

INTERNATIONAL TRADE

Asia-Pacific and Latin America

Dynamics of regional integration
and international cooperation

Akio Hosono



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This document has been prepared by Akio Hosono, Senior Research Adviser at the JICA Research Institute and former staff member of the International Trade and Integration Division, of the Economic Commission for Latin America and the Caribbean (ECLAC). Comments on a previous version of the document by Keiji Inoue, Senior Economics Affairs Officer of the same Division are greatly appreciated.

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Contents

Abstract	5
Introduction	7
I. Analytical approach and main topics	9
II. Building institutions for economic integration and expanding intra-regional economic relations in East Asia and Latin America	13
III. Dynamics of Industry development in East Asia, economic integration, and international cooperation	21
IV. Dynamics of industrial development and international cooperation in Latin America	25
V. Concluding remarks: toward closer economic relations between Asia Pacific and Latin America	29
Bibliography	31
International Trade Series: issues published	34
Table	
Table 1 Intra-regional trade share in total trade	14
Figures	
Figure 1 A mayor surge of japanese FDI in Latin America.....	27
Figure 2 Composition of Japan's foreign direct investment (FDI) to Latin America and selected countries, 2012.....	28
Diagrams	
Diagram 1 International cooperation and economic growth	23
Diagram 2 Priority issues of development cooperation of Japan	30

Abstract

Regional economic integration is stronger when complementarity and synergy effects are generated between “de jure” economic integration and close economic relations achieved autonomously through market-led /business-driven integration. This observation is important when we consider bringing closer the economic ties between Asia Pacific and Latin America. Japan has a large potential to contribute to the development of such economic ties. This is precisely because of the unique position that Japan has long retained both in East Asia and Latin America, and its catalytic role for the process of industrial development and structural transformation.

The industrial structural transformation brought about by regional integration and expansion of economic relations should not merely aim at achieving higher economic growth. Efforts are needed for the transformation to lead to a high-quality growth: namely, inclusive, innovative, and sustainable growth. Many East Asian countries have been shifting their policies intended to transform their industrial structure towards more inclusive and knowledge/technology-based activities. Likewise, in Latin America, proposals have been made to transform its industrial structure and aim for a more equitable society. The APEC Growth Strategy, adopted in 2010, has drawn attention from such perspectives, advocating the pursuit of “high quality growth.” Likewise, the Development Cooperation Charter of Japan delivered in 2015 set “high quality growth” as one of its goals in development cooperation. When Japan promotes the establishment of closer economic ties between East Asia and Latin America discussed above, it could contribute to the transformation of the industrial structure and growth and development which is inclusive, innovative, and sustainable, and capable of enhancing resilience to disaster—all of which are aimed for by every country of both regions.

Introduction

Bilateral and plurilateral trade agreements are expanding globally. In this context, revitalizing economic relations and developing closer cooperative ties between Asia and Latin America—which share a high degree of complementarity from various perspectives—are becoming more promising. Bringing such possibilities into view, this paper considers the dynamics of economic integration and international cooperation from the perspective of aiming at socio-economic development via high quality growth.¹

Section 1 discusses the analytical approach and the main topics dealt in this paper, referring to existing literature. Section 2 reviews economic integration and economic growth in East Asia and Latin America and how they interacted with each other, and compares and contrasts the process in the two regions. Section 3 discusses the unique role played by Japan in the process which took place in East Asia. Section 4 then looks at the role played by Japan in the process which took place in Latin America. Section 5 recommends closer economic ties between Asia Pacific and Latin America in the future based on past experience and concludes.

¹ This paper is written on the basis of a presentation made by the author in the symposium “Latin America in the Pacific Rim” which took place on March 5, 2015 at the United Nations University (co-hosted by the Aoyama Gakuin University, the United Nations University Institute on Comparative Regional Integration Studies, and the Inter-American Development Bank). The author is grateful to Dr. Mikio Kuwayama for his valuable comments regarding the distinction between “de jure” and “de facto” integration which was for the first time officially made in the United Nations Economic Commission for Latin America and the Caribbean (UN-ECLAC)(2014). Furthermore, the author thanks Dr. Kuwayama for providing recent statistics on Latin American intra-regional trade, as mentioned in the footnote 5. All quotations from sources originally written in Japanese are author’s translations unless stated otherwise.

I. Analytical approach and main topics

Let us first consider the relationship between economic integration, transformation of industrial structure and economic growth. The term economic integration often refers to the establishment of institutions that promote such action. Latin America started to undertake such efforts much earlier than Asia. In 1961, the Latin American Free Trade Association (LAFTA, or ALALC in Spanish) and the Central American Common Market (CACM) were created. Thanks to the establishment of such institutions, it was expected that economic integration would advance (see Hosono (2001)). In theory, economic integration is manifested in greater intraregional trade (that is, an increase in the share of intra-regional exports in total exports as well as increase in the share of intra-regional imports in terms of total imports) as well as an expansion of intra-regional investments. Ironically, intra-regional trade in Latin America did not expand as expected, though the region established institutions which were supposed to promote economic integration. On the contrary, East Asia, which had not built such institutions until the mid-1990s, made big progress in intra-regional trade. We could argue, therefore, that the Asian region achieved substantial economic integration through intra-regional trade and investment expansion before establishing institutions, which made further integration possible.

Such contrasting processes of economic integration in East Asia and Latin America were the focus of the pioneering research undertaken by UN-ECLAC, (referred to as ECLAC in the rest of this paper) in 1993 and subsequent studies. These studies argue that there are different patterns of integration processes. In the first case, institution-building for promoting integration or “de jure” integration (bilateral FTAs, multilateral customs unions, and multilateral free trade area agreements) are established first and prompt substantial integration (including particularly an expansion of intra-regional trade, which in turn is accompanied by intra-regional investments). The other is the case where even without establishing institutions, intra-regional trade expands autonomously (market-led integration or “de facto” integration). Kuwayama (1993) argued that regional economic integration would be driven once complementarity and synergy were generated between de jure and de facto integration. This idea was then proposed in an official report (UN-ECLAC, 1994), where ECLAC used the terminologies de jure integration and de facto integration for the first time. The year 1994 was when the North American Free Trade Agreement (NAFTA) comprised of Canada, Mexico, and the United States was established.

ECLAC, in its 25th session² that year, advocated the importance of changing production patterns with social equity (or *transformación productiva con equidad* in Spanish), which it had been proposing since 1990. Moreover, it manifested that integration must be based on an open regionalism, while it also must be conducive to changing production patterns. ECLAC further asserted that there were two different types of integration processes (UN-ECLAC 1994a; 1994b). This report not only influenced later research at ECLAC, but was also a groundbreaking report which widely changed the perspectives of economic integration in Latin America.

Similar arguments prevailed in Asia. For example, M. Ariff, Executive Director of the Malaysian Institute of Economic Research, emphasized that the regional integration within the Asia-Pacific Economic Cooperation (APEC) was a market-driven process wherein the integration was driven autonomously by the market. M. Ariff further argued that the integration was an open regionalism which would not go against the World Trade Organization (WTO), and that integration took place “de facto” rather than “de jure.” Moreover, M. Ariff emphasized that the integration of the Association of Southeast Asian Nations (ASEAN) was far closer to the “open regionalism” in comparison to many other integration schemes in the world (Ariff 2001). On the other hand, Hosono (2001) argued that the expansion of intra-regional trade that took place in East Asia from the 1970s for more than 20 years was a market-led integration that was driven autonomously, while in Latin America, intra-regional trade did not expand as much as it was expected, though it aimed at realizing a rules-based integration through numerous formal regional accords. Furthermore, Yorizumi Watanabe (2012) explains that in East Asia, business-driven de-facto economic integration gradually shifted to institution-driven de-jure economic integration.

In the 1990s, the Mercado Común del Sur (MERCOSUR) was established in Latin America, while in East Asia, the ASEAN Free Trade Area (AFTA) came into force. Such moves brought about new progress in terms of economic integration in both regions. ASEAN made further progress in terms of intra-regional integration driven by effects of the AFTA. However, in Latin America, impact of the MERCOSUR was practically limited to the bilateral agreement on automotive trade between Brazil and Argentina, among other things. Although its intra-regional trade share improved, its level remained low compared to that of East Asia (discussed in detail later in this paper). Therefore, on the whole, the difference between Asia and Latin America, which I have discussed above, still continues to exist until today to a large extent. Mexico, on the other hand, is a unique case as it has focused on deepening its relationship with the United States and Canada rather than integrating its economies with the Latin American nations. The economic integration of Mexico, the United States, and Canada greatly advanced as a result of the conclusion of the NAFTA in 1994. This is discussed later in detail.

Then, what has caused such differences between the two regions? This is one of the most important research questions of this paper which attempts to analyze the possibility of new and dynamic economic relations between the two regions. This paper also intends to clarify the relationship between economic integration and economic growth, as well as economic integration and economic development, comparing the two regions.

Of particular importance to be taken into account when analyzing the relationship between economic integration, economic growth, and economic development is the close relationship between the industrial structural transformation and economic integration. In East Asia, the importance of structural transformation drew attention from earlier on. For example, Singapore was the first country in East Asia that implemented measures aiming at transforming its economy from a labor-intensive to a knowledge-intensive industry (Hosono 2015b). Other East Asian nations followed, and by the mid-1980s, they shifted their policies in the same direction, which will be discussed later.

In 2013, the Asian Development Bank (ADB) published a report called Economic Transformation of Asia. In this report, the ADB pointed out that, in the Asian region, Japan, Hong Kong, Korea, Singapore, and Taipei, China underwent the greatest transformation, and became modern industrial and service economies, while in other Asian nations, such transformation occurred at a slower pace. The report went on to sustain that developing Asia needed to make a significant qualitative leap in structural

² The session is the most important event of each biennium for ECLAC.

transformation, and focus on transferring labor from sectors of low productivity (typically agriculture) into sectors of high productivity (ADB 2013: xxix).

In Latin America, in the beginning of the 1990s, ECLAC made known a view which put importance on transforming industrial structure and sophistication (UN-ECLAC 1992). Moreover, ECLAC's document places emphasis on the process where structural transformation is induced by the intra-industrial specialization, which is, in turn, driven by regional integration. This refers to the strengthening of the supply chain³ and "the development of these linkages associated with a spontaneous or 'de facto' integration, which entails the acquisition and dissemination of information, training and financial services, and involves the establishment of networks with a potential for specialization and innovation that could become an engine of integration" (UN-ECLAC 1994a; 1994b: 10).

Industrial transformation or sophistication refers to the structural change where the economic structure shifts from low productivity sectors to one centered around higher productivity sectors. This is believed to materialize by creating new industries of high productivity, increasing productivity of existing industries, diversifying industries, expanding and deepening value chains, among other things. Generally, it is believed that a new industry's development is induced by changes in the comparative advantage. Norman and Stiglitz (2012) argue that the essence of development is a dynamic process, and "what matters, for instance, is not comparative advantage as of today, but dynamic comparative advantage." From much the same perspective, Lin (2012) argues that for developing countries, "the more effective route for their learning and development is to exploit the advantages of backwardness and upgrade and diversify into new industries according to the changing comparative advantages determined by the changes in their endowment structure."⁴ Lin (2012) further explains, "It is useful to add infrastructure as one more component in an economy's endowments. Infrastructure includes hard infrastructure and soft infrastructure, and human capital is considered to be one component of a country's endowment". Sharing the same perspective, JICA/JBIC (2008) discusses developing a new comparative advantage, as an example of an industry development strategy implemented in Asia, and mentions the importance of development of the ICT industry through higher education; investment climate development through the establishment of special economic zones; and establishment of a development corridor.

³ The ECLAC document does not use the term "supply chain," but does argue that linkages between corporations grew.

⁴ Factor endowment normally refers to production factor endowment such as capital and labor. Comparative advantage is determined by changes in the share of factor endowments.

II. Building institutions for economic integration and expanding intra-regional economic relations in East Asia and Latin America

ASEAN was East Asia's first group to start developing institutions for economic integration. However, it was in 1993 when the AFTA —FTA for ASEAN— came into force, and the original member countries finally committed to tariff reduction in 2010, and newer member countries in 2015. Moreover, ASEAN signed FTAs with China, South Korea, and Japan individually (these FTAs are called the ASEAN-China Free Trade Agreement, or ACFTA, the ASEAN-Korea Free Trade Agreement, or AKFTA, and the ASEAN-Japan Comprehensive Economic Partnership, or AJCEP, respectively). However, the three agreements did not come into force until 2005, 2007, and 2008, respectively. And tariff reduction for ACFTA and AKFTA was not completed until 2012 for the newer ASEAN member countries. The AJCEP is expected to be completed by 10 to 15 years after the agreement entered into force. Moreover, the three partner nations have not concluded any bilateral FTAs between one another. In contrast, it was as early as 1961 when LAFTA (which later became Asociación Latinoamericana de Integración, or ALADI) and the Central American Common Market (CACM) were inaugurated. Therefore, as far as building institutions for economic integration is concerned, East Asia lagged behind Latin America by more than 30 years.

Nevertheless, during this time, East Asia moved way ahead of Latin America in terms of expanding intra-regional economic relations such as intra-regional trade and investment. As mentioned above, it was in 1993 —the year in which the AFTA was put into effect— when East Asia undertook institution-building. And it took more years for the countries to enjoy benefits from tariff reductions. As already mentioned, it was even after 2005 —after this century began—, when ASEAN and China, Korea, and Japan which would join the ASEAN plus Three embarked on institution-building. However, between 1980 and 1995 —when the initiatives designed to build institutions for economic integration in East Asia were first undertaken by the ASEAN—, the share of East Asia's intra-regional trade in terms of total trade value (or “intra-regional trade share” below) significantly expanded. During this time, the intra-regional trade share of East Asia —which includes ASEAN plus Three, and Hong Kong and Taipei, China— increased by 17.8 percentage points, from 34.1 percent to 51.9 percent. By contrast, in Latin America, the increase in the intra-regional trade share was limited, notwithstanding the major advances in institution-building for

economic integration which took place during the same period of time, intra-regional trade share of MERCOSUR increased from 11.1 percent to no further than 19.2 percent, while that of the Andean Community increased from 3.3 percent to no more than 12.4 percent. CACM—which had started to undertake the institution-building for integration from early on—also had a limited intra-regional trade share at 12.1 percent as of 1990. The figure for Latin America as a whole was also limited: its intra-regional trade share rose from 15.3 percent to no more than 19.8 percent between 1980 and 1995.⁵ In this manner, intra-regional trade share of Latin America has not only been much lower than that of East Asia, but its rate of growth has also been sluggish (See Table 1). A similar disparity between the two regions is remarkable also in terms of intra-regional foreign direct investment (FDI).

Table 1
Intra-regional trade share in total trade
(Percentages)

	1980	1985	1990	1995	2000	2005
East Asia	34.1	37.1	43.1	51.9	52.1	54.5
ASEAN(10) ^a	17.9	20.3	18.8	24.0	26.6	27.2
MERCOSUR	11.1	7.2	10.9	19.2	20.7	15.7
Andean Community	N/A	3.3	5.4	12.4	10.8	9.1
Central American Common Market	N/A	N/A	12.1	15.6	17.5	10.1
NAFTA	33.8	38.7	37.9	43.1	48.8	44.3
European Union	61.5	60.0	66.8	66.9	66.3	65.8

Source: UN-ECLAC (2008).

^a ASEAN (10) includes Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.

As mentioned earlier, as far as the institution-building for economic integration is concerned, East Asia lagged behind Latin America by more than 30 years. Nevertheless, during this time, East Asia was far ahead of Latin America with regards to expanding intra-regional economic relations including intra-regional trade and investment. Why did something that could not be accomplished even after building institutions in Latin America (or in the Americas or the Western Hemisphere as one region, along with the United States and Canada) was possible in East Asia? This appears to be one of the biggest differences between East Asia and Latin America in terms of their relationship between economic integration and economic development.

The World Development Report (World Bank, 2009) pointed out that, “the degree of intraregional trade in East Asia may be considered surprising given the history of divisive political relationships between many East Asian countries. In the Western Hemisphere, the economic effects of conflict between countries were overcome by formal institutions of codified legal systems and political agreements that governed arm’s-length commercial transactions and that could be readily expanded to accommodate rapid growth in commerce and finance.”

Then the report explains the sharp contrast between Latin America and East Asia by mentioning that “in East Asia these institutions have been slower to develop. Instead, a long history of social networks, communities, and informal institutions provides the trust to support modern international integration of goods and money.”

The existence of a long history of social networks, communities, and informal institutions is important as one of the factors that enabled the regional integration process. However, it is difficult to

⁵ These figures were calculated by Dr. Mikio Kuwayama, based on the same data shown in Table 1. The ratio has been almost static since 1995: the intra-regional trade share of Latin America as of 2013 was 19.7 percent.

explain only with this factor the remarkable difference between the two regions discussed above, that is, that East Asia has realized a far more dynamic expansion of intra-regional economic relationships than Latin America.⁶

The World Bank's report *The East Asian Miracle* analyzed the economic growth of East Asia until the mid-1990s, the period in which efforts for institutional-building for integration started. The report stresses that: "Macroeconomic stability and rapid economic growth were two key elements in starting the virtuous circles of high rates of accumulation, efficient allocation, and strong productivity growth that formed the basis of East Asia's success" (World Bank 1994: 105). And the report described how rapid Total Factor Productivity (TFP) changes in developing countries can be a result of the ability to rapidly approach international best practices, and called this "productivity-based catching up", and argued that it was made possible by synergy effects of exports and human capital. What is particularly interesting about *The East Asian Miracle* is its remarks related to the TFP growth and exports:

"How did the unusually high rates of growth of exports and human capital contribute to the productivity performance of the East Asian economies? Most explanations of the link between TFP growth and exports emphasize such static factors as economies of scale and capacity utilization. While these may account for an initial surge of productivity soon after the start of an export push, they are insufficient to explain continuing high TFP growth rates" (World Bank 1994: 317).

This assertion of *The East Asian Miracle* suggests that, in East Asia, there existed factors which continuously accounted for its TFP growth. The report goes on to argue that "rather the relationship between exports and productivity growth may arise from export's role in helping economies adopt and master international best-practice technologies. High levels of labor force cognitive skills permit better firm-level adoption, adaptation, and mastery of technology. Thus, exports and human capital interact to provide a particularly rapid phase of productivity-based catching up" (World Bank 1994: 317).

Hosono (2001) explained this as follows: "the countries of East Asia responded very rapidly to the trade and investment opportunities that appeared in the region as a result of the dynamic evolution of their comparative advantages. This has entailed a simultaneous, sequential and coordinated transformation of the region's industries". Hosono further argued that this process was a sequential catch-up which took place in the market-led integration of East Asia, and this was indeed the process in which the flying wild-geese (FWG) pattern of economic development—which had extensively been studied in Japan—gradually expanded geographically (Hosono 2001: 150-152).

The FWG pattern of economic development was first studied by Kaname Akamatsu, and scholars including Kiyoshi Kojima and Ippai Yamazawa continued research of this model.⁷ When Japan achieved a certain level of industrial development where its income and wage levels rose, certain industries lost competitiveness. Such industries or a part of them relocated to the Asian Newly Industrializing Economies (NIEs)⁸ through Japanese FDI and transfer of technology and management know-how by Japanese firms. The NIEs start to export to Japan, and to non-regional countries such as the United States. Japan exported intermediate goods such as parts and accessories as well as capital goods to the NIEs. As a result, not only extra-regional exports but also intra-regional exports expanded, increasing intra-regional trade's share. Subsequently, industries in Japan and the NIEs were relocated to the

⁶ The report also discusses networks among Chinese abroad as an example of social networks and communities, as well as informal institutions which have a long history. However, it is not to say that Latin America lacks similar long-term networks. In addition to the Spanish and Portuguese, there is an important number of immigrants from Europe as well as networks and communities built by immigrants from Lebanon and Syria. The question is why economic integration itself did not make as much progress as expected in Latin America, despite the fact that, in addition to informal institutions, numerous official institutions were established with an intention of promoting economic integration.

⁷ Yamazawa (1990) states that, more strictly speaking, the FWG refers to a catching-up product cycle (CPC), and that the CPC has a basic pattern and two variations. The basic pattern refers to a sequential development of imports, domestic production, and exports which take place within an industry. Variation 1 refers to a sequential development of CPC in a number of individual industries, while variation 2 refers to a transmission of sequential development of CPC between countries that trade with one another.

⁸ Here, the NIEs refer to Hong Kong; Korea; Singapore; and Taiwan, China. However, in the above-mentioned *The East Asian Miracle*, these four nations are called the "Four Tigers" and Indonesia, Malaysia, and Thailand are treated as the Newly Industrializing Economies of East Asia (World Bank 1994: 1).

ASEAN economies through the same process. A long-term interindustry analysis with input-output matrices conducted by the Institute of Developing Economies (IDE) has shown that such process has prominently strengthened the interindustry relationships between different countries of East Asia (Sano, Takao, and Osada 1998). Furthermore, such process enabled a high labor productivity growth rate and consequent high economic growth rate. According to a World Bank report, more than 50 percent of the labor productivity growth in East Asia is attributable to interindustry labor mobility (i.e. creation of higher productivity industries and transfer of labor to such industries). For example, 65 percent of China's labor productivity growth, and 55 percent of Vietnam's have been attributable to interindustry labor mobility (World Bank 2012: 100-101).

Yamazawa (1990) argues that in East Asia, the active catch-up industrialization (or more precisely, the catching up product-cycle (CPC)) started at the end of the 1960s, and continued throughout the 1970s despite the Oil Shock, and further continued during the 1980s. He concluded that sequential CPC took place in the NIEs and ASEAN. Moreover, Ohno and Sakurai (1997) argued that the sequential structural transformation which occurred in East Asia was indeed within the FWG pattern. Suehiro (2000), in his work *Catch-up Industrialization*, further developed this analysis. Similarly, JICA/JBIC (2008) cited these works to discuss the FWG as a factor contributing to East Asia's growth. Furthermore, Lin (2012) places emphasis on the FWG in East Asia as a real-life example of structural transformation of developing nations which occurred through a dynamic change in comparative advantage. Lin mentions that 13 successful economies that sustained a high economic growth over a long period of time —discussed in the report published by the Growth Commission comprised of members including Michael Spence (discussed later in this paper)— followed similar industrial development patterns, although the policies often differed. The NIEs of East Asia, for instance, exploited endowment structures similar to Japan's to follow that country's development in a flying-geese pattern (Lin 2012: 94).

This process developed further by taking an even more complex form, thanks to the development of industries such as the electronics and the automotive sector which rapidly expanded due to a wave of innovations after the 1980s, as well as the expansion of international supply chains and global value chains (GVC). Under this process, intra-industry and inter-industry manufacturing processes were further segmented. At the same time, the FWG (and its more complicated patterns) further spread out geographically, to newcomers of ASEAN and the South Asian nations. The FWG, by its nature, focuses on a shift in a number of specific industries which is caused by dynamic changes in factor endowments and in comparative advantages among countries. In this new process where the importance of the automotive and electric industries increases, the shift and expansion of different production segments (or production processes) among these nations becomes essential. It was not a simple process in which an industry moved from country A to country B: rather, it was a process where production sequences of different characteristics in the automotive and electronics industries evolved in individual countries, which in turn created production networks between different countries. It could also be argued that a new pattern of the FWG evolved while interregional and global supply chains and value chains expanded.

Moreover, such process was most prominent in East Asia. For example, the share of electronics and electrical devices in total industrial product trade in the world increased from 13.0 percent in 1970 to 29.7 percent in 2000 (decreasing thereafter to 25.0 percent in 2007). In East Asia, this figure increased from 14.3 percent to 48.4 percent in the same period of time (this level continued into 2007), and East Asia except for Japan show a larger increase, from 14.4 percent to 52.7 percent (and even increased to 55.7 percent in 2007) (Kumakura 2010:98-102)⁹.

Furthermore, between 1980 and 2006, the share of raw materials and processed goods in East Asia's intra-regional trade went down from 29.0 percent to 3.1 percent and from 37.5 percent to 29.7 percent, respectively, while the share of parts increased from 7.2 percent to 35.9 percent. By the same token, during the same period of time, the share of capital goods increased from 11.7 percent to

⁹ East Asia is defined as Brunei Darussalam, China, Hong Kong, Special Administrative Region, Indonesia, Japan, Republic of Korea, Malaysia, the Philippines, Singapore, Taiwan, Province of China, Thailand and Vietnam.

18.7 percent, while that of consumer goods decreased from 14.6 percent to 12.5 percent (Kumakura 2010: 92-93).¹⁰ Under this process, the East Asian nations boosted the competitiveness of their industrial manufactured products, increased their intra-regional trade share, and expanded exports at high rates (not only within the region but also to the world), as will be discussed later.

These trends depict how the Asian market-led (or business-led) de facto integration may have been a process in which the Asian nations sustained economic growth at high rates while strengthening their mutual economic relationships through certain modes of sequential structural transformation like the FWG. Such process was remarkable even from a global perspective and at least four studies have referred to it. One is *The East Asian Miracle* by the World Bank (1994) which analyzed “the high performing East Asian economies or countries and regions (HPAEs) led by Japan”. These consisted of eight countries and regions: Japan, the “Four Tigers” —Hong Kong (SAR), the Republic of Korea, Singapore, and Taiwan, Province of China— and the three newly industrialized economies (NIEs) of Southeast Asia, Indonesia, Malaysia, and Thailand. The report asserts:

“Since 1960, the HPAEs have grown more than twice as fast as the rest of East Asia, roughly three times as fast as Latin America and South Asia, and five times faster than Sub-Saharan Africa. If growth were randomly distributed, there is roughly one chance in ten thousand that success would have been so regionally concentrated.”

The high economic growth of East Asia continued well into the subsequent years. The report published by the Commission on Growth and Development 2008 (referred to as the Growth Report below) —which was published 15 years after *The East Asian Miracle*—, is a research conducted by 22 specialists led by Michael Spence, recipient of the Nobel Prize. The report analyzes characteristics of the 13 countries that experienced an economic growth of seven percent annually during the 25 years after World War II. Out of the 13, nine are East Asian countries (i.e. the HPAEs discussed above plus China). It is noteworthy that the nine nations are from the same region. The other countries —Botswana, Brazil, Malta, and Oman— are from different regions. Needless to say, when we look at the population —not only the number of countries—, the nine Asian countries make up an overwhelmingly large share.

A report published by the Asian Development Bank (ADB 2008) which came out in the same year as the Growth Report asserted that of the ten countries whose annual per capita GDP growth rate exceeded 4.5 percent in 40 years between 1956-1996, eight were from East Asia, and that, during the same period of time, the 16 integrating Asian economies, when looked at as one group, recorded an average per capita GDP growth reaching 5.0 percent, surpassing the 1.7 percent of other countries and the world average of 1.9 percent. By presenting these evidences, the ADB (2008) emphasized that the economic integration and economic growth were closely interrelated in East Asia. Moreover, the ADB (2008) discussed the FWG put forward by Akamatsu, and asserted that this FWG model born in Japan in the post-World War II reconstruction period progressively spread across East Asia. The ADB (2008) called it the East Asian Model, and pointed out that “(b)y the time the East Asian model had become widely celebrated (when World Bank’s *The East Asian Miracle* was published in 1993), the East Asian model had already been at work for four decades” (ADB 2008). Furthermore, the report stresses that the Asian regionalism is a result of the expansion of economic interaction, and was not a result of political planning.

Johnson et al. (2007) showed that eight of the 12 nations which sustained long-term economic growth since the 1960s were from Asia.¹¹ As mentioned earlier, *The East Asian Miracle* emphasizes that

¹⁰ Raw materials refer to unprocessed raw materials; processed goods refer to primary processed products and energy products; parts refer to intermediate goods such as mechanical components that are more processed than primary processed products; and consumer goods refer to industrial manufactured goods and food products for final consumers. The figures for East Asia except Japan were as follows: raw materials and processed goods went down from 26.1 percent to 2.6 percent and from 43.8 percent to 28.4 percent, respectively, while the share of parts significantly increased from 6.6 percent to 40.2 percent. By the same token, the share of capital goods increased from 5.8 percent to 17.4 percent, while that of consumer goods once increased from 17.8 percent, and decreased to 11.4 percent (Kumakura 2010: 92-93).

¹¹ Johnson et al. (2007) argue that, as of 1960, of all the countries in the world, 12 under weak institutions sustained high economic growth, and ten among them achieved such growth through export expansion of industrial manufactured goods. And of those ten nations, eight were from East Asia: China, Indonesia, Malaysia, Republic of Korea, Singapore, Taiwan, province of China, Thailand,

such a phenomenon (materialization of high economic growth of many nations concentrated in one single region) does not occur by coincidence. Moreover, earlier discussions in this paper elucidate that this phenomenon is deeply related to the FWG-form sequential structural transformations and the deepening of intra-regional supply chains and value chains. Moreover, as The East Asian Miracle's analysis reveals, it is more than evident that a sequence of public policies—which were implemented by each one of the East Asian nations—played an important role to promote sustainable economic growth. It would not be an exaggeration to say that these public policies and transformation (the FWG mode of sequential structural transformation) were the two wheels of the cart that made sustained long-term economic growth possible.

Such processes that took place in East Asia were very different from the ones that took place in Latin America, where most countries experienced economic stagnation and various difficulties due to prolonged debt crises after 1982. It took the Latin American countries almost 10 years to overcome such difficulties. This period is called the “Lost Decade”, and during this time, under structural adjustment measures, poverty expanded and social problems intensified. Under such a situation, ECLAC published a document which emphasized the necessity of changing production patterns accompanied with social equity (*transformación productiva con equidad*) in its 23rd Session in 1990 (UN-ECLAC 1990a; 1990b) in order for Latin America to escape from the Lost Decade and return to a sustainable growth path. ECLAC further developed such a proposal and advocated a comprehensive approach in its 24th Session in 1992 (UN-ECLAC 1992a; 1992b), the 10th anniversary of the outbreak of the crises in the region.

Moreover, based on such perspectives, ECLAC published a report in 1994 (UN-ECLAC 1994a; 1994b), quoted earlier in this paper, that strongly proposed a shift to an open regionalism which would enable such transformation of production patterns. The report argued that to further transform production patterns, intraregional trade liberalization should also be promoted in order to deepen intra-industrial specialization processes currently under way. This specialization process has now become even more important, considering the presence of managerial practices associated with liberalization and deregulation in a context of globalization, which includes the de-verticalization of firms and the consequent increase in linkages between firms and independent suppliers at various levels. The development of these linkages associated with a spontaneous or “de facto” integration entails the acquisition and dissemination of information, training and financial services, and involves the establishment of networks with a potential for specialization and innovation that could become an engine of integration. Integration may have a major, lasting impact on the growth rates of the participating countries.¹²

Over 20 years have passed since this report was published, however, transformation of the industrial structure of Latin America as a whole has not made as much progress as expected. The fact remains that the share of industrial sector in terms of GDP has decreased, and the so-called “de-industrialization” has advanced. In East Asia (excluding Japan), the importance of value added of manufacturing sector in terms of GDP increased from 25.6 percent in 1980-84 to 30.7 percent in 2005-2009 (30.8 percent in 2010-2013), while that of Latin America decreased from 22.9 percent to 15.4 percent in the same period of time (13.5 percent in 2010-2013) (UNIDO 2015: 33).

Nevertheless, when we observe individual countries and regions in Latin America, there are many cases where industrial transformation and industrialization advanced. The MERCOSUR nations including Brazil, along with Mexico and Chile attract the most attention. MERCOSUR, especially Argentina and Brazil brought forward an intra-regional integration of automotive production with the Auto Pact, and made a remarkable achievement in this area. With the start of NAFTA in 1994, Mexico's

and Vietnam. This study emphasizes that exports of industrial manufactured goods were the driving force of economic growth, which captures the essence of the economic growth of the East Asian nations.

¹² According to a study by Horisaka and Hosono (1996) on the characteristics of inward FDI to the Latin American region covering approximately 200 cases, five sectors which attracted investments were: (1) processed natural resources (processed or semi-processed commodities), (2) energy, communication, transport, construction, finance, insurance, and pension funds, (3) mining, (4) non-traditional exports such as wine, salmon, and fruit of Chile, and (5) trade of automobile and parts between Brazil and Argentina based on the MERCOSUR Auto Pact. The only area which induced intra-regional trade was the investment in (5). It clearly elucidates that despite the institution-building efforts for promoting a long-term economic integration in Latin America, it did not necessarily lead to the materialization of substantial integration within the region.

production of automobiles and electronic devices for the U.S. market was progressively integrated within the NAFTA region, and the transformation of its production pattern made steady progress. This process further accelerated thanks to the FTA between Mexico and the European Union and the Japan-Mexico Economic Partnership Agreement.

Brazil expanded its manufacturing sector not only in the above-mentioned automotive industry, but in a wide range of areas including the aircraft industry (small and medium-sized aircrafts). It could be argued that Brazil successfully transformed its production pattern in the manufacturing sector. Moreover, Brazil—which had traditionally been a grain-importing country—became a net grain-exporting country in the 1990s, and its agricultural and livestock products processing industry developed significantly. Examples of other countries include Chile. While its mineral exports' share of total exports remains high, reaching over 50 percent, it has successfully expanded its exports of other products such as salmon and wine, and lowered its dependence on its mineral exports. Moreover, in Paraguay—which has traditionally depended heavily on cotton exports—has successfully diversified its exports with new products such as soy beans, processed soy products, meat, and sesame, among other things. Finally, the Central American nations—which suffered the effect of civil conflicts—gradually underwent an economic renaissance, and their achievement include the expansion of bonded processing exports (Maquiladora) and non-traditional exports.

We may conclude that, in Latin America, in terms of the transformation of industrial structure, remarkable transformation processes have occurred in Brazil and Mexico, and similar processes have also been observed in some other countries. Nevertheless, these are not equivalent to the process of sequential structural transformation that took place in East Asia which extended to the whole region, accompanying a substantive regional integration.¹³

¹³ For example, to date, spillover effects of expansion of the automotive industry in Mexico and Brazil to the surrounding countries have been limited to auto-parts' production including wire harness through Japanese FDI (production in Nicaragua and El Salvador for the Mexican market, and production in Paraguay and Uruguay for the Brazilian market).

III. Dynamics of Industry development in East Asia, economic integration, and international cooperation

The process of sequential structural transformation in East Asia has not necessarily taken the same form in each country. Differences in the demographic transition, different endowments such as resources affecting production, and the international environment surrounding each nation are among the factors that affected such variation. Nevertheless, there was a common structural transformation process observed across East Asia: new industries were created and replaced the traditional ones to become the leading sector (such process included a sophistication of the industries thanks to new technologies and expansion of value chains). And to enable the creation of new industries, technologies industrial workforce, infrastructure, institutional foundations to support the new industries, and other factors, were required. In other words, the dynamic shift of comparative advantage enabled by these resources and endowments, needed to be accompanied by the taking of opportunities generated by such changes and investment to develop industries. Such investments led to industrial development, and such industries, in turn, facilitated both intra-regional and extra-regional exports. Much of such investment was inward foreign direct investment (FDI) during the period of The East Asian Miracle.

Urata (2001) has elucidated that such FDI-export nexus strongly worked in East Asia. He analyzes the increase in exports and FDI in East Asia in 1980-1998 which largely coincides with the period studied by The East Asian Miracle. In section I, it was argued that until the mid-1990s, East Asia experienced market-led de facto economic integration, rather than integration through institution building. In addition, it was argued that its intra-regional trade share significantly increased thanks to the integration. During the same period, the increase in East Asia's total export to the world and the increase in the total value of FDI directed to East Asia significantly surpassed the world averages. The share of East Asia in world exports jumped from 9.0 percent in 1980-85 to 16.8 percent in 1994, and almost doubled to 17.5 percent in 1997 (Urata 2001). At the same time, the share of East Asia in world FDI inflows increased from 8.9 percent in 1980-85 to 20.8 percent in 1994 when it hit its peak, continuing until 1997, when its share temporarily fell due to the currency crisis.

Urata considers intra-regional production and trade networks built by multinational companies as one of the factors which contributed to the emergence of the FDI-trade nexus in East Asia. Moreover, he argues that FDI not only provided funds needed for fixed capital investment, but it relocated technology and

management know-how, which contributed to the expansion and improvement of production capacity. Urata further asserts that it is worth noting that FDI inflows and exports mutually interacted and developed concurrently in East Asia, and that such East Asian experience serves as a useful reference for other developing nations.¹⁴

This FDI-trade nexus process is driven by changes in various endowments and the consequent dynamic transformations of comparative advantage in the host countries. One of the goals of the Japanese official development assistance (ODA) was to play a catalytic role in such a scheme.¹⁵ Japan's ODA White Paper 2005 (MOFA 2005) states that:

“Achieving economic growth requires improving the investment environment, which involves policy and institution building, human resources development, strengthening basic infrastructure, attracting foreign direct investment, and expanding trade. Japan has long insisted that economic growth through infrastructure development, etc., is crucial to poverty reduction, and has incorporated this viewpoint in its ODA policies.”

Therefore, as the Asian experience shows, ODA has contributed to FDI and export growth, and thereby facilitates industrial structural transformations and contributes to the economic growth and poverty reduction. In other words, ODA has played a catalytic role.

This viewpoint dates back to the mid-1980s when the so-called “trinity development cooperation” concept, that is, comprehensive economic cooperation packages composed of aid, direct investment, and importation (from developing countries to Japan), was launched. It was formally announced in January 1987 by the then Minister of International Trade and Industry of Japan under the title of New Aid Plan (New Asian Industries Development Plan) (Shimomura 2013). It would not be an exaggeration to say that this concept has been passed down until today, as is evident in the Development Cooperation Charter (MOFA 2015):

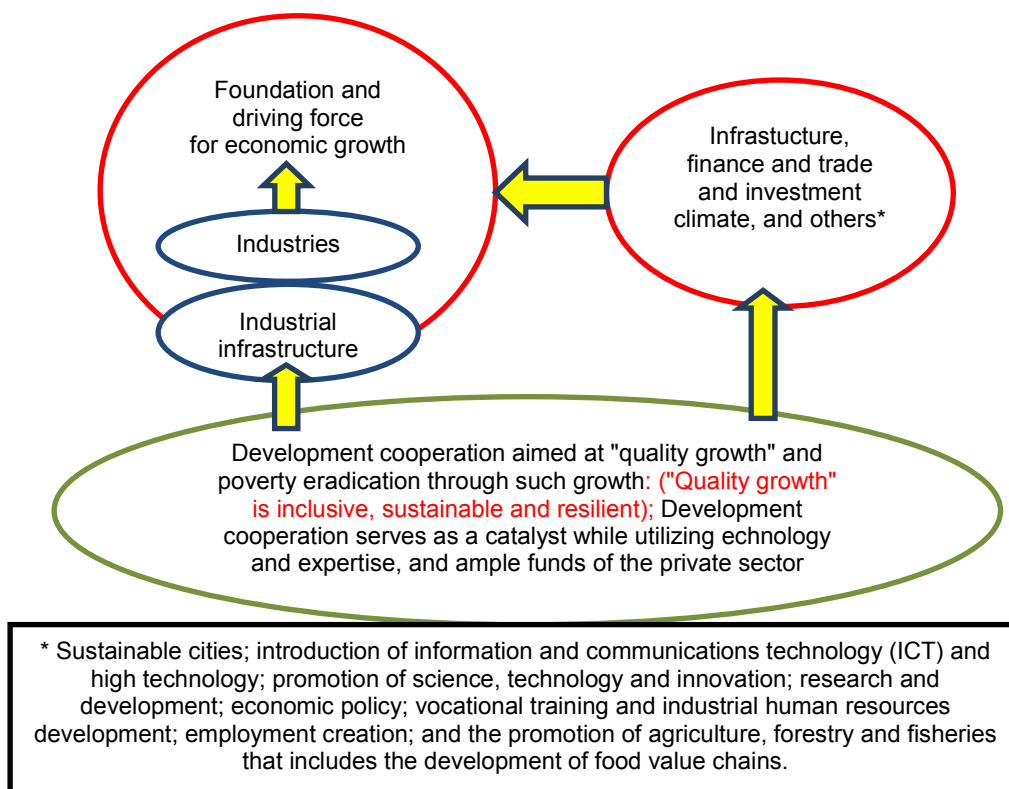
“In order to resolve the poverty issue in a sustainable manner, it is essential to achieve economic growth through human resources development, infrastructure development and establishment of regulations and institutions as well as the growth of the private sector enabled by the aforementioned actions, which are aimed at self-reliant development of developing countries.” “In Asia, hard (physical) and soft (non-physical) basic infrastructure built with development cooperation has contributed to improving the investment climate. Development cooperation's role as a catalyst promoted private investment, which in turn has led to economic growth and poverty reduction in the recipient countries.” (See diagram 1)

The New Aid Plan was carried out against the backdrop of the ASEAN countries' strong desire for economic transformation. The South East Asian nations made a policy shift in support of economic transformation in the mid-eighties. It could be argued that such a shift created synergy with the development cooperation trinity. In regards to this policy shift, Kimura (2003) argues that, “Since the early 1970s, Malaysia aggressively promoted foreign investment by taking measures such as constructing export processing zones. Nevertheless, it was not until the mid-1980s when the country set out its industrialization strategy—which focused on foreign capital participation—on a full scale, involving the domestic economy. It was also during the mid-1980s when Thailand started to employ export-oriented policies and actively invite foreign investments. The Philippines and Indonesia also embarked on policy change beginning in the latter half of the 1980s.” As Shimomura (2013) put it, “the ASEAN nations were desperately attempting to transform their primary goods-based export structure to technology-intensive manufacturing”.

¹⁴ Toshio Watanabe (1986) emphasized that the high economic growth of the East Asian countries from 1960 to the beginning of the 1980s is not attributable solely to the export-oriented industrialization. He argues that exports and capital formation mutually reinforce each other through imports of capital goods with embodied technology to create such an expansive mechanism. Urata (2001) also highlighted the importance of FDI in particular in that process.

¹⁵ Needless to say, Japan's ODA covers a wide range of fields, including social development such as education and health, environment, disaster prevention, among other things. In a broad sense, such initiatives have contributed to socio-economic development accompanied with industrial structural transformations. Here, we refer to the area of ODA connected to the industrial development.

Diagram 1
International cooperation and economic growth



Source: Author, based on Development Cooperation Charter of Japan.

The Japan International Cooperation Agency's (JICA) Annual Evaluation Report argued that the strategy of the aid, trade, and investment trinity ultimately contributed toward the economic growth of developing countries after 20 years of implementation (JICA 2006). This report also explained how this strategy was carried out in practice. Furthermore, this has been supported by detailed empirical research. Kimura and Todo (2010) confirmed a strong linkage between ODA and FDI, or ODA-FDI nexus in the case of Japan's ODA. Japanese ODA has what they call a "vanguard effect," meaning that Japanese aid promotes FDI from Japan to the recipient developing countries by enhancing information-sharing and reducing investment risk through close cooperation between the government and the private sector. They suggested that the presence of such mechanism might have accelerated the economic growth of recipient countries (Sawada 2012).

Such characteristics of Japan's ODA has been increasingly recognized by the international community. For instance, the Peer Review on Japan by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) (OECD-DAC 2004) stated that, "OECD considers FDI a major catalyst to development and suggests that developed countries can contribute to the promotion of these benefits by using ODA to leverage investments. Japan has promoted FDI in the Asian region, developing its own model for enhancing economic growth by linking trade and investment policies with development co-operation." This peer review further highlighted "Japan's comparative advantage in infrastructure-FDI model."

There exists a long list of cases of Japan's development cooperation trinity in East Asia. They are addressed in Japan's Official Development Assistance White Papers as well as JICA's Annual Evaluation Reports mentioned above. The Thai automobile industry is one example. Foreign investment in the Thai automobile industry started in the 1960s, and its automotive industrial policy was

implemented in the 1970s. Policies including the domestic production of auto parts proved effective. Consequently, auto assembly and auto parts industry expanded, mainly in Bangkok, for more than 50 years. Automobile production reached 1 million units per year in 2005, expanding further to 2.5 million in 2012. As of 2010, 690 first-tier parts makers (23 percent of them Thai companies and 30 percent of them Thai-majority joint venture companies) and 1,700 second- and third-tier parts makers (most of them Thai companies) supported the automobile industry in Thailand (Natsuda and Thoburn 2011). This way, competitive supporting industries consisting mainly of Thai companies were formed. Having gone through such long-term developmental process, the automobile industry has become the principal engine for growth of Thailand's economy. Thus, "The Detroit of Asia," envisioned once by the Thai government, is now a reality. This also shows how Thailand made an important transformation of its industrial structure.

In this process, Japan's ODA provided support for infrastructure and human resources, among other things, which substantially changed the endowments of Thailand. And in such a process, Japan's ODA played a catalytic role and facilitated its economic transformation. Particularly, the cooperation for the construction of infrastructure in the ports including the Eastern Seaboard is well known as a concrete example of the catalytic role of ODA leveraging investment for economic transformation toward higher value-added and more competitive activities. The Bangkok Port alone could not provide sufficient port capacity necessitated for the automobile industry's sustainable development. Thus, development of a wide range of industries, including automotive, called for a construction of a new large-scale port. Thanks to the industrial infrastructure including multiple ports in the Eastern Seaboard constructed in 1995, today it has become an export hub, and is becoming the center for technology-intensive industries. It embraces 14 industrial estates, where 1,300 factories and 516 automobile-related factories are located, employing 360,000 workers. This has made the establishment of the "automobile belt" from Ayuthaya to the Eastern Seaboard a reality. The Eastern Seaboard region accounts for 16 percent of Thailand's GDP (Sawaji 2014).

Furthermore, Japan's assistance extended to fostering human resources that would respond to the employment opportunities that had expanded through this process. At the same time, since the 1980s, Japan had started its development cooperation for small and medium enterprises (SMEs). Especially, since the mid-1990s, Japan has embarked on technical cooperation aiming to strengthen the competitiveness of the SMEs that make up the automotive supporting industries. Thus, we could conclude that, in Thailand, international cooperation for building infrastructure, developing human resources, and nurturing SMEs, among other things, served for leveraging Japanese and Western countries' FDI in the automobile industry, and played a catalytic role in the process of industrial structural transformation.

It should be taken into account however that the transformation of endowments in each country, investment in new industries, their progress, and the consequent increase in intra-regional trade and extra-regional trade vary greatly in different industries. Moreover, with respect to investments, not only Japanese FDI but also investments made by domestic firms in each nation, as well as FDI from Western industrialized countries played crucial roles. For example, as for the electronic industry, initial investments into Taiwan, Province of China and Southeast Asia were made by American-affiliated semiconductor integrated circuit (IC), TV, and personal computer firms which faced competition from the growing Japanese exports. It was during the 1990s when investments by Japanese manufacturers in Taiwan, Province of China and the Southeast Asian nations in these sectors gained momentum (Kumakura 2010).

IV. Dynamics of industrial development and international cooperation in Latin America

Section 2 discussed an overview of the characteristics of industrial development in Latin America. Japan has been extending cooperation to Latin America in a wide range of fields, including social development such as education and health, environment, disaster prevention, among other things. Japan has also rendered a wide range of assistance to the region which has contributed to its industrial development through investment and trade development. A report by the Inter-American Development Bank (IDB 2013) shows how, “Aid for Trade (AfT) has been a major emphasis of Japan’s Official Development Assistance (ODA), reflecting the country’s belief that trade and foreign investment play a critical role in economic development, as well as its strategy of aligning cooperation efforts with goals for expanding Japanese firms’ trade and investment opportunities.” “To this end, JICA has been a leader in providing AfT, which aims to develop countries’ capabilities to integrate in the global economy through the development and enhancement of physical infrastructure, building private sector capacity, and supporting enabling policies and institutions. Japanese cooperation has in fact played a central role in launching some of the region’s most successful export sectors. Japanese technical assistance was critical in transforming Brazil’s Cerrado region into the country’s agricultural heartland, whose production places Brazil among the world’s leaders in exports of soybeans, maize and other grains. In Chile, Japanese technical assistance and financing through JICA helped develop the country’s salmon industry, which has grown to become one of the most competitive export sectors of the Chilean economy.”¹⁶

Moreover, the report asserts that in the energy and mining sectors, investments made by Japanese firms and cooperation between the Japanese government and the Latin American governments are mutually reinforcing and have created synergies. It also argues that, “Indeed, the interconnected and reinforcing nature of trade, investment, and cooperation has been central to the trajectory of the Japan-LAC relationship” (IDB 2013).

Furthermore, the Economic Partnership Agreements (EPA) concluded by Japan have attracted much attention for covering much broader contents than the traditional FTAs (IDB 2013). ECLAC gives

¹⁶ Japan’s cooperation in AfT was carried out in areas such as improvement of infrastructure and development of human resources. These did not only promote investment from Japan, but also from domestic firms of the partner countries and countries other than Japan.

much attention to the following two points regarding the Japan-Mexico EPA: first, this EPA includes chapters regarding bilateral cooperation; and second, the EPA involves an establishment of the Committee for the improvement of the business environment (UN-ECLAC 2010). Important impacts of the Japan-Mexico EPA on the development of Mexico, particularly its automotive industry, will be described later.

Unlike East Asia, which has been studied extensively both in terms of region as well as individual countries, there are not many Latin American nations that have been studied in detail from the perspectives mentioned above. This paper presents some of the cases in Brazil, Chile, and Mexico, based on empirical studies regarding these subjects.¹⁷ As the IDB report argues, Brazil's Cerrado development led to its vast industrial structural transformation. The Cerrado tropical savannah lies in the central part of Brazil, and its total area is 5.5 times larger than the whole area of Japan. It used to be considered as a barren land, unfit for agriculture. Nevertheless, thanks to technological innovations centered around soil and breed improvements, Cerrado has become one of the world's most important grain-producing regions today. Moreover, competitive agro-industry value chains have developed, and consequently, exports have been diversified, centered around meat and its processed products. Brazil's agribusiness—which consists of agriculture and agro-processing industries—is considered to account for 38 percent of its GDP. Brazil, which used to be an exporter of tropical primary products such as coffee and sugar, has structurally transformed its economy to become a multifaceted agricultural and agro-processing country in approximately 40 years since the mid-1970s.

The soil of Cerrado is characterized by high acidity and aluminum toxicity, as well as nutrient deficiency. Therefore, for a long time, Cerrado was considered unfit for food production. It was essential to increase the Cerrado soil organic matter to enable the absorption of limestone (which are applied to neutralize the highly acidic soil) as well as fertilizer (which is used to increase the nutritive substance). Under these circumstances, much was expected from soybeans. Soybean is a legume which can contribute to the fertilization of soil through the fixation of atmospheric nitrogen with root nodule bacteria. As a result, soybeans were important for the agricultural development in the Cerrado not only as the first economically viable crop, but also because they were indispensable in making the soil in the Cerrado fit for agriculture. However, being a temperate crop, soybeans come into flower and bear fruit depending on hours of daylight. To make it possible for soy beans to be cultivated in the tropical savanna, the Cerrado Agricultural Research Center (CPAC) under the umbrella of Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA) spent approximately seven years to improve soy bean varieties. Soil and breed improvements made agriculture in Cerrado possible. Two Brazilians who contributed to the development of Cerrado agriculture received the World Food Prize in 2006. The founder of this prize, Dr. Norman E. Borlaug, who received the Nobel Peace Prize for his work in connection with the Green Revolution, rated the success of agriculture in the Cerrado as “one of the great achievements of agricultural science in the 20th century.” Brazil and Japan collaborated through technical and financial cooperation to develop the Cerrado agriculture. Such cooperation continued for more than 20 years from the 1970s through the beginning of the 2000s (Hosono, Campos da Rocha, and Hongo 2015).

Japan's cooperation continued over a long period of time in the Brazilian manufacturing industry as well. For example, JICA has provided assistance in support of Brazil's industrialization policies for more than 50 years since the 1960s. JICA has supported technical human resources through various programs in coordination with the Brazilian government entities and universities; technical instructors and researchers—beneficiaries of Japanese technical transfer—are playing an important role today. The transferred techniques have been diffused to the industrial arena through government institutions. Such cooperation has been highly appreciated for having contributed to the capacity building of Brazil's industrial workforce and to the enhancement of technological capability.

Salmon had not previously existed in Chile. Nevertheless, Chile has today become one of the world's top salmon exporters comparable to Norway. This is thanks to the cooperation between Japan

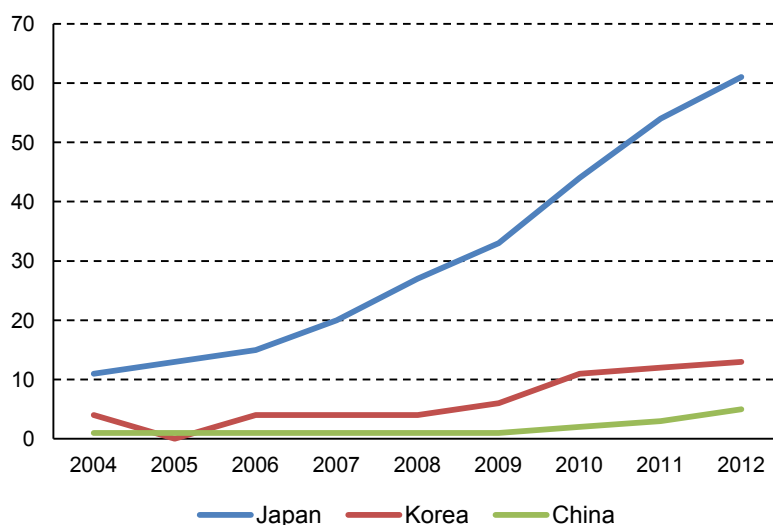
¹⁷ There are, nonetheless, other empirical researches regarding the variety of cooperation taking place for the industrial development of Paraguay and Sistema de la Integración Centroamericana (SICA) (ECLAC/JICA 2015; SICA/JICA 2016, respectively).

and Chile through which the two nations aimed at developing the salmon industry that started in the end of the 1960s and continued for 20 years. Moreover, the Fundación Chile also contributed to such achievement; it embarked on salmon cultivation in the beginning of the 1980s and succeeded at producing at a commercial scale (1,000 tons). The diversification of exports has been a critical issue for Chile whose main exports have been dominated by copper and other mineral products. Salmon, thus, together with other products like wine, has contributed to its export diversification as well as its industrial structural transformation, particularly, in the southern 10th and 11th regions—which used to be characterized as poor regions—the industrial structure went through a sea of change (Hosono, Iizuka, and Katz 2016).

Mexico's automotive industry experienced a steady growth since the inauguration of NAFTA which brought investments from the United States, Europe, and Japan. The conclusion of the Japan-Mexico EPA led to increased investments from Japanese companies. Such investments were carried out in tandem with Japan's ODA, and contributed to further development of the Mexican automotive industry. Since the EPA entered into force, the number of Japanese companies in Mexico—the majority of them in the automotive industry—increased from 300 to 1,000, and Japanese companies today produce about 35 percent of the total automobile production in Mexico. ECLAC's remark quoted earlier—which mentions that the EPAs concluded by Japan cover a far wider range of contents than the traditional FTAs—is especially notable in the Japan-Mexico EPA. Mexico's automobile production reached 1.7 million in 2005, and exceeded 3 million in 2012. Moreover, Mexico exports approximately 80 percent of its total produced units, which makes it an automotive producer with the highest export share in terms of production volume, among the developing nations. Japan's cooperation has strengthened the development of the supporting industries of Mexico's automotive industry since the inception of the EPA, thus contributing to the industrial development of the country (IDB 2013: 33-35).

Japan's cooperation for the industrial development of Latin America—be it through the public or private sector—has some important characteristics, different to those of other Asian nations. One characteristic is that such cooperation has existed for a long period of time, more than half a century. The Japanese companies are pioneers of Asian investments in Latin America, and Japan's FDI stocks in Latin America are the largest of all the Asian nations today. Besides, its portfolio is the most diversified and runs the gamut of economic sectors including manufacturing (See figure 1 and figure 2).

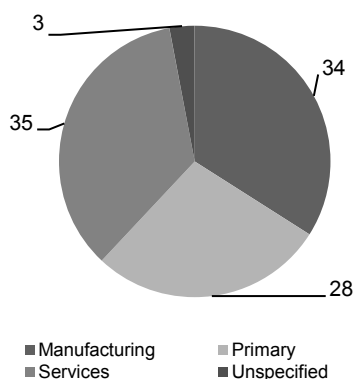
Figure 1
A mayor surge of japanese FDI in Latin America
(FDI in stock)



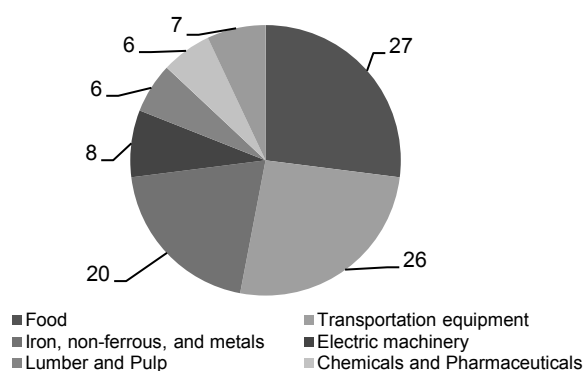
Source: IDB, 2013.

Figure 2
Composition of Japan's foreign direct investment (FDI) to Latin America and selected countries, 2012

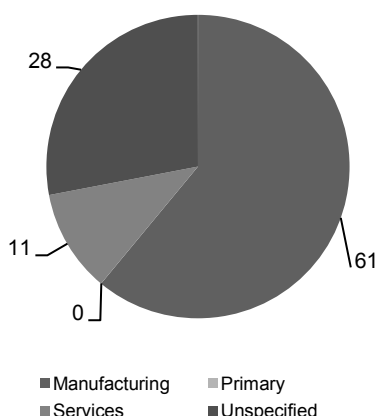
A. Latin America and the Caribbean



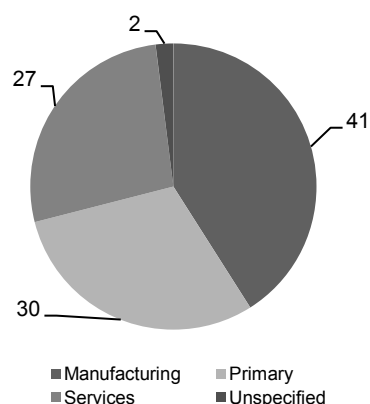
B. Manufacturing FDI of Japan in Latin America by industry 2012



C. Mexico



D. Brazil



Source: IDB, 2013.

FDI offers numerous benefits including technology transfer, employment generation, and expansion of export market, among other things. FDI and its impacts, thus, should be evaluated on a stock basis, not merely on the flows. In terms of its impacts, it is well known that the Japanese companies have made efforts in human development, while expanding FDI and trade from early on. Usinas Siderúrgicas de Minas Gerais S.A. (Usiminas), is known to have developed human resources which has contributed substantially to the development of the Brazilian steel industry. For this reason, the company is also called “Usiminas School”. Similarly, the human resource development system at the shipbuilding company Ishikawajima Do Brasil S/A (Ishibras) is well known as “Ishicola”— “the school of Ishibras” in Portuguese, which has produced a great portion of the workforce in the shipbuilding and machinery. Such emphasis on human resource development demonstrates that the Japanese corporations have long been engaged in investment and operations in Latin America with a long-term perspective. On the other hand, Japan has long been the only OECD-DAC member country in Asia, and has committed to cooperation with Latin America through ODA for a long period of time. Part of it has contributed to trade expansion (through AFT) and has proven effective, as is highlighted in the above cited IDB report. Such commitments have also involved public-private partnerships. The signing of EPAs would further promote the strengthening of cooperation to expand economic relations between Japan and the EPA countries in these areas.

V. Concluding remarks: toward closer economic relations between Asia Pacific and Latin America

In Section One, it was argued that regional economic integration would progress steadily when complementarity and synergy effects are generated between de jure economic integration and closer economic relations achieved autonomously through market-led /business-driven integration. This relation is demonstrated by the experiences of economic integration in East Asia and Latin America discussed in Section Two. This is relevant when we consider bringing the economic ties between Asia Pacific and Latin America closer. Particularly important is the condition that autonomous economic relations—which make regional economic integration possible—expand through increased investments and business development across both regions. This may be facilitated by developing value chains and supply chains between both regions. At the same time, institutions responsible for fostering economic partnership between the two regions need to be streamlined, making sure that such institutions are able to promote or at least not to hamper the process of economic integration. APEC has mounted an effort to facilitate trade and investment over a number of years and has committed to expand economic relations between the member countries through open regionalism. Chile, Mexico, and Peru have been participating from Latin America, and these nations have been deepening relations with the Asia-Pacific nations.

Furthermore, Japan has a large potential to contribute to the development of economic relations between the Latin American nations including these three countries and the Asia-Pacific nations. This is precisely because of the unique position that Japan has long retained both in East Asia and Latin America, and its catalytic role in the process of industrial development and structural transformation. The industrial structural transformation of countries in both regions has shifted the trade structure between East Asia and Latin America; moreover, it has contributed to the progress of the intra-regional economic integration, especially in East Asia.

Additionally, the industrial structural transformation which is made possible by regional integration and the expansion of economic relations should not merely aim at achieving higher economic growth. Efforts are needed for the transformation to lead to a high-quality growth: namely, inclusive and sustainable growth. As already mentioned, many countries of East Asia have been shifting their policies intending to transform their industrial structure towards more sophisticated activities. Likewise, in Latin

America, proposals have been made to shift its industrial structure aiming for a more equitable society as proposed by ECLAC(1994). Today, many East Asian and Latin American countries show strong interest in fostering industrial development and economic growth to prevent them from falling into the middle-income country trap. The APEC Growth Strategy, adopted in 2010, has drawn attention from such a perspective. This report advocated the pursuance of “high quality growth,” meaning that APEC aspires towards a more balanced, inclusive, sustainable, innovative, and secure (including human security) growth. Likewise, the Development Cooperation Charter of Japan delivered in 2015 set “high quality growth” as one of its development cooperation goals. The Charter states that Japan aims at realizing inclusive, sustainable and resilient growth thereby achieving poverty reduction (see figure 3).

Diagram 2
Priority issues of development cooperation of Japan



Source: Author, based on Development Cooperation Charter of Japan.

Japan should take into consideration the “high-quality growth” emphasized in the APEC Growth Strategy and the Development Cooperation Charter when contributing to the establishment of closer economic ties between East Asia and Latin America. Thus, Japan could contribute not only to the deepening of economic relations between the two regions, but also to the transformation of the industrial structure, inclusive and sustainable growth and development, and to enhance resilience to disaster—all of which are goals pursued by every country of both regions.

Bibliography

- Ariff, Mohamed, “Regional Integration and Global Free Trade: Working at Cross Purposes?” Saavedra-Rivano, Neantro, Akio Hosono and Barbara Stallings (eds.) (2001).
- Asian Development Bank (ADB) (2008) *Emerging Asia Regionalism: A Partnership for Shared Prosperity*. Manila: ADB.
- _____(ADB) (2013) *Key Indicators for Asia and the Pacific 2013: Asia’s Economic Transformation: Where to, How, and How Fast*. Manila: ADB.
- Commission on Growth and Development (2008) *The Growth Report: Strategies for Sustained Growth and Inclusive Development*. Washington D.C.: World Bank.
- Horisaka, Kotaro y Akio Hosono (1996), *Study on Latin American Multinational Enterprises: Regional Economy and Globalization* (in Japanese) Tokyo: Nihon Hyoron Sha.
- Hosono, Akio (2001) “Asia-Pacific Economic Cooperation (APEC) and the Free Trade Area of the Americas (FTAA): Possibilities of Trans-Pacific Cooperation.” Saavedra-Rivano, Neantro, Akio Hosono, and Barbara Stallings (eds.) (2001).
- _____(2015a) “Industrial Transformation and Quality of Growth” Haddad, Lawrence, Hiroshi Kato and Nicolas Meisel (eds.) (2015) *Growth is Dead, Long Live Growth: The Quality of Economic Growth and Why it Matters*. Tokyo: JICA Research Institute.
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- Hosono, Akio, Michiko Iizuka and Jorge Katz (eds.) (2016) *Chile’s Salmon Industry: Policy Challenges in Managing Public Goods*. Berlin: Springer.
- Hosono, Akio, Carlos Magno Campos da Rocha and Yutaka Hongo (2015) *Developing for Sustainable Agriculture: The Brazilian Cerrado*. New York: Palgrave McMillan.
- Inter-American Development Bank (IDB) (2013) *Japan and Latin America and the Caribbean: Building a Sustainable Trans-Pacific Relationship*. Washington D.C.: IDB.
- Japan International Cooperation Agency (JICA) (2006) *Annual Evaluation Report 2006*. Tokyo: JICA.
- Japan International Cooperation Agency (JICA)/ Japan Bank for International Cooperation (JBIC) (2008) *Report of the Stocktaking Work on the Economic Development in Africa and the Asian Growth Experience*. Tokyo: JICA/JBIC.

- Johnson, Simon, Jonathan D. Ostry, and Arvind Subramanian (2007), "The Prospects for Sustained Growth in Africa: Benchmarking the Constraints" NBER Working Paper. Cambridge (MA): National Bureau of Economic Research.
- Kimura, Fukunari (2003) "Promotion of Foreign Direct Investment as a Strategy of Industrialization" Ohno, Kenichi and Nozomu Kawabata (eds.) *Strategy of Industrialization of Viet Nam* (in Japanese) Tokyo: Nihon Hyoron Sha.
- Kimura, Hidemi, and Yasuyuki Todo (2010) "Is Foreign Aid a Vanguard of FDI? A Gravity-equation Approach" *World Development*. 38(4): 482-97.
- Kumakura, Masanaga (2010) "Interdependent Relations and Electronics Industry in Asia Pacific Economies" (in Japanese) Watanabe, Akio (ed.) (2010) *Asia Pacific and Progress of New Regionalism* Tokyo: Chikura Shobo.
- Kuwayama, Mikio (1993), "Regionalización abierta de América Latina para su adecuada inserción internacional" Documento de trabajo (No.20). Santiago (Chile): UN-ECLAC.
- Lin, Justin Yifu (2012a), *New Structural Economics: A Framework for Rethinking Development and Policy*. Washington, D.C.: World Bank.
- ____ (2012b), *The Quest for Prosperity: How Developing Countries Can Take Off?* Princeton: Princeton University Press.
- Ministry of Foreign Affairs (MOFA, Japan) (2005) *Japan's Official Development Assistance 2005* Tokyo: MOFA.
- ____ (2015) *Development Cooperation Charter* Tokyo: MOFA.
- Natsuda, Kaoru, and John Thoburn, 2011, "Industrial Policy and Development of the Automotive Industry in Thailand." Working Paper No.11(5), Ritsumeikan Center for Asia Pacific Studies (RCAPS).
- Norman, Akbar and Joseph E. Stiglitz. (2012). "Strategies for African Development." Norman, Akbar et al. (eds.) (2012), *Good Growth and Governance In Africa: Rethinking Development Strategies*. Oxford: Oxford University Press.
- OECD-DAC (2004) Peer Review: Japan. Paris: OECD Development Assistance Committee.
- Ohno, Kenichi and Kojiro Sakurai (1997), *Theory of Development Economics in East Asia* (in Japanese) Tokyo: Nihon Hyoronsha.
- Saavedra-Rivano, Neantro, Akio Hosono and Barbara Stallings (eds.) (2001) *Regional Integration and Economic Development*. New York: Palgrave.
- Sano, Takao, and Hiroshi Osada (eds.) (1998) *Deepening Industrial Linkages among East Asian Countries: In the Light of International Input-Output Analysis*. Tokyo: Institute of Developing Economies.
- Sawada, Yasuyuki (2012). "Effect of ODA on Investment" Keizai Kyoshitsu, *Nihon Keizai Shimbun*. August 20, 2012.
- Sawaji, Osamu (2014). "ODA, Japan's Way" *The Japan Journal*. October, 6-13.
- Shimomura, Yasutami (2013) "The Japanese View: With Particular Reference to the Shared Cognition Model in Asia" Shimomura, Yasutami, and Hideo Ohashi (eds.) *A Study on China's Foreign Aid: An Asian Perspective*. 145-68. New York: Palgrave MacMillan.
- SICA/JICA (2016). *Desarrollo Inclusivo en Centroamérica y la República Dominicana: Logros y Desafíos para el Próximo Decenio*. San Salvador and Tokyo: SICA and JICA.
- Suehiro, Akira (2000), *Teoría de Industrialización Actualizante: Logros y Perspectivas de la Economía de Asia*. (en japonés) Nagoya: Nagoya University Press.
- UN-ECLAC (1990a) *Changing Production Patterns with Social Equity: The Prime Task of Latin American and the Caribbean Development in 1990s*. Santiago (Chile): UN-ECLAC.
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- ____ (2008) *Oportunidad de Comercio e Inversión entre América Latina y Asia-Pacífico: El Vínculo con APEC* Santiago (Chile): UN-ECLAC.
- ____ (2010) *Latin America and the Caribbean in the World Economy 2009-2010*. Santiago (Chile): UN-ECLAC.

- UN-ECLAC/JICA (2015) *Study on Inclusive Development in Paraguay: International Cooperation Experience*. Santiago (Chile): UN-ECLAC.
- UNIDO (2015) *Industrial Development Report 2016: The Role of Technology and Innovation in Inclusive and Sustainable Industrial Development*. Vienna: UNIDO.
- Urata, Shujiro (2001), "Emergence of an FDI-trade Nexus and Economic Growth in East Asia" Stiglitz, Joseph, and Shahid Yusuf (eds.) (2001) *Rethinking the East Asian Miracle*. Washington, D.C.: World Bank.
- Watanabe, Toshio (1986) *Theory of Development Economics: Economic and Contemporary Asia* (in Japanese), Tokyo: Nihon Hyoron Sha.
- Watanabe, Yorisumi (2012), "Economic Integration of East Asia and its Institutional Framework", Kuroiwa, Ikuo (ed.) (2012) *Integration of East Asia and its Theoretical Background* (in Japanese) Tokyo: Institute of Developing Economies.
- World Bank (1993) *The East Asian Miracle: Economic Growth and Public Policy*. Oxford: Oxford University Press.
- _____(2009) *World Development Report 2009: Reshaping Economic Geography*. Washington D.C.: World Bank.
- _____(2012) *World Development Report 2013: Jobs*. Washington D.C.: World Bank.
- Yamazawa, Ippei (1990) "Flying Wild Geese Pattern in the Pacific: Pattern of Industrial Development among Asian Countries" (Distinguished Speakers Program) Manila: Asian Development Bank.



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