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RIS Discussion Papers

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A Perspective from the Strategy of
Japanese Enterprises**

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Potential of Asian Economic Integration: A Perspective from the Strategy of Japanese Enterprises

Tetsuji Kawamura*

Abstract: The progress of the cooperation and economic integration of the region has a big potentiality for further industrial and economic development of the whole Asian region in general. IT industries have big potentiality for the future economic development of each country in the region. IT sectors will stimulate high-tech and lead the technological innovations in the economy and possibly lead the economic development of the region. Japanese firms have significant roles, as demonstrated by the experiences over the past three decades. The effective transfer of its capability-building system, or its significant human resources management and development system still has the key importance.

1. Economic integration of the ASEAN and the East Asian Region: Historical Basis and Background

In the last three decades, a firm historical basis for the economic cooperation and integration has evolved in ASEAN and East Asian region, closely related to the international politico-economic framework of the region. That is the emergence and deepening of the “Pacific Ocean Triangle” structure¹. This

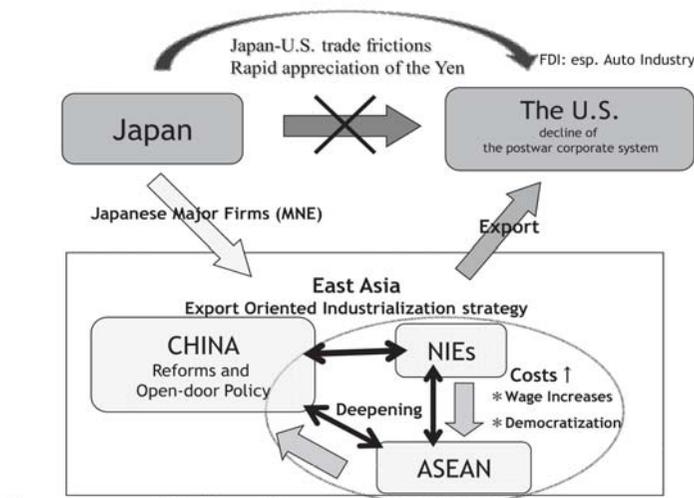
An earlier version was presented at the Sixth High-Level Conference on Asian Economic Integration: Agenda for East Asia Summit, held on 12-13 November 2007, organized by RIS in collaboration with Institute of South East Asian Studies (ISEAS), Singapore; and the Institute of Developing Economies (IDE), Tokyo, New Delhi, India.

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structure emerged centering in the process of the decline and transfiguration of the postwar Pax Americana regime in the late 1970s². The key driving force was the Japanese major firms' strategic responses and their new challenges in the region to cope with the increasing trade imbalance and intensified trade frictions between US-Japan and rapid appreciation of the Japanese yen. They faced major difficulties of export to the U.S. and they were forced to move their export production bases to the NIEs area, first. Electronics industries took the lead in Asia, while major auto makers started full scale local production in North America. Therefore, Japanese firms shifted to ASEAN and then to China. Eventually, steady growth of trades in the region among NIEs, ASEAN, China, has deepened the structure.

It should be noted that such historical background have brought about one important characteristic of the regional economic framework. The extensive intra-firm and inter-firm business networks of Japanese firms in all the spheres of production, procurements and sales constitute the key fabric of the economic cooperation and integration of the region.

Figure 1: Emergence and Deepening of the “Pacific Ocean Triangle” Structure

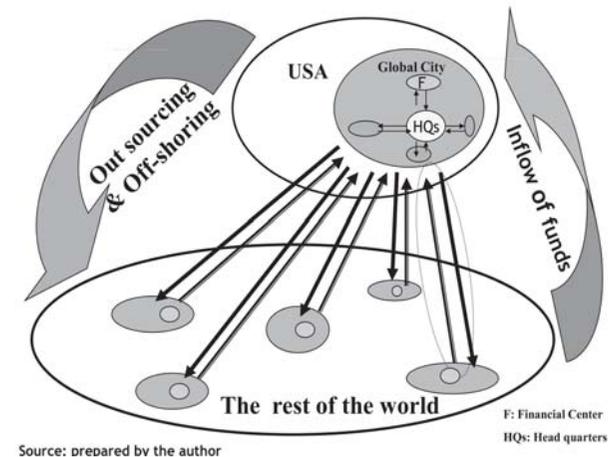


Source: prepared by the author

More recently, the circumstances of the region have had experienced additional big changes. The most salient features are threefold. All of them constitute major accelerating factors for the region to draw on further economic cooperation and integration.

First, in general, is the globalization impact. The region has to cope up with the increasing pressures from mega-competition among major global enterprises; financial liberalization and speculative financial developments; and spreading neo-liberalism. More specifically, new dynamics of the U.S. economy is very influential to the region: United State economy has shifted to the “Global City” type nexus (see, Saskia Sassen, 1996 and 2001). As the “World Growth Center”, the region constitutes one of the major targets of the global outsourcing and off-shoring of the U.S. business and financial interests. The region has become much enrolled in the U.S. “New Imperial Circuits” or international money flow circuits centered in the U.S.

Figure 2 Global Outsourcing & Off-shoring of the U.S. and New Imperial Circuit of the international money flow



Source: prepared by the author

Second is the increasing Chinese presence. Pressures from China are getting immense on the region. Made-in-China products have been already major competitors in the global market places. The huge domestic market attracts FDI there, among others.

Third is the far-reaching impact of the Asian financial crisis in 1997. It affected the whole regional economy and forced the region a wholesale reorganization of the economy and a major reorientation of policies. It also prompted the regional efforts toward further cooperation to prevent the recurrence of the crisis.

2 New Challenges of Japanese Firms in the Post-crisis Era

All of these renewed circumstances, or globalization impact in sum, has been working as the major driving forces for the region to enforce further economic cooperation and integration in general. In this context, the importance of Japanese major firms' renewed strategies should be emphasized in the region after the Crisis. One aspect is their strategic repositioning of their local production bases in the region. They tend to place more emphasis not on the individual countries but on the ASEAN markets on the whole. As a matter of fact, the aggregate scale of the regional economy as a whole is comparable to China in many of product lines. Moreover, Japanese firms are increasingly looking at more beyond the regional boarder. They are looking at the region as the export bases to other major emerging markets of South America, other Asia, Middle-east and African areas, by making full use of the existing production capabilities accumulated through the long experiences of their production operations and procurement networks of the local Japanese suppliers in the region.

They are also adding new efforts for their renewed strategies. It is typified by auto industries. Toyota's IMV Project, which is centered in Thailand, is a notable case, among others. In electronics industries, Panasonic utilize their Malaysian TV production facilities as the strategic center for their new strategy. They have IPO function for TV assembly there. They expanded their local R&D capability and design "global chases" for Asian and South American markets. At the same time, Japanese parts and component suppliers in ASEAN try to build up more organized linkages of their business with their Chinese production operations (for the typical cases of Panasonic, Toyota and Denso, see Tables 1, 2, 3).

The Toyota Case should be instantiated here³. Toyota had already built up their production bases and procurement networks in the region. Especially,

Table 1: Panasonic in Asia (other than China)

Singapore	
-	Panasonic Singapore
-	Panasonic Systems Asia Pacific
-	Panasonic Industrial Asia Pte. Ltd.
-	Befrigeration Devices Singapore Pte. Ltd.
-	Panasonic AVC Networks Singapore Pte. Ltd.
-	Panasonic Motor Singapore Pte. Ltd.
-	Panasonic Electronic Devices Singapore Pte. Ltd.
-	Panasonic Semiconductor Asia Pte.
-	Panasonic Shikoku Electronics Singapore Pte. Ltd.
-	Panasonic Factory Solutions Singapore Pte. Ltd.
-	Panasonic Singapore Laboratories Pte. Ltd.
Indonesia	
-	PT. Panasonic Gobel Indonesia
-	PT. Panasonic Manufacturing Indonesia
-	PT. Panasonic Shikoku Electronics Indonesia
-	PT. Panasonic Battery Batam
-	PT. Panasonic Lighting Indonesia
-	PT. Panasonic Electronic Devices Indonesia
-	Panasonic Semiconductor Indonesia
-	PT. Panasonic Shikoku Electronics Batam
-	PT. Panasonic Electronic Devices Batam
-	PT. MT Picture Display Indonesia
-	PT. Display Devices Indonesia
Malaysia	
-	Panasonic Malaysia Sdn. Bhd.
-	Panasonic Manufacturing Malaysia Bhd.
-	Panasonic HA Air-Conditioning (M) Sdn. Bhd.
-	Panasonic HA Air-Conditioning R&D (M) Sdn. Bhd.
-	Panasonic Compressor Malaysia Sdn.Bhd.
-	Panasonic Compressor R&D Centre Malaysia Sdn. Bhd.
-	Panasonic Foundry Malaysia Sdn.Bhd.
-	Panasonic Refrigeration Devices Malaysia Sdn. Bhd.
-	MT Picture Display (M) Sdn. Bhd.
-	Panasonic AVC Networks Johor Malaysia Sdn. Bhd.
-	Panasonic Industrial Company (M) Sdn. Bhd.
-	Panasonic R&D Centre Malaysia Sdn. Bhd.

Table 1 continued

Table 1 continued

Thailand

- iew Sales (Thailand) Co., Ltd.
- Panasonic A.P. Sales (Thailand) Co., Ltd.
- Panasonic Industrial (Thailand) Ltd.
- Panasonic Electronic Devices (Thailand) Co., Ltd.
- Panasonic Automotive Systems (Thailand) Co., Ltd.
- Panasonic Battery (Thailand) Co., Ltd.
- Panasonic Ecolory Systems (Thailand) Co., Ltd.
- Panasonic Motor (Thailand) Co., Ltd.
- Panasonic AVC Networks (Thailand) Co., Ltd.
- Panasonic Technologies (Thailand) Co., Ltd.
- Panasonic Home Appliance (Thailand) Co., Ltd.
- Panasonic Refrigeration Devices (Thailand) Co., Ltd.
- MT Picture Display (Thailand) Co., Ltd.

Philippines

- Panasonic Manufacturing Philippines Corporation
- Panasonic Communications Philippines Corporation

Vietnam

- Panasonic AVC Networks Vietnam Co., Ltd.
- Panasonic Home Appliances Vietnam Co., Ltd.
- Panasonic Communications Vietnam Co., Ltd.

India

- Panasonic India Pvt. Ltd.
- Panasonic Carbon India Co., Ltd.
- Panasonic Battery India Co., Ltd.
- Panasonic Home Appliances India Co., Ltd.
- Panasonic AVC Networks India Co., Ltd.
- Panasonic Washing Machine India Pvt. Ltd.
- Panasonic Air-Conditioning India Pvt. Ltd.

Source: http://panasonic.net/corporate/global_network/ao/ and various data provided to the author by Panasonic (Matsushita Electric Industrial Co., Ltd.)

from the 1990s on, Toyota promoted the mutually compliment concentration of the key parts production in the region under the AIJV (ASEAN Industrial Joint Venture) and the BBC (Brand-to-Brand Complementation) Schemes, the AICO and then the CEPT Scheme for AFTA.

**Table 2: Toyota Production and other Bases in Asia
(Other than China)**

Thailand

- Toyota Motor Thailand Co., Ltd. (TMT) 1964 Hilux, Fortuner, Camry, Corolla, Soluna Vios, Yaris, Wish
- Toyota Auto Body Thailand Co., Ltd. (TABT) 1979
- Thai Auto Works Co., Ltd. (TAW) 1988 Fortuner, Hilux Vigo (IMV)
- Siam Toyota Manufacturing Co., Ltd. (STM) 1989 Engine, engine parts
- Toyota Motor Asia Pacific Engineering and Manufacturing Co., Ltd. (TMAPEM) 2003 Development of autos in aisan area production support

Singapore

- Toyota Motor Aisa Pacific Pte Ltd (TMAP 1990 parts supply to ASEAN marketing and slaes support in Asia

Taiwan

- Kuozuimotor, Ltd. 1984 Camry, Corolla, Wish, Vios, Yaris, Hiace, Zace, press parts, engine

Indonesia

- PT. Toyota Motor Manufacturing Indonesia 1970 Kijani Pckups, Inova, Fortuner, Dyna, engine
- P.T. Astra Dailhatsu Motor (ADM) 2004 Avanza

Malaysia

- Assembly Services Sdn. Bhd. (ASSB) 1968 Camry, Corolla, Vios, Hilux, Inova, Fortuner, Hiance
- Perodua Manufacturing Sdn. Bhd. (PMSB) 2005 Avanza

Philippine

- Toyota Motor Philippines Corp (TMP) 1989 Camry, Corolla, Inova
- Toyota Autoparts Philippines (TAP) 1992 manual transmission, constantvelocity joint

Vietnam

- Toyota Motor Vietnam Co., Ltd. (TMV) 1996 Camry, Corolla, Vios, Land Cruiser, Inova, Hiance

India

- Toyota Kirloskar Motor Private Ltd.(TKM) 1999 Corolla, Inova
- Toyota Kirloskar Auto Parts Private Ltd. (TKAP) 2002 axel, propeller shaft, manual transmission

Pakistan

- Indus Motor Company Ltd. (IMC) 1993 Corolla, Hilux

Source: http://www.toyota.co.jp/en/about_toyota/manufacturing/worldwide.html and various data provided to the author by Toyota Motor Corporation.

Recently, Toyota launched the IMV Project (Innovative International Multi-purpose Vehicle — international motor vehicle models based on the same platform) by making full use of the reorganization of the production and procurement basis in the region. First they started the project at Toyota Motor Thailand in August 2004 with Hilux Vigo, which functions as the mother plant of the project. 240,000 units of IMVs out of 280,000 produced there are scheduled for export. Next month, Toyota introduced Kijang Inova at Toyota Motor Manufacturing Indonesia (TMMI). Considerable part of the local production (10,000 units out of the total local production of 80,000 units) is scheduled for export to Asia and Middle East (for major models of IMV, see Figure 3).

For the project, Toyota has developed the intra-regional procurement system of the key parts and components in the following way⁴ (see Figure 4):

- TMMIN (Toyota Motor Manufacturing Indonesia) in Indonesia: engine
- TAP (Toyota Autoparts Philippine) in Philippine: manual transmission, constant velocity joint
- T&K Auto Parts in Malaysia: steering gear
- STM: (Siam Toyota Manufacturing) in Thailand: diesel engine
- Singapore: TMAP (Toyota Motor Asia Pacific ← TMSS in Singapore):

New strategies and the actual movements by Japanese firms in this way have been helping promote the renewed cooperation and integration efforts in the region. Japanese firms expect effective roles of the new developments of FTA, EPA schemes and AFTA framework.

Broadly speaking, on the firm basis of the historical background and the broader frameworks of the industrialization and economic development of the region, there must be a certain common basis for the economic integration, among especially in the ASEAN plus Japan, S. Korea (and Taiwan). China might be in a different position in the sense that China has a huge domestic market —real and potential, whatever— which all the Japanese firms have to deal with by solely devoting themselves to it. But, nowadays Japanese firms are pursuing to make more linkage each other of

Table 3: Denso in Asia (other than China)

Singapore

- Denso International Aisa Pte. Ltd. (DIAS) 1998*
 - Promotion of compliment local procurement, Support for Aisa, Oceania and Middle Eart. Holding company of Aisa and Tiawan
 - Denso International Singapore Pte. Ltd. (DISP) 1995 Sales*
-

Thailand

- Denso International Asia Co., Ltd.
 - Denso International (Thailand) Co., Ltd. (DITH) 2002 Sales & functional services
 - Denso (Thailand) Co., Ltd. (DNTH) 1972 electrical components, Car A/C, magnet, spark plug
 - Denso Tool & Die (Thailand) Co., Ltd. (DTTH) 1989 Tool & Die
 - Siam Denso manufacturing Co., Ltd. (SDM) 2002 Common rail
 - Toyota Boshoku Filtration System (Thailand) Co. Ltd. (TBFST) 2002 Oil filter
 - Anden (Thailand) Co., Ltd.
 - Siam Kyosan Denso Co., Ltd.
-

Indonesia

- PT. Denso Indonesia (DNIA) 1975 A/C, electrical components, radiator, spark plug, filter
 - PT. Denso Sales Indonesia
 - PT. Asmo Indonesia
 - PT. Hamaden Indonesia Manufacturing
-

Korea

- Denso PS Electronics Corp. (DNPE) 1976 Meter
 - Denso Sales Korea Corporation
 - Denso PS Corp. (DNPS) 1948 Small motor, electrical components
 - Doowon Climate Control Co. Ltd. (DCC) 1989 A/C
 - Korea Wiper Blade Co., Ltd.
-

Malaysia

- Denso (Malaysia) Sdn. Bhd.
 - Nippon Wiper Blade (M) Sdn. Bhd.
-

Table 3 continued

Table 3 continued

India

- Denso India Ltd.
- Denso Haryana Pvt. Ltd.
- Denso Kirloskar Industries Pvt. Ltd.
- Denso Sales India Pvt. Ltd.
- Denso Faridabad Pvt. Ltd.

Philippine

- Philippine Auto Components, Inc.
- Denso Techno Philippines, Inc.

Vietnam

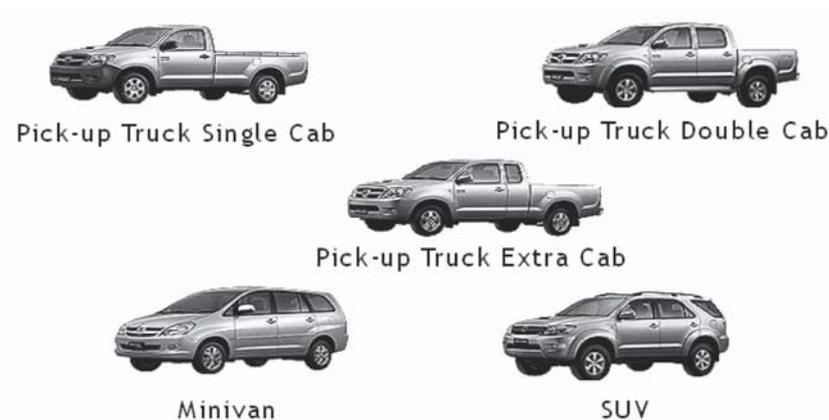
- Denso Manufacturing Vietnam Co., Ltd. (DMVN) 2001 Airflow meter, SCV actuator, parts design for ASEAN, application design (Design Center)

Note: * consolidated in April 2008

Source: <http://www.globaldenso.com/en/aboutdenso/globalnetwork/index2.html> and data provided to the author by Denso

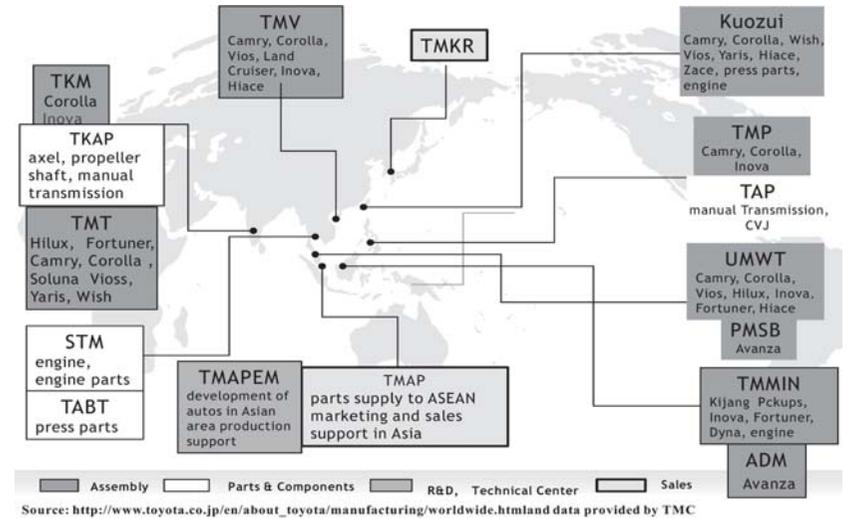
their production bases in China and ASEAN. And the next big frontier for Japanese firms is India, together with the less developed countries in ASEAN, like Vietnam, Myanmar, Lao PDR, Cambodia, among others.

Figure 3: Toyota IMV Models



Source: <http://www.toyota.co.jp/jp/strategy/imv/index.htm>

Figure 4: Toyota Bases in Asia (Other than China)



However, there are still holding-back factors for further regional economic integration. For example, a critical need for a stable currency and exchange rate system is clearly demonstrated by the crisis in 1997. But, China and the Yuan and also the US and the US Dollar seems to be the main holding back factors toward the Asian Monetary union and the ACU or a Single-Asian currency. An APEC-type framework might be necessary.

Another factor, which is often considered as the major limitation factor, is the wide diversity of socio-economic conditions of the region, even in religion and culture, especially compared with EU. It must be the major difficulty to adjust the diversified national interests, in general. However, more specifically it reveals one important dimension of Japanese firms' business operations and strategies in the region — It is closely related to the character of the JM&PS itself.

Amid fierce global mega-competition among major global enterprises within and outside the region as well, production operations

of Japanese companies have to cope with new business circumstances: increasing market uncertainty; shorter product life cycle; reduced production lead time, and so on. They have to achieve the production operation of variable products with variable volume, with higher quality requirements and pressures of cost cuts, much more than ever. Actually it should be noted that these new requirements give more competitive advantage to the JM&PS, which has flexibility inherent to the system and the built-in *capability-building* system (*Kaizen* and innovations based on accumulated knowledge on shop floor)⁵

3. Significance of the Effective Transfer of the Japanese Management and Production System

Essentials of the JM&PS – its transferability and the “Hybridization” dynamism

The JM&PS is usually characterized by its production management methods in accordance with the “JIT” or “pull” principles and the specific work management methods to achieve it. However, its capability-building system aspect on shop-floor should be placed more emphasis, among others. It is the core of the system to secure *Kaizen* activities or continuous improvements and problem-solving activities in daily operations on shop floor. It constitutes, in short, the source of the incremental process innovations of the JM&PS. In that sense it constitutes the key for the smoother local production operations and enhancement of the technological and managerial capabilities on local basis. But it highly depends on human elements (see Fujimoto, 2007; Kawamura, ed., 2008).

Our research group, the Japan Multinational Enterprise Study Group (JMNESG) has investigated the international transfer of the JM&PS in foreign soils for more than twenty years in the major regions in the world: North America (the U.S., Canada and Mexico) , European continent (including central Europe) and UK, Asia (Korea, Taiwan, ASEAN, China) and South America (Brazil and Argentina) (for a general summary of the research outcomes, see Abo, ed., 2007, and for the recent research outcomes, see Kawamura, ed., 2008) .

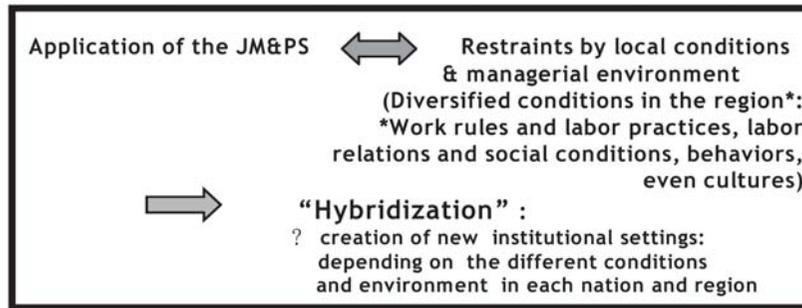
One of the most important findings of these researches and investigations is that the human resources aspects have the crucial significance as much to achieve the full implementation of the basic logic of the JM&PS, especially, its *capability building system* in their local plants. Japanese firms need various efforts to cope with the specific local human elements that restrain its implementation. They have invented various new devices and institutional settings, or by making use of the local “functional equivalents⁶,” according to the situations and local conditions in each region. The process can be called a *hybridization dynamics*.

These dynamics are summarized in three steps. First, Japanese firms try to implement JM&PS in their local transplants—the *application* aspect. Second, JM&PS cannot be implemented according to its original specifications because of the constraints imposed by local conditions. They must be modified in various ways—the *adaptation* aspect. Third, as a result of these processes, hybridization of the management and operation systems of the local transplants put in process is set in progress, giving birth to a complex conjunction between elements of the JM&PS and local conditions. Figure 5 shows the outline of the process of the hybridization dynamism.

We have developed a *hybrid model analysis* the as a specific analytical method to elucidate the hybridization dynamics. The basics of it involve grasping Japanese transplants’ management and operations as such a dynamic process of application-adaptation-and-hybridization. Specific method of five-degree evaluation is adopted to evaluate the application-adaptation degrees in each constituent aspect and element of the JM&PS, which is organized in six-group, 23-items model (see, Table 5 and Figure 6).⁷

Figure 7 and Table 6 summarize the resulting evaluation scores and their inter-regional comparisons. As shown in these summaries, our observations and investigation for more than twenty years in the major regions in the world including ASEAN and China and India include very important aspects of the international transfer of the JM&PS. However, one aspect should be especially emphasized here. While in the routine

Figure 5: The Hybridization Dynamism



➢ The various restraints from local conditions sometimes impair full implementation of the basic logic of the JM&PS.
? Japanese firms try to compliment the difficulties by Japanese expatriates as well as by “bringing-in” of production equipment and key parts from Japan

Source: prepared by the author

operations and technical aspects, the Japanese systems have been considerably implemented in their local production, but transfer of the *capability-building* system has had major difficulties, even though it is the very important key for the localization of the management. The major constraints factors exist in the local human elements; labor relations, labor practices, labor legislations, and so on, more generally the behaviors and customs of peoples deep-rooted in the cultures and society in the nations. In Asian region, these local conditions are much diversified even within the countries.

Importance of the Transfer of the Capability Building System

The improvements of the commerce systems and infrastructure even in crossing borders are quite important for Japanese firms to realize the full operation of the JM&PS in their local plants in the region. They are quite necessary especially to organize the effective implementation of Japanese-style procurement system in accordance with the JIT principles in optimal ways. However, the effective local transfer and implementation of the *capability building* system still constitutes a major field of challenges for Japanese firms’ global management. The effective transfer of the *capability building system* of

Table 5: Major Aspects and Elements of the JM & PS --International Transfer Model--

<ul style="list-style-type: none"> ● <i>Human & Material Core of the JPS</i> : —main system I. Work Organization and Its Admin. —Japanese-style Work Organization and HR management <ul style="list-style-type: none"> ➢ JC, Wage System, JR, Education & Training, Promotion, First-line Supervisors II. Production Management —Japanese-type material management to achieve the basic logic of the JPS <ul style="list-style-type: none"> ➢ Equipment, QC, Maintenance, Process Management III. Procurement —Japanese-style procurement system and suppliers relations <ul style="list-style-type: none"> ➢ Local Content; Suppliers; Procurement methods 	<ul style="list-style-type: none"> ● <i>Sub-systems and Frameworks of the JPSG</i> IV. Group Consciousness —Sub-systems of Japanese-type Organic Organization <ul style="list-style-type: none"> ➢ SGAs, Information Sharing; Sense of unity (Socialization) V. Labor Relations —Sub-systems and frame works of Japanese-type work place <ul style="list-style-type: none"> ➢ Hiring Policy; Job Security; Harmonious labor relations; Grievance procedure VI. Parent-Subsidiary Relations —Frameworks of local management <ul style="list-style-type: none"> ➢ Ratio of Japanese Expatriates; Delegation of Authority; Position of local Managers
--	---

Source: prepared by the author

the JM&PS is very crucial for the effective local production operations of the Japanese local plants. It constitutes the major devices to achieve the continuous improvements and innovations on shop floor as well as to secure more

Figure 6: Measurement of Hybridization of the JM & PS

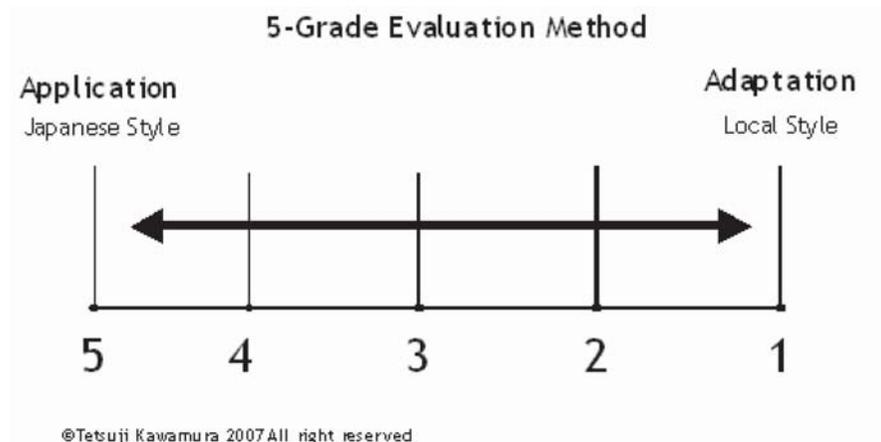
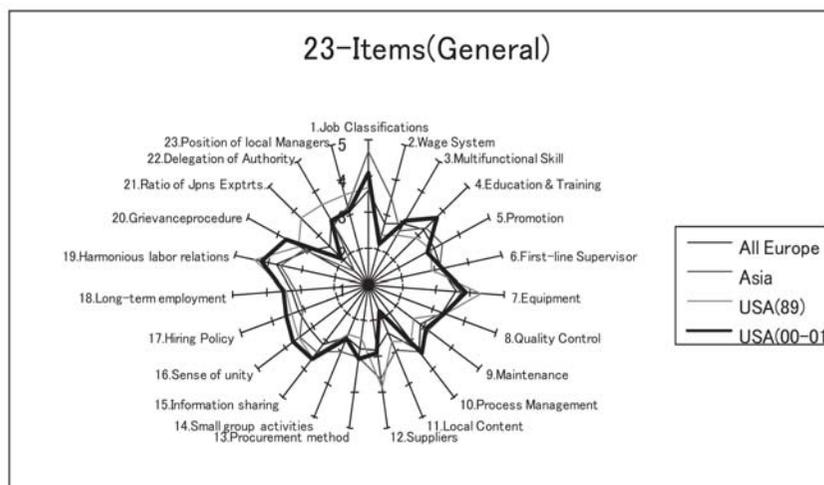


Figure 7: Application Pattern (23-items: general aveages)



Source: prepared by the author

general improvements of managerial and operational techniques in almost all the spheres of their operations: quality enhancement, improvements of work procedures and process innovations, productivity enhancement, product R&D and design, even in procurement & purchasing, and marketing & sales operations. In that sense, the system is the key element indispensable for efficient localization of their production operations and supply chain management depending on local staffs and workers.

Toyota has already started the notable efforts for the systematic local transfer of their *capability-building* system on a global scale. The most important moves by Toyota toward that direction were the establishment of the Global Production Promotion Center (GPC) in Motomachi plant in Japan in 2003 as a hub base. In Asian region, the Asia Pacific Global Production Center (AP-GPC) was established on the site of Toyota Motor Thailand Co., Ltd, at Samut Prakarn in August 2005. In North America, North American Production Support Center (NAPSC) was established just the next to the site of Toyota Motor Manufacturing Kentucky in the USA in February 2006. Also in European region, they opened the European Global Production Centre (E-GPC) on the site of Toyota Motor Manufacturing (UK) Ltd, in March 2006.

Table 6: Average Hybrid scores for major regions

	USA (00-01)	USA (89)	Comprsn, 89/00-01	UK N-20	Europe N-36	S. Korea & Taiwan	ASEAN N-35	East Asia N-39
	N-37	N-34			N-24			
1. Job Classifications	4.1	3.7	0.4	4.4	3.2	4.9	4.5	4.7
2. Wage System	2.2	2.4	-0.2	2.8	2.8	3.9	3.1	3.5
3. Multifunctional Skill	3.1	2.6	0.5	3.3	2.8	2.9	2.6	2.7
4. Education & Training	3.7	2.9	0.8	3.5	3.1	3.4	3.3	3.3
5. Promotion	2.9	3.1	-0.2	3.4	3.1	3.7	3.1	3.4
6. First-line Supervisor	3.2	2.9	0.3	3.4	3.1	3.4	2.9	3.2
7. Equipment	3.9	4.3	-0.4	3.9	3.4	3.5	4.0	3.7
8. Quality Control	3.4	3.4	-0.0	3.6	3.1	3.6	3.2	3.4
9. Maintenance	3.1	2.6	0.5	3.0	2.8	3.3	3.0	3.2
10. Process Management	3.5	3.0	0.5	3.6	3.2	3.5	3.2	3.4
11. Local Content	1.8	2.7	-0.9	1.9	2.8	2.9	3.1	3.0
12. Suppliers	2.9	3.9	-1.0	2.7	2.9	3.5	3.8	3.7
13. Procurement method	3.1	2.5	0.6	2.9	2.8	3.2	2.8	3.0
14. Small group activities	2.6	2.5	0.1	2.7	2.5	3.2	2.9	3.0
15. Information sharing	3.6	3.6	0.0	3.6	2.8	3.5	3.3	3.4
16. Sense of unity	3.7	3.5	0.2	3.7	2.8	3.6	3.3	3.5
17. Hiring Policy	3.6	3.4	0.2	3.3	3.1	3.0	3.1	3.0
18. Long-term employment	3.5	3.4	0.1	3.4	3.2	3.3	3.0	3.2
19. harmonious labor relations	4.2	4.4	-0.2	4.2	3.5	4.0	3.3	3.6
20. Grievance procedure	3.7	3.3	0.4	3.0	3.1	3.2	3.1	3.1
21. Ratio of Jpns Exports	2.1	3.7	-1.6	2.4	2.6	1.5	1.6	1.5
22. Delegation of Authority	3.1	3.6	-0.5	3.0	3.2	2.7	3.2	2.9
23. Position of local Managers	3.1	3.6	-0.5	3.0	3.1	2.7	3.8	3.3
Overall average	3.2	3.3	-0.0	3.3	3.0	3.3	3.2	3.3

Source: prepared by the author

Conclusion

The progress of the cooperation and economic integration of the region has a big potentiality for further industrial and economic development of the whole Asian region in general. However, one point should be emphasized here, namely, the key importance of the key industrial sector(s) for the economic development of a nation or a region. They constitute the main engine of the industrialization and economic development. They play the key roles in development of technological and managerial capabilities, promotion of organic agglomeration of broader, even cross boarder industrial clusters. In this context, manufacturing still matters in the region, and especially automobile and electronics industries are still very important among others.

Almost all the countries in the region have been pursuing the development of IT & IT industries – in Singapore, Taiwan, Malaysia, China, and so on, and the recent India is another notable case. IT industries have big potentiality for the future economic development of each country in the region. IT sectors will stimulate high-tech and lead the technological innovations in the economy and possibly lead the economic development of the region. However, overall job creation effects of IT sectors are smaller than manufacturing. The jobs and professional services that IT industries and high-tech sectors create are more specialized. In contrast, manufacturing industries especially automobile and electronics industries have broad and wide variety of relating and supporting industries. Technology transfer and spin-offs effects are large and comprehensive. They have large potentiality for job-creation. All of these aspects will help build up the industrial bases and capability of the region as a whole and have very important roles for the economic development of each countries and the whole region as well.

In this context, Japanese firms have significant roles, as demonstrated by the experiences over the past three decades. One very important aspect is the effective transfer of the JM&PS. Technological spin-offs effects and the transfer of the managerial methods of the JM&PS will enhance the capability of the regional local firms to cope with growing global mega-competitions among major global firms. It also contributes to the enhancement of the capability of the regional supporting and relating industries on broader basis and building up of the local procurements

networks with organic linkage of the countries in the region each other, which presumably enforce the main fabrics of the economic linkage of the region. At the same time, alliance with the local firms in the region will contribute as much to enhance the Japanese firms' competitive edge in the global economy.

As discussed above, the effective transfer of its capability-building system, or its significant human resources management and development system still has the key importance. However, because of its high dependency on the human elements, the much diversified existing local socio-economic and even cultural conditions and institutional settings, especially in human resources areas, in the region cause major difficulties for Japanese firms to realize its effective transfer in an uniform way. They face major challenges to create new devises and institutional settings that are more suitable to the local conditions, including local wage systems and the promotion systems to the variety of local conditions in each country.

It is needless to say about general importance to promote more common economic frameworks of marketing and distribution systems, custom procedures, certifications, intellectual properties protection, as well as Infrastructure improvements in ports, highways, air ports and power supplies, etc. for further economic development of the region. The devices of individual or collective EPA, CEPT for AFTA and other schemes to promote further economic integration are very important. However, it should be emphasized that, under the rapidly progressing globalized economy, it is more generally needed to build up the more stable common economic frameworks and institutional settings that incorporate and balance the needs of the Japanese and other foreign firms with the more diversified local conditions in the region. Especially human resources development area has special importance for the more autonomous and self-sustaining economic growth for each country which has uniqueness and diversity in the integrated world of the region. The effective implementation of *capability-building* system of the JM&PS has the special significance in this context. If more meticulous *hybridization* can be achieved by incorporating the characteristic local conditions specific to each country, it will enhance the *sui generis* local industrial capabilities in each country, taking advantage of

its socio-economic and even cultural characteristics and thereby help enable each country to have the specific economic positions in the integrated Asia. In this field, the ERIA scheme will provide one of the most significant contributions as the common platform of the research and policy planning institution for the whole region to provide the detailed information on local human resources situations and conditions in each country in the Asian economic community.

Endnotes

- ¹ For the notion and discussions about the “Pacific Ocean Triangle” (or “Asian Growth Triangle”) structure, Economic Planning Agency Japan, 1987, Chapter 3 and Twu, 1997.
- ² Kawamura, 1997, discusses outline of the argument of the decline and transfiguration of the postwar Pax Americana perspective.
- ³ Mainly based on the data and resources provided to the author by Toyota Motor Corporation and their HP sites (URL: http://www.toyota.co.jp/en/index_company.html).
- ⁴ See, <http://www.toyota.co.jp/jp/strategy/imv/index.html> and Toyota Motor Corporation New Release, August 06, 2006, http://www.toyota.co.jp/jp/news/06/Aug/nt06_0809.html If abstracted from any reliance on human elements, the model of the international transferability of the JM&PS cannot elucidate the following important problems in the “system-transfer” (see Kawamura, 2007, 2008):
 - 1) Problems arising from the “high-dependency” character of the system, as pointed out by Oliver and Wilkinson — i.e. the mutual inter-dependency among the constituent elements of the system (Oliver and Wilkinson, 1992);
 - 2) The specific difficulties that the transfer of the capability-building system — which Kenny and Florida first called the innovation-driven production (Kenny and Florida, 1993) and recently Fujimoto explicitly articulated in a more integrated form including the whole process of design and manufacturing — faces due to constraints imposed by local conditions, especially from local socio-human elements such as labor practices;
 - 3) Limitations due to factors such as the localization of materials or the importance of the supplemental roles played by Japanese expatriates, in cases of insufficient “system-transfer”.
- ⁵ Fujimoto especially emphasizes the “capability-building” aspect of the Japanese production system as the real source of competitive edge of the Japanese manufacturing firms. See, Fujimoto, 2007. Liker and others focus on tacit knowledge as one characteristic of the Japanese system (Liker et al, 1999). The argument of “Knowledge-Driven Work” by Cutcher-Gershenfeld and others emphasizes the reliance of the Japanese system on human elements. They argue that the Japanese system depends on tacit knowledge and perceptions about the basic logic of the system, which is embodied in the skills and specific knowledge of the shop-floor rank-and-file workers, as well as in those of middle-top management; by contrast, the American system are

characterized by the systematization of explicit functions (Cutcher-Gershenfeld et al, 1998; also see Nonaka et al, 1996). The notion of the “capability-building” system of Japanese manufacturing plants, associated with the “capability-building” concept of Fujimoto, 2007, means a comprehensive system of continuous *Kaizen* improvement and problem-solving activities on the shop floor and organizational and formal elements that make them possible. For “capability-building competition,” see Fujimoto, 2007. The Japanese *capability-building system* at manufacturing plants almost overlaps the “innovative production work practice” as described by Florida (Florida, Jenkins and Smith, 1998). Doeringer, 2001, calls this the “efficient organizational regime,” and based on the comparison of actual conditions at Japanese “hybrid” plants in Europe and elsewhere, observes that although the traditional labor-management relations presented a major obstacle to its transfer to the United States, the weakening of workplace regulations through collective bargaining linked to government regulations is giving rise to labor-management relations that make the adoption of the Japanese “high performance management practices” easier. See Doeringer, 2001, pp.17-18.

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- 3) Limitations due to factors such as the localization of materials or the importance of the supplemental roles played by Japanese expatriates, in cases of insufficient “system-transfer”.

⁶ For the notion of “functional equivalents”, see Boyer et al ed., 1998, pp.33-36.

⁷ For the detailed account of the specific method developed by the JM&PS.JMNESG to measure the Hybridization process of the JM&PS in the Japanese transplants, see Abo, ed., 1994, Chapter 2 by Kawamura, Kawamura, 2007, Chapter 1 and Kawamura, 2008, Chapter 1.

Comprehensive researches on the Japanese overseas transplants, including ours, have been made available. The accumulation of studies about innovations in management and production systems in North America, Asia, U.K. and Continental Europe, and about the diversity of Japanese transplants in these regions, have made clear both the basic logic that is characteristic of The major tendency shown is a global convergence toward “lean” management and production. At the same time, these studies have also elucidated the diversified forms of transplanted JM&PS systems; these differences have arisen in every aspect of management and production, with variations from region to region, nation to nation, industry to industry, firm to firm or even product to product.

Taken as a whole, then, the arguments about JM&PS transferability are becoming integrated into a “Hybridization” framework, as Kumon and Abo assert. See, Kumon and Abo, ed., 2004. For an account of the “Hybridization” argument, see Adler, 1999, pp.76-78. Recently the theory has been more generalized. “Hybridization” is considered as the universal process of system transfer through the application of a specific management and production system to different regions and societies; see Zeitlin and Herrigel, ed., 2000. Robert Boyer also distinguishes three phases of the hybridization process, namely, “imitation,” “discovery of functional equivalent” and “innovation.” For more about these points, see Kawamura, 2007, and Kawamura, ed. 2008, Chapter 6.

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