local assets that the suppliers need for their foreign operations.