

Joint venture entry and expansion of wholly owned subsidiaries in foreign market:  
Inter-organizational partnership of Toyota in North America

Keywords: International joint venture, Foreign direct investment, Trojan horse hypothesis, Cooperative specialization, knowledge combination, New United Motors Manufacturing, Inc.

#### Abstract

There are two perspectives on equity joint ventures that imply two different scenarios for foreign partners. One is called the Trojan Horse Hypothesis (THH) and it focuses on competitive learning by partners. THH argues that one of the partners will build its capabilities by internalizing the knowledge contributed by its joint venture partner. Within this view, the partnership behavior of the foreign partners is short-term oriented because as soon as their learning is complete, the foreign partners will dissolve the joint venture and set up wholly owned subsidiaries using the knowledge obtained from their local joint venture partners. Another view is called the Cooperative Specialization (CS) view. This view emphasizes joint value creation by the partners. Under the CS view, the foreign partner continues the joint venture with its local partner after it creates wholly owned subsidiaries in the market because it prioritizes joint value creation with the local partner in the joint venture.

We analyze the case of Toyota's affiliating strategy after launching New United Motors Manufacturing Inc. (NUMMI), its joint venture with General Motors in the U.S. We explore which view, THH or CS, explains Toyota's affiliating strategy in the U.S. and discuss the limitation of these perspectives.

## 1 Introduction

This paper investigates international joint venture behavior and direct investments of investors who choose joint venture as a way to enter a foreign market. In an international joint venture formed between a foreign and a local partner, these partners are expected to combine mutual knowledge. When the foreign partner has little business experience in the local market of the joint venture, the local partner is expected to provide production skills or supply/distribution networks. In return, the foreign partner will bring technology or knowledge of overseas markets. After the joint venture partners combine their respective knowledge in the collaboration, their joint venture behavior and inter-partner relationship will naturally change over time.

There are two theories that seek to explain the evolution of joint ventures. One is called the learning race view, which is also called the Trojan Horse Hypothesis (THH). According to Khanna (1998) and Khanna et al. (1998), this view emphasizes the private benefit of a particular partner, not the shared benefit created in joint ventures. For instance, THH proponents, such as Reich and Mankin (1986), Pucik (1988a, 1988b), Hamel et al. (1989), and Hamel (1991), argue that one of the partners will build its own capabilities by internalizing the knowledge contributed by its joint venture partner. Within this view, the foreign partner appropriates the value of the local joint venture partner at the expense of the local partner's competitive position. In addition, the partnership behavior of the foreign partner is short-term-oriented because they dissolve their joint ventures and set up wholly owned subsidiaries using the knowledge obtained from the local partner as soon as their learning is completed.

The other theory is called the Cooperative Specialization (CS) view. This view, described in such work as Zeng and Hennart (2002), in contrast to THH view's stressing the private value of a particular emphasizes joint value creation by the partners. Under the CS view, joint venture partners tend to continue their joint ventures because they will specialize and complement each other. Consequently, foreign partners will continue their investment in the joint venture even after they create wholly owned subsidiaries in the foreign market because they prioritize joint value creation with local partner in the joint venture.

However, we have real world cases that cannot be explained by either of these two views. For instance, consider the case of joint venture where the foreign partner expects to obtain the local partner's knowledge to use it at its wholly owned subsidiaries but also continues the joint venture for a long time. This is the mixed evolution of a joint venture partnership that develops from taking both of the differing views.

Here, we analyze the case of Toyota's affiliating strategy after launching New United

Motors Manufacturing Inc. (NUMMI), a joint venture with General Motors in the U.S. This case implies the possibility of developing a third view for international joint venture partnerships. In addition, we mainly review the THH view because the partners initially intended to learn from each other in our case, which is a similar condition to that assumed in this view. Therefore, we argue why and how the foreign partner simultaneously continues the joint venture and sets up wholly owned subsidiaries, which is a different behavior than that predicted by THH proponents.

## 2 Literature review

Traditionally, joint venture has been treated as a market entry mode, in contrast to wholly-owned affiliates. There is an abundant literature in international business investigating that topic. Gatignon and Anderson (1988), Gomes-Casseres (1989), and Hennart (1991) were the pioneers, using transaction cost theory (TCT) to explain that choice. In addition, some authors have argued that geographic and cultural distance may affect that choice (Kogut and Singh, 1988; Hennart and Larimo, 1998; Dow and Larimo, 2009). There are somewhat fewer studies on the evolution of joint ventures.

THH is one of the main perspectives on joint venture partnership that focuses on competitive learning between partners.

Reich and Mankin (1986) is an early study cited by other THH proponents. They warned that joint venturing with Japanese firms in the U.S. is dangerous for American firms because Japanese firms could learn local market-related knowledge about distribution networks and business operations from American partners and they would then take over the American partners' market positions.

Pucik (1988a) and Pucik (1988b) pointed out that Japanese firms learn effectively in their joint ventures with Western partners in Japan through human resource management (HRM). He characterized Japanese HRM as based on the premise that long-term capability building and human resource development help Japanese firms to form strong linkage with domestic joint ventures. Japanese firms generally dispatch staff to domestic joint ventures and collaborate with joint ventures in recruitment and personnel training. Such a close HRM relationship between Japanese firms and domestic joint ventures helps Japanese firms to directly manage the joint ventures and increases the loyalty of the employees of joint ventures to the Japanese parent company. On the other hand, Western firms do not have such a close linkage with joint ventures in Japan in general. Consequently, Japanese firms increase their bargaining power against their partners in joint venture management and the inter-partner relationship gets worse to the point that the joint venture is dissolved.

Hamel (1991) and Hamel et al. (1989) are representative THH studies that discuss Japanese joint venture behavior with Western partners. They pointed out that Japanese firms catch up with Western firms by quickly transferring to themselves the knowledge they acquire from their Western partners and by effectively establishing core-competences. In particular, Hamel (1991) developed a joint venture behavior model to emphasize the value to each partner, which is different from the traditional view emphasizing the creation of shared value between alliance partners. According to his model, new alliances are characterized by the parent companies placing priority on learning from their partners in order to build up its core-competence, and thus alliance partners compete in a learning race.

According to these discussions, there are two aspects of Japanese joint venture behavior that help them to win the learning race against Western partners.

One is learning behavior, which is characterized by clear strategic learning intent, less transparency of internal knowledge to outsiders, and capability to learn and commercialize external knowledge.

The other factor is partnership behavior, that is joint venture termination or continuation, which is short-term-oriented. THH proponents explained that Japanese firms learn from their Western partners faster than vice versa, and that they dissolve joint ventures soon after their learning is complete. This scenario is based on the premise that joint ventures are no longer useful to partners when they have finished learning. THH proponents also share the premise that even at continuing joint ventures, such as when Japanese firms fail to persuade their Western partners to dissolve them, joint ventures will end shortly. This is because Japanese firms will want to increase their dividends from the joint venture as they increase their bargaining power by winning the learning race, and the inter-partner relationship will get worse and eventually lead to the end of the joint venture.

THH proponents developed their THH model of joint venture behavior by observing Japanese firms, and they claimed that such behavior is generally observed as Japanese behavior. In particular, they emphasized that the Japanese see joint venture partnership as short-term oriented because they recognize that joint ventures are not necessary as soon as they finish learning and hence will dissolve them. Then, they create wholly owned subsidiaries or internal business units by using the knowledge obtained from Western partners. Even in the cases of joint ventures that are not dissolved for a while, they suggested that dissolution would soon come.

Hypotheses advanced by THH proponents have been constructed and tested by Hennart et al. (1999), Ishii and Hennart (2009a), Ishii and Hennart (2009b), and Ishii

(2009). They constructed operational hypotheses following those scenarios based on the THH view and tested them by using data on Japanese-Western joint ventures in Japan, the U.S. and Europe. They found that the majority of Japanese firms do not exhibit the joint venture behavior illustrated by THH proponents and that Japanese firms make relatively long-term joint venture investments compared to Western firms. Hence, the supposed Japanese partnership behavior of dissolving joint ventures in the short-term, as pointed out by THH studies, has not been verified.

Accordingly, our research question is why and how do Japanese firms make such long-term partnerships in joint ventures. In particular, this paper will investigate this research question within the context of foreign direct investment. According to Hennart et al. (1999), Japanese firms do not follow a THH strategy in their foreign direct investments. If Japanese firms followed a THH strategy, they would terminate joint ventures soon and set up wholly-owned subsidiaries in the foreign market. However, even when they actually set up their wholly owned subsidiaries in the U.S. market, they did not follow the joint venture partnership behavior predicted by the THH view (Hennart et al., 1999). Therefore, our research question becomes: What is the mechanism by which the Japanese continue their joint venture investment after they have achieved their learning purpose in the foreign market? As Khanna (1998) pointed out, an individual alliance is not a sufficient unit to analyze alliance issues, such as termination, initiation and evolution. By exploring joint venture termination within the foreign direct investment context, including other subsidiaries in the same market (Hennart et al., 1999), we can gain a better understanding of the gap between the predictions of THH studies and the results of our previous study. We still do not have a sufficient explanation for why the THH view has not been verified in our previous macro-data analysis. In this sense, we distinguish this paper from our previous THH tests that have mainly focused on Japanese behavior in international joint ventures. Actually, THH proponents discuss issues over a broad range, such as organizational capability or business in a foreign or product/service market of the parent firm, beyond a particular joint venture. Such a broader view of THH has so far been investigated only by Hennart et al. (1991). Exploring our case of international joint ventures within the international investment context, including other subsidiaries or business units of the focal firm in the market, will complement previous THH tests.

To explore this research question, we will analyze the case of the Japanese-American joint venture NUMMI located in the US market. It lasted for a relatively long time while the foreign partner, Toyota, set up its wholly owned subsidiaries to utilize knowledge it had learned from its local partner, GM. Our information is mostly based on

secondary source, such as journal and newspaper articles. NUMMI and Toyota's US investments have received much press coverage and this has provided us with sufficient information.

### 3 The case

#### 3.1 Choice of the case

There are three reasons we chose to study NUMMI and Toyota's investment in North America.

First, this case is suitable for our research question and framework. Toyota initially intended to learn from GM (and GM also intended to learn from Toyota) in NUMMI. Within the process of establishing its production network in North America, Toyota kept its joint venture investment at NUMMI for more than 25 years. We can analyze how and why Toyota continued the joint venture even after having learned from GM and how Toyota diffused the knowledge to its wholly owned plants in North America.

Second, NUMMI is one of the most symbolic international joint ventures that have been reported in the media. It is generally difficult for researchers to access information on joint ventures because inter-partner contracts normally contain confidentiality covenants. Although we do not have direct access to NUMMI's internal information we can obtain a relatively large amount of information on the case.

Third, related to the second reason, choosing a well known case is beneficial for developing our argument. Our research is in the early stage of developing a joint venture behavioral model involving foreign direct investment strategy, which has the potential for getting comments from other researchers or business people. Therefore, choosing a famous case will increase the chance to obtain such comments.

#### 3.2 Strategic intentions and business outline at NUMMI

NUMMI was the first automobile manufacturing plant of Toyota in the U.S. market, and it was founded as a 50/50 joint venture between Toyota and GM in 1984 in Fremont, California. The NUMMI factory utilized the GM Fremont plant which had been closed down in 1982. About 85% of the 2,500 newly hired workers at NUMMI previously worked at the GM Fremont plant, from among the 5,000 workers laid off. There NUMMI made a new agreement with the United Auto Workers (UAW) and workers at NUMMI to implement the Toyota Production System (TPS) under new rules, emphasizing collaboration between company and union, which was different from the labor relations at the previous GM Fremont plant.

We can confirm the strategic intentions of Toyota and GM for NUMMI from NUMMI's

official Internet homepage:

General Motor Corporation and Toyota Motor Corporation formed NUMMI as an experiment. For Toyota, the joint venture was an opportunity to test its ability to use its production methods in an America setting. For GM, it provided a way to learn how to build cars more efficiently using Toyota's "lean" production system. Since GM also wanted to manufacture a small, high-quality car, Toyota seemed like the perfect partner.

(NUMMI official Internet homepage, <http://www.nummi.com/>, accessed on 14 April 2010)

Following these strategic intentions, Toyota and GM agreed to assemble passenger cars under the GM brand by using the TPS. They began operation at NUMMI to manufacture the GM (Chevrolet brand) "Nova" (4-door sedan Toyota "Sprinter") in December 1984. During the process of their feasibility study and production start at NUMMI, the Japanese yen appreciation and Japan-U.S. trade conflict forced Toyota to source locally manufactured cars to sell in the U.S. NUMMI subsequently added the Toyota "Corolla FX" (3-door hatchback) to manufacture for Toyota and to increase production volume in September 1986. Afterwards, NUMMI began manufacturing the GM (Geo and Chevrolet brands) "Prizm" (4-door sedan Toyota "Sprinter") and the Toyota "Corolla" (4-door sedan Toyota "Sprinter") instead of the "Nova" and the "Corolla FX" in 1988. In 1991, the manufacture of the Toyota "Tacoma" (pick-up truck) was added, and the GM (Pontiac brand) "Vibe" (also branded as the Toyota "Voltz" the first NUMMI car to be exported to Japan) was introduced instead of the "Prizm" in 2002. Figure 1 shows the production volume of these cars.

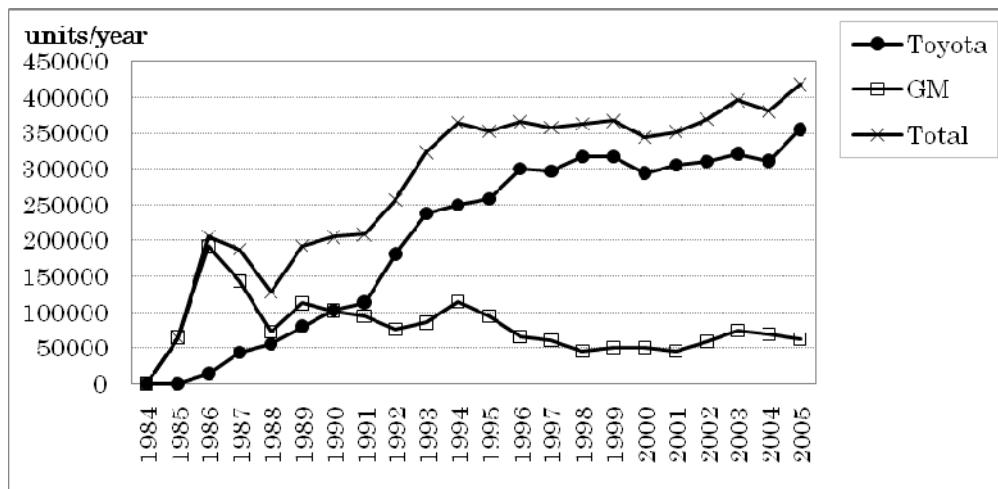


Figure 1: Production volume of GM and Toyota-branded cars at NUMMI

According to figure 1, NUMMI had a growth trend in its production volume, although this includes some fluctuation. At the outset, the production capacity of NUMMI was 200,000 units per year, and later it was expanded to 400,000 units per year which was reached in 2005. Of course, much effort has been made to increase the production volume at NUMMI throughout its history. For instance, some production models were replaced and added to adapt to market changes. In addition, managerial projects were implemented such as introducing work sharing among shop workers (*Nikkei-sangyo-shinbun*, 5 April 2010), adding training programs and arranging new tasks out of the production shop (*Nihonkeizai-shinbun*, 28 February 1991). These steps were taken to avoid lay-offs even in periods of market stagnation and production model replacement, which involves decreasing production volume.

In the final stage of the joint venture, NUMMI's production volume stagnated to about 200,000 units per year due to the fall in the automobile market in 2008.

### 3.3 Results of NUMMI

In May 2009, GM declared that it would end the joint venture contract of NUMMI and cease the production contract of NUMMI in August 2009. In June 2009, GM's stake in NUMMI was taken over by the Motors Liquidation Company (old GM) due to GM's bankruptcy because the new GM decided not to take it over. Although Toyota studied the possibility of continuing NUMMI as a wholly owned subsidiary, it finally decided to liquidate NUMMI because it was quite difficult for Toyota to continue operating NUMMI without supplying GM-branded cars. Then, NUMMI ended its history in March 2010.



It can be said that NUMMI experienced a relatively successful history although it ended its operations. First, it enjoyed a duration of over 25 years, which is much longer than the average longevity of international joint ventures. According to Kogut (1988), changes in joint venture investment peak at the 6th year after the foundation of a joint venture. Takeda (1996) pointed out that more than half of the international joint ventures dissolve nine years after their foundation. The long history of NUMMI also implies that Toyota and GM were generally satisfied with the joint venture business. Second, the manufacturing activities have been relatively successful in terms of business expansion. Except for a few years toward its end during the global market contraction, NUMMI increased its business scale by adapting to environmental changes and requests from the parent firms. Third, NUMMI was successful in establishing its organizational capability to achieve quality. Its products and the NUMMI plant itself have often earned best car and plant awards from J.D. Power and Associates in various years. In addition, NUMMI has been used by GM to learn production systems for many years.

Of course, additional investigation is necessary to evaluate the success of NUMMI in a stricter way. For instance, managers and workers at NUMMI also faced many managerial challenges and problems in its history. For instance, Mr. Kusunoki, a vice president at Toyota, suggested that NUMMI had to frequently coordinate with the UAW in advance for changing production line speed when introducing the “Corolla FX” in 1986, since the U.S. plant was not as efficiently operated as the plant in Japan with more flexible operations (*Nihonkeizai-shinbun*, Chubu regional edition, 7 January 1987). For the quality of products manufactured at NUMMI, the defect rate (which is found in the inspection shop and adjusted at the plant) was double that of Toyota’s Brazil plant where the same “Corolla” is manufactured. It is assumed that the reasons for this include the relatively high rates of turnover and absence compared to other plants in the U.S. (*Nikkei-business*, 26 February 2007). For instance, the turnover rate of NUMMI was 6-10% when that of Toyota’s Kentucky plant was 3% (*Nihonkeizai-shinbun*, 7 November 1988). On the other hand, the attendance of employees at NUMMI increased drastically, and its productivity improved 50% compared to that at the former GM Fremont plant (*Nihonkeizai-shinbun*, 9 June 1987; Shishido and Kusano, 1988). In addition, when adding a new Toyota pick-up truck model at NUMMI, Toyota had difficulty in negotiating with GM because GM requested discounts in the sale prices of its brand cars purchased from NUMMI in exchange for adding Toyota’s new model (*Nikkei-sangyo-shinbun*, 8 Oct 1988). NUMMI’s performance exhibits thus both successful and unsuccessful aspects.

However, we can assume that the learning intentions of Toyota and GM at NUMMI were attained at a sufficient level. This is the fourth successful point, which was the most important motivation for Toyota and GM in creating the joint venture. As we will observe, a variety of learning activities were arranged by Toyota, GM and NUMMI to facilitate inter-organizational learning among them.

### 3.4 Toyota's learning

Experimenting with TPS in the U.S. was the first motive for Toyota at NUMMI. Therefore, NUMMI supplied only GM brand cars at the outset. Within the context of experimenting with TPS at NUMMI, Toyota intended to learn from GM about how to manufacture automobiles in the U.S. In this sense, learning from GM was important; however, this was not all Toyota wanted to learn at NUMMI because it had to create and accumulate new knowledge to apply TPS in the U.S.

What did Toyota learn from GM at NUMMI? According to Badaracco (1991), Toyota learned how to manage American labor and component suppliers and how to deal with the UAW and state and local governments. It is assumed that Toyota transferred such knowledge from GM and could get manufacturing activities on track at NUMMI quickly by saving the initial learning cost and time compared to setting up a wholly owned plant.

One of the important kinds of knowledge Toyota obtained from GM was information on local suppliers, which contributed to increasing the local component purchasing rate and the quality and productivity of local components at NUMMI. GM provided Toyota information about excellent local suppliers in the U.S. because most cars manufactured at NUMMI were initially supplied to GM, and this information also contributed to setting up Toyota's new plant in Kentucky (*Nihonkeizai-shinbun*, 12 May 1987). Then, even at early stages of NUMMI when the main components such as engine and transmission were supplied from Japan, more than 50% of the value of the components (price base) of the "Nova" model were purchased from local suppliers (*Nihonkeizai-shinbun*, 14 April 1986); later this was increased.

### 3.5 Expansion of manufacturing network of Toyota in North America

Learning from GM and the TPS experiment at NUMMI helped Toyota manage local production at its wholly owned subsidiaries in North America. Table 1 lists Toyota's automobile assembly plants in North America (USA and Canada).

Table 1: Toyota's automobile assembly plants in North America

	Company name	Start of operations	Main products	Number of employees	Production for 2008 (in thousands)
Canada	Toyota Motor Manufacturing Canada Inc. ( TMMC )	Nov. 1988	Corolla, Matrix, RX	5964	287
U.S.	New United Motor Manufacturing, Inc. ( NUMMI )	Dec. 1984	Corolla, Tacoma	4,519	271
	Toyota Motor Manufacturing, Kentucky, Inc. ( TMMK )	May 1988	Camry, Camry Hybrid, Solara, Avalon, Venza, Engines	7,365	456
	Toyota Motor Manufacturing, Indiana, Inc. (TMMI )	Feb. 1999	Tundra, Sequoia, Sienna	4327	208
	Toyota Motor Manufacturing, Texas, Inc. ( TMMTX )	Nov. 2006	Tundra	1858	90
	Subaru of Indiana Automotive, Inc. ( SIA )	Apr. 2007*	Camry	3083	92
	Toyota Motor Manufacturing, Mississippi, Inc. (TMMMS)	2011 (plan)	Prius, Highlander	N/A	100 (plan)

Toyota expanded its assembly plant network in North America after setting up NUMMI. In 1985, only a year after production started at NUMMI, Toyota announced its plans to set up wholly-owned plants in the U.S. (Toyota Motor Manufacturing Kentucky, Inc.) and in Canada (Toyota Motor Manufacturing Canada, Inc.) that would start operations in 1988. Afterwards, Toyota added two more wholly-owned plants in North America, Toyota Motor Manufacturing, Indiana Inc. which started operation in 1999, and Toyota Motor Manufacturing, Texas, Inc. which started operation in 2006. In addition, Toyota started manufacturing at Subaru of Indiana Automotive, Inc. by outsourcing production of the “Camry” and set up a new plant, Toyota Motor Manufacturing, Mississippi, Inc. (planned to start operation in 2011).

It seems that Toyota’s learning from GM contributed to its ability to establish its plants in North America. However, Toyota also had to create new knowledge to establish its local production network in North America.

First of all, transplanting knowledge of TPS from Japan to NUMMI was quite important, and this activity took much time and manpower at the initial stage. For instance, a variety of programs for workers to learn TPS were arranged at NUMMI.

Former GM workers were invited to apply for jobs and told of the need for employees willing to contribute to an atmosphere of trust and cooperation.

Potential production employees went through a three-day assessment that included production simulations, individual and group discussions, and written tests and interviews. Once hired, team members attended a four-day orientation covering the team concept, production system, quality principles, attendance policies, safety policies, labor management philosophies and the competitive condition of the auto industry.

About 450 group leaders and team leaders traveled to Toyota's Takaoka plant in Japan for three weeks of classroom and on-the-job training. This training is now conducted almost exclusively at the NUMMI plant in a two to four weeks program referred to as "Foundations in training," or FIT. Classes include an introduction to the Toyota production system, team building, union-management relations and safety. These are followed by on-the-job training with team members working side-by-side with experienced trainers.

(NUMMI official homepage, <http://www.nummi.com/> , accessed on 14 April 2010)

In the process of applying and evolving TPS in plants in North America, Toyota had to create new knowledge. For instance, it took more than 10 years to establish an inter-organizational learning network for its component supply chain in the U.S. to apply Toyota's supplier management system to the US and to develop new knowledge by trial and error in the U.S. market (Dyer and Nobeoka, 2000). In addition, implementing "kaizen" activities in NUMMI was also important to Toyota to develop knowledge of how to introduce and diffuse TPS to its American plants. An innovation suggestion project was introduced at NUMMI in April 1986, and later 8 out of 10 workers proposed various suggestions (workers were rewarded with such prizes as refrigerators), which was a perfect test bench for introducing the kaizen project at Toyota's Kentucky plant (*Nihonkeizai-shinbun*, Chubu regional edition, 7 January 1987).

Therefore, Toyota used two paths to learn how to establish its plant network in the U.S. by at least two learning paths: it learned from GM and developed new knowledge for applying TPS to the U.S.

#### 4 Discussion and conclusion

As we have observed in the case of NUMMI, only part of Toyota's joint venture behavior has been as predicted by THH proponents.

It seems that Toyota learned local production knowledge in the U.S. from GM, which contributed not only to improving the capability of NUMMI's efficiency but also to expanding Toyota's own production network. Consequently, Toyota is today the largest non-American auto assembler in the U.S.. In this sense, Toyota had successfully learned from GM at NUMMI to diffuse this knowledge through its own business, as predicted by the THH view.

On the other hand, Toyota kept NUMMI as a joint venture with GM for more than 25 years while it establishing a network of wholly-owned plants in the U.S., a behavior that is not consistent with the THH view. It is assumed that Toyota learned much from GM in the early stages when Toyota set up and started operations at wholly owned plants in North America. In addition, transferring TPS into the U.S. and creating new knowledge for the transfer were also important for the growth of NUMMI and for establishing Toyota's manufacturing network in the U.S.

Then, why didn't Toyota dissolve the joint venture, especially at the stage when it finished learning from GM what it had initially intended to learn? This question will lead us to our research question in this paper, "Why do Japanese firms tend to have long-term joint venture partnerships?" That is the significance of examining our case, in which each partner intended to learn from the other partner and they continued collaboration as the foreign partner internalized the local partner's knowledge. An analysis of such a critical case study will contribute to developing the behavioral model of the firm (Yin, 1985) in the future.

Before we argue the reasons for Toyota's lasting investment in NUMMI, it is necessary to confirm whether Toyota has tried to dissolve NUMMI. This is because there is a possibility that the joint venture duration is the result of the failure of Toyota to persuade GM to dissolve the joint venture by buying out or selling off the joint venture stake, resulting in the continuation of the joint venture for a while. However, there is no evidence that of Toyota having intended to dissolve NUMMI. Rather, it seems that Toyota has made much effort to continue it as a joint venture. For instance, Toyota insisted on leaving out clauses for internal dispute settlement in the post-split stage between partners, although GM insisted on including such clauses in the joint venture agreement (Shishido and Kusano, 1986). According to Mr. D. C. Cuneo, vice president at NUMMI, Toyota's idea was that inter-partner relationship should be constructed through their daily joint venture management and that setting up contractual clauses for divorce would be harmful and not very useful (Shishido and Kusano, 1986). Joint venture agreement without clauses governing inter-partner conflict resolution is quite unusual in the U.S., Mr. Weinbaum, in charge of legal section at GM, suggested that

“Not only American managers, but also we American lawyers are learning Japanese ways” (Shishido and Kusano, 1986). It is difficult to say which approach is more reasonable. However, the way Toyota proposed would have left flexibility for inter-partner coordination when they faced conflicts. In addition, it would have increased the difficulty of exiting from the joint venture because it is difficult to measure the cost of ending the relation. If the prospects for the joint venture’s dissolution are more uncertain, the partners will make more effort to improve their relationship. Moreover, Toyota also supported NUMMI in improving its quality and technology and its adaptation to the market. These episodes indicate that Toyota has tried to continue NUMMI as a joint venture.

Therefore, why and how did Toyota maintained its investment in NUMMI? We can point out three reasons:

First, Toyota had some motivations to keep NUMMI as a joint venture other than learning from GM, such as sharing the costs and risk of investment, and reaching an optimal scale of production by supplying GM brand cars. (Shishido and Kusano, 1988; Ishii, 2001). The value of learning from GM may have decreased compared to other motives while Toyota accumulated manufacturing experience in the U.S. Practically, the motives of joint venture formation and continuation are many. In addition, the strategic position of a joint venture dynamically changes as the corporate strategies of the parent firms and the competitive environment change. Therefore, as long as we consider only THH and CS, we may face difficulties in explaining the reality. In this sense, it may be better to consider that a partner learns from the other to construct its own capability and improves the performance of the collaboration at the same time. There were also political considerations involved, as Toyota’s strong presence in the US could have led to negative reactions from local government and public opinions (Shishido and Kusano, 1988). Continuing a joint venture with a US firm was a useful way to defuse such adverse reactions.

Second, Toyota has emphasized not only its own benefits but also the benefits to GM and to the local community. Toyota supported GM learning TPS at NUMMI for many years, which was the most important motive of GM. Toyota has also emphasized its contributions to the local community around NUMMI. Even when GM was withdrawing its investment in NUMMI, Toyota tried to continue its own because the closedown of the plant would have a negative impact on the local economy. Actually, Toyota studied the possibility of starting a new business in California after dissolving NUMMI in March 2010 (21 May 2010, MSN-Sankei News). Then, in May 2010, Toyota declared that it would have joint projects with Tesla for developing and manufacturing electric vehicles.

Tesla announced it would purchase part of the NUMMI plant to manufacture there and recruit about 1,000 employees among which ex-NUMMI workers (21 May 2010, Sankei-shinbun). Emphasizing such a comprehensive value for the stakeholders of a joint venture will extend the arrangement. According to Suenaga (2000), “Sanpo-yoshi” (which can be translated as doing good for oneself, one’s partner and society) has been historically important as a philosophy for Japanese traders, especially among the merchants of the Ohmi area (Ohmi-shonin). This philosophy emphasizes continuous transactions that do not only maximize the focal firm’s profit, which is different from opportunism. If the merchant behaves for only its own profit, sacrificing the profit of its partner or community, the focal firm will be isolated from the transaction network because the numbers of players in a transaction is relatively limited. If the focal firm is unable to join the transaction network, it is almost impossible for it to continue its business. Such “Sampo-yoshi” is a philosophy based on Japanese culture and customs, which recognizes that the values for partners and regions will bring value for the focal firm in the long run (Kagono et al., 2008). By measuring Toyota’s joint venture behavior against this philosophy, we may have a better understanding of its joint venture strategy.

Third, some of GM’s knowledge may have been difficult for Toyota to completely learn, and thus Toyota had to continue collaborating with GM. For instance, some of the coordination and negotiation skills needed to collaborate with component suppliers, government or labor unions in a foreign market are quite hard to internalize if the foreign investor’s headquarters is not located there. Actually, Toyota launched a joint venture with Peugeot, Toyota Peugeot Citroen Automobile, in the Czech Republic which started production operations in 2005 to learn efficient supply chain management in Europe from Peugeot–Citroen (Hosoya, 2006), even after it had sufficient manufacturing experience in Europe since it had started plant operations in the UK in 1992, in Turkey in 1994, and in France in 2001 and hence had presumably considerable manufacturing experience in Europe. This suggests that some knowledge of the local market is difficult to learn because it is very local and continuously changing. Continuing the joint venture can be an important strategic option to learn such constantly changing knowledge (Ishii, 2009). On the other hand, it is assumed that Toyota continued NUMMI even after it had achieved its first intention to absorb knowledge of local production in the U.S. Taking into consideration how some types of knowledge are more difficult for the foreign partner to learn from the local partner may provide an answer our to our question.

Finally, we intend to collect more secondary data in the future since our data is mainly

collected from Japanese sources at this stage. Articles in the American and European media will allow us to observe the NUMMI case from a more objective viewpoint, which will contribute to the further development of our joint venture behavior model.

In particular, we need to investigate the learning and partnership behavior of GM at NUMMI. GM's biggest motive for the joint venture was to learn TPS and this challenge was also supported by Toyota at NUMMI. According to Ishii (2001), 4,000-5,000 GM workers (20 per day) visited NUMMI and the learning institute of GM near NUMMI to study TPS from the GM plants. In addition, learning TPS was an obligation for dispatched managers of GM to NUMMI. GM rotated about 16 managers every year or two to learn the lean production techniques of Toyota to NUMMI, and this improved GM's lean-manufacturing efforts (Waurzyniak, 2005). When they were assigned back to GM, these managers submitted reports about TPS what they learned at NUMMI with the help of managers dispatched from Toyota (Ishii, 2001). Managers dispatched from Toyota have helped those dispatched from GM to learn TPS because TPS includes a lot of implicit knowledge. GM also set up an office near the NUMMI plant to support its employees in learning TPS and compiled many reports on that technique (Nikkei-business, 12 April 2004). Mr. Azuma (ex-president NUMMI, ex-senior executive director of Toyota) said that "Toyota itself called TPS as tacit knowledge and was not keen on documenting it until recently. For the systemization, GM has gone through TPS more than Toyota has done." (Nikkei-business, 12 April 2004) However, it has been pointed out that GM could not learn TPS that much, although they had chances to do so. In particular, we can point out that the Saturn project was a symbolic and an important part of the results of GM's learning from Toyota at NUMMI. According to an article in Nikkei-business (3 Aug 1998), GM's Chairman Smith directed that GM executives be sent to NUMMI to learn TPS and created Saturn as a completely new GM company to use its experience from NUMMI in 1985. In 1990 GM set up in Springhill, Tennessee, the Saturn plant, which was similar to NUMMI in its Japanese production system and the cooperation between capital and labor. However, a labor-management confrontation occurred in 1998, and GM declared its intention to dissolve the Saturn business by October 2010, when it could not agree to sell the brand to other firms. It is reported that one of the reasons for this failure was that Saturn could not completely introduce the Japanese system (Nikkei-business, 17 September 1990). It is assumed that joint venture behavior of GM is closely interrelated with that of Toyota at NUMMI and we can explain Toyota's joint venture behavior with richer facts by reducing possibilities of alternative explanation.

In addition, we need to investigate the inter-organizational relationship between



NUMMI (or Toyota) and its local suppliers in the U.S. It is reported that American local suppliers have improved their productivity and quality by learning TPS from Toyota and NUMMI (*Nikkei-sangyo-shinbun*, 8 October 1988). This implies that Toyota also had chances to use local suppliers' capabilities to establish its production network in the U.S. Further research could also probe alternative explanations such as option theory (Kogut, 1991).

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