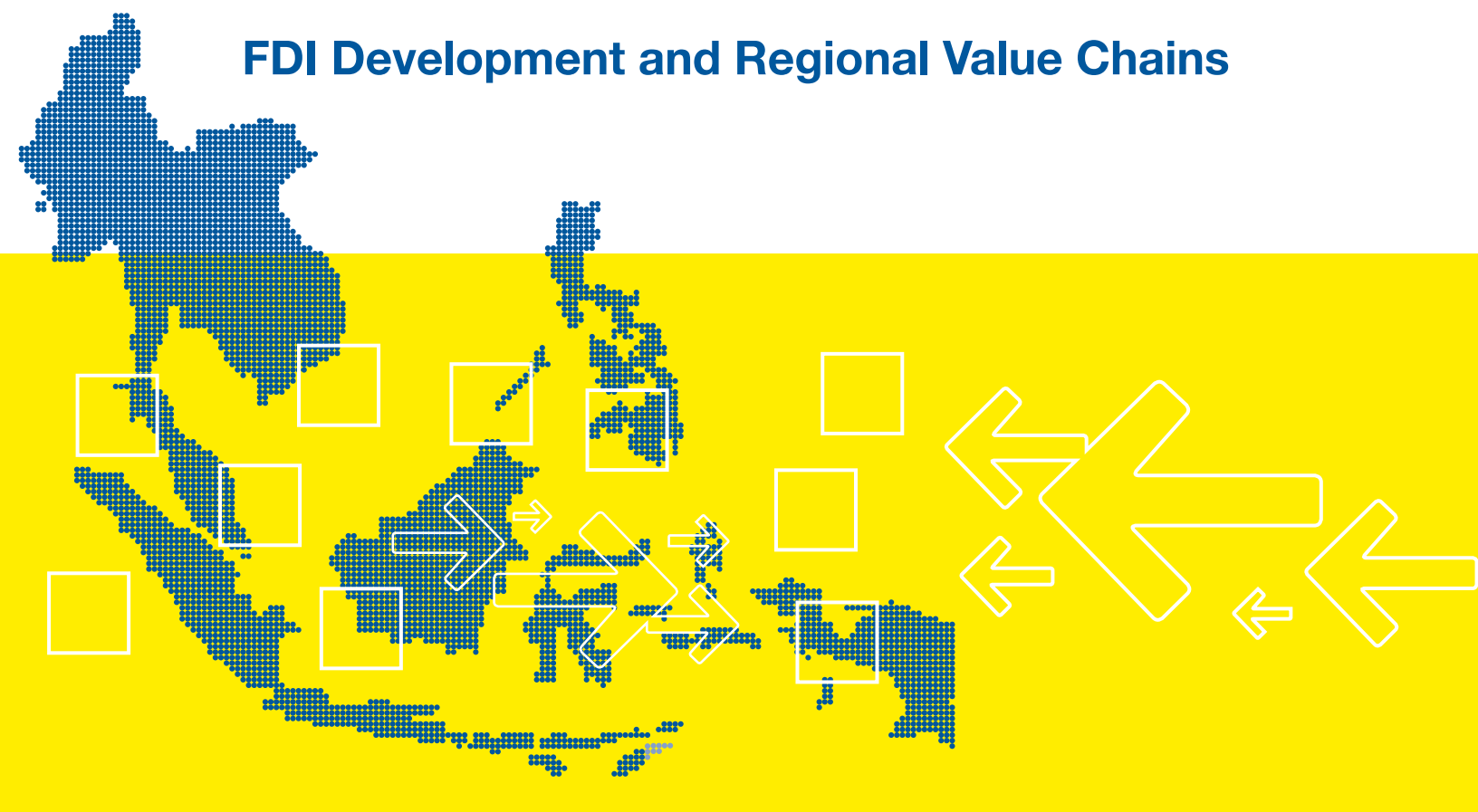


ASEAN Investment Report 2013-2014

FDI Development and Regional Value Chains



one vision
one identity
one community



UNITED NATIONS
UNCTAD



ASEAN Investment Report 2013-2014

FDI Development and Regional Value Chains

The ASEAN Secretariat

**United Nations Conference on
Trade and Development**

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States of the Association are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia.

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The ASEAN Investment Report is produced to facilitate a better understanding of FDI developments in ASEAN. The findings, interpretations, and analysis in the Report should be treated with care, as work on harmonising and improving FDI quality across the region is on-going.

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PREFACE

ASEAN's integration efforts are pursued through key regional measures that among others, strengthen investment cooperation among ASEAN Member States, enhance investment protection and liberalization regimes, and promote ASEAN as an integrated investment and production network. All these have contributed to make the ASEAN region an attractive destination for foreign direct investments (FDI).

Anchored by strong macroeconomic fundamentals, improved policy environment and greater regional market prospects as well as rising investor confidence thanks to the vast opportunities and the relative peace and stability of the region, ASEAN remains a significant recipient of global FDI flows. In 2013, ASEAN attracted US\$ 122 billion, accounting for 8% of the global FDI. This includes increasing investments from ASEAN Member States, which at 17% of the total FDI inflows, is now the third largest source of FDI in the region.

With ASEAN's continuing success as a competitive location hosting intermediate manufacturing facilities as well as value chain operations of transnational corporations (TNC), this year's ASEAN Investment Report focuses on FDI development and regional value chains. The Report illustrates how the expansion of TNC operations and the increase in capacities of local firms to produce inputs have helped strengthen the development of the regional value chain which, in turn, underpins and contributes to ASEAN's robust and resilient economies.

This Report will not only be a useful reference for ASEAN's business community on their existing operations and expansion plans, it also shows ASEAN's commitment to facilitate and promote investments in the region as we are moving forward to the realization of the ASEAN Community by 2015.



Le Luong Minh
Secretary-General of ASEAN

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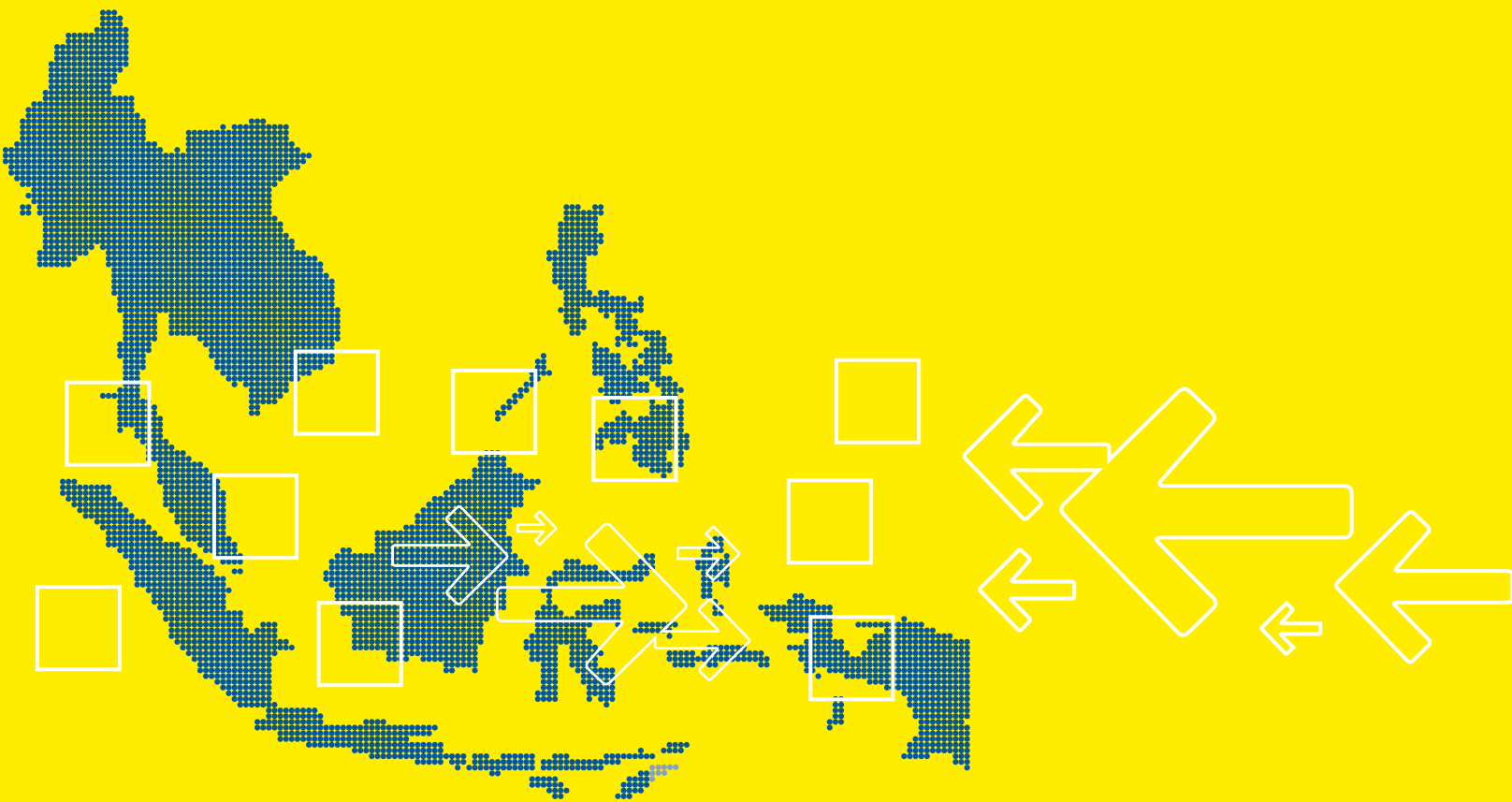
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ABBREVIATIONS

ACIA	ASEAN Comprehensive Investment Agreement
AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
AFTA	ASEAN Free Trade Area
AIA	ASEAN Investment Area
AICO	ASEAN Industrial Cooperation
AIR	ASEAN Investment Report
ATIGA	ASEAN Trade in Goods Agreement
BITs	bilateral investment treaties
CEPT-AFTA	Common Effective Preferential Tariff Scheme for AFTA
DTTs	double taxation treaties
DVA	domestic value added
FDI	foreign direct investment
FVA	foreign value added
FTAs	free trade agreements
GLCs	Government-linked companies
GVCs	global value chains
M&A	mergers and acquisition
MRA	mutual recognition arrangement
OBM	original brand manufacturer
OFDI	outward foreign direct investment
RCEP	Regional Comprehensive Economic Partnership
RVCs	regional value chains
SEZ	special economic zone
SOEs	State-owned enterprises
SMEs	small and medium-sized enterprises
TIFA	trade and investment framework agreement
TNCs	transnational corporations
WIR	World Investment Report

OVERVIEW

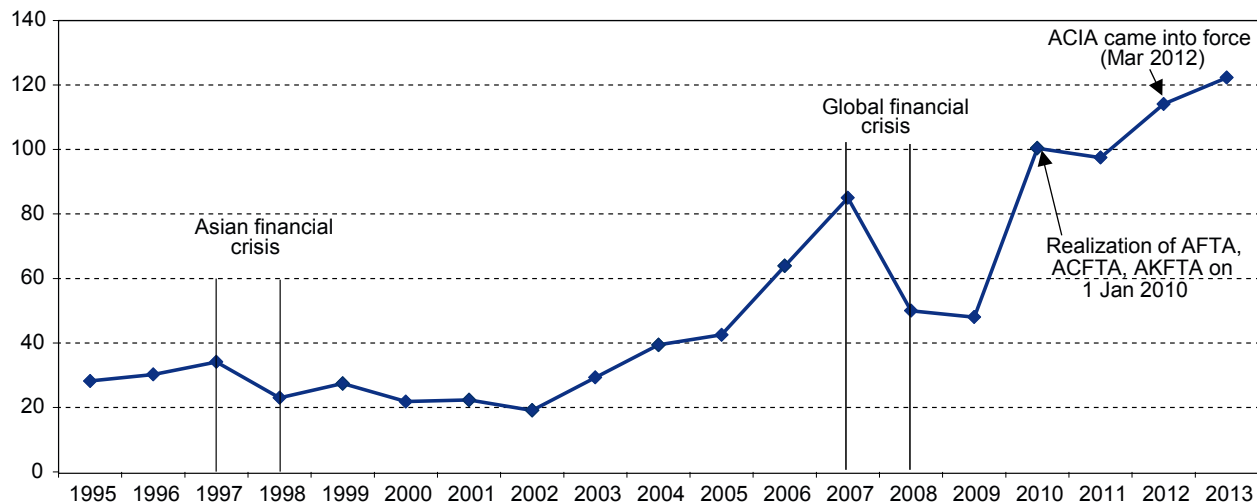


OVERVIEW

FDI Trends and Development in 2013

Foreign direct investment (FDI) flows into ASEAN in 2013 continued to surge and are about on par with those to China for the first time since 1993. Inflows in 2013 exceeded \$122 billion – pushing the region’s rapidly rising inward FDI stock to \$1.6 trillion (figure 1). Most ASEAN Member States recorded higher inflows in 2013; two recorded marginal declines.

Figure 1. FDI flows to ASEAN continued to surge, exceeding \$122 billion in 2013
(Billions of dollars)



Sources: ASEAN Secretariat, ASEAN FDI database and UNCTAD FDI database.

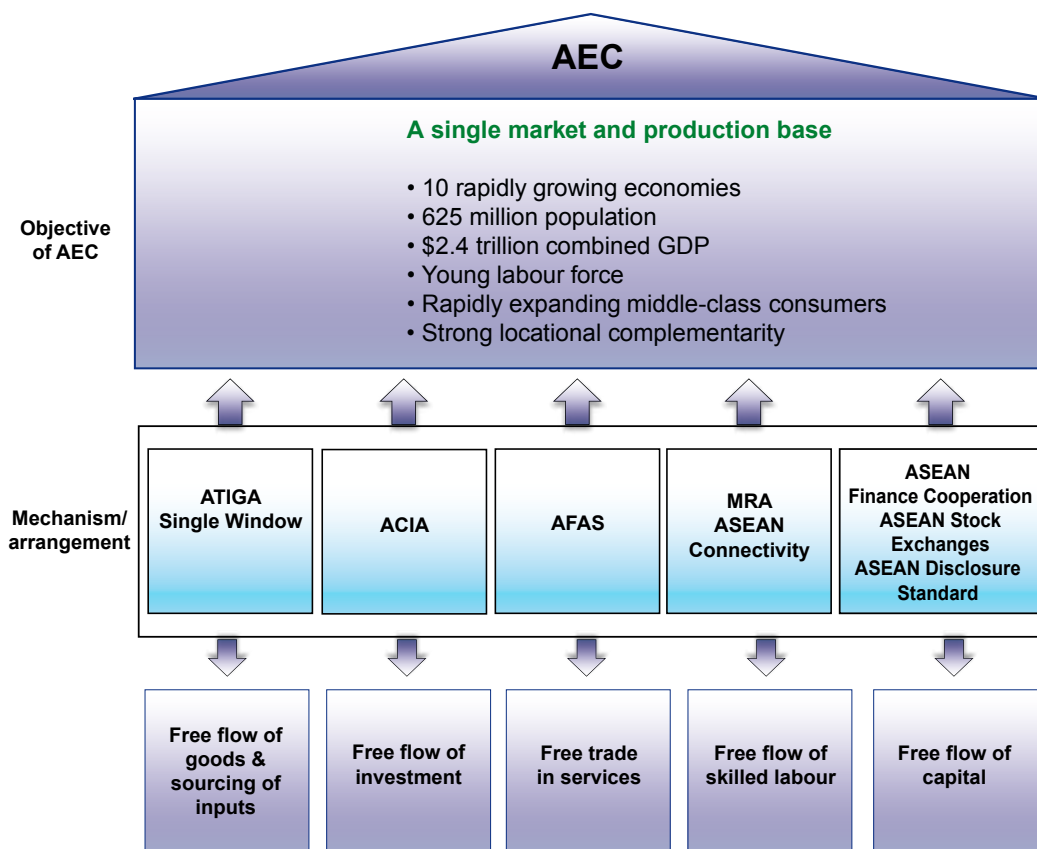
Notes: ACIA = ASEAN Comprehensive Investment Agreement; AFTA = ASEAN Free Trade Area; ACFTA = ASEAN China Free Trade Area; AKFTA = ASEAN Korea Free Trade Area. Data for 2013 exclude reinvested earnings in the Philippines and do not include investment in infrastructure and extractive industries for some countries.

Among developing countries, ASEAN Member States as a whole remained a significant recipient of global FDI flows. ASEAN accounted for 3% of the global economy in 2013 but attracted more than 8% of global FDI flows. It accounted for 8% of the combined GDP of emerging markets and developing countries but received 16% of global FDI flows to the developing world. Higher inflows over the past decade have produced a five-fold rise in FDI stock per capita, from \$500 in 2000 to nearly \$2,500 in 2013. These numbers augur well for ASEAN’s efforts to promote and attract FDI to the region, especially as a competitive location for TNCs’ production and value chain operations. They also suggest that the region is on investors’ radar screens and is recognized as a place to expand their FDI footprint.

A number of factors contributed to the significant and continuous rise. Many TNCs increased their investments and expanded their operations in the region. Rising intra-ASEAN investments and further growth in cross-border mergers and acquisitions (M&As) in the region played a role. The improved policy environment, strong macroeconomic fundamentals, regional market prospects and growing positive investor sentiment towards an integrating ASEAN also contributed to the recent surge in inflows.

Corporate perceptions of the ASEAN Economic Community (AEC) are positive, and many corporations, both ASEAN and foreign companies, are expanding their presence in the region. Investors are looking forward to the AEC. Some have established operations or stepped up their activity in the region in the past two years, ahead of the arrival of AEC-2015, to benefit from the single market and production base of an integrating ASEAN (figure 2). They do so to boost their regional footprint, to improve their competitiveness, to expand their market reach, and to further strengthen their regional production networks. Some are moving regionally, ahead of others, because of their desire to realize a first-mover advantage, while others plan significant regional investments for the next few years.

Figure 2. AEC: Influences on business and investment decisions

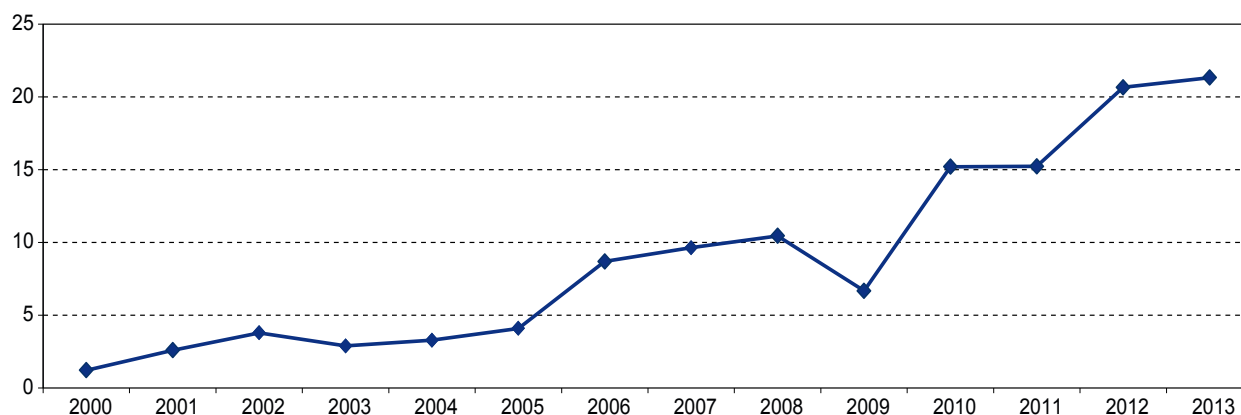


Source: UNCTAD (2014).

AEC = ASEAN Economic Community, ATIGA = ASEAN Trade in Goods Agreement, ACIA = ASEAN Comprehensive Investment Agreement, AFAS = ASEAN Framework Agreement on Services, MRA = Mutual Recognition Arrangement.

Rising regional opportunities supported strong intraregional investment. ASEAN companies invested some \$21 billion in the region in 2013, which is 13% more than the combined intraregional investment between 2000 and 2005 (figure 3). Intra-ASEAN investment contributed about 17% to the total inflows in the region and is a major source of investment in most ASEAN Member States.

Figure 3. Intra-ASEAN investment on a growth momentum
(Billions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database.

The growing corporate income and cash reserves of ASEAN companies supported strong intraregional investment. The top 50 major ASEAN companies with a regional presence saw their combined profits rise from \$50.9 billion in 2012 to \$53.8 billion in 2013. The combined cash reserves of these companies are significant: \$166 billion in 2013. They provide the financial capacity to invest and undertake M&As in the region. Some ASEAN companies have been on a spending spree, acquiring assets in the region and expanding regionally in greenfield projects.

ASEAN Member States as a group are a leading investor in the CLMV countries, which helps strengthen regional connectivity and contributed to the increase in intraregional investment. ASEAN investment to Cambodia, the Lao People's Democratic Republic, Myanmar and Viet Nam rose by more than 75% in 2013, attracted by wage cost differentials, market potential and opportunities.

The top 10 investors accounted for more than 70% of inflows in 2012-2013 (table 1). Japan was the largest investor, followed by ASEAN Member States as a group. Together they accounted for more than 36% of investment in both years. Investments from a number of European Union countries were also considerable (e.g. the Netherlands, the United Kingdom, Luxembourg). Chinese companies have also been investing actively in ASEAN and in 2013 contributed \$8.6 billion in flows. United States companies invested considerably less in 2013 – some \$3.8 billion, or only 3% of all FDI in ASEAN. Although their investment to the region declined, many United States companies are becoming more optimistic about the region's investment environment and opportunities. Some have

started to expand operations in ASEAN and others plan to do so in the next few years, partly because of the influence of the AEC, the associated investment opportunities and the locational advantages that ASEAN Member States offer.

Table 1. Top 10 investors in ASEAN account for more than 70% of inflows

Major investors	2011		Major investors	2012		Major investors	2013	
	Amount (\$ millions)	Share in FDI in ASEAN (%)		Amount (\$ millions)	Share in FDI in ASEAN (%)		Amount (\$ millions)	Share in FDI in ASEAN (%)
ASEAN	15 228.4	16	Japan	23 777.1	21	Japan	22 904.4	19
United Kingdom	12 152.2	12	ASEAN	20 657.6	18	ASEAN	21 321.5	17
Japan	9 709.0	10	United States	11 079.5	10	Netherlands	10 486.3	9
United States	9 129.8	9	Netherlands	8 728.3	8	United Kingdom	10 443.1	9
China	7 857.7	8	China	5 376.8	5	China	8 643.5	7
Luxembourg	5 566.7	6	Hong Kong, China	5 029.9	4	Hong Kong, China	4 517.3	4
Netherlands	4 947.6	5	Luxembourg	3 926.8	3	United States	3 757.5	3
France	4 360.2	4	France	3 126.4	3	Republic of Korea	3 516.2	3
Hong Kong, China	4 273.8	4	Taiwan, Province of China	2 242.3	2	Belgium	2 489.3	2
Taiwan, Province of China	2 317.0	2	India	2 233.4	2	Luxembourg	2 310.4	2
Top 10 total	75 542.4	77	Top 10 total	86 178.2	75	Top 10 total	90 389.5	74

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012-2013 do not include the Lao People's Democratic Republic. Philippines data excludes reinvested earnings – one of FDI flow components – as geographical breakdowns are not available.

The services and manufacturing sectors continued to dominate FDI flows in ASEAN. But FDI in manufacturing rose significantly, to some \$41 billion from only \$18 billion in 2012. The significant recipient industries were electronics and automotive and automotive parts. The largest investors in manufacturing in 2013 were companies from Japan, which invested \$13.1 billion, followed by those from the European Union (\$7.7 billion), ASEAN (\$5.9 billion) and the Republic of Korea (\$2.1 billion). Their investments accounted for more than 70% of FDI to the manufacturing sector in ASEAN in 2013.

The Investment Policy Environment and Development

The investment environment in ASEAN improved further with investment and investment-related measures introduced in 2013–2014,¹ nationally and regionally. The regional investment measures introduced or announced addressed liberalization, facilitation and promotion. In addition, ASEAN Member States also introduced measures to further liberalize their investment regimes, undertake reforms, relax regulations, provide incentives, reduce taxation, organize promotion events, streamline investment procedures, simplify requirements, establish one-stop centres and economic zones, provide more information and increase transparency, including actions

that aim to lower the cost of doing business. Some member countries also signed new bilateral investment treaties or free trade agreements, and some are negotiating further investment-related agreements with their partners.

Key Features of FDI in ASEAN from Dialogue Partners

The ASEAN Dialogue Partners are major investors in ASEAN. This examines the salient features of FDI in ASEAN from two of the Dialogue Partners (i.e. China and Japan). Other Dialogue Partners will be examined in future reports.

Chinese FDI and TNC operations in ASEAN

Chinese companies are major players and significant financiers in infrastructure projects and mining activities. Their commitments to develop or complete infrastructure projects in ASEAN in 2013–2017 alone were estimated to be worth at least \$50 billion, or an average of \$10 billion annually. As a comparison, annual average Chinese FDI flows to all sectors in 2011–2013 was only \$6 billion and Chinese outward FDI stock in ASEAN in 2012 was \$28 billion. This development underscores the preference of Chinese companies for non-equity modalities in ASEAN, especially in the infrastructure sector. FDI data alone do not adequately capture the full scale of Chinese investment in the region.

The significance of ASEAN as an investment destination for Chinese companies continued to grow. China is now the fifth largest investor in the region. The high level of Chinese outward FDI to ASEAN is driven by a number of factors. They include the continuing push of Chinese firms to internationalize, the influence of the ASEAN-China FTA, the support of the Chinese government, geocultural proximity and affinity, and the improving investment environment and opportunities in ASEAN. Access to financing facilities and the support of Chinese banks such as China Development Bank and the EXIM Bank of China played an important role in facilitating Chinese companies' investments in ASEAN. The drive to access natural resources and the competitiveness of Chinese companies, especially in construction and infrastructure, are encouraging more Chinese enterprises to invest in resource-rich ASEAN Member States, including developing landmark infrastructure projects.

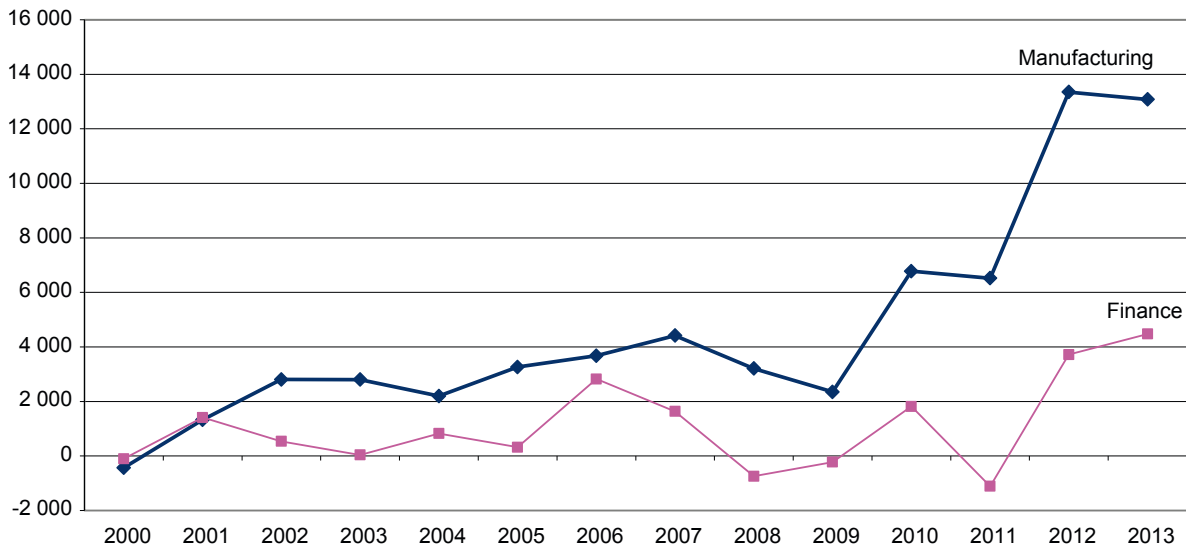
Japanese FDI and TNCs operation in ASEAN

Japanese manufacturing FDI in ASEAN rose rapidly since 2009 (figure 4). Japanese TNCs are the largest foreign investors in manufacturing activities in ASEAN, contributing some 46% of the \$58 billion investment in that sector in the last two years.

Japan has been a major investor in ASEAN, and ASEAN has similarly been a major FDI destination for Japanese investment abroad for several decades.

This symbiotic relationship in investment and production between the two has grown more significant in recent years, which have witnessed an increasing number of Japanese companies expanding to and within ASEAN Member States. These companies are expanding their production capacity, building new factories, adding new production lines and subsidiaries, producing new product categories and establishing new business functions on top of existing ones.

Figure 4. Rapid growth of Japanese manufacturing FDI in ASEAN, 2000-2013
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database.

The number of Japanese companies in ASEAN is significant: about 5,500 affiliates in 2012, generating some 1.9 million jobs and sales worth more than \$540 billion. In automotive manufacturing operations alone, 71 factories and facilities of Japanese automotive TNCs in ASEAN directly employed about 145,000 people at the beginning of 2013.

A new wave of Japanese investment in ASEAN is taking shape. It started in 2012, when investment rose to twice the previous peak of 2010 to reach \$23 billion, contributed to by high numbers of new and expansionary investment activities. This new scale is expected to continue in 2014 and over the next few years, for several reasons. The improving regional investment environment and the anticipation of the AEC’s benefits play roles in encouraging Japanese companies to invest in the region. Risk diversification and production efficiency strategies continue to influence Japanese companies’ investment plans, favouring different countries in the region for manufacturing of different product categories. In addition, the complementarity of locational advantages is facilitating and encouraging Japanese companies to use regional production networks to achieve greater production efficiency.

Regional Value Chains in ASEAN

Regional value chains (RVCs) in ASEAN are spreading, involving more companies, countries and a wider range of products that help connect the region. The expanding operations of TNCs in the region and the increasing capacity of local firms in producing inputs used in subsequent stages of the value chains in ASEAN play roles in this growth. Regional integration is also contributing towards this trend in RVCs, which are connecting ASEAN Member States through FDI, non-equity modalities, trade in intermediate inputs, finished goods and arm's-length transactions. The ability of TNCs (lead firms) to slice, distribute and coordinate different value chain segments and functions, including determining who is to supply what and from where, has been a strong factor facilitating RVCs in ASEAN.

RVCs strengthen regional connectivity through production, investment, trade and business linkages (figure 5). They also help connect countries, companies and industries in the region, complementing the three pillars of ASEAN Connectivity through physical, people and institutional connections.

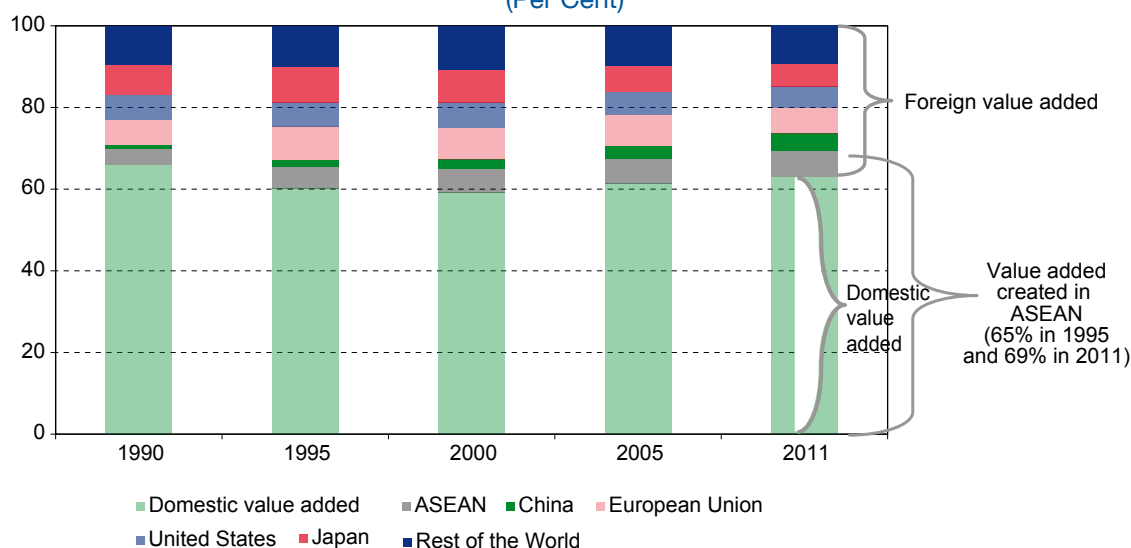
Figure 5. Regional integration, RVCs and ASEAN's connectivity



Source: UNCTAD (2014).

ASEAN value added inputs in the region's total exports are high and have been increasing, from 65% in 1995 to 69% in 2011 (figure 6). This development suggests that export-oriented foreign and local companies operating in the region have increased their sourcing of inputs from the region to use in producing or assembling subsequent components or final products in the value chains they are associated with.

Figure 6. Value added exports from ASEAN, by domestic, ASEAN and top four foreign country creators of value added, 1990, 1995, 2005 and 2011
(Per Cent)



Source: UNCTAD-Eora GVC database.

The manufacturing industry accounted for a majority of the intraregional value added inputs in ASEAN export. For instance, in 2011 some 60% of the intra-ASEAN value added inputs in ASEAN exports came from manufacturing activities.² The electronics industry was the single most active user in intraregional intermediate inputs (table 2).

Table 2. ASEAN exports incorporating intra-ASEAN value added inputs, by industry, 1990, 1995, 2000, 2005 and 2011
(Millions of dollars)

	1990	1995	2000	2005	2011
Total intra-ASEAN value added inputs in ASEAN exports	99 579	190 947	249 982	449 746	855 052
Manufacturing industry value added inputs in ASEAN exports	56 341	114 433	152 282	270 839	514 226
Textiles, clothing and leather	5 856	10 728	16 516	25 736	43 470
Chemicals and chemical products	2 917	7 332	10 829	20 634	43 009
Machinery and equipment	1 829	4 730	7 053	13 483	28 242
Electrical and electronic equipment	19 315	36 124	49 124	90 336	171 598
Motor vehicles and other transport equipment	2 151	4 375	7 066	12 454	22 046
<i>Memorandum</i>					
ASEAN value added inputs in manufacturing in world export	69 990	140 849	194 392	355 529	680 448

Source: UNCTAD-Eora GVC database.

Note: Interpretation of these I-O numbers needs to be done carefully as the numbers may under-report the actual trade volume of ASEAN due to differences in methodologies in collecting or compiling I-O and customs-based trade statistics.

Intra-ASEAN manufacturing value added inputs in ASEAN exports rose more than eight-fold between 1990 and 2011, from \$100 billion to \$855 billion. Intra-ASEAN trade in intermediate goods is expected to grow more, aided by growth expansion of operations by TNCs in the region in 2012–2013.

Aside from electronics, intra-ASEAN trade is also concentrated in key product categories such as automotive, automotive parts and components, machinery and palm oil. Intraregional trade in these products is increasing the intensity of intraregional production, investment, trade and business linkages involving foreign and domestic companies operating in ASEAN Member States. The region is a major global producer and exporter of these products, and many global companies are involved in the production of these export items in ASEAN.

Involvement in RVCs and links to global value chains (GVCs) vary by industry, particularly between the primary and the manufacturing sector. The three manufacturing industries that have the largest foreign inputs are the motor vehicles and other transport equipment industry; the coke, petroleum products and nuclear fuel industry; and the electrical and electronic equipment industry (table 3). The table communicates three important messages:

Table 3. ASEAN is strongly connected in GVCs but for some industries RVCs are significant and increasing

(Share of foreign value added in ASEAN exports, 1990 and 2011)

	Sector/industry	1990	↑→↓	2011
Primary	All industries	34.1	↑	37.0
	Primary total	7.5	↑	10.1
	Agriculture, hunting, forestry and fishing	8.3	↑	16.0
	Mining, quarrying and petroleum	7.2	→	7.4
Manufacturing	Manufacturing total	44.4	→	45.8
	Food, beverages and tobacco	17.6	↑	27.4
	Textiles, clothing and leather	32.2	↑	37.3
	Wood and wood products	18.5	↑	26.5
	Publishing, printing and reproduction of recorded media	27.9	↑	39.6
	Coke, petroleum products and nuclear fuel	63.4	↓	57.5
	Chemicals and chemical products	37.8	→	37.9
	Rubber and plastic products	27.6	↑	39.0
	Non-metallic mineral products	31.9	↑	34.3
	Metal and metal products	37.5	↑	44.0
	Machinery and equipment	47.4	↓	46.2
	Electrical and electronic equipment	54.9	↓	53.5
	Precision instruments	36.8	→	38.6
	Motor vehicles and other transport equipment	72.7	↓	62.5
Services	Services total	18.6	↑	21.9
	Electricity, gas and water	10.9	↑	21.8
	Construction	24.9	↑	31.3
	Trade	14.9	→	14.9
	Hotels and restaurants	12.4	↑	17.9
	Transport, storage and communications	27.7	↑	30.8
	Finance	10.6	↑	14.3
	Business activities	19.2	↑	23.1
Health and social services	18.3	↑	22.6	

Source: UNCTAD-Eora GVC Database.

Note: Based on two- to three-digit level of ISIC.

- (i) ASEAN is strongly connected to GVCs in these industries and products through high foreign value added inputs incorporated in the region's exports.
- (ii) Between 1990 and 2011, the domestic value added content in ASEAN's exports rose, which is suggestive of growing RVCs.
- (iii) The data suggest that not only are imports replaced by the direct investment and operations of TNCs in the region, but also domestic producers have gained competitiveness to produce more value added products in these industries.

RVCs involve the multifaceted interconnection of many companies operating in different ASEAN Member States (in-country and regionally), which encompass intra-firm and inter-firm relationships, including extensive webs of supplier connections in the region. RVCs in ASEAN also take place at a number of different levels: at the sub-components and components manufacturing, assembly and post-assembly stage. At each of these stages, major companies operate on a regional production network basis with multiple plants in a host country and connect in subsequent stages of the value chains with affiliates or other suppliers or customers operating in different ASEAN Member States. For parts and components that they do not produce or produce in insufficient quantity, these companies source directly or through contract manufacturing from their suppliers in the region. RVCs also occur through the interconnection of business functions of different affiliates operating in different ASEAN Member States. Intra-firm RVC business connections within a TNC group can include R&D, manufacturing of key components, assembly, sourcing of other intermediate inputs, testing, regional administrative and logistics operations and marketing and distribution functions based in different ASEAN Member States.

For the electronics industry RVC, this report presents the complex backward and forward integration relationships of different levels of players in the production of hard disk drives (HDDs) and components in the region. The final assembled HDD product is just one key component for the subsequent production of computers and other consumer electronic goods. In the automotive industry, some original brand manufacturers produce key parts in their own plants or through their contract manufacturers in ASEAN. The regional production networks of the automotive manufacturers and their relationships with suppliers in the region form strong and complex RVCs, involving intra-firm and inter-firm connections.

Similarly, the agriculture value chains for palm oil present further evidence of RVCs in ASEAN. Agroclimatic conditions, access to low-cost farming land and labour, and other locational factors (e.g. favourable policy environments) influence the RVC connection and the investment location. Agriculture RVCs are further shaped by the role some major players in the industry play through integrated business models, with different business functions spread across the region in different countries. These business functions run from plantations, refineries and manufacturing to marketing and distribution of the merchandise generated.

Although RVCs can develop without regional integration, ASEAN's integration accentuates and encourages RVCs for various reasons. Through TNCs and firms involved with RVCs, ASEAN as a region is connected in the broader GVCs of TNCs, involving interregional trade and production connections.

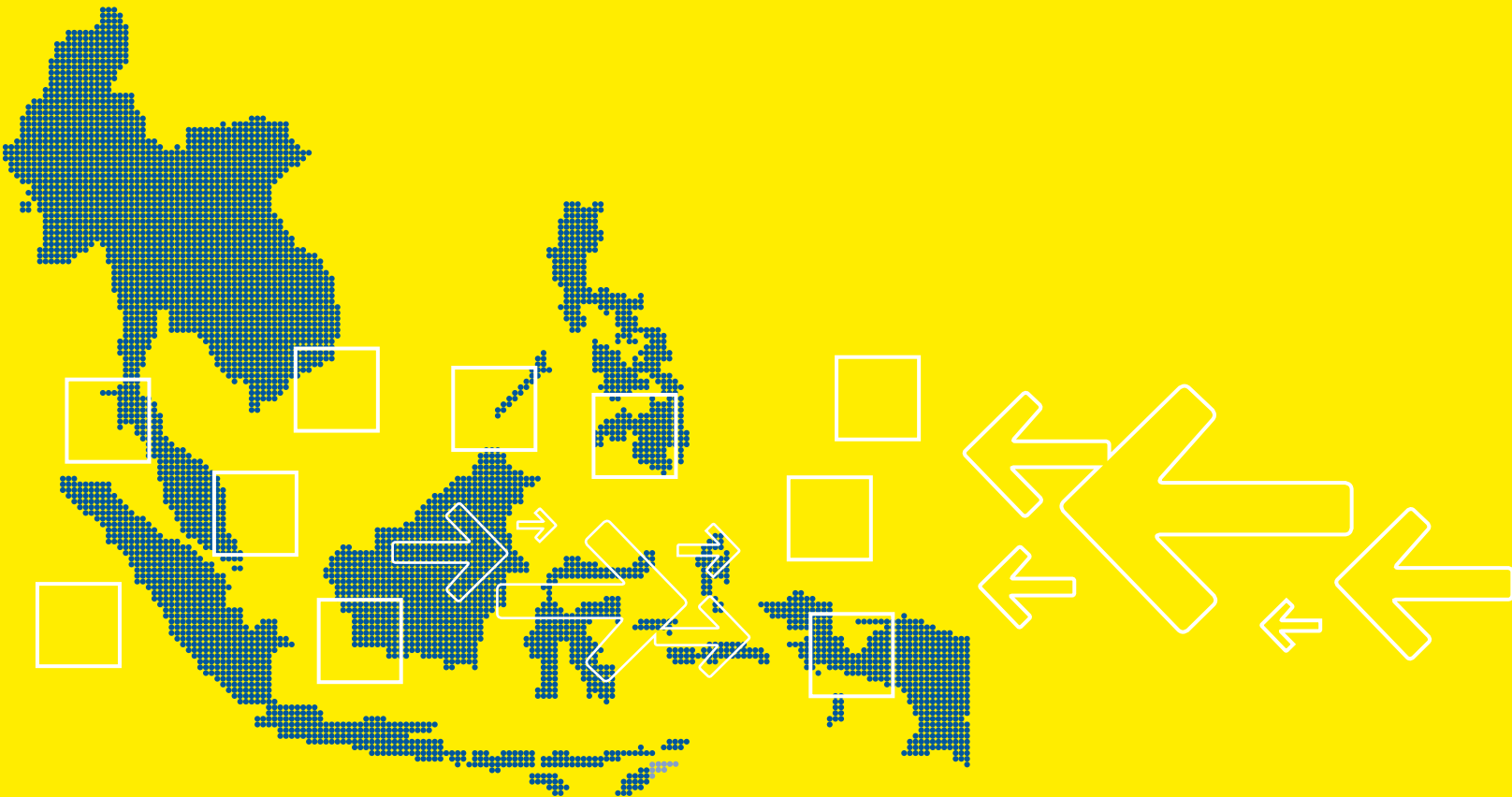
Notes

¹ Through July 2014.

² The latest year for which the input-output statistics are available.

PART ONE

FDI TRENDS AND POLICY DEVELOPMENTS IN ASEAN



CHAPTER 1

FDI AND TNC OPERATIONS IN ASEAN IN 2013–2014

1.1 Introduction

This chapter analyses key developments in foreign direct investment (FDI) and the operations of transnational corporations (TNCs) in ASEAN in 2013 and 2014 (1st half of 2014). These included a surge in FDI into the region, rising intra-ASEAN investments, and a further growth in cross-border mergers and acquisitions (M&As). The chapter shows that these years witnessed continued significant expansion in regional operations (sections 1.2 and 1.6) by both ASEAN and foreign companies, which contributed to the rapid expansion in FDI flows and stock. The chapter also explores how rising regional opportunities and the growing cash reserves and profitability of ASEAN companies has encouraged the rise in intra-ASEAN investment.

The chapter examines key sources of FDI in ASEAN, including within major industries. Although FDI flows into the region are concentrated in more developed countries, the CLMV member states (Cambodia, the Lao People's Democratic Republic, Myanmar and Viet Nam) are attracting increasing investment. The chapter concludes with an assessment of the investment outlook for 2014–2015.

1.2 FDI developments in 2013

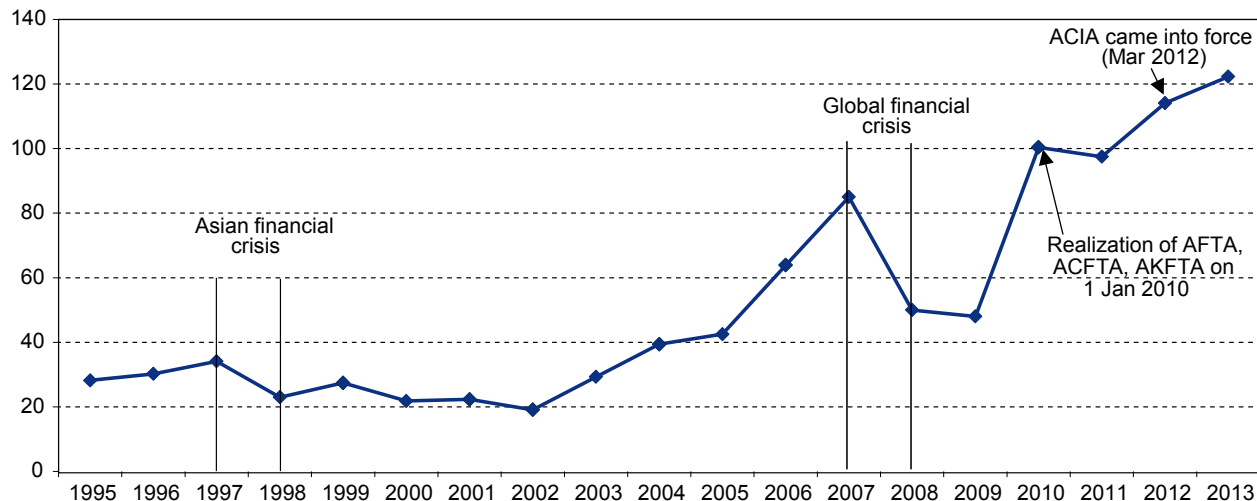
FDI flows to ASEAN in 2013 continued a growing momentum, with inflows exceeding \$122 billion,¹ pushing the region's rapidly rising inward FDI stock to \$1.6 trillion² (figure 1.1). Most ASEAN Member States recorded higher inflows in 2013; two recorded marginal declines. Among developing countries, ASEAN members as a whole remained a significant recipient of global FDI flows with inflows about on par with those to China for the first time since 1993 (WIR 2014, pp. 205–208). ASEAN accounted for 3% of the global economy in 2013 but attracted more than 8% of global FDI flows. It accounted for 8% of the combined GDP of emerging markets and developing countries but received 16% of global FDI flows to the developing world. Higher inflows over the past decade have produced a five-fold rise in FDI stock per capita, from \$500 in 2000 to nearly \$2,500 in 2013 – exceeding the stock per capita in many other developing economies and regions.

These numbers augur well for ASEAN's efforts in promoting and attracting FDI to the region, especially as a competitive location for TNCs' production facilities. They also suggest that the region is being watched closely by investors and recognized as a place to expand their FDI footprint.

Strong FDI inflows from ASEAN Member States (section 1.3), the Netherlands, the United Kingdom and China (section 3.2) in that order contributed to the surge in investment in

Figure 1.1. FDI flows to ASEAN continue to surge, exceeding \$122 billion in 2013

(Billions of dollars)



Sources: ASEAN Secretariat, ASEAN FDI database and UNCTAD FDI database.

Notes: ACIA = ASEAN Comprehensive Investment Agreement; AFTA = ASEAN Free Trade Area; ACFTA = ASEAN China Free Trade Area; AKFTA = ASEAN Korea Free Trade Area. Data for 2013 exclude reinvested earnings in the Philippines and do not include investment in infrastructure and extractive industries for some countries.

2013. Although United States' investment to the region declined, many United States companies are increasingly optimistic about the region's investment environment and opportunities. Many have started to expand operations in ASEAN and others plan to do so in the next few years, partly because of the influence of the AEC, the associated investment opportunities and the locational advantages that ASEAN Member States offer (ASEAN-BAC 2013, AT Kearney and JWT 2013, AmCham Singapore 2014, JBIC 2013, Economist 2013 and JMA 2013).

1.2.1 Sources of FDI

FDI to ASEAN remains highly concentrated and dominated by a few countries. The traditional sources – Japan, the United States and the European Union – remain significant investors. The top 10 investors accounted for more than 70% of inflows in 2012–2013. Japan was the largest investor, followed by ASEAN Member States as a group (table 1.1). Together they accounted for more than 36% of investment in both years. Chinese companies have also been investing actively in ASEAN and in 2013 contributed \$8.6 billion in flows. Unlike in previous years, United States companies invested considerably less – some \$3.8 billion or only 3% of all FDI in ASEAN, dropping its ranking to seventh. Companies from four European countries (the Netherlands, the United Kingdom, Belgium and Luxembourg) invested \$26 billion, representing a 21% share of the total.

1.2.2 ASEAN Dialogue Partners

ASEAN Dialogue Partners are important sources of FDI to the region, and inflows from these partners are rising (figure 1.2), accounting for more than 50% of inflows in recent

years. Some Dialogue Partners are more significant investors than others. In 2013, the biggest increases in FDI among the Dialogue Partners came from the European Union, China, the Republic of Korea, New Zealand and the Russian Federation (table 1.2).³ Investments from each Dialogue Partners were concentrated in different industries and host countries.

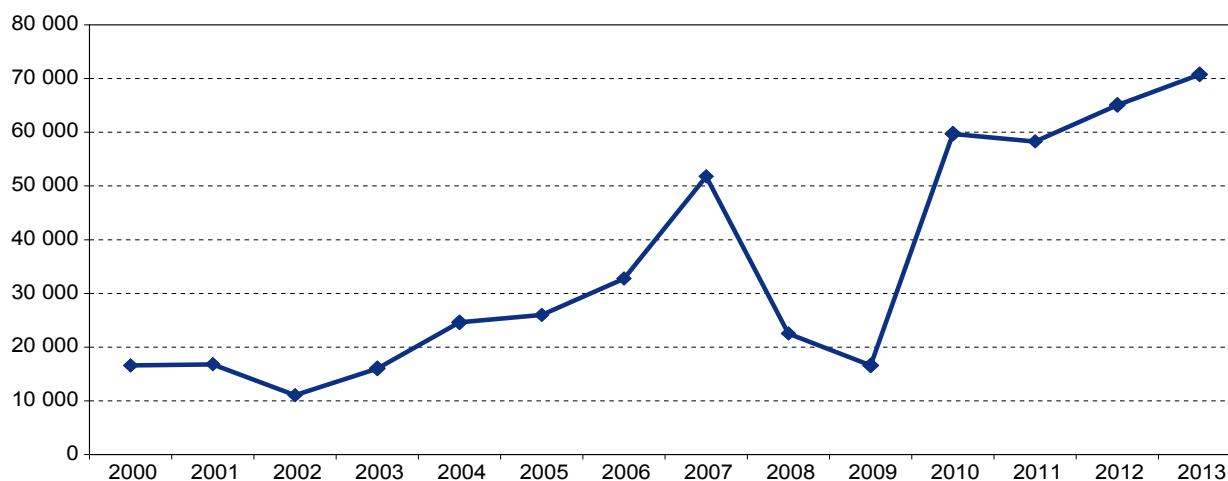
Table 1.1. Top 10 investors in ASEAN account for more than 70% of inflows

2011			2012			2013		
Major investors	Amount (\$ millions)	Share in FDI in ASEAN (%)	Major investors	Amount (\$ millions)	Share in FDI in ASEAN (%)	Major investors	Amount (\$ millions)	Share in FDI in ASEAN (%)
ASEAN	15 228.4	16	Japan	23 777.1	21	Japan	22 904.4	19
United Kingdom	12 152.2	12	ASEAN	20 657.6	18	ASEAN	21 321.5	17
Japan	9 709.0	10	United States	11 079.5	10	Netherlands	10 486.3	9
United States	9 129.8	9	Netherlands	8 728.3	8	United Kingdom	10 443.1	9
China	7 857.7	8	China	5 376.8	5	China	8 643.5	7
Luxembourg	5 566.7	6	Hong Kong, China	5 029.9	4	Hong Kong, China	4 517.3	4
Netherlands	4 947.6	5	Luxembourg	3 926.8	3	United States	3 757.5	3
France	4 360.2	4	France	3 126.4	3	Republic of Korea	3 516.2	3
Hong Kong, China	4 273.8	4	Taiwan, Province of China	2 242.3	2	Belgium	2 489.3	2
Taiwan, Province of China	2 317.0	2	India	2 233.4	2	Luxembourg	2 310.4	2
Top 10 total	75 542.4	77	Top 10 total	86 178.2	75	Top 10 total	90 389.5	74

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012-2013 do not include the Lao People's Democratic Republic. Philippines data excludes reinvested earnings – one of FDI flow components – as geographical breakdowns are not available.

Figure 1.2. FDI flows from ASEAN's Dialogue Partners are significant sources and rising
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012-2013 do not include the Lao People's Democratic Republic. Philippines data excludes reinvested earnings – one of FDI flow components – as geographical breakdowns are not available.

Table 1.2. Some ASEAN's Dialogue Partners are more significant investors
(Millions of dollars)

	2010	2011	2012	2013
Intra-ASEAN	15 200.4	15 228.4	20 657.6	21 321.5
Australia	4 000.7	1 530.2	1 831.0	2 002.3
Canada	1 297.5	767.9	923.9	851.0
China	4 052.3	7 857.7	5 376.8	8 643.5
European Union 28	19 017.7	29 693.3	18 084.9	26 979.6
Selected EU countries				
Austria	195.9	-14.4	120.2	384.7
Belgium	-500.6	1 471.8	322.8	2 489.3
Denmark	1 761.1	687.2	1 708.3	-732.1
Finland	456.1	-855.2	607.4	163.9
France	1 436.0	4 360.2	3 126.4	1 084.1
Germany	615.2	240.7	106.9	245.9
Ireland	1 645.1	975.7	-1 069.8	453.7
Italy	25.0	-77.0	-88.5	160.3
Luxembourg	6 739.3	5 566.7	3 926.8	2 310.4
Netherlands	2 095.3	4 947.6	8 728.3	10 486.3
United Kingdom	1 503.8	12 152.2	-909.5	10 443.1
India	3 474.0	-2 230.5	2 233.4	1 317.5
Japan	11 171.1	9 709.0	23 777.1	22 904.4
New Zealand	21.7	7.5	-107.6	246.5
Pakistan	29.5	12.5	-21.4	-0.6
Republic of Korea	4 298.8	1 742.1	1 708.4	3 516.2
Russian Federation	60.3	67.6	184.4	542.1
United States	12 285.3	9 129.8	11 079.5	3 757.5
Dialogue Partners' Total	59 709.0	58 287.0	65 070.4	70 760.1
ASEAN TOTAL	100 360.1	97 538.1	114 284.0	122 376.5

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data of for 2012-2013 do not include Lao People's Democratic Republic as there are no data breakdowns by source country for these two years. Philippines data excludes reinvested earnings as geographical breakdowns are not available.

The largest investors in manufacturing in 2013 were companies from Japan, which invested \$13.1 billion, followed by those from the European Union (\$7.7 billion), ASEAN (\$5.9 billion) and the Republic of Korea (\$2.1 billion). Their investments accounted for more than 70% of FDI to the manufacturing sector in 2013. More than 14% of Japanese FDI in manufacturing and 27% of ASEAN's went to the CLMV countries. By comparison, more than 80% of Chinese manufacturing FDI to ASEAN went to those countries. European Union and United States manufacturing FDI was concentrated in more advanced ASEAN economies.

Industry recipients

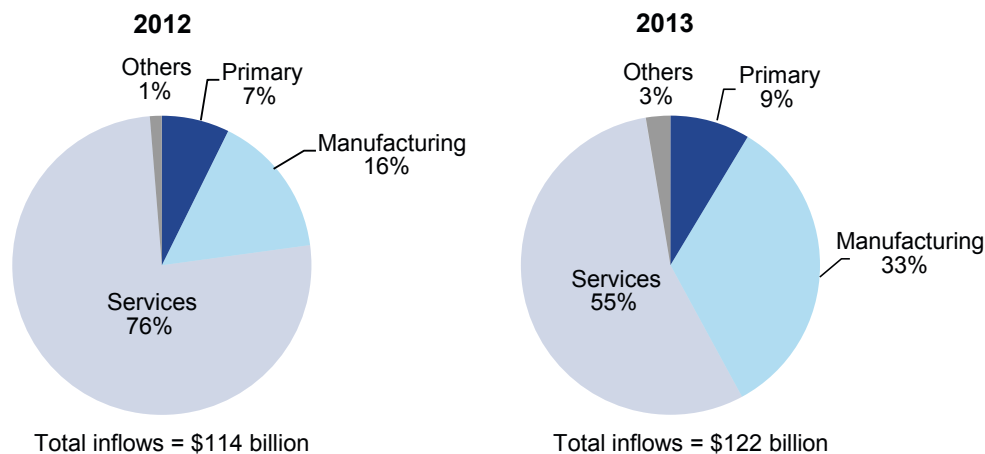
Services and the manufacturing sector continued to dominate FDI flows in the region, with some variations between the more developed member economies and the CLMV countries. Overall, these two sectors accounted for about 90% of FDI flows in ASEAN in 2012 and 2013 (figure 1.3). Key industries included automotives and electronics, and finance, real estate and retail trade. However, the manufacturing sector performed well

in attracting FDI in 2013, while the services sector saw investment plummet to \$67.4 billion, from \$86.5 billion in 2012.

Resource-rich countries continued to receive significant FDI in the extractive and agricultural industries (e.g. Indonesia and Myanmar). The share of manufacturing in total FDI flows in the CLMV countries is proportionately greater than that in the other ASEAN Member States. This difference partly reflects the stages of economic development among member countries and the locational cost advantages of the CLMV countries for labour-intensive manufacturing operations, which often connect with the operations of affiliates in other ASEAN Member States.

For instance, some major Thai apparel manufacturers have relocated labour-intensive operations to the CLMV countries because of lower wages or are planning to do so (Kohli

Figure 1.3 Services and manufacturing sector continued to dominate FDI flows in ASEAN with a 90% share



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

2014). In 2013, Nikon established a camera production operation in the Lao People's Democratic Republic, where some parts are sent from its plant in Thailand. Such networks of production help reinforce regional value chains (chapters 4 and 5).

In infrastructure, investment in electricity, construction, and water and sanitation rose to \$2.4 billion nearly five times the level of 2012 (table 1.3). In water and sanitation, Japan and the European Union dominated. In construction, China and the European Union were the two largest investors. In energy, ASEAN, the European Union, Japan and the Republic of Korea were significant investors.

Expansion of operations by TNCs

The recent surge in FDI flows by TNCs in ASEAN is driven by both greenfield projects and M&A activity. This drive comes from two key sources: (i) in-country expansion and (ii) cross-country expansion. The first arises from the establishment of new subsidiaries or new plants or the expansion of existing capacity with additional production lines. For example, Honeys (Japan) is building a second garment factory in Myanmar. Similarly, in Indonesia, Japanese car manufacturers are on the move: Suzuki is building a second plant, Toyota is building a new Indonesian engine plant on top of its many other operations in the country, and Honda opened a second factory in 2014.

In-country expansion also takes the form of cross-functional operations or upgraded production processes (e.g. encompassing different segments of operation networks or value chains). This entails, for instance, integrating sourcing, manufacturing, research and development (R&D), coordination and headquarters functions either in one host country or in the region. Robert Bosch (Germany), which has a manufacturing operation in Thailand, set up a regional office in Bangkok in 2013 to serve its clients. Its Asia Pacific headquarters in Singapore coordinates the company's operations in ASEAN. In addition, it has established a significant research centre in Singapore involving R&D functions for core software technologies.⁴ The BASF regional headquarters in Singapore manages and

Table 1.3. FDI flows to ASEAN, by industry and source, 2012 and 2013
(Millions of dollars)

2012	Emerging Markets of East Asia														ASEAN	Canada	Other countries	Total
	Japan	United States	European Union	Republic of Korea	Hong Kong, China	Taiwan Province of China	China	Subtotal	India	Australia	New Zealand	Russian Federation						
Agriculture, forestry and fishing	77	2	227	18	..	8	85	85	9	5	..	..	1 293	..	29	1 727
Mining and quarrying	198	607	775	34	69	14	286	402	-1	16	103	1	530	-1	3 060	5 690		
Manufacturing	13 347	-902	-3 390	852	368	1 093	343	2 655	16	720	-4	93	5 081	31	-84	17 638		
Electricity, gas, steam and air conditioning supply	32	-31	219	4	-39	10	7	-18	..	..	..	..	14	..	5	220
Water supply; sewerage, waste management and remediation activities	-3	-66	78	..	..	-1	3	3	..	..	..	..	1	..	1	13
Construction	152	10	-136	28	1	25	108	162	12	-17	..	2	78	..	-1	254		
Wholesale and retail trade; repair of motor vehicles and motorcycles	2 570	890	7 233	812	300	209	593	1 915	280	-391	64	4	1 212	106	5 306	19 159		
Transportation and storage	246	7	77	67	2 062	240	9	2 378	-152	111	2	1	269	1	-1 121	3 821		
Accommodation and food service activities	20	31	11	2	-61	9	1	-48	..	..	..	..	91	4	-36	74
Information and communication	175	-24	886	19	-32	35	42	64	..	-12	..	2	301	..	660	2 051		
Financial and insurance activities	3 719	8 175	4 999	-523	1 865	144	603	2 089	1 426	720	-293	3	6 137	426	9 804	36 712		
Real estate activities	601	513	280	157	236	185	1 903	2 481	793	118	52	31	4 405	16	937	10 504		
Professional, scientific and technical activities	63	153	-49	7	6	8	-7	15	1	14	..	1	52	161	55	466		
Administrative and support service activities	51	-6	56	..	..	..	1	1	..	5	..	..	42	..	-8	141
Education	..	..	-2	..	..	..	..	..	7	..	..	..	0	-4	1	2
Human health and social work activities	10	2	4	4	2	9	1	17	..	11	..	..	-6	..	238	275
Arts, entertainment and recreation	26	10	5	6	4	12	2	23	..	..	..	1	32	..	21	117
Other services activities	886	143	6 175	158	144	110	942	1 354	-225	476	..	46	681	..	1 872	12 308		
Activities of households as employers	4	..	1	1	..	2	..	3	..	..	..	..	2	..	1	11
Others/unspecified	-62	86	-28	..	81	-5	-2	74	-1	-7	..	..	218	-5	107	1 452
Lao People's Democratic Republic estimation of intra-/extra-ASEAN	..	..	..	..	..	..	..	..	..	..	..	..	74	..	..	294
Myanmar's estimation of intra-/extra-ASEAN	..	..	..	..	..	..	..	..	..	..	..	..	118	..	..	1 152
Singapore's data suppressed for confidential reasons	1 666	1 480	664	63	23	137	482	222	67	62	-32	..	151	184	24	..		
Total	23 777	11 080	18 085	1 708	5 030	2 242	5 377	13 875	2 233	1 831	-108	184	20 658	919	21 093	114 284		

2013	Emerging Markets of East Asia														ASEAN	Canada	Other countries	Total
	Japan	United States	European Union	Republic of Korea	Hong Kong, China	Taiwan Province of China	China	Subtotal	India	Australia	New Zealand	Russian Federation						
Agriculture, forestry and fishing	62	55	473	37	1	1	88	128	5	3	..	2	1 599	..	8	2 346		
Mining and quarrying	-655	982	1 725	25	58	1	558	642	-2	67	133	2	468	19	3 127	8 183		
Manufacturing	13 076	116	7 689	2 142	1 617	651	1 140	5 550	105	545	1	322	5 899	86	7 034	40 764		
Electricity, gas, steam and air conditioning supply	211	25	228	166	35	23	87	311	..	5	..	39	248	1	88	1 157		
Water supply; sewerage, waste management and remediation activities	420	5	101	4	17	1	1	22	..	..	..	1	25	..	-5	602
Construction	46	16	110	69	223	5	22	319	-1	145	..	5	-50	..	-31	603		
Wholesale and retail trade; repair of motor vehicles and motorcycles	1 286	234	2 600	519	-687	109	2 696	2 636	174	149	12	11	862	-3	-561	7 396		
Transportation and storage	204	167	-832	-91	-87	27	19	-131	..	2	-2	1	311	..	649	1 688		
Accommodation and food service activities	33	107	20	35	-125	3	16	-70	1	3	..	8	114	..	-45	261		
Information and communication	102	2	378	2	-10	1	-2	-9	..	13	..	1	389	1	1 319	2 196		
Financial and insurance activities	4 477	-1 388	11 134	239	2 245	306	1 144	3 934	363	775	99	9	4 726	490	8 236	32 739		
Real estate activities	388	370	446	100	703	35	1 523	2 361	397	2	-2	51	4 475	10	525	9 132		
Professional, scientific and technical activities	124	227	22	39	7	5	10	61	-1	5	..	9	76	160	29	712		
Administrative and support service activities	60	54	65	1	..	1	3	5	..	-4	..	1	104	1	8	295		
Education	13	1	0	10	2	1	5	18	-5	..	..	2	14	10	12	66
Human health and social work activities	53	28	2	7	1	4	4	17	..	10	..	2	17	..	2	129		
Arts, entertainment and recreation	11	1	12	4	15	1	2	22	..	..	..	1	..	..	172	219
Other services activities	537	285	2 509	145	210	53	535	944	258	224	..	74	855	34	-322	10 230		
Others/unspecified	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3 232
Lao People's Democratic Republic estimation of intra-/extra-ASEAN	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	427
Singapore's data suppressed for confidential reasons	2 456	2 470	296	62	291	94	793	175	25	59	5	-	1 187	42	30	..		
Total	22 904	3 758	26 980	3 516	4 517	1 322	8 644	16 934	1 317	2 002	246	542	21 322	851	20 274	122 377		

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

provides value added services in logistics distribution, marketing, finance and treasury, information technology and applications to BASF subsidiaries in the Asia Pacific region, including in ASEAN.⁵ In ASEAN, it has significant operations also in Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam.

In-country expansion covers investment in new facilities as well as existing ones for the production of different categories of goods or services. Samsung is building a new facility in Viet Nam to produce mobile phones separately from its existing facilities for production of other electronic goods.⁶ The Samsung group is also planning to invest in power plant, airport and shipbuilding projects in Viet Nam.⁷ DHL opened more offices in Indonesia in 2013⁸ and is planning to expand further in the country to strengthen its market position. Some Japanese companies (e.g. Toshiba, Toray Industries, Panasonic and Marubeni) are also planning their expansion in Indonesia. Dow Chemical (United States) already has a significant operation in Thailand and in 2013 launched a polyether polyols facility at its existing plant.⁹

Companies are also expanding to build a stronger market position to serve the regional market of some 625 million people, about 25% more than the European Union. Many are investing or expanding ahead of the AEC. Some are expanding their presence in ASEAN with additional investments in other ASEAN Member States through either vertical or horizontal integration. Nissan – which already has a significant presence in Indonesia, Malaysia and Thailand – is investing in Myanmar to produce Sunny compact cars for the local market, using parts sourced elsewhere, including from ASEAN Member States.¹⁰ Similarly, Suzuki Motor, which has operations in six other ASEAN Member States, received approval in 2013 to start manufacturing small trucks and spare parts in Myanmar.

The increase in automotive demand in the region has led to an increase in production and assembling activities, which in turn has drawn increases in investments from parts and components manufacturers. For instance, a number of part and component companies set up new plants in Indonesia in 2013–2014 to cater for increasing demand from automotive manufacturers. These companies include Furukawa (Japan), Cheng Shin Rubber (Taiwan Province of China), Bosch (Germany), Saint-Gobain (France), Michelin (France), Hankook (Republic of Korea) and Aisin Seiki (Japan).

Key reasons behind the surge

Strong regional macroeconomic fundamentals have played a role. Regional economic growth, although it has declined from 5.8% in 2012 to an estimated 5.1% for 2013, remains strong compared with the world average of 3.0% and the emerging and developing country average of 4.7% (IMF 2014).

Further, market-seeking FDI is attracted by the rapidly growing middle class in a combined regional economy of \$2.4 trillion in 2013. The size and potential of this market has encouraged TNCs to establish a stronger presence. ASEAN's regional integration has also continued to persuade many TNCs to expand their manufacturing

and services bases in the region for a mix of market-seeking, efficiency-seeking and strategic reasons.

The growing corporate income and cash reserves of ASEAN companies have supported strong intraregional investment, including M&A activities. Among the top 50 major ASEAN companies¹¹ with a regional presence, combined profits rose from \$50.9 billion in 2012 to \$53.8 billion in 2013 (table 1.4). The combined cash reserves of the top 50 companies are significant: at \$166 billion in 2013, they are about twice the size of the combined economies of Cambodia, Myanmar, and the Lao People's Democratic Republic. They provide the financial capacity to invest and undertake M&As in the region (section 1.5). Companies such as the Siam Cement Group have been on a spending spree, acquiring assets in the region and expanding regionally in greenfield projects.¹²

Other ASEAN companies with significant presence in the region and sizeable cash reserves that are not on the top 50 list include Golden Agri-Resources (Singapore), Bangkok Dusit Medical Services (Thailand), YTL Corp (Malaysia), Kalbe Farma (Indonesia), Jollibee Foods Corp (Philippines), Thai Oil (Thailand), ComfortDelGro Corp (Singapore), San Miguel Corp (Philippines), MMC Corp (Malaysia) and Banpu (Thailand). Many of these companies are also continuing to expand regionally as well as internationally.

Expectations for the AEC, which promises a single market and production base, are increasing investors' interest and driving corporate expansion (box 1.1). TNCs and ASEAN companies in countries with higher wage costs continued to move labour-intensive production to countries such as Indonesia, the Philippines and the CLMV countries.¹³ Some foreign and ASEAN companies have made investments in multiple locations to strengthen their regional presence, market reach and production capacity, including Nissan (Japan), Robert Bosch (Germany), Samsung (Republic of Korea), Siam Cement (Thailand), Parkson (Malaysia), AEON (Japan), Unilever (United Kingdom/Netherlands) and Procter & Gamble (United States)).

Improving regional investment conditions and policy environments play an important role in attracting FDI and boosting investors' sentiment. The confidence these generate helped translate plans into investment projects and operations in 2013 and 2014. ASEAN Member States continued to introduce measures favourable to FDI and to improve the investment environment (chapter 2).

Table 1.4. 50 largest ASEAN companies with regional presence, significant assets and many with strong cash reserves, 2013

(Millions of dollars)

Company	Country of domicile	Industry	Fiscal year ending in 2013			Net income	
			Total assets	Market cap	Cash and near cash items	fiscal years ending in:	
						2012	2013
Singapore Telecommunications	Singapore	Telecommunication	32 216	46 156	734	3 183	2 824
DBS Group	Singapore	Banks	318 447	33 123	14 834	3 050	2 935
Oversea-Chinese Banking Corp	Singapore	Banks	268 099	27 736	15 321	3 197	2 212
Malayan Banking	Malaysia	Banks	170 789	26 844	18 076	1 861	2 082
United Overseas Bank	Singapore	Banks	225 150	26 523	21 293	2 244	2 404
PTT	Thailand	Oil & gas	55 078	24 856	4 820	3 368	3 084
Public Bank	Malaysia	Banks	93 166	20 704	2 893	1 239	1 291
PTT Exploration and Production	Thailand	Oil & gas	21 639	20 113	2 364	1 845	1 830
Bank Central Asia	Indonesia	Banks	40 781	19 361	4 236	1 250	1 376
Advanced Info Service	Thailand	Telecommunication (wireless)	3 425	18 048	351	1 123	1 182
CIMB Group	Malaysia	Banks	113 031	17 948	11 062	1 407	1 442
Telekomunikasi Indonesia	Indonesia	Telecommunication	10 514	17 728	1 208	1 371	1 371
Wilmar International	Singapore	Food products	46 632	17 336	3 242	1 255	1 319
Keppel Corp	Singapore	Industrial conglomerates	23 808	16 026	4 408	1 791	1 475
Bank Mandiri	Indonesia	Banks	60 238	14 983	5 173	1 654	1 757
Tenaga Nasional	Malaysia	Electric utilities	30 005	14 928	2 807	1 418	1 490
Siam Commercial Bank	Thailand	Banks	77 470	14 819	1 093	1 263	1 637
Siam Cement	Thailand	Construction materials	13 464	14 605	533	759	1 190
SM Investments Corp	Philippines	Industrial conglomerates	14 263	12 757	1 131	585	647
Genting	Malaysia	Hotels & leisure	21 787	11 552	5 474	1 366	672
CP ALL	Thailand	Food	8 824	11 480	753	356	343
Kasikorn Bank	Thailand	Banks	70 006	11 360	1 241	1 135	1 346
IOI Corp	Malaysia	Food products	7 523	10 936	360	580	639
Thai Beverage	Thailand	Beverages	5 604	10 741	156	917	623
Bangkok Bank	Thailand	Banks	79 375	10 338	1 637	1 025	1 170
Singapore Airlines	Singapore	Airlines	18 071	10 274	4 077	268	305
CapitaLand	Singapore	Real estate	28 640	10 206	4 676	745	679
Singapore Tech Engineering	Singapore	Aerospace & defense	6 897	9 743	1 529	461	464
Petronas Dagangan	Malaysia	Oil & gas	3 098	9 518	109	271	258
SM Prime Holdings	Philippines	Real estate	7 562	9 201	612	384	384
Hong Leong Bank	Malaysia	Banks	51 489	7 870	1 544	565	602
Sembcorp Industries	Singapore	Industrial conglomerates	10 895	7 762	1 787	603	656
MISC	Malaysia	Marine	12 260	7 754	1 447	249	662
Charoen Pokphand Foods	Thailand	Food products	11 158	7 539	595	605	230
Kuala Lumpur Kepong	Malaysia	Food products	3 606	7 388	539	389	295
Sembcorp Marine	Singapore	Machinery	5 743	7 360	1 343	431	444
Krung Thai Bank	Thailand	Banks	76 876	7 017	1 550	752	1 106
Ayala Corporation	Philippines	Diversified financial services	13 512	6 996	1 479	249	301
City Developments	Singapore	Real estate	13 221	6 915	2 274	543	546
Semen Indonesia	Indonesia	Construction materials	2 530	6 866	334	517	518
Great Eastern Holdings	Singapore	Insurance	48 250	6 681	2 952	952	539
Intouch Holdings	Thailand	Telecommunication (wireless)	1 553	6 610	86	444	475
Fraser & Neave	Singapore	Beverages	11 272	6 430	1 550	662	4 366
AMMB Holdings Bhd	Malaysia	Banks	41 123	6 393	4 579	485	529
RHB Capital	Malaysia	Banks	58 232	6 132	4 318	578	582
JG Summit Holdings	Philippines	Industrial conglomerates	10 451	6 095	789	321	238
Telekom Malaysia	Malaysia	Telecommunication	6 444	6 050	766	409	322
Alliance Global Group	Philippines	Industrial conglomerates	7 490	5 970	2 140	330	406
PPB Group	Malaysia	Food products	5 200	5 831	204	273	312
Central Pattana	Thailand	Real estate	2 370	5 599	54	199	205
Total			2 269 283	655 201	166 533	50 929	53 768

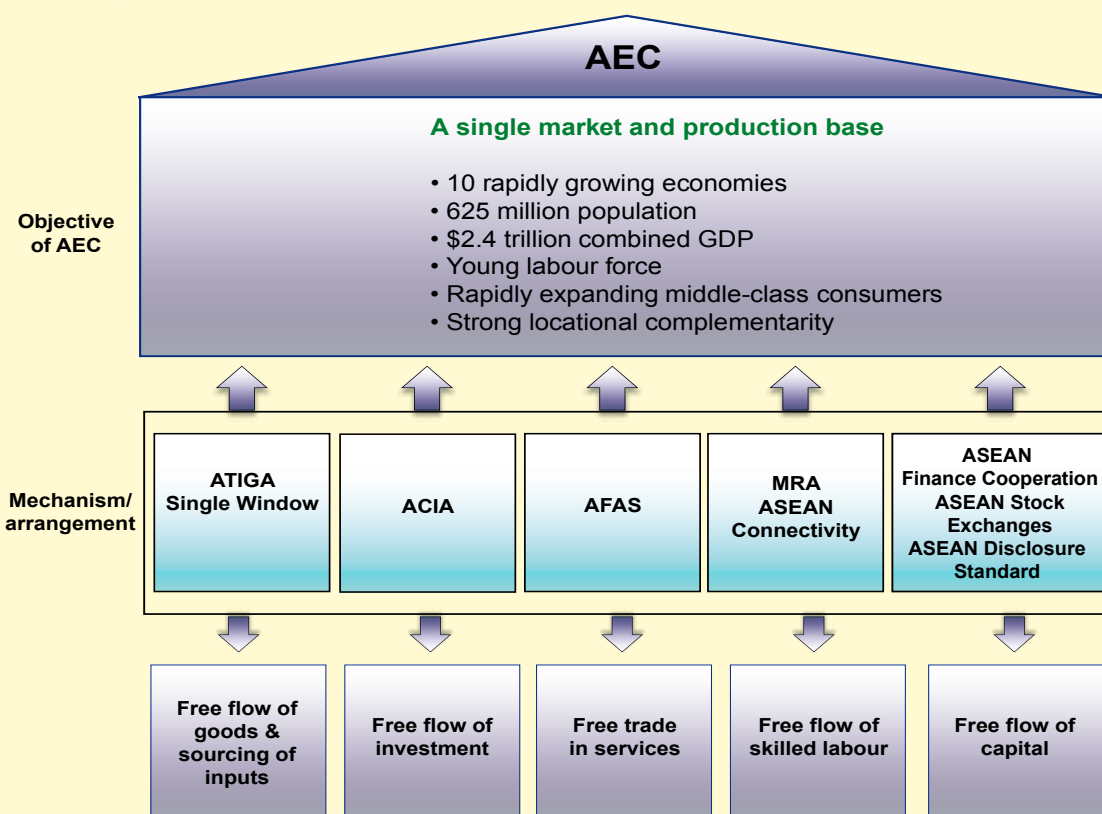
Source: UNCTAD 2014, based on Bloomberg and companies' websites.

Notes: Based on market capitalization and reports on the fiscal year ending in 2013. Some of the companies are subsidiaries of larger groups of companies. These subsidiaries on their own made significant investment in the region in addition to investment made by their parent companies. These companies include Fraser & Neave, owned by Thai Beverage, Petronas Dagangan and MISC a member of the Petronas Group (Malaysia), and PTTEP a member of the PTT Group (Thailand).

Box 1.1 Positive corporate perceptions of the AEC and regional investment opportunities

Investors are looking forward to the AEC, as shown by many international studies (AT Kearney and JWT 2013, AmCham Singapore 2014, JBIC 2013, Economist 2013). Some have actively established operations or expanded their activities in the region in the past two years, ahead of the arrival of AEC-2015. They do so to strengthen their regional footprint, to improve their competitiveness, expand their market reach, and further strengthen their regional production networks to prepare for the imminent single market and production base. Some are moving regionally, ahead of others, because of their desire to realize a first-mover advantage, while others plan significant regional investments for the next few years or post-2015. With the arrival of the AEC, investors can benefit from a dynamic and sizeable market, access to a large pool of relatively low-cost skilled professional labour and low-cost labour, and low transaction costs for investing, sourcing, trading and producing in ASEAN (box figure 1.1.1).

Box figure 1.1.1. AEC: influences on business and investment decisions



Extra-ASEAN developments are also attracting the attention of corporations to invest in ASEAN Member States. For instance, the ASEAN China Free Trade Area (ACFTA), ASEAN India Free Trade Area (AIFTA), ASEAN Japan Comprehensive Economic Partnership (AJCEP) and ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) all enable corporations to reach even bigger and more connected markets.

Source: UNCTAD (2014).

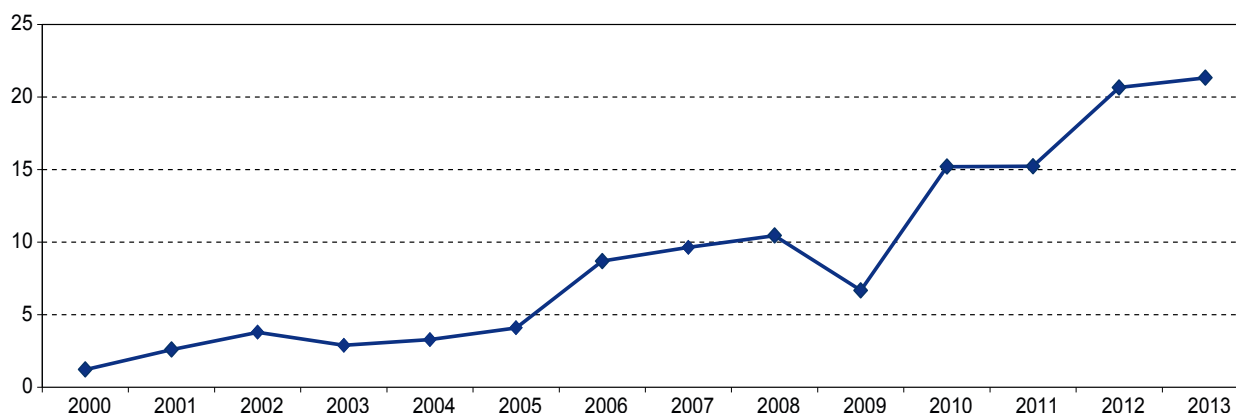
1.3 Intra-ASEAN investment

The growing interest of companies from ASEAN Member States to invest and expand regionally continues to drive intra-ASEAN investment, which remained a major source of investment to the region. In 2013, the more developed ASEAN Member States received the preponderance of intra-ASEAN investment but regional investment to the CLMV countries also rose.

Developments in 2013

Intra-ASEAN investment continued with an upward trend with the realization of the ASEAN Free Trade Area (AFTA) in 2010 (figure 1.4). In 2013, some 88% of the 99,434 tariff lines in ASEAN were at a rate of 0% for intra-ASEAN imports (AIR 2013). By 31 December 2015, that share will rise to an estimated 96% of all tariff lines. The tariff reduction under the ASEAN Trade in Goods Agreement (ATIGA) schedule is lowering the transaction costs of doing business, which is encouraging ASEAN and non-ASEAN companies to invest and expand in the region.

Figure I.4. Intra-ASEAN investment on a growth momentum
(Billions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data of Lao People's Democratic Republic do not have breakdowns by source country. Myanmar's data are based on fiscal year, which starts on 1 April and ends on 31 March. Philippines data excludes reinvested earnings as geographical breakdowns are not available.

ASEAN companies invested some \$21 billion in the region in 2013, which is 13% more than the combined intraregional investment between 2000 and 2005 (section 1.2). Intra-ASEAN investment contributed about 17% to the total inflows in the ASEAN Member States and is a major source of investment in most ASEAN Member States.

A few ASEAN Member States dominate as major recipients and sources of regional investment in 2013 (table 1.5). Intra-ASEAN investment into three countries (Indonesia, Viet Nam and Thailand) rose significantly, concentrated in manufacturing activities. For instance, more than 75% of intra-ASEAN investments in Viet Nam, 39% in Thailand and 35% in Indonesia were in manufacturing. Indonesia received the greatest amount

Table 1.5. Intra-ASEAN investment remained a significant source of FDI for the region

(Millions of dollars)

Reporting country	2010	2011	2012	2013
Brunei Darussalam	89.5	67.5	31.5	-72.6
Cambodia	349.0	223.8	523.0	298.8
Indonesia	5 904.4	8 334.5	7 587.9	8 721.1
Lao People's Democratic Republic	135.4	75.0	73.6	..
Malaysia	525.6	2 664.3	2 813.9	2 187.5
Myanmar	25.5	84.6	151.2	1 186.8
Philippines	40.2	-74.1	145.2	-41.7
Singapore	5 592.9	2 386.2	8 410.8	5 706.2
Thailand	1 236.9	-50.7	-342.0	1 256.8
Viet Nam	1 300.9	1 517.3	1 262.5	2 078.6
Total intra-ASEAN	15 200.4	15 228.4	20 657.6	21 321.5
Intra-ASEAN share (%)	15.1	15.6	18.1	17.4

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data of Lao People's Democratic Republic for 2013 do not have breakdowns by source country.

Myanmar's data are based on fiscal year, which starts on 1 April and ends on 31 March. Philippines data excludes reinvested earnings – one of FDI flow components – as their geographical breakdowns are not available.

of intra-ASEAN investment in finance after Singapore (table 1.6). About 50% of ASEAN investment in Malaysia went to the manufacturing sector, primarily from Singapore investors. Singapore remained an active destination for ASEAN investments in finance and real estate. More than 60% of ASEAN investment in Cambodia in 2013 went into agriculture and forestry, but manufacturing remained important. ASEAN investment in manufacturing in Brunei Darussalam doubled, albeit from a low base, to \$12 million, and the Philippines received \$35 million, a striking contrast to the loss of \$4 million in 2012. Intra-ASEAN investment in agriculture, manufacturing and real estate activities rose (table 1.7).

ASEAN banks and finance companies continued their regionalization drive, despite a decline in investment. Having a

network of regional operations is essential to maintain competitiveness as well as to grow. Many banks are strengthening their operations regionally to serve customers from their home countries that have already, or plan to, set up operations in other ASEAN Member States.

Emerging sources of regional investments

In addition to the traditional largest regional investors (Malaysia and Singapore), Indonesia, Thailand and Viet Nam are emerging players with rapidly rising intraregional investments. This includes some Indonesian State-owned enterprises (SOEs) such as Semen Indonesia, Aneka Tambang, Wijaya Karya and Bukit Asam which are investing in other ASEAN Member States including some of the CLMV countries. Although intraregional investments from the Philippines are still small, some Philippines companies made noticeable investments in the region in 2013. These companies included Manila Water, which acquired a 31% stake in Saigon Water Infrastructure (Viet Nam) for \$15 million; and Ayala Land, which expanded its real estate operations in Myanmar and Viet Nam.

Thailand: a growing source of intraregional investment

Thai companies made significant investments in the region through greenfield projects and M&As (table 1.8). Thai companies are increasingly using the M&A channel

Table 1.6. Intra-ASEAN investment, by industry and country, 2012–2013
(Millions of dollars)

2012	Brunei Darussalam	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam	Total
Agriculture, forestry and fishing	..	194.8	1 057.6	33.0	..	..	..	7.7	1 293.1
Mining and quarrying	-16.6	0.0	445.4	243.0	..	..	-155.1	12.9	529.7
Manufacturing	6.3	41.9	1 645.3	1 822.8	-4.2	523.7	142.0	903.7	5 081.4
Electricity, gas, steam and air conditioning supply	..	..	0.9	..	1.7	..	4.0	7.5	14.1
Water supply; sewerage, waste management and remediation activities	..	..	0.4	-0.4	..	..	0.6	..	0.6
Construction	22.5	..	-28.6	40.2	0.6	16.1	..	26.7	77.7
Wholesale and retail trade; repair of motor vehicles and motorcycles	8.6	..	497.5	154.9	8.5	560.3	-77.3	59.7	1 212.2
Transportation and storage	..	..	179.8	-19.9	-34.7	117.2	8.9	17.5	268.8
Accommodation and food service activities	..	23.5	40.6	11.4	-0.5	..	8.0	8.4	91.4
Information and communication	..	..	365.0	113.4	0.5	..	-210.1	32.2	301.0
Financial and insurance activities	6.5	236.1	2 608.3	359.5	-30.3	3 515.7	-558.7	..	6 137.1
Real estate activities	..	..	568.3	23.0	2.3	3 611.7	47.4	152.9	4 405.5
Professional, scientific and technical activities	0.6	..	..	33.2	-1.0	..	11.3	7.6	51.8
Administrative and support service activities	0.3	..	..	-18.9	-0.6	..	61.1	0.4	42.2
Education	0.0	..	..	..	..	..	0.1	..	0.1
Human health and social work activities	3.3	..	-1.8	-1.3	-15.0	..	0.9	8.1	-5.9
Arts, entertainment and recreation	..	..	..	20.1	0.2	..	0.3	10.8	31.5
Other services activities	..	26.7	209.3	-0.1	..	66.1	374.7	4.7	681.4
Activities of households as employers	..	..	..	..	..	..	..	1.6	1.6
Others/unspecified ¹	..	..	..	..	217.5	..	..	..	217.5
Lao People's Democratic Republic estimation of intra-ASEAN	..	..	..	..	..	..	..	..	73.6
Myanmar's data	..	..	..	..	..	..	..	..	151.2
TOTAL	31.5	523.0	7 587.9	2 813.9	145.2	8 410.8	-342.0	1 262.5	20 657.6

2013	Brunei Darussalam	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam	Total
Agriculture, forestry and fishing	..	191.0	1 304.3	79.8	15.9	..	-0.1	8.3	1 599.3
Mining and quarrying	-54.5	..	155.3	282.3	..	..	77.5	7.7	468.3
Manufacturing	11.6	42.5	3 013.2	1 077.8	35.0	-372.3	492.3	1 598.9	5 899.1
Electricity, gas, steam and air conditioning supply	..	..	43.6	0.6	-0.9	..	9.6	195.2	248.1
Water supply; sewerage, waste management and remediation activities	..	..	18.7	0.7	..	..	0.8	4.9	25.1
Construction	-52.7	..	-32.4	20.3	0.2	-3.0	-2.2	20.3	-49.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	1.9	..	570.0	-188.5	1.3	440.7	-15.9	52.4	861.8
Transportation and storage	..	..	164.6	7.6	20.1	116.2	-1.4	4.3	311.5
Accommodation and food service activities	..	19.9	33.5	-26.0	-0.5	..	64.4	23.1	114.5
Information and communication	..	..	334.2	-42.5	0.3	..	91.3	5.8	389.0
Financial and insurance activities	15.7	25.8	2 081.3	523.5	-141.7	2 662.6	-441.1	0.1	4 726.2
Real estate activities	..	..	728.6	412.6	26.9	2 868.6	346.6	91.4	4 474.7
Professional, scientific and technical activities	1.1	..	..	-13.5	1.7	..	47.3	39.9	76.4
Administrative and support service activities	-1.4	..	..	56.4	-3.5	..	52.6	0.1	104.2
Education	..	..	..	2.9	0.1	..	0.1	11.3	14.4
Human health and social work activities	5.7	..	-0.9	2.0	0.5	..	0.8	8.6	16.7
Arts, entertainment and recreation	..	..	..	-8.4	2.8	..	0.5	4.9	-0.2
Other services activities	..	19.6	307.1	-0.2	..	-6.6	533.9	1.4	855.2
Myanmar's data	..	..	..	..	..	..	..	..	1 186.8
Total	-72.6	298.8	8 721.1	2 187.5	-41.7	5 706.2	1 256.8	2 078.6	21 321.5

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Note: Philippines data only for equity. No detailed breakdown of data by industry for Myanmar and Lao People's Democratic Republic.

Table 1.7. Intra-ASEAN investment, by industry, 2012–2013
(Millions of dollars)

Industry	2012	2013
Agriculture, forestry and fishing	1 293.1	1 599.3
Mining and quarrying	529.7	468.3
Manufacturing	5 081.4	5 899.1
Electricity, gas, steam and air conditioning supply	14.1	248.1
Water supply; sewerage, waste management and remediation activities	0.6	25.1
Construction	77.6	-49.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	1 212.2	861.8
Transportation and storage	268.8	311.5
Accommodation and food service activities	91.4	114.5
Information and communication	301.0	389.0
Financial and insurance activities	6 137.2	4 726.2
Real estate activities	4 405.5	4 474.7
Professional, scientific and technical activities	51.8	76.4
Administrative and support service activities	42.2	104.2
Education	0.1	14.4
Human health and social work activities	-5.9	16.7
Arts, entertainment and recreation	31.5	-0.2
Other services activities	681.4	855.2
Activities of households as employers	1.6	..
Others/unspecified	442.4	1 186.8
Total intra-ASEAN	20 657.6	21 321.5

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Note: Includes Myanmar whose intra-FDI data are not available by industry.

to internationalize and regionalize. In 2013, some 58% of all global M&A purchases by Thai companies took place in the region, including the acquisition of foreign-owned assets based in Thailand. Companies such as Central, Siam Cement, Berli Jucker, Loxley and Saha Group expanded regionally in 2013–2014 (section 1.5). Key factors driving Thai companies to regionalize include the emerging AEC, stronger cash reserves, the need to build stronger regional networks to expand their market base, the desire to follow customers that have regionalized, and the imperative to transfer labour-intensive operations to lower-wage countries to remain competitive (AIR 2013).

Viet Nam: investing in neighbouring countries

Outward FDI from Viet Nam surged to another record in 2013, up from \$1.2 billion in 2012 to \$2.0 billion, most of it conducted by SOEs and concentrated in resource-rich neighbouring countries.

Some 47% of all Vietnamese projects are in the Lao People's Democratic Republic and Cambodia. Significant proportions of Vietnamese investments in neighbouring

ASEAN Member States are in hydropower, agriculture and construction projects.

Nearly 60% of Vietnamese projects are in the ASEAN region (table 1.9), not surprising given the geocultural proximity and affinity. For instance, Metphone is increasing investment in Cambodia Angkor Air: and Vietnam Rubber Group has increased its investment in Cambodia to \$600 million.¹⁴ Hoang Anh Gia Lai Group, FPT and the Bank for Investment & Development of Vietnam (BIDV) have all invested in Myanmar.¹⁵

Table 1.8. Thai companies are emerging regional players with significant M&A purchases
(Millions of dollars; per cent)

	2009	2010	2011	2012	2013
Thai M&A purchases in the world (millions of dollars)	1 027	3 272	6 655	10 468	22 868
M&A acquisitions by Thai companies in ASEAN (millions of dollars)	154	595	972	4 745	13 312
Percentage of Thai M&A purchases in ASEAN (%)	15.0	18.2	14.6	45.3	58.2

Source: UNCTAD, M&A database.

Companies' growing financial capability and readiness to venture abroad, as well as government encouragement, will continue to drive more Vietnamese investment across the region. Regional integration is encouraging Vietnamese companies to pursue market expansion strategies, as well as gain access to natural resources including in agriculture, and in infrastructure and construction projects.

Table 1.9. Vietnamese companies' investment concentrated in ASEAN-neighbouring countries
(Number; Millions of dollars)

	As of April 2014 ^a	
	Number of projects	Amount (\$ millions)
Vietnamese global outward FDI	933	19 023
Vietnamese outward FDI in ASEAN	543	9 543
ASEAN's share in Vietnamese outward FDI	58%	50%
Lao People's Democratic Republic	270	4 690
Cambodia	171	3 377
Malaysia	12	754
Myanmar	19	450
Singapore	53	196
Indonesia	8	50
Thailand	9	25
Brunei Darussalam	1	0.6

Source: Ministry of Planning and Investment, Viet Nam.

^a Since 1999.

1.4 CLMV recipients

FDI to the CLMV countries as a group rose to \$13.2 billion in 2013, as investment rose in the manufacturing sector. FDI in the extractive industry and infrastructure were significant. FDI to three of the four CLMV countries rose in 2013, accounting for 11% of inflows in ASEAN. These 4 countries continue to develop more industrial estates and special economic zones to further improve their investment environment.

ASEAN Member States as a group are a leading investor in the CLMV countries, which helps strengthen regional connectivity and contributed to the increase in intraregional investment (tables 1.10 and 1.11). ASEAN investment rose by more than 75% in 2013, attracted by wage cost differentials, market potential and opportunities in the extractive industry. FDI into the CLMV countries displays different industry patterns, depending on each country's locational advantages.

Cambodia: The garments industry is by far the largest recipient of inflows in manufacturing, but FDI in other industries is emerging.

FDI in Cambodia is dominated by Asian investors (table 1.12). In 2013, ASEAN, China, the Republic of Korea and Taiwan Province of China, in that order, contributed nearly 75% of all investment in the country. ASEAN investors were more active in agriculture. Investors from the East Asia emerging economies, in particular China, dominated in manufacturing

Table 1.10. ASEAN and ASEAN's Dialogue Partners' FDI flows in CLMV countries, 2012–2013
(Millions of dollars)

	2012					2013				
	Cambodia	Lao People's Democratic Republic ¹	Myanmar ²	Viet Nam	CLMV	Cambodia	Lao People's Democratic Republic ¹	Myanmar ²	Viet Nam	CLMV
Intra-ASEAN	523.0	73.6	151.2	1 262.5	2010.4	298.8	..	1 186.8	2 078.6	3 564.2
Selected ASEAN Member States										
Indonesia	..	..	..	29.6	29.6	-0.0	..	16.4	16.4	32.8
Malaysia	189.9	..	0.1	122.1	312.1	97.9	..	4.0	59.4	161.3
Singapore	69.5	..	120.0	992.0	1 181.5	83.7	..	654.8	1 801.1	2 539.6
Thailand	52.2	..	24.0	102.1	178.2	61.8	..	494.5	167.0	723.3
Viet Nam	211.5	..	7.1	..	218.6	54.3	..	16.4	0.0	70.7
Australia	23.1	..	1.7	5.8	30.6	19.1	..	0.1	52.2	71.4
Canada	5.2	..	..	11.1	16.2	-6.8	..	0.1	10.5	3.7
China	367.8	..	482.2	190.0	1 040.0	286.8	..	792.6	948.2	2 027.5
European Union 28	126.1	..	664.2	543.1	1 333.4	115.5	..	296.2	350.4	762.0
Cyprus	..	..	..	193.5	193.5	..	..	..	..	..
France	7.1	..	..	55.8	62.8	30.9	..	202.3	28.9	262.1
Germany	6.7	..	..	96.6	103.4	-24.8	..	0.0	48.0	23.2
Netherlands	14.3	..	..	60.9	75.3	-11.6	..	24.4	162.1	174.9
United Kingdom	92.7	..	664.2	22.1	779.1	116.0	..	68.9	77.2	262.1
India	12.0	..	0.0	10.1	22.1	6.1	..	7.3	1.1	14.6
Japan	13.8	..	31.1	2 862.9	2 907.8	38.5	..	36.0	2 365.2	2 439.8
New Zealand	..	..	..	..	..	..	..	..	0.6	0.6
Pakistan	..	..	..	0.1	0.1	..	..	..	0.1	0.1
Republic of Korea	161.7	..	..	657.9	819.6	178.2	..	..	1 766.8	1 945.0
Russian Federation	10.8	..	..	73.3	84.0	10.8	..	..	420.5	431.2
United States	16.1	..	..	82.1	98.2	33.9	..	..	51.6	85.5
Total	1 557.1	294.4	1 354.2	8 368.0	11 573.7	1 274.9	426.7	2 620.9	8 900.0	13 222.5

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: ¹ Lao People's Democratic Republic's data for 2012–2013 exclude investment 'by source country'.

² Based on fiscal year. Myanmar's fiscal year starts on 1 April and ends on 31 March.

Table 1.11. Top 10 investors in CLMV countries, 2012–2013
(Millions of dollars; per cent)

	2012		2013		
	Amount (\$ millions)	Share (%)	Amount (\$ millions)	Share (%)	
Home economy					
Japan	2 907.8	25.1	ASEAN	3 564.2	27.0
ASEAN	2 010.4	17.4	Japan	2 439.8	18.5
Taiwan Province of China	1 533.3	13.2	China	2 027.5	15.3
European Union	1 333.4	11.5	Korea, Republic of	1 945.0	14.7
China	1 040.0	9.0	European Union	762.0	5.8
Korea, Republic of	819.6	7.1	Hong Kong, China	643.6	4.9
Samoa	473.6	4.1	Russian Federation	431.2	3.3
Hong Kong, China	464.8	4.0	Taiwan Province of China	418.3	3.2
Virgin Islands, British	420.8	3.6	Cayman Islands	147.6	1.1
Cyprus	193.5	1.7	Virgin Islands, British	126.2	1.0
Others	376.5	3.3	Others	716.9	5.4
Total	11 573.7	100.0	Total	13 222.5	100.0

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data of Lao People's Democratic Republic do not have breakdowns by source country.

Myanmar's data are based on fiscal year, which starts on 1 April and ends on 31 March.

operations. The sources of FDI are highly concentrated as the top 10 sources in 2012 and 2013 accounted for nearly all the inflows. Flows to Cambodia decreased by 18% to \$1.3 billion, mainly due to a 16% decline in FDI in the manufacturing sector, from \$549 million in 2012 to \$463 million in 2013 (table 1.13). A 25% drop in investment in the garments industry, from \$456 million in 2012 to \$343 million in 2013, was the main factor contributing to that decline.¹⁶

Although the garment and footwear industries are still the main FDI recipients, other manufacturing activities such as auto-related industries are emerging as recipients, with Japanese auto parts companies and others setting up plants in the country. Denso started an operation in 2013 to produce sensor components for ignition magnetos. Yazaki opened a \$24 million wire harness plant for auto parts in the same year. Toyota and Mazda each opened a new outlet in 2013, for distribution and for marketing, respectively.

In 2014, Huaxin Cement (China) acquired a 40% stake in a Cambodian Cement factory, which is estimated to be valued at \$100 million. Prestech International (Malaysia) won a contract to build an \$86 million power transmission line in addition to its existing contractual arrangement for power lines in the country. Kitahara International Hospital Group (Japan) is investing some \$35 million to build a hospital, which is expected to be operational by 2015. Sumitomo Mitsui Financial Group (Japan) acquired a 12.25% stake in Aceda bank in August 2014. Other companies such as Nippon Express (Japan), Minebea (Japan) and the Booyoung Group (Republic of Korea) have set up operations in the country in recent years.

Lao People’s Democratic Republic: Hydropower and electricity trade continues to dominate FDI flows.

Chinese companies are major investors in the Lao People’s Democratic Republic. Although their operations cover a wide range of areas, most are concentrated in hydropower generation, transmission and trading of electricity. In addition to investment in infrastructure, Chinese FDI in mining, agriculture and real estate are all notable (see section 3.2). In forestry and agriculture, such as timber and rubber, there are investments from a number of sources, primarily from ASEAN Member States and East Asian economies.

Myanmar: Opportunities for investors are growing, including in manufacturing.

However, the extractive and infrastructure sectors remain the foremost recipients of FDI inflows. FDI into Myanmar in 2013 rose to nearly twice the level of 2012, reaching \$2.6 billion. As in the other ASEAN Member States, these numbers exclude non-equity modes of investment such as contractual arrangements and concessions in infrastructure or mining activities. Foreign involvement in Myanmar therefore likely far exceeds the amount of FDI recorded in 2013 (section 3.2).

With the exception of the \$664 million invested by the United Kingdom in 2012, FDI flows in Myanmar have been dominated by Chinese investments since 2008. In 2013, however, ASEAN emerged as the largest investor, with large levels of investment from Singapore

Table 1.12. Top 10 investors in Cambodia, 2012–2013

(Millions of dollars; per cent)

	2012			2013	
	Amount (\$ millions)	Share (%)		Amount (\$ millions)	Share (%)
Home economy			Home economy		
ASEAN	523.0	33.6	ASEAN	298.8	23.4
China	367.8	23.6	China	286.8	22.5
Taiwan Province of China	172.7	11.1	Korea, Republic of	178.2	14.0
Korea, Republic of	161.7	10.4	Taiwan Province of China	173.3	13.6
European Union	126.1	8.1	European Union	115.5	9.1
Hong Kong, China	91.6	5.9	Hong Kong, China	82.8	6.5
Australia	23.1	1.5	Japan	38.5	3.0
United States	16.1	1.0	United States	33.9	2.7
Japan	13.8	0.9	Samoa	20.5	1.6
India	12.0	0.8	Australia	19.1	1.5
Others	49.3	3.2	Others	27.6	2.2
Total	1 557.1	100.0	Total	1 274.9	100.0

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

(\$655 million) and Thailand (\$494 million). ASEAN and China together contributed 75% of all FDI in the country in 2013 (table 1.14).

FDI into Myanmar has been dominated by investments in infrastructure and extractive industry in oil, gas and mining activities. However, FDI into manufacturing has started to pick up since the promulgation of the new foreign investment law in 2012¹⁷ (figure 1.5; chapter 2). FDI in manufacturing rose nearly seven-fold in 2013, to \$364 million from \$47 million in 2012, while FDI in oil and gas rose by 139% to \$1.6 billion.

The low wage cost has also attracted labour-intensive operations and apparel companies. These companies included Costic International, Honeys Garment Industry, Nadia Pacific Apparel, Manufacturer GFT Enterprise, JS Filter, Eurogate Sportsware, THY Garment, Shinsung Tongsang Inter, Korea Link Industrial and Mac Do. Some major Thai garment companies are also setting up operations in Myanmar because of the cost factor.¹⁸ More foreign garment and shoe manufacturers received approval to set up operations in 2013. They included Melody Global and Sunny Shoes from Taiwan Province of China; SDI Manufacturing, Shanghai Donglong Feather Manufacture and Jiangsu Solamoda Garments based in China; and AMG Factory from Hong Kong (China).¹⁹

This rapid rise in FDI to the country has itself been supported by inward investment. For instance, the rush of foreign investors to the country has also led to a rapid rise in investment in real estate, hotels and tourism-related activities since 2012. Hoteliers such as Accor (France), Best Western (United States) and Marriott (United States) have invested in the country; beverages companies such as Carlsberg (Denmark), Heineken (Netherlands) and ThaiBev (Thailand) received approval in 2013 to set up operation.²⁰

More fundamentally, Malaysian and Singaporean companies are involved in building airports and other infrastructure; and the Toyo-Thai Corporation completed a first phase of a gas power plant in 2013. In a similar vein, Japanese trading companies such as

Table 1.14. Major investors in Myanmar, 2012–2013
(Millions of dollars)

2012			2013		
	Amount (\$ millions)	Share (%)		Amount (\$ millions)	Share (%)
Home economy			Home economy		
European Union	664.2	49.0	ASEAN	1 186.8	45.3
China	482.2	35.6	China	792.6	30.2
ASEAN	151.2	11.2	European Union	296.2	11.3
Japan	31.1	2.3	Hong Kong, China	272.0	10.4
Korea, Democratic People's Republic of	23.8	1.8	Japan	36.0	1.4
Australia	1.7	0.1	Korea, Democratic People's Republic of	29.8	1.1
			India	7.3	0.2
			Others	0.2	0.1
Total	1 354.2	100.0	Total	2 620.9	100.0

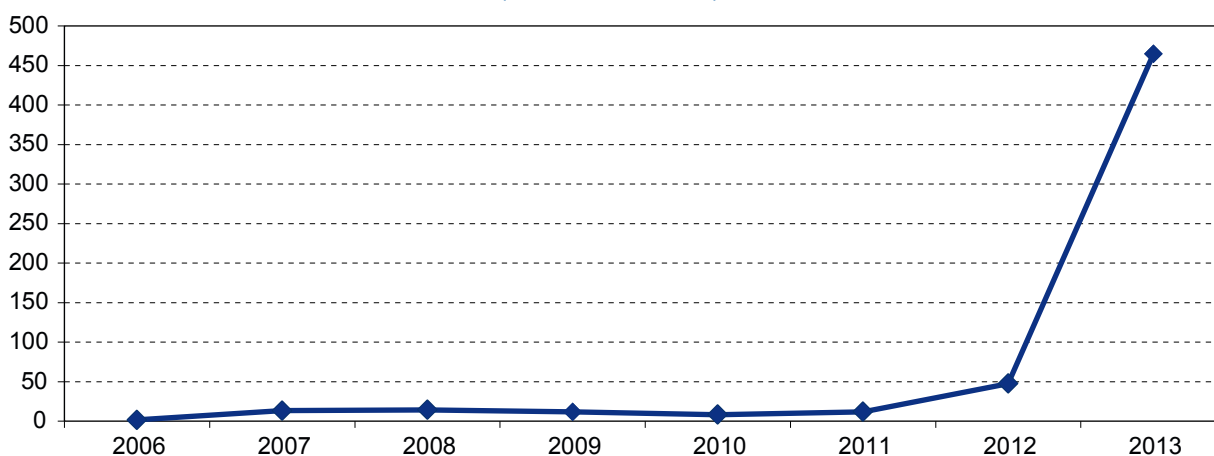
Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Note: Fiscal year, which starts on 1 April and ends on 31 March.

Mitsubishi, Marubeni and Sumitomo are involved in the construction and development of the Thilawa SEZ.²¹

In short, in only a few years, Myanmar has seen the arrival of a large number of foreign investors from all over the world. For instance by 2013, major companies such as GE (United States), Samsung (Republic of Korea), Unilever (United Kingdom/Netherlands), Canon (Japan), Hilton (United States), Heineken (Netherlands), Carlsberg (Denmark), Mazda (Japan), Ford (United States), Nissan (Japan), PepsiCo (United States) and BAT (United Kingdom) had already invested and started operations in the country.²² Companies such as Coca-Cola (United States) and Unilever (United Kingdom/Netherlands) have also announced significant investment plans over the next few years. More major TNCs are planning to invest in different industries in Myanmar.

Figure 1.5. Rise of manufacturing FDI in Myanmar
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Table 1.15. Top 10 investors in Viet Nam, 2012–2013
(Millions of dollars; per cent)

2012			2013		
Home economy	Amount (\$ millions)	Share (%)	Home economy	Amount (\$ millions)	Share (%)
Japan	2 862.9	34.2	Japan	2 365.2	26.6
Taiwan Province of China	1 360.6	16.3	ASEAN	2 078.6	23.4
ASEAN	1 262.5	15.1	Korea, Republic of	1 766.8	19.9
Korea, Republic of	657.9	7.9	China	948.2	10.7
European Union	543.1	6.5	Russian Federation	420.5	4.7
Samoa	465.9	5.6	European Union	350.4	3.9
British Virgin Islands	420.8	5.0	Hong Kong, China	288.9	3.2
Hong Kong, China	373.2	4.5	Taiwan Province of China	245.0	2.8
Cyprus	193.5	2.3	Cayman Islands	147.6	1.7
China	190.0	2.3	British Virgin Islands	126.2	1.4
Others	37.6	0.4	Others	162.6	1.8
Total	8 368.0	100.0	Total	8 900.0	100.0

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Viet Nam: The manufacturing sector overwhelmingly dominates FDI flows in the country.

FDI in Viet Nam rose from \$8.4 billion in 2012 to \$8.9 billion in 2013, aided by the rise in investment in manufacturing and utility services including strong investment from ASEAN, the Republic of Korea and China. Japan was the single largest investor in 2013 despite a 17% decline in inflows from \$2.9 billion in 2012 to \$2.4 billion (table 1.15). ASEAN investment in the country rose by some 65%, making it the second largest investor after Japan.

The manufacturing sector dominates FDI in Viet Nam (table 1.16), receiving more than 70% of FDI in 2012–2013. Many existing investors expanded their operations, and new investors with manufacturing facilities in other ASEAN Member States also invested in Viet Nam, contributing to the continuing strong presence of manufacturing FDI in the country (section 1.2). Korean companies have been particularly active, led by Samsung Electronics, LG and Posco.

1.5 Cross-border M&A development

Gross cross-border M&A sales in ASEAN reached a record level in 2013, with deals exceeding \$40 billion for the first time in the group's history (figure 1.6).²³ The number of mega deals – those exceeding \$500 million rose by 70%, from 10 in 2012 to 17 in 2013. These numbers, albeit concentrated in a few countries, suggest that the M&A environment in ASEAN Member States is maturing. In addition to the increasing or high M&A activities in Malaysia, Singapore and Thailand, the number of deals is growing

Table 1.16. FDI flows to Viet Nam, by economy and industry, 2012–2013
 (Millions of dollars)

2012	Emerging markets of East Asia											ASEAN	Canada	Other countries	Total		
	Japan	United States	European Union	Republic of Korea		Hong Kong, China		Taiwan Province of China		India	Australia					Russian Federation	
				China	Subtotal	China	Subtotal	China	Subtotal								
Agriculture, forestry and fishing	17.4	0.5	3.3	4.0	2.3	8.3	1.2	15.7	0.1	..	0.4	7.7	0.1	5.7	50.9		
Mining and quarrying	29.3	0.8	5.6	6.7	3.8	13.9	1.9	26.5	0.1	0.1	0.8	12.9	0.1	9.6	85.8		
Manufacturing	2 049.2	58.8	388.7	470.9	267.1	973.9	136.0	1 847.9	7.2	4.1	52.4	903.7	7.9	669.6	5 989.7		
Electricity, gas, steam and air conditioning supply	17.0	0.5	3.2	3.9	2.2	8.1	1.1	15.4	0.1	..	0.4	7.5	0.1	5.6	49.8		
Water supply, sewerage, waste management and remediation activities	0.1	..	..	..	..	..	..	0.1	..	..	..	..	..	..	0.3
Construction	60.6	1.7	11.5	13.9	7.9	28.8	4.0	54.6	0.2	0.1	1.6	26.7	0.2	19.8	177.1		
Wholesale and retail trade; repair of motor vehicles and motorcycles	135.3	3.9	25.7	31.1	17.6	64.3	9.0	122.0	0.5	0.3	3.5	59.7	0.5	44.2	395.6		
Transportation and storage	39.8	1.1	7.5	9.1	5.2	18.9	2.6	35.9	0.1	0.1	1.0	17.5	0.2	13.0	116.3		
Accommodation and food service activities	19.0	0.5	3.6	4.4	2.5	9.0	1.3	17.1	0.1	..	0.5	8.4	0.1	6.2	55.4		
Information and communication	73.0	2.1	13.8	16.8	9.5	34.7	4.8	65.8	0.3	0.1	1.9	32.2	0.3	23.9	213.4		
Financial and insurance activities	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.1
Real estate activities	346.7	9.9	65.8	79.7	45.2	164.8	23.0	312.7	1.2	0.7	8.9	152.9	1.3	113.3	1 013.4		
Professional, scientific and technical activities	17.3	0.5	3.3	4.0	2.3	8.2	1.1	15.6	0.1	..	0.4	7.6	0.1	5.7	50.6		
Administrative and support service activities	0.9	..	0.2	0.2	0.1	0.4	0.1	0.8	..	..	0.0	0.4	..	0.3	2.7
Human health and social work activities	18.4	0.5	3.5	4.2	2.4	8.8	1.2	16.6	0.1	..	0.5	8.1	0.1	6.0	53.8		
Arts, entertainment and recreation	24.6	0.7	4.7	5.6	3.2	11.7	1.6	22.1	0.1	..	0.6	10.8	0.1	8.0	71.8		
Other services activities	10.6	0.3	2.0	2.4	1.4	5.0	0.7	9.6	..	..	0.3	4.7	..	3.5	31.0
Undifferentiated goods- and services-producing activities of household for own use	3.6	0.1	0.7	0.8	0.5	1.7	0.2	3.2	..	..	0.1	1.6	..	1.2	10.5
Total	2 862.9	82.1	543.1	657.9	373.2	1 360.6	190.0	2 581.7	10.1	5.8	73.3	1 262.5	11.1	955.5	8 368.0		
2013	Emerging markets of East Asia											ASEAN	Canada	Other countries	Total		
	Japan	United States	European Union	Republic of Korea		Hong Kong, China		Taiwan Province of China		India	Australia					New Zealand	Russian Federation
				China	Subtotal	China	Subtotal	China	Subtotal								
Agriculture, forestry and fishing	9.5	0.2	1.4	7.1	1.2	1.0	3.8	13.0	..	0.2	..	1.7	8.3	..	1.3	35.7	
Mining and quarrying	8.7	0.2	1.3	6.5	1.1	0.9	3.5	12.0	..	0.2	..	1.6	7.7	..	1.2	32.8	
Manufacturing	1 819.4	39.7	269.5	1 359.1	222.2	188.5	729.3	2 499.1	0.9	40.1	0.5	323.4	1 598.9	8.1	246.4	6 846.1	
Electricity, gas, steam and air conditioning supply	222.1	4.9	32.9	165.9	27.1	23.0	89.1	305.1	0.1	4.9	0.1	39.5	195.2	1.0	30.1	835.9	
Water supply, sewerage, waste management and remediation activities	5.6	0.1	0.8	4.2	0.7	0.6	2.2	7.7	..	0.1	..	1.0	4.9	..	0.8	21.0	
Construction	23.1	0.5	3.4	17.3	2.8	2.4	9.3	31.7	..	0.5	..	4.1	20.3	0.1	3.1	86.9	
Wholesale and retail trade; repair of motor vehicles and motorcycles	59.6	1.3	8.8	44.5	7.3	6.2	23.9	81.9	..	1.3	..	10.6	52.4	0.3	8.1	224.3	
Transportation and storage	4.9	0.1	0.7	3.7	0.6	0.5	2.0	6.7	..	0.1	..	0.9	4.3	..	0.7	18.4	
Accommodation and food service activities	26.3	0.6	3.9	19.6	3.2	2.7	10.5	36.1	..	0.6	..	4.7	23.1	0.1	3.6	98.9	
Information and communication	6.6	0.1	1.0	5.0	0.8	0.7	2.7	9.1	..	0.1	..	1.2	5.8	..	0.9	24.9	
Financial and insurance activities	0.1	..	..	0.1	..	..	..	0.2	..	..	..	..	0.1	..	0.4
Real estate activities	104.0	2.3	15.4	77.7	12.7	10.8	41.7	142.9	0.1	2.3	..	18.5	91.4	0.5	14.1	391.3	
Professional, scientific and technical activities	45.4	1.0	6.7	33.9	5.5	4.7	18.2	62.3	..	1.0	..	8.1	39.9	0.2	6.1	170.8	
Administrative and support service activities	0.1	..	..	0.1	..	..	..	0.1	..	..	..	..	..	..	0.3
Education	12.9	0.3	1.9	9.6	1.6	1.3	5.2	17.7	..	0.3	..	2.3	11.3	0.1	1.7	48.5	
Human health and social work activities	9.8	0.2	1.5	7.3	1.2	1.0	3.9	13.5	..	0.2	..	1.7	8.6	..	1.3	36.9	
Arts, entertainment and recreation	5.5	0.1	0.8	4.1	0.7	0.6	2.2	7.6	..	0.1	..	1.0	4.9	..	0.7	20.8	
Other services activities	1.6	..	0.2	1.2	0.2	0.2	0.6	2.1	0.3	1.4	..	0.2	5.9	
Total	2 365.2	51.6	350.4	1 766.8	288.9	245.0	948.2	3 248.9	1.1	52.2	0.6	420.5	2 078.6	10.5	320.4	8 900.0	

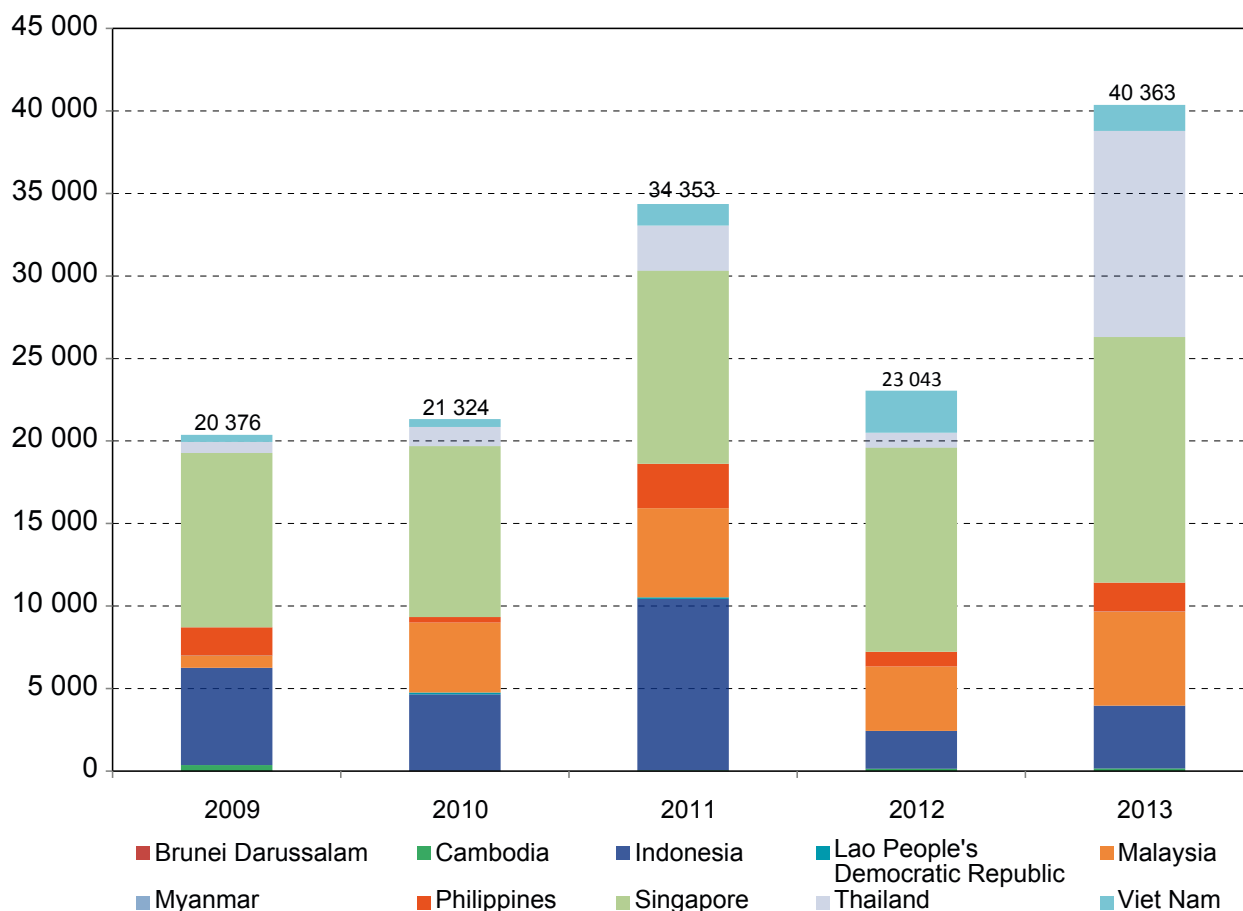
Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

in Indonesia and Viet Nam. The maturity of indigenous companies and of TNCs' affiliates in ASEAN Member States contributed to TNCs' rising interest in using M&A channels to establish or expand their presence in these countries.

Cross-border M&A sales in most member countries rose in 2013, with the largest sales taking place in Singapore (\$14.9 billion), Thailand (\$12.5 billion) and Malaysia (\$5.7 billion). These three countries accounted for more than 80% of all cross-border M&A sales in the region in 2013. Cross-border M&A sales in Thailand rose 1400% over the value of deals recorded in 2012, largely because of the acquisition of Bank of Ayudhya by Mitsubishi UFJ (Japan) for \$5.3 billion, and CP's acquisition of Siam Makro, an affiliate of SHV Holdings (Netherlands), for \$6.1 billion.

Of the 17 mega deals concluded in 2013, which together had a transaction value of \$31 billion, 6 involved companies from ASEAN Member States (table 1.17). For instance, Thai companies were active M&A investors, with greater financial capacity to undertake mega deals than before. Thai Beverage acquired a significant stake in F&N (Singapore) for \$6.9 billion, Sapura Kencana (Malaysia) acquired SeaDrill (Norway) in Malaysia for

Figure 1.6 M&A sales in ASEAN rose more than 75% to \$40 billion in 2013
(Millions of dollars)



Source: UNCTAD, cross-border M&A database.

\$2.9 billion, and Gallant Venture (Singapore) acquired Indomobil Sukses International (Indonesia) for \$809 million.

The increase in M&A activities in ASEAN in 2013 offers further support for the view that TNCs are keen to increase their regional presence. Companies from developed countries such as Japan, United Kingdom, the Netherlands, Switzerland, Italy and Australia have also expanded their presence in the region through M&As. For example, Mitsubishi UFJ Financial Group (Japan) acquired a 20% stake in Vietnam Joint Stock Commercial Bank for Industry and Trade for \$742 million, Prudential (United Kingdom) acquired Thanchart Life Assurance (Thailand) for \$568 million, and Shin-Etsu Chemical (Japan) acquired a 50% interest in Asia Silicones Monomer in Thailand for \$147 million. Similarly, Ramsay Health Care (Australia) acquired Sime Darby–Healthcare Assets in Malaysia for \$126 million, Furukawa Electric (Japan) acquired Hydro Aluminium Malaysia for \$20 million, and Sinochem (China) acquired a 44% stake in Bumi Jaya (Indonesia).

In the first half of 2014, the number of M&A activities slowed, and the number of mega deals were fewer and smaller in value. Yet, foreign companies continued to expand in ASEAN Member States through M&As. For instance, Sumitomo Life Insurance (Japan) acquired a 40% stake in BNI Life Insurance (Indonesia) for \$357 million, Asahi Group (Japan) acquired Etika Dairies in Malaysia for \$329 million, LG (Republic of Korea) acquired a gas mine of Sawhan Corporation (Republic of Korea) in Viet Nam for \$10 million, Toyota Tsusho (Japan) acquired Borneo Technical in Thailand and Suez (France) acquired Cofely DC in Singapore.

Intraregional M&A activities

ASEAN companies are also expanding regionally through M&As and have been a major force in the region's cross-border M&A activities (table 1.18). During 2011–2013, ASEAN Member States as a group were the largest acquirer in the region, making 50% of the purchases in ASEAN Member States (table 1.19). Growing financial capacity and cash reserves made these acquisitions possible, including some mega deals. Many ASEAN companies continued to be involved in intraregional M&A activities in 2013 and the first half of 2014.

Thai and Indonesian companies have significantly increased their regional M&A purchases. For instance, in 2013 Siam Cement (Thailand) acquired Prime Group in Viet Nam for \$235 million; an Indonesian investor group acquired Silverlink Resorts (India) in Singapore for \$300 million; and Modernland Realty (Indonesia) bought Jakarta Garden City for \$230 million from Keppel Corporation (Singapore).

Thailand's M&A investments have risen rapidly, overtaking those of both Singapore and Malaysia in 2013. Indonesian companies carried out more M&As in the region in terms of value than in 2012. Philippines companies, to a lesser extent, are also acquiring assets in other ASEAN Member States. Vietnamese companies, however, prefer greenfield investments to M&As for market entry.

Table 1.17. Cross-border M&A mega deals in ASEAN rose by 70%, 2012–2013
(Millions of dollars)

Year	Ultimate acquiring company	Ultimate acquiring nation	Company acquired	Target nation	Value	Shares ownership after transaction
2013	Thai Beverage	Thailand	Fraser & Neave Ltd.	Singapore	6 896	91.2
2013	Mitsubishi UFJ Finl Grp	Japan	Bank of Ayudhya	Thailand	5 315	72
2013	CP	Thailand	Siam Makro	Thailand	4 220	66.1
2013	Sapura Kencana Petroleum	Malaysia	SeaDrill Ltd-Asian Tender Rigs Division	Malaysia	2 913	100
2013	L'Arche Green	Netherlands	Asia Pacific Breweries	Singapore	2 009	100
2013	CP	Thailand	Siam Makro	Thailand	1 912	97.9
2013	Jacobs Holding	Switzerland	Petra Foods Ltd-Cocoa Ingredients Division	Singapore	950	100
2013	Gallant Venture	Singapore	PT Indomobil Sukses Internasional	Indonesia	809	52.3
2013	CVC Capital Partners	United Kingdom	KFC Holdings (Malaysia) Bhd	Malaysia	792	100
2013	Mitsubishi UFJ Finl Group	Japan	Vietnam Joint Stock Commercial Bank for Industry & Trade (VietinBank)	Viet Nam	742	19.7
2013	Coca-Cola FEMSA SAB de CV	Mexico	Coca-Cola Bottlers Philippines Inc	Philippines	689	51
2013	Nippon Steel	Japan	BlueScope Steel Ltd-ASEAN Building Products Business	Indonesia	680	50
2013	CT	Indonesia	Carrefour Indonesia PT	Indonesia	673	100
2013	IRI	Italy	STX OSV Holdings Ltd	Singapore	638	50.8
2013	Cherkassobleno (Ukraine)	Ukraine	CIMB Aviva Assurance Bhd	Malaysia	597	98
2013	Augment Investments	Cyprus	Bever Pharmaceutical Pte Ltd	Singapore	590	100
2013	Prudential	United Kingdom	Thanachart Life Assurance Co Ltd	Thailand	568	100
2012	L'Arche Green	Netherlands	Asia Pacific Breweries Ltd	Singapore	4 337	81.6
2012	Thai Beverage	Thailand	Fraser & Neave Ltd	Singapore	2 211	22
2012	AIA Group	Hong Kong, China	ING Management Holdings (Malaysia) Sdn Bhd	Malaysia	1 719	100
2012	Perenco	France	ConocoPhillips Co-Oil & Natural Gas Assets, Viet Nam (03)	Viet Nam	1 290	100
2012	DBS Group Holdings	Singapore	Central Boulevard Development Pte Ltd	Singapore	847	30
2012	Kindest Place Groups	Thailand	Asia Pacific Breweries Ltd	Singapore	795	8.6
2012	PTT	Thailand	Sakari Resources Ltd	Singapore	679	90.4
2012	Fortis Healthcare Holdings	India	Fortis Healthcare International Pte Ltd	Singapore	665	100
2012	Mizuho Financial Group	Japan	Joint Stock Commercial Bank for Foreign Trade Of Vietnam (Vietcombank)	Viet Nam	567	15
2012	Tower Bersama Infrastructure	Indonesia	Indosat Tbk PT- Telecommunication Towers (12000)	Indonesia	519	100

Source: UNCTAD, M&A database.

Note: Mega deals are those exceeding \$500 million in value. This number includes M&A sales of foreign-owned assets based in the home country of the acquiring ASEAN company.

Table 1.18. Cross-border M&A sales in ASEAN and top 10 acquiring nations, 2011–2013
(Millions of dollars)

2011	\$ Millions	2012	\$ Millions	2013	\$ Millions
World	34 352.9	World	23 043.3	World	40 363.2
ASEAN	9 646.0	ASEAN	8 460.4	ASEAN	20 339.3
United Kingdom	5 227.7	Netherlands	4 811.5	Japan	8 461.4
Japan	5 161.8	Japan	2 554.3	United Kingdom	2 107.6
United States	3 398.8	Hong Kong, China	2 235.5	Netherlands	2 043.1
United Arab Emirates	1 941.9	France	1 305.0	Hong Kong, China	1 545.3
France	1 464.4	India	783.3	Switzerland	1 186.2
Korea, Republic of	1 320.8	United Kingdom	624.9	Italy	697.5
Canada	1 233.6	Australia	555.0	Mexico	688.7
China	1 150.0	United States	513.1	Cyprus	590.0
Hong Kong, China	939.1	China	222.2	Australia	538.7
Total Top 10	31 484.0	Total Top 10	22 065.2	Total Top 10	38 197.8

Source: UNCTAD, M&A database.

Table 1.19. Intra-ASEAN M&A transactions, 2012–2013
(Millions of dollars)

	Ultimate acquiring nation	Target							
		ASEAN	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
2012	ASEAN	8 460	101	1 493	1 402	425	4 196	457	387
2012	Cambodia	100	100	..	..	..	..	..	..
2012	Indonesia	936	..	774	..	..	5	..	157
2012	Malaysia	383	..	38	4	2	179	125	35
2012	Philippines	705	..	4	642	34	..	..	25
2012	Singapore	2 355	..	439	756	9	1 043	2	106
2012	Thailand	3 950	1	239	..	380	2 968	331	32
2012	Viet Nam	31	..	..	..	..	..	..	31
2013	ASEAN	20 339	166	2 705	3 249	94	7 748	6 232	146
2013	Cambodia	..	..	..	..	..	..	..	..
2013	Indonesia	1 321	..	999	..	..	322	..	..
2013	Malaysia	3 454	155	40	3 080	..	60	97	21
2013	Philippines	108	..	..	..	94	..	..	15
2013	Singapore	2 376	11	1 653	169	..	451	2	91
2013	Thailand	13 077	..	12	..	..	6 914	6 133	17
2013	Viet Nam	2	..	..	..	..	..	..	2

Source: UNCTAD, M&A database.

Table 1.20. TNCs with regional presence are expanding operations in ASEAN, 2013–2014 (selected cases)

Company	Headquarters	Activity	Existing operations in selected host country	Started operations or made investment in 2013-2014 in selected ASEAN countries
Coca-Cola	United States	Food and beverages	Has business activities in various ASEAN Member States	Opened a manufacturing operation and announced \$200 million investment plan in Myanmar for the next few years. Plans to begin bottling operation in Lao People's Democratic Republic in 2014.
Unilever	United Kingdom/ Netherlands	Consumer goods	Has operations in various ASEAN Member States	Started manufacturing operation and announced \$700 million investment plan in Myanmar.
Teleovor	Norway	Telecom	Myanmar	Won contract to develop Myanmar's telecommunications infrastructure.
Pepsi Co	United States	Food and beverages	Has business activities in various ASEAN Member States	Started operation in Myanmar.
Chevron	United States	Oil and gas	Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam	Started operation in Myanmar in 2013. In 2014, announced plan to expand oronite additives production in Singapore, and to increase upstream activity in Thailand and Indonesia.
Nissan	Japan	Automotive	Indonesia, Malaysia, Thailand, Philippines, Viet Nam	Approval received in 2013 to build a factory in Myanmar to assemble cars for the domestic market with parts produced elsewhere, including in other ASEAN Member States. Investment involved Tan Chong Motors (Malaysia).
Suzuki	Japan	Automotive	Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Thailand, Viet Nam	Start production of small trucks and spare parts in its plant in Myanmar.
Samsung	Republic of Korea	Electronics	In seven ASEAN Member States	Expanded operations in Viet Nam to cover mobile phone production. Other affiliates of the group are planning to invest in other activities in the country. Samsung Electronics received approval in 2014 to set up operation in Myanmar.
AEON	Japan	Retail, supermarket	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam.	Opened a \$250 million mall in Cambodia and a new mall in Viet Nam. Announced a \$1.5 billion plan to open 20 malls in Viet Nam by 2020.
Hitachi Sunway Information Systems	Japan-Malaysia	IT	Cambodia, Malaysia	A Japan-Malaysia joint venture to supply point-of-sales systems to AEON in Cambodia.
Big C	France	Retail, supermarket	Cambodia, Lao People's Democratic Republic, Thailand, Viet Nam	Opened a new outlet in Viet Nam. Plans to expand operations to 24 supermarkets in the country. In 2014, opened Big A Supermarket in Cambodia with a local joint-venture partner.
Ikea	Sweden	Retail, supermarket	Malaysia, Thailand, Singapore, Indonesia	has operations in a number of ASEAN countries is opening an estimated \$100 million store in Indonesia in 2014.
Posco	Republic of Korea	Steel plant	Indonesia, Malaysia, Myanmar, Thailand, Viet Nam	Owned 70% stake in the Krakatau-Posco Steel Plant in Indonesia. The plant was completed and started production in 2013. Second phase of the project is to begin in 2015 with an estimated \$6.6 billion investment.
Robert Bosch	Germany	Auto parts and engineering	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam	Opened a regional office in Bangkok in 2013 and received approval in the same year for expansion of its operation in Rayong, Thailand. In 2014, it set up an automotive R&D centre in Viet Nam.
Caterpillar	United States	Power plant/ infrastructure	Indonesia, Thailand, Singapore	Commenced operation and maintenance of a \$46.5 million 52-MW Ywama Power Plant in Yangon, Myanmar in 2014.
GM	United States	Automotive	Singapore, Thailand, Viet Nam	In 2013, started automotive production at its new assembly plant in Indonesia. Will move its international operation headquarters from China to Singapore in 2014.

Source: UNCTAD (2014).

Note: Data through 1st half of 2014.

1.6 Enterprise development and strategies in 2013–2014

The active regional expansion by ASEAN and foreign TNCs reflects overall corporate investment strategy. This expansion implies that there is a growing corporate confidence in ASEAN, aided by companies' favourable experience operating across the region.

Both ASEAN and foreign companies use a variety of forms of expansion, including investing in new factories or plants, expanding existing plants, acquiring additional facilities from other companies, establishing a new subsidiary, or entering into non-equity contractual arrangements (such as subcontracting the production of inputs).

1.6.1 Foreign TNCs' expansion in ASEAN

Many Global Fortune 500 TNCs expanded their operations and facilities in ASEAN in 2013 or 2014. These companies included BMW (Germany), Coca-Cola (United States), Continental (Germany), Daihatsu (Japan), GE (United States), GM (United States), Honda (Japan), Intel (United States), Jabil (United States), Mazda (Japan), Nestle (Switzerland), Nissan (Japan), P&G (United States), Panasonic (Japan), Posco (Republic of Korea), Robert Bosch (Germany), Samsung (Republic of Korea), Toshiba (Japan), Toyota (Japan), Unilever (United Kingdom/ Netherlands), Volkswagen (Germany) and Western Digital (United States). Many of these TNCs expanded their regional presence with new investments in 2013–2014, including multiple facilities in two or more ASEAN Member States at the same time, or increased production capacity to assemble new product lines for local market (tables 1.20, 1.21; box 1.2).

Table 1.21. Major automotive manufacturers expanded in ASEAN with introduction of new product lines/models (selected cases) in 2014

Company	Activity/new product lines	Host country
BMW	Assembly of 3-Series Gran Turismo	Malaysia
Volkswagen/DRB-Hicom	Assembly of Jetta and Polo models	Malaysia
Mitsubishi Motors/Tan Chong Motor	Production of ASX Compact SUV	Malaysia
Nissan	NP300 Navara pickups	Thailand
Volkswagen	Eco-car	Thailand
Honda	Mass production of Mobilio HR-V SUV	Indonesia
Isuzu	D-MAX pickups	Philippines
Toyota	Vios sedan	Philippines

Source: Company websites and media reports.

Box 1.2. Selected global TNCs: expansion of operations across ASEAN in 2013–2014

Mazda expanded its operations in 2013 with new production facilities.^a It established a joint venture with Bermaz and began local production of the CX-5 model in Malaysia that year. In Thailand, it has increased production capacity for pickup trucks and is building a new transmission plant to produce the Skyactive-Drive transmission. It also acquired a three-seat compact vehicle model from Suzuki in Indonesia in the same year.

BASF has a significant presence in six ASEAN Member States: a regional headquarters, several research facilities and a range of production plants in the region. In 2013, it completed its expansion of antioxidant production capacity in Singapore, opened a new coatings technical competence centre in Bangkok to support the growing automotive markets in ASEAN, opened a new office in Viet Nam and announced plans to invest \$500 million with Petronas Chemical Group in an integrated aroma ingredients project as part of their existing joint venture, BASF PETRONAS Chemicals in Malaysia.

Samsung started construction of a second high-tech complex worth \$2 billion in Viet Nam in 2013 for the assembly of mobile phones and other high-tech products. In 2014, the company obtained approval to construct another \$1 billion electronics manufacturing facility in Ho Chi Minh City.^b The Samsung group is planning to invest in energy and other areas in the host country. Samsung also received approval in 2014 to invest in Myanmar.

GE started operation in Myanmar in 2013. It also signed a contract to develop the second phase of a wind turbines project in Viet Nam, which will start commercial operation in 2014. Work on the first phase, which was completed in May 2013, involved an investment estimated at \$110 million. The plant also manufactures wind turbine components for export to ASEAN Member States.^c GE's Vietnam Engineering Centre started operation in 2013. In Indonesia, GE expanded its manufacturing facility in Batam with the construction of a high bay for a new line of subsea wellhead equipment.^d GE plans to invest \$100 million in Indonesia in 2014, as part of its \$300 million investment over the next three years.^e In Malaysia, it entered into a joint venture to develop a palm oil mill effluent (POME) biogas-to-power generation facility, which is expected to start operation by late 2014.

Intel expanded operations in Malaysia and Viet Nam.^f It is expanding its existing operations in Viet Nam from an assembly and testing facility to include the production of desktop central processing units.^g

Unilever launched its full business operations including a new manufacturing facility and new headquarters in Myanmar in 2013. It plans to invest \$656 million in the country over the next decade in expansion of operations to cover different product lines.^h In 2013, it also invested in a palm kernel fractionation facility in Indonesia which will start production in 2014, announced its commitment to build a \$90 million home-care liquids and distribution facility in Thailand and opened a \$56 million global leadership development center in Singapore.

Robert Boschⁱ has six manufacturing plants and various non-manufacturing operations across ASEAN, delivering products such as power tools, automotive components and industrial technology. It has recently extended its footprint in the region, including establishing a presence in Cambodia, and the Lao People's Democratic Republic. It has expanded its operations in Indonesia, Thailand and the Philippines, opening new facilities and local offices in 2013. It also set up operations in Myanmar in 2013 and invested more than \$12 million in building manufacturing plant in Indonesia, which will begin production in 2014. The company

Box 1.2. Selected global TNCs: expansion of operations across ASEAN in 2013–2014

plans to invest about \$200 million in its existing manufacturing plant in Viet Nam by 2016 to expand its capacity to produce belts for continuously variable transmissions.

Toyota has a significant presence in a number of ASEAN Member States. It opened a fourth plant in Indonesia in 2013, worth an estimated \$340 million, and plans to start building another engine plant in the country in 2014. It is expected to expand its operation in Indonesia with an investment plan of \$1.1 billion between 2012 and 2017. The company has announced that it is also planning to build an additional assembly plant in Thailand and increase production capacity in the Philippines in 2014.

Honda started construction of a \$575 million auto plant in Thailand in 2013 and is currently building a second plant, estimated at \$337 million, in Indonesia. The two plants will start production in 2015 and 2014, respectively. Honda announced in January 2014 that it has expanded its factory in Malaysia with an additional production facility.

Siemens in 2013 won a number of contracts related to energy infrastructure in ASEAN Member States. For instance, it announced that it has invested another 5 million in the expansion of its power generation factory in Indonesia and that it won a contract to construct and operate the San Gabriel combined-cycle power plant in the Philippines, which is worth about 395 million. In 2014, together with Marubeni, Siemens finished building the turnkey combined-cycle power plant Chana 2 and the Wang Noi 4 combined-cycle power plant in Thailand for EGAT.^j Together with Samsung C&T, Siemens Energy built the PLP combined-cycle power plant in Singapore. It will also work with MMC Engineering Services (Malaysia) to construct a turnkey Pengerang cogeneration plant in Malaysia.

Sources: UNCTAD (2014), based on companies' annual reports, websites and media news.

- ^a See Mazda, Annual Report 2013 (www.mazda.com/investors/library/annual/2013/pdf/MazdaAr13_e.pdf).
- ^b "Samsung invests over US\$1 billion in HCM City factory", VietNamNet Bridge, 6 June 2014 (<http://english.vietnamnet.vn/fms/business/104391/samsung-invests-over-us-1-billion-in-hcm-city-factory.html>).
- ^c "GE to expand operations in Viet Nam", The Voice of Vietnam, 28 November 2013 (<http://english.vov.vn/Economy/Investment/GE-to-expand-operations-in-Vietnam/268628.vov>).
- ^d "GE Oil and Gas expands Batam subsea manufacturing facilities, adding high bay workshop for first Asia Pacific production of vertical subsea trees", GE News, 15 May 2013 (www.genewscenter.com/Press-Releases/GE-Oil-and-Gas-Expands-Batam-Subsea-Manufacturing-Facilities-Adding-High-Bay-Workshop-for-First-Asi-3fd4.aspx).
- ^e "GE to invest \$100m in Indonesia for 2014 as part of \$300m in 3-year period", ASEAN Investor, 5 February 2014 (www.asean-investor.com/ge-invest-100m-indonesia-2014-part-300m-3-year-period).
- ^f "US among top three investors in Malaysia", The Star Online, 24 April 2014 (www.thestar.com.my/Business/Business-News/2014/04/24/FDIs-still-coming-in-from-US-It-remains-a-top-three-investor-in-Malaysia).
- ^g "Intel to expand production in Ho Chi Minh City", ASEAN Digest, 5 July 2014 (<http://aseandigest.net/2014/07/05/intel-to-expand-production-in-ho-chi-minh-city>).
- ^h "Unilever to make flavours in Myanmar amid \$656 million investment, Bloomberg, 6 June 2013 (www.bloomberg.com/news/2013-06-06/unilever-to-make-flavors-in-myanmar-amid-656-million-investment.html) and "Unilever launches in Myanmar", Unilever News (www.unilever.com/mediacentre/newsandfeatures/UnileverlaunchesinMyanmar.aspx).
- ⁱ Robert Bosch, Annual Financial Results in Singapore, 5 June 2014 (www.bosch.com.sg/en/sg/newsroom_8/news_8/news-detail-page_23744.php).
- ^j "Siemens transfers combined cycle plant to Thailand's EGAT", Asian Power, News, 16 August 2014 (<http://asian-power.com/ipp/news/siemens-transfers-combined-cycle-plant-thailands-egat#sthash.akBZlkl.dpuf>).

Table 1.22. Companies from ASEAN Member States made regional investments in 2013–2014 (First Half)

Company	Home country	Company	Home country
Automotive related		Plantation and agribusiness	
Gallant Venture	Singapore	CB Industrial Product Hldg	Malaysia
Sime Darby	Malaysia	TH Plantations	Malaysia
Manufacturing (various categories)		Olam International	Singapore
ASTI Holdings	Singapore	Genting	Malaysia
Fajar Suhendra	Indonesia	Johor Corp	Malaysia
Flextronics International	Singapore	Halcyon Agri Corp	Singapore
Mann Seng Metal	Singapore	Wilmar International	Singapore
Dynapack Asia	Singapore	Sinar Mas Group	Indonesia
Artivision Technologies	Singapore	Southern Capital Group	Singapore
Top Glove Corp	Malaysia	Real estate and department stores	
Global A&T Electronics	Singapore	Parkson	Malaysia
Jackspeed Corp	Singapore	Central	Thailand
ecoWise Holdings	Singapore	Ayala	Philippines
Food and beverages		Metro Pacific Investment	Philippines
Thai Beverage	Thailand	JS Oil	Malaysia
Creador	Malaysia	Oxley Holdings	Singapore
Banking and finance		Anderson Investments	Singapore
CIMB Group Holdings	Malaysia	Consistent Record	Malaysia
MayBank	Malaysia	Roxy-Pacific Holdings	Singapore
UOB	Singapore	Quest Capital Investment	Singapore
Tune Money	Malaysia	TA Corp	Singapore
Mining and oil & gas		Construction and infrastructure related	
PTT	Thailand	Semen Indonesia	Indonesia
Petron	Philippines	Egat	Thailand
Petronas	Malaysia	Siam Cement	Thailand
Pertamina (check)	Indonesia	Bukit Asam	Indonesia
Hartawan Holdings	Singapore	Manila Water	Philippines
Overseas-Chinese Bkg Corp	Singapore	Star Publications	Malaysia
Colossal Petroleum Corp	Philippines	E Power	Singapore
UPP Holdings	Singapore	Enco Holdings	Malaysia
Loyz Energy	Singapore	Hospital and health	
Just Minerals	Singapore	Cordlife Group	Singapore
Telecommunication		Richard Chandler	Singapore
Axiata Group	Malaysia	KPJ Healthcare	Malaysia
Northstar Equity Partners	Indonesia	Quan Min Holdings	Singapore
TEE International	Singapore	Hotels and resorts	
Transportation - courier		Minor International	Thailand
Singapore Post	Singapore	Fullerton Fund Management	Singapore
Grand Orient Capital	Thailand	Kuok (Singapore)	Singapore
Ortus Holdings	Singapore	Others	
AirAsia	Malaysia	MediaCorp	Singapore
		ASL Marine Holdings	Singapore
		Astro Holdings	Malaysia

Source: UNCTAD 2014, based on UNCTAD M&A database, company websites and media reports.

Table 1.23. Intra-ASEAN investment expansion (selected cases), 2013–2014

Company	Home country	Activity	Selected host country	Remarks
Hau Giang Pharmaceutical Company (DHG)	Viet Nam	Pharmaceutical	Myanmar	Established a joint-venture project to produce medicine. Plans to invest \$4.5 million in Myanmar, with construction of a plant expected in 2015.
Ayala Land	Philippines	Expansion on residential developments	Myanmar, Viet Nam	Expanding residential developments and retail in Myanmar and Viet Nam.
Electricity Generating Authority of Thailand (Egat)	Thailand	Construction on dams	Lao People's Democratic Republic, Myanmar, Viet Nam	To invest in a power plant near Salween River (Myanmar). Obtained licenses to develop the Nam Ngiep hydropower plant in Lao People's Democratic Republic and a \$2.3 billion power plant in Viet Nam.
Metro Pacific Investments Corp. (MPIC)	Philippines	Infrastructure	Indonesia, Thailand	Expanding its business in Thailand and Indonesia. Increased its ownership in the Don Muang Tollway project.
Gunkul	Thailand	Electrical power system, engineering	Myanmar	Wants to transform from being an importer and provider of electrical equipment to being a power producer in ASEAN. Has huge investments plan over next two years in development of wind power plants in Thailand and gas-powered plants in Myanmar.
Buritara Development	Thailand	Real estate	Thailand, Myanmar and Lao People's Democratic Republic	Has set aside two billion Baht to develop condominiums in Thailand, Myanmar and Lao People's Democratic Republic.
PTT Exploration and Production (PTTEP)	Thailand	Oil and gas	Cambodia, Lao People's Democratic Republic, Myanmar, Philippines	In 2014, announced that \$3.3 billion will be invested in Myanmar over next five years. Aims to open 60 fuel stations in Myanmar and regionalize its brand within the next 5 years.
Bukit Asam	Indonesia	Investment in coal-fired power plant	Myanmar	Expected to invest \$900 million in coal-fired power plants project. Second plant will cost approximately \$450 million to construct.
Saha Union	Thailand	Retail	Cambodia	Set up a retail distribution operation in Cambodia in 2013 to supply AEON in the country.
Tan Chong Motor	Malaysia	Automotive	Myanmar	Through Tan Chong Motor, started an operation in the country in 2013.
Axiata	Malaysia	Telecommunication	Cambodia, Indonesia	Acquired PT AXIS Telecom Indonesia for \$865 million in 2014.
UPP Holdings	Singapore	Power infrastructure	Myanmar	Through its subsidiary, UPP Power (Myanmar) started in 2014 to deliver electricity under a 30-year contract.

Source: Company websites and media reports.

1.6.2 Regional players and intraregional corporate investments

ASEAN companies continued their regional investments in 2013 and 2014. Many ASEAN companies from Indonesia, Malaysia, Thailand, the Philippines, Singapore and Viet Nam have made investments in the region in 2013 and some are planning further regional expansion in 2014 (tables 1.22, 1.23 and box 1.3).

These companies invest to strengthen their regional foothold and to grow as leading regional players in the industries they serve. Others announced major investment plans to expand to a number of ASEAN Member States in 2013 and over the next few years. Some companies stepped up their investment to build a regional brand image.

Countries such as Indonesia and Viet Nam are also encouraging their SOEs to expand in the region. In 2013, Aneka Tambang announced plans to invest in mining in Myanmar, and three other Indonesian SOEs (PT Wijaya Karya, PT Timah and PT Semen Indonesia) obtained licence from the Myanmar authority. These companies have already established representative offices in the host country. Semen Indonesia will begin construction of a \$200 million cement plant in Myanmar in 2014. Like Aneka Tambang, other SOEs such as Bank Negara Indonesia and Telecom Indonesia are also planning to expand their operations in ASEAN Member States.

The expansion of TNCs to the CLMV countries is encouraging ASEAN companies to follow suit, including establishing linkages with these TNCs. For example, a new operation in

Box 1.3. ASEAN: Regional expansion by regional players (selected cases)

Siam Cement Group (Thailand)

Siam Cement Group has operations in various ASEAN countries and is expanding its operations in the region, with a focus on Indonesia, Myanmar and Viet Nam. As of 31 March 2014, about 16% of the company's assets are in ASEAN (excluding Thailand), and that share is growing. In 2013, the company made regional investments in a number of operations, which included the following:

- (i) A paper and packaging facility in Indonesia, by acquiring a 90% stake of Primacorr Mandiri (Indonesia) for \$12.4 million;
- (ii) The first green cement plant in Indonesia for \$356 million; and
- (iii) The first integrated greenfield cement plant in Myanmar, which will include a 40 megawatt power plant, supporting port facilities, and other infrastructure for future expansion.

In 2014, the company began building a cement plant in the Lao People's Democratic Republic, which is expected to start operation in 2017. It also began expanding its cement production capacity in Cambodia. The company plans to pursue its expansion strategy in ASEAN for the foreseeable future.

CIMB (Malaysia)

The company has built up an extensive regional network in ASEAN, with significant presence across member countries and is continuing to expand with new investment and M&As. In July 2014, it acquired Finansa (Thailand).

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Box 1.3. ASEAN: Regional expansion by regional players (concluded)

Sime Darby (Malaysia)

Sime Darby is a large Malaysian conglomerate, with extensive operations in various industries in ASEAN Member States. In addition to activities at its plantation operations in Malaysia, it has upstream, downstream and R&D activities in Indonesia. It also has downstream operations in the manufacturing and distribution of edible products in Singapore, Thailand and Viet Nam.

Semen Indonesia

In 2013, the company acquired a 70% stake in Thang Long Cement (Viet Nam). In 2014, it announced plan to build a \$300 million cement plant in that country over the next five years as part of its regional expansion strategy. The production will be primarily for the local market and some for export to neighbouring countries. The company also obtained an operating licence in 2014 in Myanmar. The construction of a \$200 million plant in that country will commence in 2014. The company also plans to expand its networks in the region.

Saha Group (Thailand)

The company signed a joint venture agreement with MK Group of Myanmar in June 2014 to operate a logistics business. It plans to increase its business significantly in the region in the next 5–10 years. It plans to establish instant-noodle factories in Cambodia and Myanmar, and is setting up a detergent factory in Myanmar with local and foreign partners.

Parkson (Malaysia)

Parkson, the retail arm of the Lion Group (Malaysia), opened stores in Indonesia and Myanmar in 2013. It continued to expand in Viet Nam and opened the ninth outlet in that country in 2014.

Vinamilk (Viet Nam) was granted a licence in January 2014 to open a \$23 million processing facility in Phnom Penh’s SEZ. The operation is expected to begin in 2015.

Source: Companies’ websites.

Viet Nam by AEON (Japan) encouraged Hitachi Sunway Information Systems (a Japan-Malaysia joint venture) to invest in the country to supply point-of-sales systems to that country. Similarly, Saha Union (Thailand) established a retail distribution business in Cambodia in 2013 to supply AEON’s operation in that host country.

Companies, including SMEs from Malaysia, Singapore and Thailand in particular have been actively expanding their regional footprints. They continued to make new investments in other ASEAN Member States in 2013 and 2014 to grow and to be stronger regional players (box 1.3; box 1.4).

ASEAN banks further strengthened their presence with investments in other ASEAN Member States in 2013–2014. These banks include CIMB (Malaysia), UOB (Singapore), Maybank (Malaysia), Public Bank (Malaysia) and Bank Mandiri (Indonesia). Thai banks continued to expand in the newer ASEAN Member States to provide service

to Thai companies operating in these countries and in anticipation of the rise in business activities both in these countries and regionally. These banks include Kasikorn Bank, Bangkok Bank and Siam Commercial Bank.

ASEAN is increasingly an important source of investment in non-member countries (AIR 2013). In 2013 and 2014, ASEAN companies invested in many other developing and developed countries in agriculture, manufacturing, infrastructure and other service industries. Outward FDI flows from ASEAN rose from \$54 billion in 2012 to \$56 billion in 2013, aided by companies active investment abroad and in ASEAN through M&As (tables 1.24 and 1.25). Singapore companies made significantly more acquisitions outside ASEAN than did companies from other ASEAN Member States.

1.7 Outlook for 2014–2015

Against the backdrop of increasingly positive investor sentiment, the outlook for ASEAN Member States is promising. Many international surveys in 2013 and 2014 ranked ASEAN Member States high on investors' radar screens because of the region's potential (JBIC 2013, AmCham Singapore 2014, ASEAN-BAC 2013, Economist 2013 and WIR 2014).

Regional expansion strategies will continue to be a key element in FDI flows over the next few years for both ASEAN and non-ASEAN TNCs, including first-time SME investors. The economic growth prospects for the region are favourable, which is a key factor influencing FDI destination decisions. The AEC will be an increasingly influential factor, as the opportunities of a single market that it ushers in, attract corporate attention and investment interest in ASEAN.

Intra-ASEAN investment is expected to maintain its upward path as more companies realize their plans to strengthen their regional position. Cost factors will continue to drive the relocation of labour-intensive operations across the region. Intraregional M&A acquisitions will be an increasingly preferred strategy for ASEAN companies to strengthen their regional footprint, particularly in the services sector. However, M&A sales in the region are not likely to repeat the scale and number of mega

Box 1.4. ASEAN SMEs are also going regional

Regional expansion in 2013–2014 was not confined to only big players. Small and medium-sized enterprises in ASEAN countries are also expanding regionally. A sizeable number (ranked by market capitalization) now have a regional presence (box table 1.4.1).

In 2013–2014, some of these SMEs made further expansions or announced plans to invest in the region. They include Food Empire, Scomi Group, Dusit Thani, Krungthai Bank, Erawan and Samart Corporation.

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Box 1.4. ASEAN SMEs are also going regional (concluded)
Box table 1.4.1 ASEAN listed SMEs with regional presence (selected cases), 2013¹
 (Millions of dollars)

Company	Country of domicile	Industry	Market cap	Total assets	Revenue
Erawan Group	Thailand	Hotels, restaurants & leisure	247	419	153
Chin Teck Plantations	Malaysia	Food products	245	193	33
Raffles Education Corp	Singapore	Diversified consumer services	243	842	104
Samart Corp	Thailand	Diversified telecommunication services	242	381	301
CH Offshore	Singapore	Energy equipment & services	233	246	48
Loxley	Thailand	Electronic equipment, instruments & components	230	407	486
Food Empire Holdings	Singapore	Food products	228	237	263
Asia Plus Securities	Thailand	Capital markets	222	235	101
GK Goh Holdings	Singapore	Capital markets	213	427	32
Unisem	Malaysia	Semiconductors & semiconductor equipment	205	479	315
ASL Marine Holdings	Singapore	Machinery	203	885	376
KNM Group	Malaysia	Energy equipment & services	201	1 228	631
Kwantas Corp	Malaysia	Food products	187	727	605
Gemadept Corp	Viet Nam	Transportation infrastructure	182	362	120
Chuan Hup Holdings	Singapore	Electronic equipment, instruments & components	180	455	236
Scomi Group	Malaysia	Energy equipment & services	176	866	622
Malaysian Pacific Industries	Malaysia	Semiconductors & semiconductor equipment	161	405	398
Ann Joo Resources	Malaysia	Metals & mining	160	944	685
Landmarks	Malaysia	Hotels, restaurants & leisure	157	720	13
Hwa Hong Corp	Singapore	Real estate management & development	155	195	23
Dusit Thani	Thailand	Hotels, restaurants & leisure	149	264	153
Ginebra San Miguel	Philippines	Beverages	145	448	340
Chemical Company	Malaysia	Chemicals	145	565	409
Creative Technology	Singapore	Technology hardware, storage & peripherals	145	237	165
YHI International	Singapore	Distributors	118	...	407
Subur Tiasa Holdings	Malaysia	Paper & forest products	112	330	249
Pelikan International Corp	Malaysia	Commercial services & supplies	96	459	458
Green Packet	Malaysia	Software	94	287	192
Sunningdale Tech Ltd	Singapore	Machinery	85	...	381
S I2I	Singapore	Diversified telecommunication services	81	171	551
Pteris Global	Singapore	Machinery	73	...	40
MFS Technology	Singapore	Electronic equipment, instruments & components	71	124	130
United Fiber System	Singapore	Construction & engineering	61	...	5
Samudera Shipping Line	Singapore	Marine	61	457	391
Thakral Corp	Singapore	Distributors	60	...	330
Magnus Energy Group	Singapore	Energy equipment & services	58	...	41
Xpress Holdings	Singapore	Commercial services & supplies	53	129	19
Sacom Dev & Inv	Viet Nam	Electrical equipment	52	142	47
Zelan	Malaysia	Construction & engineering	51	283	41
Fu Yu Corp	Singapore	Machinery	46	...	227
Advanced Integrated Mfg	Singapore	Electronic equipment, instruments & components	42	...	66
Metech International Ltd	Singapore	Commercial services & supplies	29	...	24
Huan Hsin Holdings	Singapore	Electronic equipment, instruments & components	10	424	375

Source: UNCTAD (2014), based on Bloomberg.

¹ Ranked by market capitalisation of less than \$250 million in fiscal year ending 2013.

Table 1.24. Global M&A purchases by companies in ASEAN, 2009–2014 first half
(Millions of dollars)

Acquiring nation	Value					2013	2014
	2009	2010	2011	2012	2013	First Half	First Half
ASEAN	11 244	26 117	31 990	31 357	41 112	16 812	4 665
Brunei Darussalam	10	..	..	..	..	..	..
Cambodia	346	..	..	100	..	..	..
Indonesia	2 426	1 412	2 746	2 089	3 905	1 072	1 386
Malaysia	3 648	6 113	5 078	10 300	5 757	3 205	1 203
Myanmar	..	..	..	..	..	..	..
Philippines	240	203	523	852	165	17.3	15
Singapore	3 545	15 061	17 187	8 288	8 642	1 362	897
Thailand	1 027	3 219	6 456	9 674	22 632	11 153	1 163
Viet Nam	..	109	..	54	9	2	..

Source: UNCTAD, M&A database.

deals witnessed in 2013 – dampening the level of FDI flows in 2014. Nevertheless 2015 is likely to usher in a rise in FDI flows, exceeding the levels achieved in 2013, with stronger performance by a number of countries.

Historically, during a crisis (e.g. the Asian and global financial crises) FDI flows to the region fall and disrupt the long-term upward trajectory (see figure 1.1). For the moment, global corporate perception of the region is increasingly positive (WIR 2014). **Barring such external shocks, 2015 is expected to bring better FDI performance for the region and the outcome for 2014 are expected to be about the level recorded in 2013.**

Table 1.25. Selected M&A purchases by ASEAN companies, 2012–2013
(Millions of dollars)

Year	Ultimate acquiring company	Acquiring nation	Target company	Target economy	Value	Shares owned after acquisition
2013	CP group	Thailand	Ping An Insurance (Group) Co of China Ltd	China	9 386	15.6
2013	Thai Beverage	Thailand	Fraser & Neave Ltd	Singapore	6 896	91.2
2012	PETRONAS	Malaysia	Progress Energy Resources Corp	Canada	5 428	100
2013	CP	Thailand	Siam Makro PCL ¹	Thailand	4 220	66.1
2013	SapuraKencana Petroleum	Malaysia	SeaDrill Ltd-Asian Tender Rigs Division ¹	Malaysia	2 913	100
2012	Thai Beverage	Thailand	Fraser & Neave Ltd	Singapore	2 211	22
2013	CP	Thailand	Siam Makro PCL	Thailand	1 912	97.9
2012	PTT	Thailand	Cove Energy PLC	United Kingdom	1 909	100
2013	Indonesia Republic	Indonesia	ConocoPhillips Algeria Ltd	Algeria	1 753	100
2013	Singapore	Singapore	Grand Wailea Resort Hotel & Spa, Maui, Hawaii	United States	1 502	100
2013	Investor group	Malaysia	Spire Healthcare Ltd-Hospitals	United Kingdom	1 111	100
2012	Republik Energi & Metal	Indonesia	Vallar PLC	United Kingdom	1 000	23.8
2013	Gallant Venture	Singapore	PT Indomobil Sukses Internasional Tbk	Indonesia	809	52.3
2012	Indorama Resources	Thailand	Old World Industries I Ltd, Old World Transportation Inc	United States	795	100
2012	Kindest Place Group	Thailand	Asia Pacific Breweries Ltd	Singapore	795	8.6
2012	Malaysia	Malaysia	KanAm International GmbH- Portfolio of Offices (2)	United Kingdom	791	100
2013	Fortune REIT	Singapore	Tin Shui Wai Development Ltd	Hong Kong, China	754	100
2012	PTT	Thailand	Sakari Resources Ltd	Singapore	679	90.4
2013	CT Corp	Indonesia	Carrefour Indonesia PT	Indonesia	673	100
2012	Sime Darby	Malaysia	Battersea Power Station	United Kingdom	621	100
2012	A-REIT	Singapore	Ascendas Australia Hotel Fund	Australia	523	100
2012	Benjaya Corp	Malaysia	Cosway Corp Ltd	Hong Kong, China	449	100
2013	Gallant Venture	Singapore	PT Indomobil Sukses Internasional Tbk	Indonesia	449	81.9
2012	Perennial China Retail Trust	Singapore	Chengdu Longmont Mall Development	China	407	80
2012	SMC	Malaysia	ExxonMobil Malaysia Sdn Bhd, ExxonMobil Borneo Sdn Bhd	Malaysia	404	100
2012	Electricity Generating	Thailand	Goodman Group-Logistics Properties	Australia	390	100
2013	International Sport Capital	Indonesia	Quezon Power (Philippines) Ltd Co	Philippines	375	98
2012	Kumpulan Wang Amanah Pecen	Malaysia	FC Internazionale Milano SpA	Italy	338	70
2013	Indofood CBP Sukses Makmur	Indonesia	Hammerson PLC-Office Property	United Kingdom	323	100
2013	Singapore Telecommunications	Singapore	Amobee Inc	United States	321	100
2013	Investor group	Indonesia	China Minzhong Food Corp Ltd	China	320	89.1
2013	Capitaland	Singapore	Bharti Telecom Ltd	India	303	39.8
2012	Singapore	Singapore	Silverlink Resorts Ltd	Singapore	300	100
2013	Tuan Sing Holdings	Singapore	Tiger Eye Realty Yugen Kaisha-Olinas Mall	Japan	299	100
2013	Wilmar International	Singapore	Matahari Putra Prima Tbk PT	Indonesia	296	26.1
2012	Investor group	Singapore	Robinson Point Ltd	Mauritius	272	100
2013	Malaysia	Singapore	Cosumar SA	Morocco	270	27.5
2012	Capitaland	Malaysia	Ever Bliss International Ltd	China	263	50
2012	Starhill REIT	Singapore	Acibadem Saglik ve Hayat Sigorta AS	Turkey	252	90
2012	Singapore Telecommunications	Malaysia	The Cavendish Hotel (London) Ltd	United Kingdom	248	100
2012	CIMB Group Holdings	Singapore	Sydney Harbour Marriott Hotel	Australia	248	100
2012	Fortune REIT	Malaysia	Vividwireless Group Ltd	Australia	247	100
2012	CIMB Group Holdings	Singapore	Royal Bank of Scotland-Asia Pacific Cash Equities & IB Business	Taiwan Province of China	245	100
2012	Fortune REIT	Singapore	Recoup Investments Ltd	Hong Kong, China	244	100
2013	CIMB Group Holdings	Malaysia	Walker Corp Pty Ltd-3 Collins Square	Australia	243	100
2012	Mitr Phol Sugar Corp	Thailand	MSF Sugar Ltd	Australia	243	100
2013	Far East Organization	Singapore	The Straits Trading Co Ltd- Hotel Portfolio	Australia	237	100
2012	CIMB Group Holdings	Malaysia	Walker Corp Pty Ltd-Office Building	Australia	233	100

Table 1.25. Selected M&A purchases by ASEAN companies, 2012–2013 (concluded)
(Millions of dollars)

Year	Ultimate acquiring company	Acquiring nation	Target company	Target economy	Value	Shares owned after acquisition
2012	Reliance Global Holdings Pte	Singapore	BP Chemicals (Malaysia) Sdn Bhd	Malaysia	231	100
2013	Modernland Realty	Indonesia	Jakarta Garden City Co ¹	Indonesia	230	100
2012	Maplefree Logistics Trust	Singapore	Goodman Japan Funds -Warehouse Portfolio	Japan	213	100
2012	SMC	Philippines	ESSO Malaysia Bhd (Exxon Corp)	Malaysia	212	65
2012	Investor group	Indonesia	Multi Tambangjaya Utama PT	Indonesia	205	100
2013	Evertrust Asset Mgmt	Singapore	Tokutei Mukuteki Kaisha Shobu Project-Mallage Shobu	Japan	203	100
2012	Investor Group	Singapore	Trendy International Group	China	200	10
2012	Electricity Generating	Thailand	Manambang Muara Enim Coal Mine Project	Indonesia	197	40
2012	Pepper Group (Singapore)	Singapore	GE Capital Woodchester Ltd	Ireland	188	100
2012	Asia Silk Holdings	Singapore	Chaswood Resources Sdn Bhd	Malaysia	177	100
2013	Keppel Corp	Singapore	Mirvac (Old Treasury) Trust	Australia	171	50
2013	Investor group	Singapore	Fanatics Inc	United States	170	6
2012	IRPC	Thailand	Ube Chemicals (Asia) PCL ¹	Thailand	168	25
2013	Yinson Holdings	Malaysia	Fred Olsen Production ASA	Norway	168	97
2012	Olam International	Singapore	Titanium Holding Co SA	Nigeria	167	100
2013	Singapore	Singapore	Cosmos Tokutei Mokuteki Kaisha -Property Portfolio	Japan	166	100
2012	Capitaland	Singapore	CapitaMalls Japan Fund Pte Ltd-Malls	Japan	166	100
2012	Samling Strategic Corp	Malaysia	Samling Global Ltd	Japan	165	100
2012	Central group	Thailand	Retail & Entertainment-Palace Building	Hong Kong, China	160	100
2012	Semen Gresik	Indonesia	Thang Long Cement Joint Stock Co	Italy	157	70
2012	PTT Global Chemical	Thailand	Perstorp Holding France SAS	Viet Nam	155	51
2013	Axiata group	Malaysia	Latelz Co Ltd	France	155	100
2013	Singapore	Singapore	Greenko Mauritius Ltd	Cambodia	151	100
2012	PTT Chemical	Thailand	NatureWorks LLC	Mauritius	150	0
2012	Fraser & Neave	Singapore	FairBriar Residential Investment Partnership-75 Stanhope Garden	United States	149	50
2013	Keppel Corp	Singapore	United Super Investments Pty Ltd-Office Building	United Kingdom	149	100
2012	Oversea-Chinese Banking Corp	Singapore	Pac Lease Bhd	Australia	145	50
2013	Investor group	Singapore	Samsung Engineering Co Ltd	Malaysia	145	100
2012	Singapore Tech Engineering	Singapore	Elbe Flugzeugwerke GmbH	Korea, Republic of	145	5.1
2013	Investor/Investor Group	Singapore	Aegea Saneamento e Participacoes SA	Germany	142	35
2012	Enviro-Hub Holdings	Singapore	Full Grace Enterprise Ltd	Brazil	135	0
2013	Investor group	Singapore	F2S1 Investment Pte Ltd	China	131	50
2012	Wilmar International	Singapore	DEN Networks Ltd	Singapore	129	100
2012	Citra Group	Singapore	Lianyungang New Orient Container Terminal Co Ltd	India	127	17.8
2013	MMC Corp	Singapore	Goodman Fielder Ltd	China	124	55
2012	Springfield Land Corp	Malaysia	Citra Kebun Raya Agri Tbk PT	Australia	124	10.1
2012	IMC Holdings	Singapore	Meridian Wind Macarthur Pty Ltd	Indonesia	121	80.1
2012	MMC Corp	Malaysia	Polaris Data Centre	Australia	119	100
2012	Starhill REIT	Singapore	KrisEnergy Ltd	Australia	119	100
2012	Singapore	Singapore	LinQ Resources Fund	Singapore	115	20
2012	MMC Corp	Malaysia	AI Hidd Power & Water Project Desalination Plant	Australia	114	17.5
2012	Starhill REIT	Malaysia	Brisbane Marriott Hotel, Brisbane, Queensland	Bahrain	113	40
2012	Singapore	Singapore	Virgin Australia Holdings Ltd	Australia	112	100
2013	Electricity Generating	Thailand	Asia Pacific Renewables Ltd	Australia	109	10
2013	Hiap Hoe Holdings	Singapore	Undisclosed Retail Centre, Melbourne,Australia	Australia	106	100
2012	Southern Capital Group	Singapore	Adventia Bhd	Australia	105	100
2012		Singapore		Malaysia	101	100

Source: UNCTAD M&A database.

¹ Foreign-owned companies based in the home country of the acquiring ASEAN company.

Notes

- ¹ The number for 2013 excludes reinvested earning in the data set for the Philippines.
- ² See *World Investment Report 2014*, p.210.
- ³ FDI from New Zealand and the Russian Federations started from a lower base than that of other Dialogue Partners.
- ⁴ Robert Bosch: Annual Financial Results in Singapore, 5 June 2014 (www.bosch.com.sg/en/sg/newsroom_8/news_8/news-detail-page_23744.php).
- ⁵ BASF Asia Pacific, www.asiapacific.basf.com/apex/AP/en_GB/content/AP_Regional/1.1_About_Us/1.1.2_Locations_Asia_Pacific/Singapore/Intro.
- ⁶ “Samsung invests over US \$1 billion in HCM City factory”, *VietNamNet Bridge*, 6 June 2014 (<http://english.vietnamnet.vn/fms/business/104391/samsung-invests-over-us-1-billion-in-hcm-city-factory.html>).
- ⁷ “Samsung expands operations in Vietnam”, *The Voice of Vietnam*, 22 February 2014 (<http://english.vov.vn/Utilities/PrintView.aspx?ID=273534>).
- ⁸ “DHL expands Indonesia capability as archipelago takes off”, DHL press release, 29 August 2013 (www.dhl.co.id/en/press/releases/releases_2013/local/082913.html); “DHL announces 40 million Euro investment in Indonesia”, DHL press release, 27 February 2013 (www.dhl.co.id/en/press/releases/releases_2013/local/022713.html).
- ⁹ “Dow Chemical: Annual Report 2013” (www.dow.com/investors/pdfs/2013_Full_Report.pdf).
- ¹⁰ “Nissan to start producing cars in Myanmar”, *Financial Times*, 18 September 2013 (www.ft.com/cms/s/0/f5db7c32-2066-11e3-9a9a-00144feab7de.html#axzz38INixEC0).
- ¹¹ In terms of market capitalization.
- ¹² “Siam Cement using cash pile to accelerate growth: Southeast Asia”, Bloomberg, 25 October 2013 (<http://www.bloomberg.com/news/2013-10-25/siam-cement-using-cash-pile-to-accelerate-growth-southeast-asia.html>).
- ¹³ “Japan shifts investment to ASEAN”, 22 August 2014, *China Daily Asia Weekly* (http://chinadailyasia.com/asiaweekly/2014-08/22/content_15158584.html) and “Samsung shifts plants from China to protect margins”, Bloomberg, 12 December 2013 (www.bloomberg.com/news/2013-12-11/samsung-shifts-plants-from-china-to-protect-margins.html).
- ¹⁴ “Vinamilk deal to go ahead”, *ASEAN Investor*, 16 January 2014, www.asean-investor.com/vinamilk-deal-to-go-ahead.
- ¹⁵ “Vietnam’s biggest pharmaceutical company to invest in Myanmar”, *VietNamNet Bridge*, 11 July 2014, www.asean-investor.com/vietnams-biggest-pharmaceutical-company-invest-myanmar.
- ¹⁶ Based on Country Report of Cambodia on Inward FDI flows in 2012–2013, presented at the Meeting of the ASEAN Working Group on International Investment Statistics, 6–8 April 2014, Cambodia.
- ¹⁷ See “Myanmar state media details new foreign investment law”, Reuters, 3 November 2012, (www.reuters.com/article/2012/11/03/us-myanmar-investment-idUSBRE8A204F20121103).
- ¹⁸ “Industry Overview: Myanmar garment and textile industry”, *Insight Alpha*, 15 April 2014 (http://insightalpha.com/news_details.php?cid=31&sid=75&nid=203)
- ¹⁹ “MIC allows more foreign companies to invest in garment sector in Myanmar”, 24 August 2013 (www.elevenmyanmar.com/index.php?option=com_content&view=article&id=3176:mic-allows-more-foreign-companies-to-invest-in-garment-sector-in-myanmar&catid=33&Itemid=356).

- ²⁰ “Myanmar: foreign investment rush raises hopes... and concerns”, *Financial Times*, 17 June 2013 (<http://blogs.ft.com/beyond-brics/2013/06/17/myanmar-foreign-investment-galore/>).
- ²¹ “Private Sector Investment Finance for the Thilawa Special Economic Zone (SEZ)”, JICA press release, 23 April 2014 (www.jica.go.jp/english/news/press/2014/140423_01.html).
- ²² “Nissan to start producing cars in Myanmar”, *Financial Times*, 18 September 2013 (www.ft.com/intl/cms/s/0/f5db7c32-2066-11e3-9a9a-00144feab7de.html#axzz38whw67Fk)
- ²³ This number includes M&A sales of foreign-owned assets based in the home country of the acquiring ASEAN company; for example, the acquisition by Mazy’s Capital (Philippines) of a 90% stake in Maybank ATR Kim Eng Financial Corporation in the Philippines, whose ultimate parent is headquartered in Malaysia.
- ²⁴ Nikon, “Fact Book 2013” (www.nikon.com/about/ir/ir_library/fb/pdf/fb2013/13fb_e.pdf).

CHAPTER 2

INVESTMENT POLICY ENVIRONMENT

2.1 Introduction

The investment environment in ASEAN improves further with more investment-related measures introduced in 2013–2014.¹

The investment environment in ASEAN has improved further with more measures related to investment introduced in 2013–2014 and in earlier years (Annex table 2.1; AIR, 2013), both regionally and nationally.² These measures exclude those made under the various extra-ASEAN arrangements, such as the ASEAN-China FTA, the ASEAN-Korea FTA and the Regional Comprehensive Economic Partnership (RCEP) currently being negotiated. The RCEP involves all the ASEAN Member States, as well as Australia, China, India, Japan, the Republic of Korea and New Zealand.

This chapter focuses on investment and investment-related measures with respect to integration within ASEAN and ASEAN's efforts to improve the investment environment, including realizing the investment objectives of the ASEAN Economic Community (AEC).

2.2 Regional policy environment in 2013–2014

In 2013–2014, regional investment measures that were introduced or announced dealt with liberalization, facilitation, promotion and institutional cooperation.

With the aim of realizing the goal of free flow of investments under the AEC, ASEAN Member States developed – for peer review – a modality to eliminate investment impediments in the region. The implementation of the ASEAN Comprehensive Investment Agreement (ACIA) work programme, including its liberalization commitment, is regularly reviewed with a view to increasing the competitiveness of the region in attracting investments and to meeting the countries' commitment under the AEC. To improve transparency and the ease of doing business in the region, an ASEAN investment website was launched on 19 August 2013. The website serves as a gateway to promote ASEAN as a single investment destination as it facilitates access to investment information regarding the region and the ASEAN Member States.

In the area of finance, securities regulators in Malaysia, Singapore and Thailand announced on 1 April 2013 the implementation of the ASEAN Disclosure Standards Scheme. Under the scheme, issuers offering equity and plain debt securities in more than one of the three countries need comply with only a single set of disclosure standards for prospectuses.

In investment and trade facilitation, specific progress has been made on the ASEAN Single Window (ASW) initiative. The Agreement to Establish and Implement the ASEAN Single Window was signed by ASEAN Ministers in 2005.³ The initiative focuses on expediting cargo clearance to facilitate movement of goods. ASEAN Member States are at different

stages of developing their National Single Window (NSW). The CLMV countries are implementing their e-Customs platforms and launching NSW efforts. ASEAN Member States are implementing a regional ASW architecture on a pilot basis, to further facilitate the exchange of cargo clearance data. An ASW web portal was launched in 2013.

Other activities to enhance regional investment facilitation efforts have increased the ease of investing in the region, including lowering transaction cost – making ASEAN a more efficient investment location.

Several efforts were also made in 2013–2014 to promote the ACIA and investment opportunities to investor and business communities. An *ASEAN Comprehensive Investment Agreement: A Guidebook for Businesses* was published and launched in March 2013. A seminar on the ACIA was held in Malaysia in conjunction with the launch. Other similar events to raise awareness of investment opportunities in the region were held throughout ASEAN: in Myanmar in June 2013, the Philippines in January 2014 and the Lao People’s Democratic Republic in September 2014 (scheduled).

Efforts to promote investment opportunities and attract FDI were also conducted outside ASEAN. A high-level delegation from all ASEAN Member States jointly promoted investment opportunities in ASEAN to prospective investors in Canada in early 2014. The annual ASEAN-China Expo, which included summits on investment and business, was held in China in September 2013. Major ASEAN investment promotion events in Australia were organized for the business community in that country. A number of major investment promotion events in ASEAN and outside the region are being planned for the latter part of 2014 and in 2015, including the 11th ASEAN-China Expo in Nanning, China.

In the area of institutional development, the Coordinating Committee on Investment met regularly in 2013 and 2014. The Committee assists the ASEAN Investment Area (AIA) Ministerial Council and the ASEAN Economic Ministers (AEM) implement work programmes of the ASEAN Comprehensive Investment Agreement (ACIA) and the investment part of the ASEAN Economic Community (AEC) Blueprint. For the period under review, a number of capacity-building activities were undertaken to strengthen the shared understanding of investment issues and to facilitate policy design, including identifying additional measures to support the implementation of the ACIA.

On extra-ASEAN arrangements, ASEAN is also negotiating investment chapters or agreements with some Dialogue Partners, which are at various stages of progress. They include the ASEAN-China FTA (ACFTA), the ASEAN-India FTA (AIFTA), the ASEAN-Australia-New Zealand FTA (AANZFTA), the ASEAN-Japan Comprehensive Economic Partnership (AJCEP) and the RCEP.

2.3 Individual actions and measures, 2013–2014

ASEAN Member States continued to introduce measures and policies to improve their investment environments in 2013 and 2014, as well as reforms which contributed to improving further the region’s investment and business environment. Selected measures announced or introduced by ASEAN Member States in 2012 appear in Annex table 2.1.

ASEAN Member States introduced a variety of measures to further liberalize investment regimes, relax regulation, undertake reforms and institutional strengthening, provide incentives, reduce taxation, organize promotion events, streamline investment procedures, simplify requirements, establish one-stop centres and economic zones, provide more information and increase transparency, including actions aimed at lowering the cost of doing business. Some ASEAN Member States also signed bilateral investment treaties (BITs, also commonly called investment guarantee agreements) or FTAs, and some are negotiating additional investment-related agreements with their partners.

Although this chapter discusses measures and actions taken by ASEAN Member States, it is not exhaustive. However, it provides an indication of the types of measures and commitments that the ASEAN Member States are undertaking to continuously enhance their investment environment and that of the region.

In 2014, seven ASEAN Member States were involved with negotiations on 28 bilateral or plurilateral agreements with countries outside ASEAN, including with the Trans-Pacific Partnership (TPP). Four ASEAN Member States (Brunei Darussalam, Malaysia, Singapore and Viet Nam) are members of the TPP. The following subsections discuss specific actions and measures favourable to foreign investment that were introduced or announced by ASEAN Member States in 2013 and 2014.

Brunei Darussalam

2013

Investment facilitation

The country established *OneBIZ*, a business licensing system (BLS) that provides a single online window for a number of business licensing processes previously handled by 13 government agencies. Business Facilitation Centres were established, which also serve as payment counters for applicants and a help desk for BLS.

A *OneBiz Portal* was launched in February 2013 to provide entrepreneurs in the country with a single government window, allowing online access and application for the required licenses with greater ease and convenience. The portal is accessible through http://onebiz.business.gov.bn/sop/process/MIPR_BBLS/Index.

A restructuring of the country's intellectual property (IP) administration system took place in 2013, with the establishment of the Brunei Intellectual Property Office (BrulPO) under the Brunei Economic Development Board (BEDB), following the transfer of the Registry of Trademarks from the Attorney General's Chambers (AGC), which marked the final phase of integration of the country's IP administration. As of June 2013, all applications for patents, trademarks and industrial designs are administered by BrulPO. The Hague Agreement for the International Registration of Industrial Designs came into effect on 24 September 2013 with the ratification of Brunei's instrument of accession. In December 2013, the Copyright (Amendment) Order was implemented, imposing harsher penalties to deter copyright violators.

Taxation

Estate duty was abolished on 1 January 2013. Several import and excise tax rates under the Customs Import Duty Order 2012 and Excise Duty Order 2012 were updated and amended. The amendments include the abolishment of the 20% import tax for machinery used for national rice projects and the lowering of the import tax for processed and unprocessed timber or wood from 20% to 5% in order to minimize domestic logging. Import duties for electrically operated industrial machines were reduced from 15–20% to 5%, and the import tax for heavy machinery such as excavators was reduced from 15% to 5%.

Incentives

Tax exemption is provided to pioneer industries and companies approved by the Government. A 15% credit can be claimed on new investments in new plant and machinery made between January 2012 and December 2017. The credit may be carried forward for two years. The incentive requires local equity participation of 30% for foreign investment in the manufacturing and fisheries sectors.

2014

Investment facilitation

Brunei Darussalam continues to improve the country's investment regime, including through the provision of better infrastructure services. The Brunei International Airport is being modernized, and the work is scheduled for completion by November 2014. The project aims to improve airport connectivity and increase both flight frequency and passenger traffic.

A few of the country's industrial parks are being upgraded:

- (i) Salambigar Industrial Park, designated for pharmaceutical, food, cosmetics and light industries
- (ii) Pulau Muara Besar, for downstream and supporting activities for the oil and gas industries
- (iii) Sungai Liang Industrial Park, for gas-based petrochemicals
- (iv) Rimba Digital Junction, catering to high-tech industry
- (v) Bukit Panggal Industrial Park, which will house energy-intensive manufacturing industries
- (vi) Telisai Industrial Park, for aquaculture and mixed industries

Negotiating further agreements

Brunei Darussalam is negotiating an investment chapter under the Trans-Pacific Partnership Agreement (TPP), which is to be concluded by the end of 2014.

Cambodia

2013

Regulations and reforms

In an effort to further improve the country's investment environment, the Government of Cambodia has taken steps to initiate a study to revise the country's current investment law and regulations, including establishing a law on special economic zones.

A number of regulations were introduced in 2013, which include the following:

- Subdecree No. 219 on Creation of the Try Pheap Oyadav Special Economic Zone, on 7 May 2013.
- Prakas No. 119 (Ministry of Agriculture, Forestry, and Fisheries) on Procedure of Management of Agricultural Fertilizer for Business, dated 11 April 2013. The regulation aims to formalize the management of all agricultural fertilizer businesses (import/export, packaging/wrapping, wholesale, advertisements, etc.) operating in Cambodia.
- Prakas No. 001 (Cambodia Security Exchange) on Implementing the Change of Operating Rules of Cambodia Securities Exchange, on 8 February 2013.
- Prakas No. 057 (Ministry of Commerce) on Determination of Par Value of Shares in accordance with Articles 143 and 144 of the Law on Commercial Enterprise, dated 31 January 2013. Any company making a public offer of securities can determine or change the par value of its share to be less than CR4,000.
- Prakas No. 073 (Ministry of Industry, Mining, and Energy) on Equivalence of System of Weight Units in the Sector of Precious Metals, dated 25 January 2013. The aim is to determine the mechanisms and management rules applicable to natural or legal persons doing business in precious metals.
- Parkas No. 002 (Ministry of Economic and Finance), issued on 4 January 2013, relates to Implementation of the Advance Ruling on Goods Classification by Customs Tariff, Goods Origin and Customs Rates. It aims to promote trade facilitation and ensure that customs notifications are declared properly.

2014

Bilateral investment treaties

In 2014, Cambodia concluded two bilateral investment agreements, one with the Belarus on 23 April 2014 and the other with Bangladesh on 17 June 2014. On 3 June 2014, Cambodia ratified a protocol to amend the Cambodia–Viet Nam bilateral investment agreement that was signed on 24 June 2012.

Regulations and reforms

A number of reforms and investment facilitation measures to further improve the investment environment are being addressed. They include the following:

(1) Investment Law

The investment law adopted in 1994 is being reviewed to determine the possibility of revising it to accommodate the commitments that Cambodia has made in regional agreements, including to catch up with developments in the region and make Cambodia a more attractive investment destination.

(2) Special economic zones

A law on special economic zones is being drafted. The aim is to make such zones more functional and effective in supporting investment and socioeconomic development in the country, including contributing to Cambodia's participation in new development in the region.

(3) Public-Private Partnership

A subdecree to implement the Law on Concessions is being prepared to involve more private sector participants in economic development through public-private partnerships (PPP).

(4) Industrial Development Policy

Cambodia is finalizing a paper on its Industrial Development Policy (IDP) 2015-2025. This work involves extensive consultations with stakeholders. The thrust of the IDP is to provide a vision, policy framework and implementation arrangements to develop competitive industries in Cambodia, including identifying potential high-growth industries.

Indonesia

2013

Regulations and reforms

The Minister of Forestry amended the Pinjam Pakai regulation with the issuance of Regulation No.14 in April 2013. A new provision on prohibition of borrow and use permits for mining in any areas designated as primary forest or peat land area. Through Presidential Instruction No. 6 of 2013, the moratorium was extended for another two years.

On 8 April 2013, the chairman of the Indonesia Investment Coordinating Board (BKPM) issued Regulation No. 5 of 2013, providing guidelines on and procedures for acquiring investment licences and non-licences. Among the new stipulations are a minimum capital investment and simplified procedures for FDI.

The Ministry of Trade issued Regulation No. 07 on 11 February 2013 for the implementation of franchising, which aims to encourage food and beverage service business franchisors to establish partnerships with small and medium-scale local enterprises.

2014

Reforms to support investment facilitation

Indonesia has introduced a number of measures and reforms to facilitate investment. They include the following:

- (i) Investors can now register for their principal license through an online system.
- (ii) BKPM is continuously improving the online system to enable investors to register other types of business licenses by 2016 that are approved by BKPM.
- (iii) The establishment of a business entity can now be done online, which accelerates the time required from 16 days to only 1 day.
- (iv) Simplification of the issuance of a Permanent Business Trading License (an SIUP) and a Company Registration Certificate (a TDP), has accelerated the time required to only 3 days from 15 days.
- (v) The process of registering workers at the Ministry of Manpower has been simplified, reducing the time required from 14 days to 1 day.
- (vi) It now takes only one day to register workers in the social security program through the online system.
- (vii) The procedures for installation of electricity have been simplified through an online registration system, reducing the time required from 101 days to 15–40 days.

For property registration, the time required has been reduced for the land certificate examination and the transfer of land rights. The land certificate examination can now be done in one day, while the transfer of land rights can be completed in a maximum of five days.

The procedures for construction permits have been simplified, and registration for building construction permits can be done through the online system. The process of getting a water connection has been accelerated to take three days instead of eight. The process of getting a telephone connection can now be completed in two days.

Special economic zones

In 2014, there were five SEZs across the country. They are (i) the Palu SEZ in Central Sulawesi, (ii) the Bitung SEZ in North Sulawesi, (iii) the Morotai SEZ in North Maluku, (iv) the Tanjung Api-api SEZ in South Sumatera, and (v) the Mandalika SEZ in West Nusa Tenggara.

Bilateral investment treaties

In June 2014, Indonesia had signed 67 BITs with Dialogue Partners, of which 59 had been ratified.

Lao People's Democratic Republic

2013

Bilateral investment treaties

On 1 July 2013, the Lao People's Democratic Republic signed a BIT with Belarus that covers investment promotion and protection.

Investment facilitation

On 19 March 2013, the Ministry of Finance issued Notification No. 3086/MoF on tax registration and renewal, in light of the introduction of the one-stop service for investment application.

An Investment Policy Review (IPR) was initiated and targeted to be completed by 2015. The IPR will focus on investment policy, investment promotion and facilitation, policies for promoting responsible business conduct, infrastructure development and other areas such as investment for green growth.

Membership of WTO

The country joined the World Trade Organization on 2 February 2013.

2014

Negotiating further agreements

As of June 2014, the Lao People's Democratic Republic has signed BITs with 28 countries. It is negotiating separate BITs with Canada, Serbia and Pakistan.

Malaysia

2013

Regulations and reforms

A number of regulations and acts were introduced, including the Financial Services Act 2013 and the Islamic Financial Services Act 2013, both enacted on 30 June. An Industrial Designs (Amendment) Regulation was published and came into force on 1 July 2013.

The Financial Services Act 2013 provides for the regulation and supervision of financial institutions, payment systems and other relevant entities and the oversight of the money market and foreign exchange market to promote financial stability. It also provides for related, consequential and incidental matters.

The Islamic Financial Services Act 2013 provides for the regulation of Islamic financial institutions, payment systems and other relevant entities and the oversight of the Islamic money market and Islamic foreign exchange market to promote financial stability and compliance with *Shariah* law and related, consequential and incidental matters.

The Industrial Designs (Amendment) Regulations made a number of changes to the existing regulations. They include the following:

- The information to be entered in the Register for each registered design has been elaborated. Among other things, it now explicitly includes a representation of the design, a statement of novelty, and the particulars of any title or interest affecting the design that have been recorded.
- The official form for recording an assignment or other transfer of ownership has been updated to cover the option of registering a security interest transaction.
- Payment of a renewal fee to extend the term of protection for a registered design may now be made at any time prior to expiry. Previously, renewal was allowed only within a window of six months before expiry of the current five-year period.

On 15 April 2013, PU (A) 139/2013, Promotion of Investments (Criteria for the Grant of Pioneer Status to a Small Company) was issued. It sets out the criteria for granting pioneer status to small companies.

Under the Economic Transformation Programme introduced in 2010, Malaysia continued to undertake in 2013–2014 an ecosystem approach to promoting private investment in both the manufacturing and the services sectors. The selective approach adopted by the Government will be intensified to target niche products, technologies and services and to fill gaps so as to complete value chains. The focus will be on leveraging mega trends to target both products with technological advances and new product applications. In addition to targeting new and re-investment, the Malaysian Investment Development Authority (MIDA) intensified its collaboration with relevant agencies in human capital and talents, infrastructure, utilities and R&D to enhance the investment promotion agenda. Further, investment promotion will be pursued within the context of promoting quality investments, which include projects that use high technology, have high value-added, and are knowledge-intensive or skills-intensive, export oriented, capital-intensive, and design- and R&D-intensive, as well as projects that have will high GNI impact on gross national income and have strong linkages with domestic industries.

A number of investment-related measures were also announced. They included the following:

- The Minimum Retirement Age Act 2012 for the private sector came into effect on 1 July 2013. The age has been raised from 55 to 60 years.
- The Finance Act 2013, issued in January, amended the Income Tax Act 1967, the Stamp Act 1949, the Petroleum (Income Tax) Act 1967 and the Real Property Gains Tax Act 1976.

An IPR was completed in 2013, covering investment policy, investment promotion and facilitation, corporate governance, responsible business conduct, infrastructure and financial sector development, and green growth.

Free trade agreements

The Malaysia-Australia Free Trade Agreement (MAFTA), signed on 30 March 2012, came into force on 1 January 2013.

2014

Liberalization

Malaysia announced a number of measures to liberalize the financial market. They included the following:

- (1) The mandatory requirement for credit ratings will be removed effective 1 January 2017.
- (2) From 1 January 2015, flexibilities will be accorded with regard to credit ratings and the tradability of unrated bonds and *sukuk*.
- (3) The equity shareholding requirements for credit rating agencies will also be liberalized, and international credit rating agencies with full foreign ownership will be allowed in the Malaysian market beginning on 1 January 2017.
- (4) Foreign corporations will be allowed to own 100% of shares in unit trust management companies in Malaysia.

Taxation

The sales tax and services tax will be replaced by a goods and services tax (GST) beginning on 1 April 2015. The GST is a value added tax fixed at the rate of 6%.

Negotiating further agreements

Malaysia is negotiating additional investment-related agreements, including BITs with (i) the European Union and (ii) the European Free Trade Association; and the Trans-Pacific Partnership (TPP) Agreement.

Myanmar

2013

Liberalization and reforms

Further to the introduction of the new Foreign Investment Law on 2 November 2012, Myanmar opened up more industries in the manufacturing sector to investment. It also announced some measures to eliminate investment restrictions in an effort to improve the country's investment environment.

Some of the specific measures introduced or announced in 2013 included the following:

- Foreign companies investing under a permit from the Myanmar Investment Commission can enter lease agreements for durations of 50 years, with the possibility of two 10-year extensions.
- The Myanmar Investment Commission released Notification 1/2013 on 31 January 2013, which relates to requirements, procedures and details on foreign investments. In addition, Notification 11/2013 covers three categories of prohibited or restricted activities, which include investment business only to form joint-venture with citizens and investment business only permitted with the specific conditions for foreigners.
- The Myanmar Citizens Investment Law was adopted on 29 July 2013, and the Foreign Investment Law was adopted in 2012. The Directorate of Investment and

Company Administration is initiating the merging of these two laws into a single comprehensive law that provides a single investment framework, by harmonizing the investment incentives and procedures for national and foreign investors. A wide range of activities are under way to promote investment. They include 100% foreign equity ownership, removal of minimum capital requirements, provision of tax incentives, longer leasing of real estate and vigorous standards for environmental and social protection.

- The laws on SEZs were revised to facilitate reform platforms that can overcome infrastructure bottlenecks, attract FDI and lead to increases in exports.

Bilateral investment treaties

A Trade and Investment Framework Agreement (TIFA) and an Investment Incentive Agreement were signed by the Government of Myanmar and the Government of the United States on 21 May 2013.

Investment facilitation

The Government introduced measures to reduce transaction costs faced by domestic private firms in doing business by reducing burdensome regulations and removing restrictive and unnecessary government controls while improving access to registration and incentives in the same fashion as is being done for foreign investors.

Efforts were introduced to conduct a comprehensive investment climate assessment including promoting private sector development. An Investment Policy Review was completed in 2014, covering policy areas related to foreign investment.

2014

Reforms and regulations

Company registration and other regulatory processes were reformed on 10 September 2012 to further encourage foreign investment. The registration procedure for companies has also been simplified since 22 February 2013, and the validity of the registration period extended from three years to five years.

Investment facilitation

In facilitating investment, the following measures were introduced:

- (i) A one-stop service centre was established in Yangon on 10 April 2013. One-stop service centres in Mandalay and Taunggyi were opened on 7 April 2014 and 18 August 2014, respectively.
- (ii) Important taxation reforms were undertaken. The income tax rate has been reduced to 25% from 30%.
- (iii) The Investment Commission is undergoing a reform process to become an independent board.

Bilateral investment treaties

Myanmar signed two BITs in 2014:

- (i) A Bilateral Investment Liberalization, Promotion and Protection Agreement with Japan in December 2013, which will enter into force on 7 August 2014.
- (ii) A Bilateral Investment Promotion and Protection Agreement with the Republic of Korea on 5 June 2014.

In April 2013, Myanmar became a party to the New York Convention, one of the key instruments in international arbitration.

Negotiating further agreements

Myanmar is negotiating with the European Union on an agreement on investment protection.

Philippines

2013

Reforms and regulations

The Securities and Exchange Commission (SEC) issued Memorandum Circular No.8-2013 on 20 May 2013, setting out the guidelines for determining compliance with the required percentage of Filipino-foreign ownership in corporations engaged in nationalized and partly nationalized activities.

Administrative Order No. 38 was issued to create an inter-agency task force with the responsibility of implementing the country's "Game Plan for Competitiveness." The task force will review and develop policies, programmes and guidelines aimed at improving the ease of doing business in the country.

An IPR was initiated through the Organization for Economic Cooperation and Development (OECD) facility, which focuses on investment policy, promotion and facilitation, and competition policy. It is targeted to be completed in 2015.

The Government also introduced the following investment-related priority bills in its legislative agenda:

- A fiscal incentives bill to rationalize and simplify the grant and administration of fiscal and non-fiscal incentives
- Amendment of the Retail Trade Liberalization Act to enable Filipino and foreign investors to forge efficient and competitive retail trade
- An antitrust/competition policy bill to level the business playing field by strengthening the legal and institutional framework to combat unfair trade practices
- Amendments to the E-Commerce Act of 2000 to facilitate wider readership of government rules and regulations, thus supporting the people's right to information on matters of public concern and at the same time complementing the government's cost-efficiency program
- Amendments to the Standards Law in recognition that standards conformance is now a critical consideration in doing trade globally

Investment facilitation

A number of administrative reforms to facilitate and support investment were made in 2013. They included the following:

- (i) The time required for processing Environmental Certificate Compliance (ECC) has been reduced from 120 days to 40 for environmentally critical projects.
- (ii) The processing time for applications for long-term lease of private lands by foreign investors has been shortened from 20 days to 15.

2014

Liberalization

The Philippines further liberalized the country's investment regime with "An Act Allowing the Full Entry of Foreign Banks in the Philippines, Amending for the Purpose Republic Act No. 7721," signed into law on 15 July 2014. The Act allows full entry of foreign banks in the country, which is in line with the Philippines' preparations for the ASEAN Banking Integration Framework (ABIF). Under the ABIF, the so-called Qualified ASEAN Banks (QABs) can operate within member country jurisdictions on equal terms with domestic banks of that jurisdiction, subject to certain prudential and governance standards.

The 9th Foreign Investment Negative List is being reviewed with a view to possibly opening up some areas for foreign investment.

The Lower House and the Senate have both introduced resolutions to amend certain economic provisions of the Constitution related to foreign equity limitations in certain industries.

Bilateral investment treaties

The Philippines has a total of 37 BITs. On 23 June 2014, the Government signed the "Joint Declaration on Cooperation with the EFTA States (Iceland, The Principality of Liechtenstein, The Kingdom of Norway and the Swiss Confederation)".

Investment promotion

The Philippines conducted an ACIA Forum on 24 January 2014 in Manila, back to back with a workshop for the country's investment promotion agencies (IPAs) to promote greater awareness of the ACIA and investment opportunities in the country and the ASEAN region as a whole.

Singapore

2013

Reforms and regulations

The following measures that enhance the country's investment environment were introduced:

- Effective 1 April 2013, single transfers of property made for value and which are in order for registration will be registered on the day of lodgment at no extra cost. This has shortened the time required for registration of transfers.
- The Singapore Patents Law has shifted the framework from the former “self-assessment” regime to a “positive grant” system which came into force from 14 February 2014.
- The Insurance (Amendment) Act 2013 came into force in April 2013. The Act enhances the powers of the Monetary Authority of Singapore (MAS) to better achieve its supervisory objectives, improve the clarity of its policy intent, align the provisions with other Acts administered by MAS, and update some provisions.
- The Accounting and Corporate Regulatory Authority of Singapore (ACRA) issued Practice Direction No. 1 of 2013. It sets out the requirements for financial reporting by companies and foreign companies. In addition, it provides guidance on how the ACRA will exercise its powers in evaluating applications such as applications for approval to acquire land or applications to drop “Limited” or “Berhad” from the company name.
- On 1 April 2013, the Government accepted recommendations from the IP Steering Committee on the IP Hub Master Plan, which aims to develop Singapore into an IP hub in Asia in 10 years.

Double taxation treaty

Singapore signed a number of agreements for the avoidance of double taxation in 2013, with Barbados, Belarus, the Czech Republic (Protocol Amending Agreement), Ecuador, Liechtenstein, Luxembourg (revised Agreement) and San Marino.

Bilateral investment treaty

In July 2013, Singapore signed an investment guarantee agreement with Colombia.

2014

Reforms and regulations

A comprehensive review of the Companies Act is expected to be completed in 2014. The wide-ranging changes are expected to reduce the regulatory burden as well as compliance costs, provide greater flexibility for companies and improve corporate governance. Proposed amendments include the following:

- Introducing a new “small company” concept for determining the requirement for statutory audit, to reduce compliance costs. An additional 25,000 companies are expected to be exempted from audit.
- Allowing companies to issue non-voting shares and shares carrying multiple votes if their constitutional documents allow it, subject to certain safeguards. This will give companies greater flexibility in raising capital and allow for different investors’ preferences.
- Liberalizing rules for electronic transmission of notices and documents by companies to reduce costs and increase efficiency.

Bilateral investment treaties and double taxation treaties

Singapore had over 40 BITs in force as of July 2014. A BIT with Burkina Faso was concluded in April 2014.

Singapore also had concluded bilateral agreements for the avoidance of double taxation with more than 70 countries.

Investment facilitation

In further improving the business environment, the Singapore Land Authority (SLA) in June 2013, implemented the “Paperless Title” scheme whereby title for properties mortgaged to participating financial institutions will not be printed upon registration of mortgages in their favour.

Negotiating further agreements

Singapore is negotiating with the European Union on an investment chapter in the EU-Singapore FTA. Singapore is also engaged in a bilateral FTA negotiation with Turkey as well as regional FTA negotiations, including the Trans-Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership.

Thailand

2013

Reforms and regulations

The Government announced investment-related measures such as Board of Investment (BOI) No. 4/2556, on 28 February 2013, on extension of granting land ownership to foreign juristic persons receiving investment promotion for the establishment of offices and residences. Other measures were issued to update prior announcements, such as BOI No. Por. 3/2556 on Procedures for Granting Rights and Benefits for the Exemption of Import Duties on the Raw and Essential Materials Imported for Use in Producing Products for Export. This Announcement clarified details for a better understanding of the improved procedures. BOI Announcement No. 1/2556 on Investment Promotion for Sustainable Development was issued in 2013 to enhance domestic industrial growth and upgrade to a more knowledge-based industry that uses higher technology.

Incentives

The BOI granted a tax incentive for sustainable development projects during the period 2010–2012, particularly in energy conservation and alternative energy, eco-friendly materials and products, environmental problem solving, high-technology business and technology upgrades that improve the efficiency of manufacturing new products.

Minimum wages

The increase in the national minimum wage to B300 a day came into effect on 1 January 2013.

Taxation

Corporate income tax was reduced to 23% for 2012 and to 20% in 2013.

2014

Reforms and regulations

The BOI is in the process of reviewing its investment policy. Under the new policy draft, the BOI plans to shift its investment promotion focus to 10 target industries:

- Infrastructure and logistics
- Primary industries
- Medical and scientific equipment
- Renewable energy and environmental services
- Business support services
- Advanced core technologies
- Food and agricultural processing
- Hospitality and wellness
- Automotive and other transport equipment
- Electronics and appliances

Outward FDI facilities

A Thailand Overseas Investment Centre has been established in the BOI to assist Thai nationals in investing abroad.

Investment facilitation

The One Start One Stop Investment Centre (OSOS) has launched a website to facilitate investment in Thailand. The website, osos.boi.go.th, gives new investors a clear overview on how to start a business in the country. In addition, the BOI offers several paperless transactions to facilitate investment, including the Electronic Machine Tracking System (eMT Online), the E-Expert System for foreign skill workers and an online application for BOI investment promotion.

Taxation

The planned increase in the value added tax rate from 7% to 10% in 2014 was postponed to stimulate domestic consumption and investment, which are essential for the recovery of the country's economy. The Government reduced the corporate income tax from 30% to 23% in 2012 and to 20% in 2013. The rate will remain at 20% in the upcoming year to continue improving Thailand's competitiveness.

Negotiating further agreements

Thailand is negotiating separate FTAs with Canada, the European Union and India.

Viet Nam

2013

Reforms and regulations

Initiatives have been undertaken in 2013 to amend the country's PPP programme by expanding the sector coverage. Proposed new sectors include agriculture, offices, culture and construction.

The Ministry of Industry and Trade issued Circular No.08/2013/TT-BCT on 22 April 2013. It provides detailed information regarding trading of goods by foreign-invested enterprises in Viet Nam.

In May 2013, Circular No. 08/2013/TT-BCT was issued, stipulating that foreign-invested enterprises that are licensed to export products may buy materials only from Vietnamese businesses that have licenses to import products and distribute goods.

A second IPR was initiated in August 2013. It will cover investment policy, investment promotion and facilitation, responsible business conduct, infrastructure development and corporate governance.

The Government introduced a number of investment-related measures, which include the following:

- A new Labour Code No: 10/2012/QH13, which came into effect on 1 May 2013. The Code governs human resources outsourcing services, industrial labour collective agreements and housemaids employment.
- Amendment of the corporate tax law, which reduced the general tax from 25% to 23% and the tax for small and medium enterprises from 23 to 20%.

Incentives

In promoting foreign investment to Da Nang Hi-Tech Park, the newest among three high technology zones in Viet Nam, the Government offers incentives that include in particular tax exemption.

2014

Reforms and regulations

The Government is finalizing amendments to the Investment Law and the Enterprise Law for submission to the National Assembly. A decree promoting private sector investment in public-private partnerships (PPP) is being drafted and expected to be issued later in 2014.

Bilateral investment treaty

An agreement on the promotion and protection of investment with Turkey was signed on 15 January 2014.

Negotiating further agreements

Viet Nam is negotiating a number of agreements, which include the following:

- (1) the TPP
- (2) separate FTAs with
 - (i) the European Union
 - (ii) the Republic of Korea
 - (iii) the Customs Union involving the Russian Federation, Belarus and Kazakhstan
 - (iv) the free-trade Union Europe (Switzerland, Ireland and Liechtenstein)

Notes

¹ Through July 2014.

² See annex table 2.1 for selected investment measures introduced and announced in 2012 by each of the ASEAN Member States.

³ “What is the ASEAN Single Window?” ASEAN Secretariat, accessed 30 July 2014 at asw.asean.org.

CHAPTER 3

SPECIAL ISSUES

SALIENT FEATURES AND TRENDS IN FDI FROM MAJOR DIALOGUE COUNTRIES: THE CASES OF CHINA AND JAPAN

3.1 Introduction

This chapter offers analyses of the salient features of FDI from two of the Dialogue Partners of ASEAN, namely China and Japan. Other Dialogue Partners that are also major sources will be taken up in future reports.

Japan has long been a major investor in ASEAN, while FDI from China has become more prominent since the commencement of the ASEAN-China FTA in 2010. Investment from the two countries displays different characteristics, patterns and trends. Chinese investment and companies are dominant in infrastructure and extractive activities. Japanese companies – along with those from the United States and other developed countries – were among the earliest to pursue regional production networks using a combination of strategies involving FDI, contract manufacturing, and other contractual forms. Although China has become a major investor in a few ASEAN Member States, Japan remains a leading investor for the group as a whole, maintaining multiple manufacturing operation facilities because of its longer association with ASEAN.

In recent years, Japanese companies have been actively expanding in ASEAN Member States – adding new product categories and establishing additional subsidiaries and business functions, including increasing production capacities and factories for existing product categories. Chinese manufacturing companies, particularly in the garment and shoe industries, are beginning to invest noticeably in ASEAN Member States with lower labour costs.

3.2 Chinese FDI and TNC operations in ASEAN

Since the commencement of the ASEAN-China FTA (ACFTA) in 2010, Chinese companies have been building a stronger presence in a wider range of industries. Chinese FDI flows into ASEAN grew rapidly since 2005, with a more significant rise in recent years. Government support plays a key role in facilitating Chinese companies' involvement in the region.

Chinese companies are major players and significant financiers in infrastructure projects and mining activities. Their commitments to infrastructure projects in ASEAN in 2013–2017 alone were at least \$50 billion, or an average of \$10 billion annually. As a comparison,

annual average Chinese FDI flows to all sectors in 2011–2013 was only \$6 billion and Chinese outward FDI stock in ASEAN in 2012 was \$28 billion (WIR 2014). This development underscores the preference of Chinese companies for non-equity modalities in ASEAN, especially in the infrastructure sector. FDI data alone do not adequately capture the full scale of Chinese investment in the ASEAN Member States.

3.2.1 The significance of ASEAN to Chinese investments

The significance of ASEAN as an investment destination for Chinese companies continued to grow. China has continued to be a major investor in ASEAN in recent years and a leading investor in the CLMV countries. It is now the fifth largest investor in the region (chapter 1). In 2013, Chinese companies invested \$8.6 billion in ASEAN (table 3.1).

Table 3.1. Chinese FDI flows in ASEAN are dominated by finance, real estates and services, 2010–2013
(Millions of dollars)

Industry	2010	2011	2012	2013	Average 2010–2013
Agriculture, fishery and forestry	45.0	55.4	58.7	88.2	61.8
Mining and quarrying	352.1	172.6	285.6	558.1	342.1
Manufacturing	84.9	393.5	342.5	1 140.2	490.3
Construction	- 21.4	128.0	108.1	21.6	59.1
Trade/commerce	76.4	877.7	594.5	2 711.8	1 065.1
Finance	1 106.6	3 704.0	602.6	1 143.9	1 639.3
Real estates	759.2	1 678.5	1 903.1	1 522.7	1 465.9
Services	100.5	- 205.1	990.7	576.5	365.7
Others (not elsewhere classified)	29.0	107.8	10.4	87.8	58.7
Unspecified	1 521.1	944.0	480.5	792.6	934.6
	4 053.4	7 856.3	5 376.8	8 643.5	6 482.5

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Chinese investment in ASEAN has grown rapidly since 2006, to \$28 billion in FDI stock in 2012, compared with only \$0.6 billion in 2003. In 2003, only 4% of global outward flows from China went to ASEAN, but by 2012 that share had grown to about 7%. ASEAN's share of Chinese global outward FDI stock rose from 1.8% in 2003 to 5.3% in 2012, indicating the growing interest and presence of Chinese investment. These figures also show the growing significance of ASEAN as an investment destination for Chinese companies.

The high level of Chinese outward FDI to ASEAN is driven by a number of factors. They include the continuing push of Chinese firms to internationalize, the influence of the ASEAN-China FTA, the support of the Chinese government, geocultural proximity and affinity, and the improving investment environment and opportunities in ASEAN (AIR, 2013). Access to financing facilities and the support of Chinese banks are important.

The drive to access natural resources and the competitiveness of Chinese companies, especially in construction and infrastructure, are encouraging more Chinese enterprises

to invest in resource-rich ASEAN Member States, including developing landmark infrastructure projects (Annex table 3.1).

Chinese companies are operating in ASEAN not just as direct investors, but also as contractors and subcontractors to other Chinese construction and infrastructure companies. Some of these contractors also work on infrastructure projects, won through bidding, of non-Chinese companies. This suggests the growing competitiveness of Chinese contractors, including their cost advantage over firms from other countries. Chinese companies are also active in agriculture and plantation activities, particularly in the CLMV countries and Indonesia.

3.2.2 Chinese investments in infrastructure, real estate, finance and extractive industries

Chinese investment continued to be concentrated in infrastructure, real estate, finance and extractive industries. When concessionary projects are taken into account, their investments in extractive industries remained strong. Some of the mega infrastructure projects that Chinese companies have been investing in and building include the Second Penang Bridge in Malaysia; hydropower projects and dams in the Lao People's Democratic Republic; large mining operations in Myanmar; ports and rail infrastructure in Cambodia; and industrial estates, bridges and rail in Indonesia. Chinese companies are building power plants in the Philippines and will be involved in the construction of two high-speed railway links in Thailand. These links will be part of the Kunming–Singapore line.

Between 2013 and 2017, more than \$50 billion worth – an annual average of \$10 billion – in infrastructure projects in ASEAN were associated with Chinese companies (Annex table 3.1). In perspective, this is 1.5 times more than the Chinese outward FDI stock in all industries in ASEAN in 2012, or 1.6 times the annual average Chinese FDI inflows in all industries in ASEAN between 2011 and 2013.

Chinese companies are building a 400-kilometer rail line, a steel plant and a seaport in *Cambodia*, to be completed by 2017. These projects are estimated to be worth a combined \$11.2 billion.¹ The China Railway Group is developing the railway line, while Sinomach's subsidiary China Ocean Engineering Construction is involved with building the port component. Another Sinomach subsidiary (China Perfect Machinery Industry) and Cambodian Petrochemical are jointly building a \$2.3 billion oil refinery, to be completed by 2015 (annex table 3.1). With financing facilities provided by the Chinese EXIM Bank, China National Heavy Machinery Company is involved in building the Tatay River Hydropower Dam, which is worth \$540 million, and China Huadian Corporation is building the Lower Stung Russei Chrum Hydropower Station, estimated to cost \$580 million. Cambodia plans to build 10 dams between 2010 and 2019, and 6 involve financing from Chinese banks. Chinese companies are also building other infrastructure such as power plants, electricity transmission lines and bridges.

In *Indonesia*, many Chinese companies are involved in the construction of power plants, ports, road and rail infrastructure including the mining of minerals through various projects

started in 2012–2013. Chinese investors are developing a China–Indonesia Industrial Investment and Cooperation Zone, and the China Railway Construction Corporation is involved in developing a 30-kilometer section of the Sunda Strait Bridge and other railway projects in the country.² Sinopec is building an oil storage terminal in the Batam Free Trade Zone that is estimated to cost about \$850 million. China Power Investment and Anhui Conch Cement are involved with a \$17 billion hydropower project in North Kalimantan that is to be completed by 2021. Other Chinese companies such as China Railway Group, China Honggiao Group and China Communications Construction Group are involved with transport, power, communication and mining projects in Indonesia. Sinohydro is involved in dam construction; Gezhauba Group and China Power International are building coal and hydropower plants; and Shanghai Construction and China Harbour Engineering are building toll roads in the host country. In recent years, other companies such as China Huadian, Dongfang Electric and Sinohydro have built coal-fired power stations and hydro plants,³ while China Power International and China International Corporation have maintained operations in coal mines in various parts of Indonesia.

Chinese companies are involved with hydropower, roads and railway projects in the *Lao People's Democratic Republic*. These companies include Sinohydro Group. China and the Lao government are jointly developing a 420-kilometer railway linking the country with Kunming in Yunnan province.⁴ China Three Gorges Corporation and China International Water and Electric Corporation are involved in the Nam Ngiep 1 Hydropower project, which is to be completed by 2019 with an estimated cost of \$868 million. China National Electric Engineering Company is building the Laos Hongsa Coal-Fired Power Plant, estimated to cost some \$1.68 billion. Four of 10 SEZs in the country were built with Chinese investment or financing:⁵

- (i) The Boten Beautiful Land SEZ built by Yunnan Hai Cheng Industrial Group with an investment amount of \$500 million
- (ii) The Saysetha Development Zone, a joint venture between a Chinese company, the Lao government and a local Laotian investor involving \$128 million
- (iii) The Golden Triangle SEZ, through a joint venture of \$86.6 million between a Chinese company and the Lao government. In August 2013, a group of Chinese companies opened a complex worth \$80 million in this SEZ.⁶
- (iv) The Thatluang Lake SEZ, by a Chinese developer, involving \$1.6 billion.

China Minmetals is mining at the Sepon Mine in a project estimated to cost \$1.39 billion.

In *Myanmar*, Chinese companies have been involved with various infrastructure projects such as railways, ports, dams, oil and gas pipelines, hydropower projects and mining. For instance, China National Petroleum Corporation participated in the construction of the Sino-Burma Oil and Gas Pipeline, Sinohydro in the Hatgyi Dam in Karen state and China Power Investment in Chibwenge Hydropower Plant in Kachin state. Other Chinese companies such as China Non-ferrous Metal Mining Group, Datang Corporation, Huaneng Group, China Three Gorges Corporation, Wanbao Mining Company, Norinco and China Railway Engineering are present in Myanmar.

Chinese companies have been involved with various large-scale infrastructure projects in *Malaysia* for some time. In recent years, companies such as China Communications and Construction Company and China Harbour Engineering, together with local partners, have constructed the Penang Second Bridge, which was opened in March 2014⁷ with an estimated cost of \$1.5 billion. Beijing Urban Construction Group, together with local partners, is involved in various road and tunnel projects in Penang, estimated to cost some \$2.6 billion. China Three Gorges Corporation and Sinohydro continue to participate in various hydropower projects, while companies such as Shougang Group and Prosperity Minerals are involved with steel plant projects. Other companies, such as ZTE and Huawei, have been involved with the development of telecommunication infrastructure in Malaysia. A Chinese company, Guangxi Beibu Gulf International Port Group, is building infrastructure projects including an industrial park and an expansion of the port in the state of Kuantan.

Finance attracts a considerable share of Chinese FDI inflows in ASEAN. In 2010–2013, Chinese companies invested some \$1.6 billion annually in finance activities in ASEAN. Finance is the biggest investment sector for Chinese investment and occurs primarily through the injection of new capital rather than through the M&A route and has contributed to the growing presence of Chinese finance companies and banks in ASEAN. The major Chinese banks, such as the Bank of China, EXIM Bank, the China Construction Bank and Industrial and Commercial Bank of China, all have a presence in two or more ASEAN Member States.

Chinese companies are active in real estate investment. During 2010–2013, Chinese companies invested \$1.5 billion annually in this industry, more than 25% of inflows from China during this period. Chinese real estate companies such as China Vanke, Reignwood Group and China Huaneng made acquisitions of companies in ASEAN in 2013–2014.

3.2.3 Chinese investments in manufacturing is rising

It is not just the big Chinese companies and infrastructure TNCs that are operating in ASEAN; smaller and less-known Chinese companies are also investing in the region, especially in manufacturing. Although Chinese manufacturing FDI in ASEAN is relatively small, it has risen by 4.4 times in recent years – from an annual average of \$87 million between 2006 and 2009 to \$490 million between 2010 and 2013. Most of it is concentrated in the CLMV countries, driven primarily by cost and attracted by the increasing attention given by international garment buyers to sourcing from these countries.

Even without including the latest data on Chinese manufacturing FDI in the Lao People's Democratic Republic and Myanmar, these two countries received 78% of Chinese manufacturing FDI in ASEAN between 2010 and 2013. This FDI is concentrated in textiles and garments, and in some light manufacturing activities such as production of parts and components for the automotive and electronics industries.

More Chinese garment companies are setting up operations in neighbouring ASEAN Member States that have a cost advantage. Chinese garment companies and foreign companies based in China are establishing operations in ASEAN Member States such as Cambodia, Myanmar and Viet Nam because of costs and the need to maintain competitiveness in an industry where buyers continue to squeeze margins. Many operate in the industry as contract manufacturers for influential buyers such as Li and Fung and branded companies such as Nike, H&M, Adidas, Primark, and Marks and Spencer.

Rising labour costs in China continue to push more garment companies to relocate to lower-cost neighbouring countries (chapter 1). The average monthly pay for garment workers in Cambodia and Viet Nam is about half the amount in China (table 3.2). In Myanmar, however, the garment labour cost is only a quarter of that in China. These significant wage differentials are helping these ASEAN Member States attract greater volumes of garment FDI, which is labour intensive and cost sensitive.

Table 3.2. Significant labour wage differences between Cambodia, Myanmar, Viet Nam and China in the garment industry, 2013
(Dollars)

	Cambodia	Myanmar	Viet Nam	China
Minimum monthly wage	100	32	97	180
Average monthly pay	125	64	130	240

Source: "Opportunities and challenges for the garment industry in Myanmar", Yarn and Fibers, 6 May 2013 (www.yarnsandfibers.com/preferredsupplier/reports_fullstory.php?id=664).

In 2012, an estimated 85 factories opened in Cambodia, one-third of them owned by Chinese companies (Becker 2013). Statistics from the Cambodian Investment Board suggests that about 83 Chinese projects in the garment, shoes and related industries were approved in 2013, compared with 72 in 2012. Between January and April 2014, more than 30 such projects were approved.

Many Chinese garment companies have recently opened factories in Cambodia. They include Cambo Yingfeng, Cambo Yan Xing Industry, Chang Sheng Garment, Chia Ho Garment Industrial, Golden Hing Garment, Morning Glory Garment Enterprise, Orient International Enterprise, Shanghai CH Garment and Solamoda Garment.⁸ In Myanmar these companies include Dong Fang Star Garment, Donglong Feather Manufacture Company, Home Shin Cold Storage Factory, Jiangsu Solamoda Garments Group, Pearl Garment Factory and SDI Manufacturing.⁹

The primary motivations for these investments include access to lower-cost labour and maintenance of competitiveness in order to serve export clients. Most Chinese garment investments in these countries are export oriented. In some cases, Chinese companies were motivated to invest in these countries to tap the host country's preferential access

to the European Union and United States markets (Zhao 2013). In addition, some Chinese garment companies are investing in Viet Nam, not just for cost reasons but also to *potentially* benefit from the 0% tariff for exports to other Trans-Pacific Partnership countries.

Chinese manufacturing companies are planning to expand in ASEAN. For instance, companies such as Dunan Metals, Oil Steel Tube, Holley International Electric, Sangbo Electronics and Sino Siam Biotechnique received approval in 2013 for expansion of their operations in Thailand. Other companies such as Fast Auto Drive, Yaokun Machinery, DCL Mold and Auto Parts, and Hudson Manufacture also received approval for investment in the host countries. Hengyi Industries signed an agreement in Brunei Darussalam to operate an integrated oil refinery and aromatics cracker facility in January 2014. Investment for Phase 1 of the project is estimated at \$4 billion.

3.2.4 Chinese companies' modes of entry

Chinese companies continued to strengthen their presence in ASEAN through new investments, including through non-equity modalities. More Chinese investment and companies entered ASEAN in 2013.

Looking at FDI numbers alone can give a misleading picture of the full extent of Chinese companies' operations in ASEAN. Chinese companies invest more often through greenfield and non-equity modes of operations than through M&As. This partly reflects the industries in which Chinese investors currently participate, such as infrastructure, real estate and extractive industries. Many companies are participating in the development and construction of infrastructure projects through non-equity forms and operating through contractual arrangements (annex table 3.1).

Chinese M&A purchases in ASEAN in 2010–2013 were relatively small compared with those of other investors, such as Japan and other ASEAN Member States. Chinese M&A purchases in this period were primarily in services (e.g. finance and business services) (table 3.3). Investment opportunities and the need for a quick start-up explain the choice to enter the market through M&As in the services industry. The need to be present in key market locations favours M&As as a route of entry (WIR 2004). In finance, access to networks, a ready customer base and local management knowledge are important factors in the M&A decision.

Chinese M&A activities in manufacturing were concentrated in textiles and garments, electronics, food and beverages, plastic and plastic products in 2011–2013. M&A activities in mining and services were also significant. For instance, Sinopec bought a stake in Chevron Corporation in Indonesia for \$680 million, and CDH China Holding acquired Sinomem Technology in Singapore for \$122 million in 2011. In 2012, China Architecture design acquired CPG Corporation in Singapore (a unit of Downer EDI of Australia) for \$146 million. China Vanke acquired a stake in Sherwood Development (a unit of Keppel Corporation) in Singapore for \$110 million in 2013 (table 3.4).

Table 3.3. M&A purchases by Chinese companies in ASEAN, 2010–2013

(Millions of dollars)

	2010		2011		2012		2013	
	Value	Major M&A activities	Value	Major M&A activities	Value	Major M&A activities	Value	Major M&A activities
Total in ASEAN	1 014	Finance, Transportation services, Textiles and garments	1 150	Mining, Transport equipment mfg, Business services	222	Business services, Trade, Electronics, Food and beverages	186	Business services, Finance
Indonesia	..	..	680	Mining	..	..	7	Rubber and plastics products
Malaysia	..	..	94	Transport equipment	..	..	38	Not classified
Singapore	461	Transport & storage; Finance	373	Food and beverages; Electronics; Machinery equipment; Construction	213	Food and beverages; Electronics; Business services	141	Finance; Business services
Thailand	539	Finance	3	Finance	9	Rubber and plastics products; Electronics	..	..
Viet Nam	14	Textiles and garments	..	..	..	..	..	..

Source: UNCTAD, M&A database.

3.2.5 Drivers and determinants

Chinese companies are aggressively investing abroad for various economic and strategic reasons, driven by motives to access natural resources, markets, technology, brand names and strategic assets (UNCTAD 2007, Milelli and Sindzingre 2013).¹⁰ Their growing financial strength, appetite for internationalization and policy support of the Government are further factors encouraging Chinese firms to venture overseas (Clegg and Voss 2012; Bernasconi-Osterwalder et. al. 2013). Chinese companies are investing in ASEAN for various reasons, which include market-seeking, efficiency-seeking and resource-seeking motives. As noted earlier, cost considerations have become an important motivation for Chinese garment manufacturers to invest abroad, particularly in lower-cost ASEAN Member States.

The ASEAN-China FTA (ACFTA) plays a role in motivating Chinese investments into the region because of the integration benefits it offers. These benefits include a combined market size of about 2 billion people, encompassing a group of some of the fastest-growing economies in the world. For Chinese companies, this means access to ASEAN’s population of over 625 million and its fast-growing middle-income group.

Under the ACFTA arrangement, finished and intermediate goods can flow easily between the countries, with more than 90% of the tariff lines planned to have a 0% rate by 2015 (table 3.5). In most ASEAN Member States and in China, most tariff lines are already at

Table 3.4. Chinese acquisitions in ASEAN in selected industry, 2013–2014¹
(Millions of dollars; per cent)

Year	Ultimate acquiring company	Target company	Target nation	Target industry	Value	Shares acquired
2013	China Vanke Co Ltd.	Sherwood Development Pte Ltd.	Singapore	Real estate development	110	30
2013	Xiamen Comfort Science & Tech	Ogawa World Bhd	Malaysia	Electromedical and electrotherapeutic apparatus	38	100
2013	China Oil HBP Science & Tech Co	Dart Energy (FLG) Pte Ltd.	Singapore	Investors, nec	21	100
2013	Sinochem Group	Bumi Jaya PT	Indonesia	Fabricated rubber prod, nec	7	44
2013	Beijing Tread Outdoor Product	Asiatravel.com Holdings Ltd.	Singapore	Travel agencies	6	13.63
2013	CNPC	HQSM Engineering Pte Ltd.	Singapore	Engineering services	4	30
2013	Chen Jincai	Hung Long Mineral & Building Material JSC	Viet Nam	Clay refractories	..	5.01
2013	Reignwood Group	Sardinia Properties Pte Ltd.	Singapore	Real estate development	..	100
2013	Qingdao Evercontaining Elec Co	PT Kutai Nyala Resources	Indonesia	Marine cargo handling	..	76
2013	Longcheer Holdings Ltd.	Longcheer Technology (Singapore) Pte Ltd.	Singapore	Radiotelephone communications	..	15
2014	Auhua Clean Energy plc	Ziolar Pte Ltd.	Singapore	Heating equipment	158	100
2014	Beijing Sanghua Envi Tech Dvlp	Sound Global Ltd.	Singapore	Air and water resource and solid waste management	13	1.55
2014	China Huaneng Group	Cambodia Se San River II Hydropower Co Ltd.	Cambodia	Single-family housing construction	..	51
2014	Asia Fashion Holdings Ltd.	Rich Circles Enterprise Ltd.	Singapore	Investment	..	49

Source: UNCTAD, M&A database.

Note: 1st half of 2014.

that rate, allowing Chinese companies to operate in ASEAN and export to China as if they are operating, to an extent, in a single country. Where is a significant cost differential between operating in China and ASEAN, as in garment industry, it makes economic sense for Chinese companies to set up operations in and export from lower-cost ASEAN Member States. The ACFTA helps Chinese firms lower cost of operations and influences efficiency-seeking FDI in ASEAN.

The ACFTA provides Chinese companies with opportunities to invest in ASEAN's rich resources sector, in particular in the extractive and agriculture industries. Chinese infrastructure companies are already investing in and winning contracts in ASEAN because of their proprietary advantages and competitiveness, and the ACFTA will increase their opportunities in ASEAN's infrastructure development.

3.2.6 Support of the Chinese Government and banks

The support of the Chinese Government and banks is a paramount influence in the expansion of Chinese investments. The financing facilities Chinese banks provide are an important explanatory factor for the ongoing rise in Chinese investment in ASEAN.

The role of Chinese banks such as the China Development Bank and the EXIM Bank of China in providing financing facilities to Chinese companies that are undertaking

Table 3.5. ASEAN-China FTA tariff profile, 2012 and 2015

Country	Year	Σ Tariff Lines (HS 2007)	0%		>0% & ≤5%	
			Σ Tariff Lines	Per cent	Σ Tariff Lines	Per cent
ASEAN-7						
Brunei Darussalam	2012	8 313	8 089	97.31%	88	1.06%
	2015	8 313	8 089	97.31%	90	1.08%
Indonesia	2012	8 738	7 778	89.01%	150	1.72%
	2015	8 738	7 778	89.01%	150	1.72%
Malaysia	2012	10 334	9 678	93.65%	56	0.54%
	2015	10 334	9 678	93.65%	56	0.54%
Philippines (Incl GE 41 tariff lines)	2012	7 847	6 654	66.00%	240	3.06%
	2015	7 847	6 656	84.82%	258	3.29%
Thailand	2012	8 214	7 403	90.13%	27	0.33%
	2015	8 214	7 403	90.13%	27	0.33%
Viet Nam	2012	9 131	3 120	34.17%	2'448	26.81%
	2015	9 131	7 582	83.04%	659	7.22%
CLM						
Cambodia	2011	6 679	358	5.36%	5'108	76.48%
	2015	6 679	6 285	94.10%	394	5.90%
Lao PDR	2012	10 584	404	3.82%	8'396	79.33%
	2015	10 584	10 073	95.17%	248	2.34%
Myanmar	2012	8 627	835	9.68%	7'088	82.16%
	2015	8 627	7 596	88.05%	642	7.44%
China						
Brunei	2012	6 840	6 837	99.96%	-	0.00%
Cambodia	2012	6 769	6 769	100.00%	-	0.00%
Indonesia	2012	6 837	6 837	100.00%	-	0.00%
Lao PDR	2012	6 773	6 773	100.00%	-	0.00%
Malaysia	2012	6 837	6 837	100.00%	-	0.00%
Myanmar	2012	6 837	6 837	100.00%	-	0.00%
Philippines	2012	6 840	6 837	99.96%	-	0.00%
Singapore	2012	6 840	6 837	99.96%	-	0.00%
Thailand	2012	6 837	6 837	100.00%	-	0.00%
Viet Nam	2012	6 837	6 837	100.00%	-	0.00%

Source: ASEAN Secretariat.

Notes: The table is based on HS 2007. Number of tariff lines would include all tariff lines which has tariff rates. For Indonesia, tariff for vehicles is included in the special rate.

investment projects in ASEAN is particularly important. For instance, the EXIM Bank had provided credit support to 46 transport infrastructure projects in ASEAN Member States by early 2014.¹¹ They involved construction, refurbishment and renovation of 24 highways, three railways, one port, three airports and nine bridges. The financing arrangement has supported the development of 2,173 kilometers of railways in Cambodia, the Second Penang Bridge in Malaysia, and the Luang Prabang Airport in the Lao People's Democratic Republic.

The Chinese Government has been encouraging Chinese enterprises to internationalize, including through investment in ASEAN. It has instituted specific facilities to support Chinese investment, such as the China-ASEAN Investment Cooperation Fund (box 3.1), the ASEAN-China Centre, the ASEAN-China Business Council and the ACFTA portal.

At the 16th ASEAN-China Summit on 9 October 2013, ASEAN welcomed China's initiative to set up an *Asian Infrastructure Investment Bank* to provide financial support to regional infrastructure projects, with priority given to ASEAN connectivity. China has started work to establish the bank, which would have an initial capitalization of \$50 billion.¹²

Box 3.1. China-ASEAN Investment Cooperation Fund plays an important role in supporting Chinese investments in ASEAN

The China-ASEAN Investment Cooperation Fund (CAF) was established by the Government of China and announced in 2009. It is one of the largest Chinese equity funds led by the EXIM Bank of China, which focuses on investment opportunities in ASEAN.

The CAF covers investment in infrastructure such as power, transport, telecommunications, water and wastewater, oil and gas pipelines, and social infrastructure projects. It also includes financing consideration for projects in natural resources such as ferrous and non-ferrous metals, precious metals (e.g. gold, platinum, palladium and silver), and plantation activities such as in palm oil, pulp and rubber.^a

The CAF provides capital support to Chinese companies with projects in ASEAN or finance projects in target sectors in ASEAN. The current size of the fund is \$1 billion, and the plan is to grow it to \$10 billion.^b Box table 3.1.1 provides a selected list of projects in ASEAN that were funded or granted a loan facility under the Fund.

Box table 3.1.1. Selected projects in ASEAN funded or supported by CAF

Projects	Host country	Chinese company	Company in ASEAN country	Date	Remarks
Development of a ferro-nickel smelter	Indonesia	Shanghai Decent Investment Group Co. Ltd	PT Bintang Delapan Investama	October 2013	Company is part of the Tsinghan Group, the world's largest ferro-nickel producer and the second largest stainless steel producer in China
Biomass power generator	Thailand	..	National Power Supply (NPS) Public Co Ltd	September 2013	Equity interest
Iron ore mine	Malaysia	Prosperity International Holdings (HK)	..	2012 (exited this project in 2014)	..
Smart TV project	Cambodia	Shenzhen Coship Electronics Co Ltd	..	..	Coinvestment in the project involving Cambodian and Chinese companies
Potash Mine	Lao People's Democratic Republic	Asia Potash Group Co Ltd	..	November 2011	Coinvestment to finance the project
Laemchabang Port	Thailand	..	..	..	Equity investment into development of the port
Fiber Optic Network	Cambodia	..	Cambodia Fiber Optic Communication Network Co	July 2011	Financing the fiberoptic network development project

Source: China-ASEAN Investment Cooperation Fund (www.china-asean-fund.com/).

^a See www.china-asean-fund.com/investment.php?slider1=2.

^b See www.china-asean-fund.com.

3.3 Japanese FDI and TNCs' operations in ASEAN

3.3.1 Introduction

Japan has been a major investor in ASEAN, and ASEAN has similarly been a major recipient for Japanese FDI for several decades. This symbiotic relationship in investment and production between the two has grown more significant in recent years, which have witnessed an increasing number of Japanese companies expanding to and within ASEAN Member States. These companies are expanding their production capacity, building new factories, adding new production lines and subsidiaries, producing new product categories and establishing new business functions on top of existing ones. Their sentiment towards investing and expanding in ASEAN has been particularly strong since 2012 for a number of strategic reasons.

Faced with the need to strengthen cost competitiveness, achieve production efficiency and diversify risks, corporate Japan has been giving greater attention to investing and operating in ASEAN. A new wave of Japanese FDI is taking shape, characterized by significant growth in expansion activities and a greater regional production network involving more firms, more ASEAN Member States and product categories. The prospect for further increases in Japanese investment in the next few years is promising, according to the findings of a number of major studies by Japanese organizations (METI 2013, JBIC 2013, Japan Management Association 2013 and JETRO 2013).

Japanese companies are active in using regional production networks that reflect their corporate strategy, complemented by the locational strengths of different ASEAN Member States. The ongoing process of regional integration towards realizing the AEC has attracted more Japanese corporate interest and investment. Some of these investments have been made to strengthen regional production networks for different product categories and because of increasing Japanese industrial activities in ASEAN.

Japanese companies have been quick to use regional arrangements such as the ASEAN Industrial Cooperation (AICO) scheme to enhance their production networks in line with their strategies to achieve production efficiency (AIR, 2013). For example, automotive and electronics parts and components are produced by Japanese TNCs in different ASEAN Member States and exchanged between participating affiliates in those countries.

Although the lion's share of Japanese FDI in ASEAN goes to manufacturing, investment in services and finance is large in absolute terms and growing. Japanese companies are also active players in infrastructure development, such as in industrial estates, economic zones and power projects. Japanese finance TNCs and retail companies have been particularly active recently in expanding their presence in ASEAN.

3.3.2 Japanese investments in ASEAN

Japan has been a major investor in ASEAN since the 1960s, and ASEAN continues to be a major destination for Japanese FDI flows. More than 38% of FDI flows in ASEAN in 2012–2013 were from Japan, making Japan the largest investor in

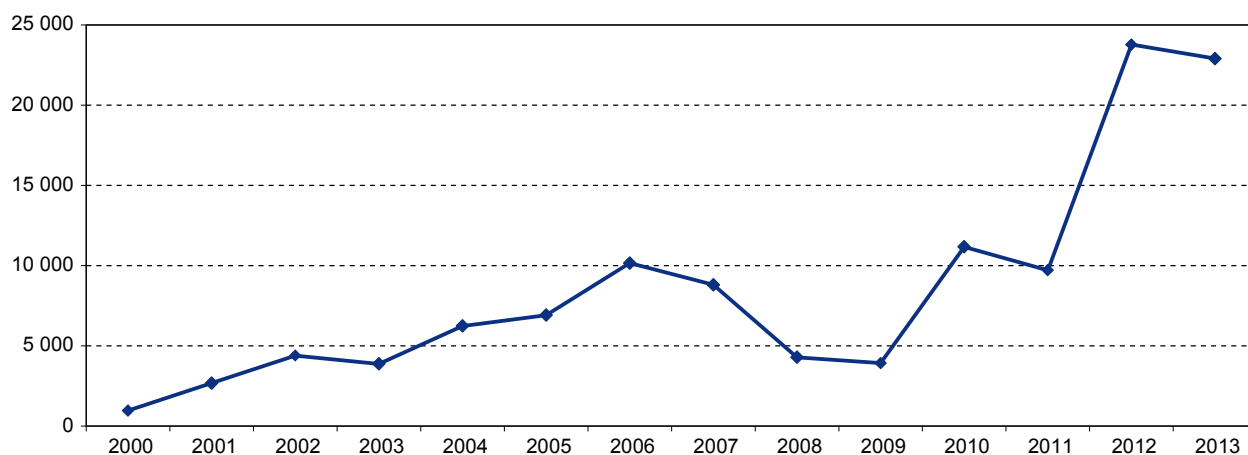
the region (chapter 1). Japanese TNCs are the largest foreign investors in manufacturing activities in ASEAN, contributing some 46% of the \$58 billion investment in that sector in the last two years (table 1.3).

Japanese investment in ASEAN has been rising, with a sharp increase in 2010, the year that the AFTA was realized. In 2012, many Japanese companies invested or expanded in ASEAN partly because of prospects of strong regional integration. Although Japanese FDI flows to ASEAN declined by less than \$1 billion in 2013, the level remained high at \$23 billion – exceeding the combined flows in 2002–2004 or in 2008–2010.

The number of Japanese companies in ASEAN is significant: about 5,500 affiliates in 2012, generating some 1.9 million jobs and sales worth more than \$540 billion (METI 2013). In automotive manufacturing operations, 71 factories and facilities of Japanese automotive TNCs in ASEAN directly employed about 145,000 people at the beginning of 2013 (JAMA 2013). These numbers do not include the many Japanese automotive parts and components manufacturers operating in ASEAN, including business linkage opportunities they create for local companies.

A new wave of Japanese investment in ASEAN is taking shape. A new wave of Japanese FDI in ASEAN started in 2012, when investment rose to twice the previous peak of 2010 to reach \$23 billion (figure 3.1), contributed to by high numbers of new and expansionary investment activities (chapter 1; section 3.3.5). This new scale is expected to continue in 2014 and over the next few years, for several reasons (section 3.3.4). The improving regional investment environment and the anticipation of the AEC’s benefits play roles in encouraging Japanese companies to invest and expand in ASEAN. Risk diversification and production efficiency strategies continue to influence Japanese companies’ investment plans, favouring different countries in the region for manufacturing of different product categories. In addition, the complementarity of locational advantages is facilitating and encouraging Japanese companies to use regional production networks

Figure 3.1. Strong surge in Japanese FDI flows in ASEAN in recent years
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012–2013 do not include the Lao People’s Democratic Republic. Philippines data excludes reinvested earnings as geographical breakdowns are not available.

to achieve greater production efficiency. ASEAN plays an important role in Japanese TNCs' production networks, but those networks are not restricted to ASEAN Member States. They also involve other Asian countries such as China, India and the other Asian economies. ASEAN is an important hub in the wider international production networks pursued by Japanese TNCs.

ASEAN is a significant destination for Japanese direct investment abroad.

Japan's total outward FDI stock at the end of 2013 stood at \$1.1 trillion, of which \$136 billion or 12% was in the ASEAN Member States. During 2005–2013, ASEAN received on average 12% of Japanese direct investment abroad, and as much as 18% in 2013 (table 3.6). More than 58% of Japanese FDI flows to Asia were absorbed by ASEAN.

3.3.3 Japanese investments in manufacturing, finance, infrastructure, real estate and services

The manufacturing industry continues to dominate Japanese FDI in ASEAN.

Japanese FDI in ASEAN is dominated by manufacturing activities, which attract nearly 60% of the total (figure 3.2). The major recipient industries are transportation equipment, electronics, machinery and chemicals. The rapid rise in Japanese FDI in ASEAN in recent years was attributable mainly to the surge in Japanese manufacturing investment activities in the region (figure 3.3).

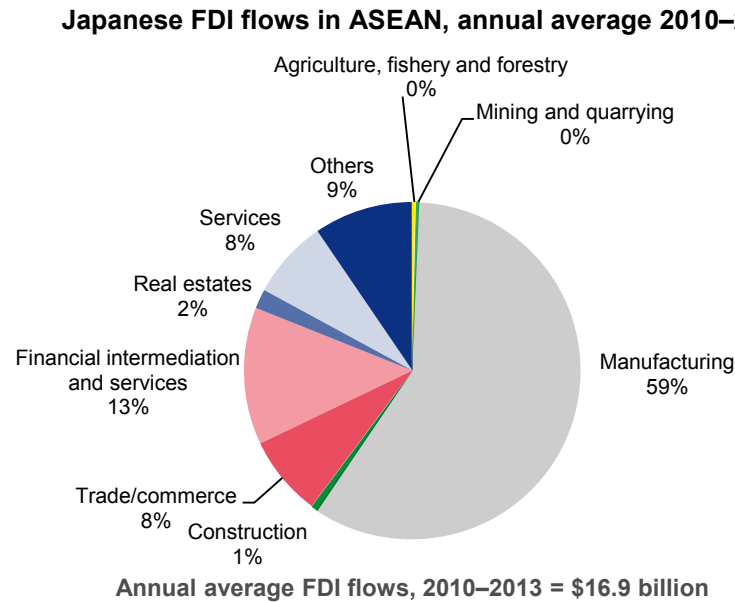
After the Plaza Accord in 1985, many Japanese manufacturing companies invested in ASEAN because of cost and exchange rate considerations. The strong Japanese yen

Table 3.6. ASEAN accounts for 18% of Japan's global outward FDI flows and more than 58% to the Asia region in 2013

	Japan outward FDI flows to selected region (\$ millions)			ASEAN share of Japan global outward FDI flows	ASEAN share of Japan outward FDI flows to Asia (%)
	World	Asia	ASEAN	(%)	
1996	23 427	9 744	5 242	22.4	53.8
1997	25 993	13 113	7 777	29.9	59.3
1998	24 153	7 860	4 518	18.7	57.5
1999	22 743	1 961	1 104	4.9	56.3
2000	31 558	2 172	224	0.7	10.3
2001	38 332	7 836	4 036	10.5	51.5
2002	32 281	8 171	4 266	13.2	52.2
2003	28 801	4 965	416	1.4	8.4
2004	30 951	10 547	2 809	9.1	26.6
2005	45 782	16 313	5 057	11.0	31.0
2006	50 265	17 201	6 957	13.8	40.4
2007	73 549	19 384	7 786	10.6	40.2
2008	128 020	23 017	6 306	4.9	27.4
2009	74 698	20 763	7 040	9.4	33.9
2010	56 263	21 686	8 786	15.6	40.5
2011	107 598	39 104	19 411	18.0	49.6
2012	122 550	33 560	10 762	8.8	32.1
2013	135 749	40 755	23 906	17.6	58.7

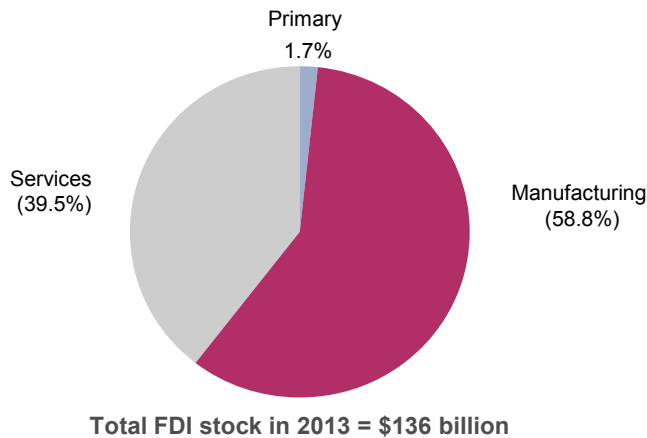
Source: Bank of Japan, Balance-of-Payments Statistics.

Figure 3.2. Japanese investment in ASEAN are concentrated in manufacturing activities



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Japanese FDI stock in ASEAN, 2013



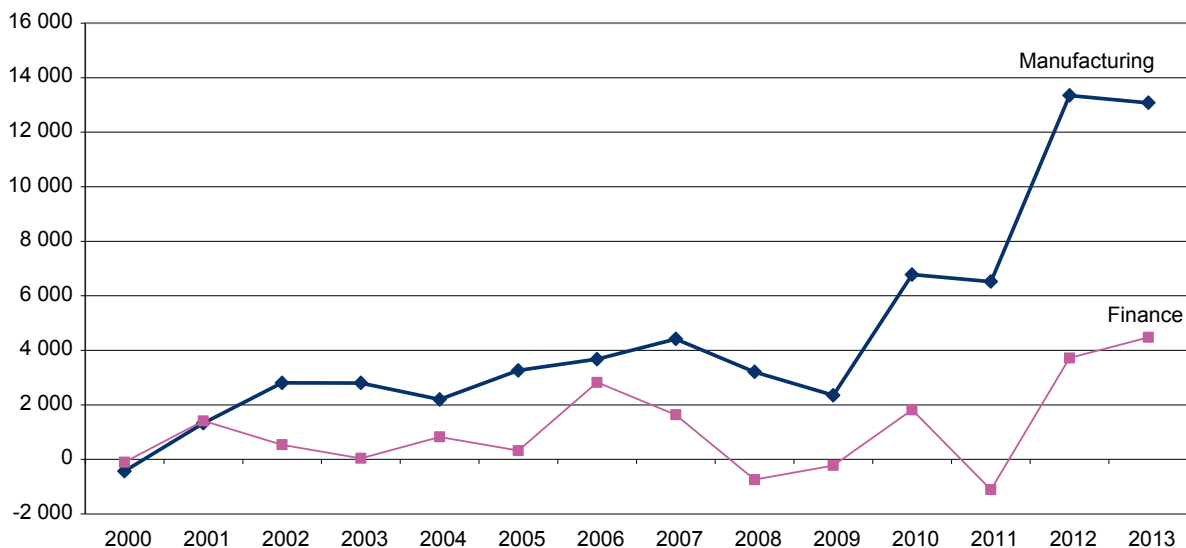
Source: UNCTAD, based on METI (2013).

made investment abroad cheaper, and the locational advantages of ASEAN Member States played a role in determining the location choice.

Since the 1980s, Japanese manufacturing FDI in ASEAN has gone from strength-to-strength. Japanese companies have been expanding in the region, establishing multiple plants and factories. More recently, particularly since 2012, many Japanese manufacturing companies have expanded in the region with horizontal and vertical operations, to benefit from the complementary locational advantages and market dynamism of these countries.

Investment in finance and services has risen in recent years. Japanese FDI in the services industry – such as in finance and retailing – in ASEAN are on the rise. Japanese

Figure 3.3. Rapid growth of Japanese manufacturing FDI in ASEAN, 2000–2013
(Millions of dollars)



Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012–2013 do not include the Lao People’s Democratic Republic. Philippines data excludes reinvested earnings as geographical breakdowns are not available.

banks and insurance companies are actively investing, while retail chains such as AEON are expanding their operations by opening up more stores in 2013 (chapter 1).

More than 70% of annual average FDI flows in ASEAN from Japanese companies in 2010–2013 were in manufacturing and finance (annex table 3.2).

3.3.4 Prospects of Japanese FDI flows to ASEAN

Many major studies suggest that more Japanese investment into ASEAN is expected over the next few years. Japanese FDI to ASEAN is expected to grow over the next three years according to a survey of Japanese manufacturing firms (JBIC 2013). These firms are optimistic about the region’s favourable environment and prospects for investment.¹³ Most ASEAN Member States were ranked high as location choices among all global destinations, with three countries (Indonesia, Thailand and Viet Nam) ranked in the top five.

Expansion activities and new investment are expected. Some of these investments will further strengthen existing Japanese regional production networks. Many Japanese companies currently operating in ASEAN are planning to expand their operations (JMA 2013). In addition, about one-fifth of firms in a recent survey that are currently not operating in ASEAN are also considering investing there for the first time (table 3.7). Aside from corporate-related factors that influence Japanese companies’ investment plans in favour of ASEAN, regional elements are also playing important roles in directing Japanese investment. In particular, **regional integration, lower costs, growing industrial clusters, the AEC and the market potential of the region are key factors contributing to the promising outlook.**

3.3.5 Japanese companies' regional expansion and M&As in 2013–2014

The regional expansion by Japanese TNCs continued its surge. Some of these activities aimed to strengthen regional presence. Many Japanese companies have been actively expanding in ASEAN in recent few years, for a number of reasons. They include the improving regional economic fundamentals and investment environment, deliberate corporate strategies to build a stronger regional value chain and the growing regional market and business potential, including the broader regional integration influences (chapter 1). For instance, Toshiba, Nidec and other well-known Japanese TNCs

continued to expand with new business lines, undertake more infrastructure projects and expand production facilities in the region (tables 3.8 and 3.9; section 3.3.6).

Table 3.7. Survey of Japanese executives on current and future operations in ASEAN

Operations in ASEAN	Response (%)
Currently in the region	41.5
Planning to expand	35.2
Planning to downsize	0.6
Cannot say	5.7
Currently not in the region	57.4
No plans to invest	46.2
Considering investment	11.2
No response	1.1

Source: JMA (2013).

Note : Five thousand executives of 662 Japanese firms were asked to take part in the survey. The response rate was 13.2%.

Table 3.8. Toshiba Group continues to expand in ASEAN because of regional attractions and opportunities (selected activities), 2013–2014

Activities	Host country	Announcement date
Toshiba announced plans to build a coal-fired power generation plant in Viet Nam.	Viet Nam	17 July 2014
Toshiba Elevator and Building Systems Corporation established an engineering centre in Kuala Lumpur.	Malaysia	30 June 2014
Toshiba Medical Systems Corporation established Malaysia's first diagnostic imaging systems manufacturing base.	Malaysia	26 June 2014
Toshiba Medical Systems Corporation established a new subsidiary in Malaysia.	Malaysia	10 June 2014
Toshiba Solutions expands ICT business in Thailand.	Thailand	14 May 2014
Toshiba, Hitachi and ITOCHU are to supply an intelligent transport systems package to Viet Nam's Expressway Corporation.	Viet Nam	18 March 2014
Toshiba subsidiary is to build a major coal-fired power generation in the Philippines.	Philippines	31 January 2014
Toshiba strengthened its energy and social infrastructure business in Malaysia with expansion of activities and reinforcing capacities.	Malaysia	15 January 2014
Sumitomo Corporation, NEC Group, Toshiba and Morita will supply airport/aviation security infrastructure in Myanmar.	Myanmar	20 September 2013
Toshiba opened a new semiconductor facility in Thailand.	Thailand	29 August 2013
Toshiba's permanent magnet synchronous motor is to refurbish Singapore train's drive systems.	Singapore	04 July 2013
Toshiba will supply a modular data centre for a securities exchange system in Myanmar.	Myanmar	03 July 2013
Toshiba is involved in development of the Nam Ou 5 hydropower plant in the Lao People's Democratic Republic.	Lao People's Democratic Republic	13 June 2013
Toshiba established a Yangon branch office in Myanmar.	Myanmar	26 April 2013

Source: Toshiba.

Table 3.9. Nidec's expansion and investment in selected ASEAN Member States, 2012–2014

Host country	Investment plans
Cambodia	Nidec started an operation on base plate manufacturing for HDD in Cambodia in 2012. The company announced that it would expand its operations from an initial manufacturing plant floor space of 25,000 square meters to 45,000 square meters in the second phase in 2013 and subsequently 65,000 square meters in the third phase in 2014. ^a Initial investment of \$12.5 million is expected to rise to \$37.5 million including the third phase.
Thailand	Nidec received a number of investment approvals in 2013 for project expansions in Thailand. ^b These approvals relate to expansion of production by different Nidec affiliates in the host country involving products such as hard disk drive parts, electric parts and parts of transmission system.
Viet Nam	Nidec plans to expand its business operations in Viet Nam with an increase in investment to over \$1 billion, from \$600 million currently in 2013. The company plans to set up five additional subsidiaries in Viet Nam, extending operations beyond production to include research and development (R&D) activities, and distribution network. ^c

Source: Media reports.

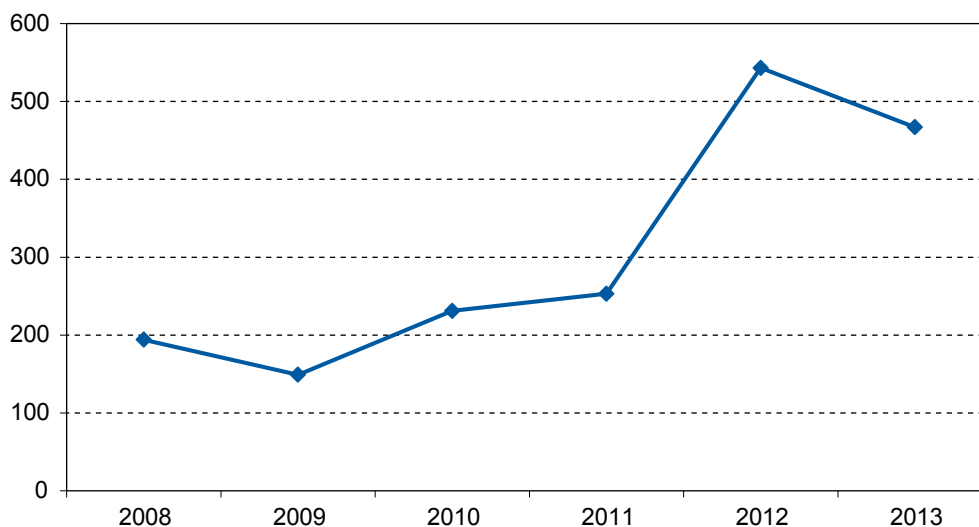
^a “Japan’s Nidec to invest \$37.5 million on new Cambodian plant”, *The Cambodia Herald*, 22 May 2012 (<http://www.thecambodiaherald.com/cambodia/detail/1?page=15&token=NTc4MjcwNDU1NmMzZWUxMDdmNDk1Njg3NGZhOWJl>).

^b See table 3.10.

^c Japanese firm Nidec to expand VN venture, *Vietnam News*, 23 December 2013 (<http://bizhub.vn/news/3903/japanese-firm-nidec-to-expand-vn-venture.html>).

Japanese TNCs’ expansion in ASEAN includes the development of operations in existing host countries, as well as across countries (figure 3.4). They also include the development of new product categories and the expansion of production capacity for existing products in host countries. For instance, Japanese companies such as Canon, Fujikura Electronics, Hino, Hitachi, Mitsubishi, Murata, Nidec, Seiko Precision and Toshiba are planning to expand their operations in Thailand by adding to the number of product categories they manufacture there (table 3.10).

Japanese companies are not expanding their operations only in a single ASEAN Member State (e.g. Thailand) but also elsewhere in the region including in the CLMV countries.

Figure 3.4. Thailand: High number of expansion projects from Japanese companies in 2012–2013

Source: BOI, Thailand.

Some investment projects are to produce specific parts for export, while others are to supply customers in the host country. For example, in Thailand, Toyota, Nissan and Hino have approved investment plans for the production of various automotive parts, primarily for supplying the local market, with most supporting intra-firm production arrangements (table 3.10).

In automotive manufacturing, in-country expansions are taking place in companies' main production hubs, including in Indonesia, Malaysia, the Philippines and Thailand. The presence of major Japanese and other automotive manufacturers in these countries is also attracting parts and component suppliers to set up plants in order to operate in a cluster or agglomeration setting. As the volume of automobile production increases in these countries, parts and components manufacturers are also expanding their operations to cope with growing demand (table 3.11). Further, "just-in-time" systems and flexible manufacturing arrangements adopted by Japanese companies are encouraging many parts and components manufacturers to set up plants in ASEAN in order to be close to the OEM (e.g. Toyota and Nissan) or first-tier component manufacturers.

In addition to Mazda (chapter 1), Mitsubishi Motors has been aggressively expanding its production capacity in ASEAN. In 2014, it announced a plan to acquire a plant owned by Ford in the Philippines to strengthen its production capacity in that country. In Thailand, its third plant started operation in 2012, raising its capacity in the country to over 500,000 vehicles per year. The company announced in 2013 that it is building a new plant worth \$400 million in Indonesia, to begin operation in 2017.¹⁴

Honda is constructing its second production base in Thailand, which is scheduled to start operation in 2015. It is also expanding the existing plant capacity in Ayutthaya to produce 300,000 vehicles by 2014. In 2014, Honda's second production facilities in Indonesia became operational, more than doubling its production capacity in the country.

Similarly, Suzuki Motor in 2013 announced that it was constructing a plant for engine and transmission systems as well as an assembly plant in the GIIC industrial park near Jakarta. It received approval in 2013 to expand its operations in Thailand for the production of transmission gears, for consumption primarily within the host country. In the same year, Nissan formed a joint venture with Tan Chong Motors (Malaysia) to establish an automobile assembly plant in Bago, Myanmar. The new plant is expected to be operational by 2015 and to produce 10,000 units of Nissan cars.

Japanese TNCs including trading companies (Sogo Shosha) with a presence in ASEAN's infrastructure and real estate are also expanding their activities in the region. These companies include Mitsubishi Corporation, Marubeni and Sumitomo Corporation. For instance, Mitsubishi – in a joint venture with Thai Electricity Generating and Italian-Thai Development company – are building an estimated \$10 billion power station in the Dawei SEZ in Myanmar. The power project is expected to start in 2015, with output to be exported to Thailand and to support development in the local area. Japanese trading houses are also expanding. Mitsui & Co. signed a deal to build and operate a \$3.3 billion coal-fired power plant in Malaysia in partnership with the State-owned company 1MDB. Marubeni is involved in power generation projects in Cirebon, Indonesia, worth \$850

Table 3.10. Japanese companies plan to expand in ASEAN in at least one Member State (Thailand), 2013
(Per cent; Millions of baht)

Company name	Export (%)	Total investment	Products
Bridgestone Metalpha (Thailand) Co. Ltd	10	570.0	Street Tyre Cord
Canon Hi-Tech (Thailand) Ltd.	100	1 580.0	PCB (Printed Circuit Board)
Canon Hi-Tech (Thailand) Ltd.	100	650.0	Multi Function Printer/Scanner
Canon Hi-Tech (Thailand) Ltd.	100	476.0	Electronic Products
Casio (Thailand) Co. Ltd.	100	930.0	Electronic Products; Plastic Parts for Electronic Products
DDK (Thailand) Ltd.	80	1 120.0	Electric Part
Fujikura Electronics (Thailand) Ltd.	100	58.9	Heart Spreader; Cold Plate
Fujikura Electronics (Thailand) Ltd.	100	275.7	Micro Coaxial Cable Assembly; Micro Coaxial Lasered Cable
Fujikura Electronics (Thailand) Ltd.	100	490.8	Flexible Printed Circuit Assembly
Furukawa Precision (Thailand) Co. Ltd.	20	31.0	Surface Treatment
Hino Motors Manufacturing (Thailand) Ltd.	0	7 447.9	Automotive Parts
Hino Powertrain Manufacturing (Thailand)	10	63.7	Rear Differential
Hitachi Automotive Systems Asia Ltd.	100	280.7	Electronic Parts for Automotive Product
Hitachi Compressor (Thailand) Ltd.	70	771.0	Compressor
Hitachi Metals (Thailand) Ltd.	100	80.1	Flexible Impact
Hitachi Powdered Metals (Thailand) Co. Ltd.	5	75.7	Machining Parts
Honda Engineering Asian Co. Ltd.	75	1 300.0	Mould & Die; Mould & Die Parts; Jig & Fixture
Jtekt Automotice (Thailand) Co. Ltd.	100	499.4	Steering Parts
Kyocera Crystal Device (Thailand) Co. Ltd.	100	202.2	Electronic Part
Kyocera Display (Thailand) Co. Ltd.	100	419.8	Electronic Part
Mazda Powertrain Manufacturing (Thailand)	75	11 284.0	Automatic Transmission
Mektek Manufacturing Corporation (Thailand)	100	4 606.7	Flexible, Printed Circuit Assembly; Flexible Printed Circuit
Mitsubishi Electric Thai Auto-Parts Co. Ltd.	90	508.2	Automotive Parts
Mitsubishi Electric Thai Auto-Parts Co. Ltd.	0	142.0	Automotive Parts
Mitsubishi Motors (Thailand) Co. Ltd.	0	531.8	R & D (Automotive)
Mitsubishi Turbocharger Asia Co. Ltd.	90	5 100.0	Turbocharger; Turbocharger Parts
Murakami Manufacturing (Thailand) Co. Ltd.	60	89.5	Actuator; Actuator Parts
Murata (Thailand) Co. Ltd.	0	13.3	Trade and Investment Support Office
Murata Electronics (Thailand) Ltd.	100	744.6	Sensor
Murata Electronics (Thailand) Ltd.	100	65.6	Coil Module
Murata Electronics (Thailand) Ltd.	100	333.6	Capacitor Ceramic Element
Nidec Component Technology (Thailand) Ltd.	0	245.8	Hard Disk Drive Parts
Nidec Copal (Thailand) Co. Ltd.	20	164.6	Electric Part
Nidec Electronics (Thailand) Co. Ltd.	30	17.7	Mould & Die; Mould & Die Parts; Mould & Die Repairing
Nidec Precision (Thailand) Co. Ltd	100	153.4	Parts of Transmission System
Nidec Precision (Thailand) Co. Ltd	100	152.2	Hard Disk Drive Parts
Nikon (Thailand) Co. Ltd.	100	12 252.0	Digital Camera; Interchangeable lens; Semi-products for Camera
Nissan Motor (Thailand) Co. Ltd.	50	15 000.0	Pick up
Nissan Powertrain (Thailand) Co. Ltd.	0	650.6	Diesel Engine; Gasoline Engine
NMB-Minebea Thai Ltd.	10	60.0	Thin Film for Electronic Product
NOK Precision Component (Thailand) Ltd.	100	24.3	Hard Disk Drive Parts
NOK Precision Component (Thailand) Ltd.	100	500.0	Electronic Part
Ricoh Manufacturing (Thailand) Ltd.	100	1 000.0	Multi Function Digital Machine (MDM); Printer; Toner
Rohm Integrated Systems (Thailand) Co. Ltd.	100	499.8	Tantalum Capacitor
Rohm Integrated Systems (Thailand) Co. Ltd.	100	498.0	Transistor and Diode
Sanden (Thailand) Co. Ltd.	0	750.0	Compressor for Automotive
Seiko Precision (Thailand) Co. Ltd.	75	338.6	Plastic Parts for Electronic Products
Seiko Precision (Thailand) Co. Ltd.	90	158.0	Camera Parts
Sharp Manufacturing (Thailand) Co. Ltd.	0	25.0	International Procurement Office (IPO)
Shin-Ei (Thailand) Co. Ltd.	70	96.0	Cutting Tools; Repairing Cutting Tools
Shin-Ei Precision (Thailand) Co. Ltd.	30	149.0	Metal Parts
Siam Toyota Manufacturing Co. Ltd.	0	17 730.2	Diesel Engine; Cylinder Block, Cylinder Head, Crank Shaft
Siam Toyota Manufacturing Co. Ltd.	0	5 196.6	Gasoline Engine for Eco Car; Gasoline Engine
Sumitomo Electric Writing Systems (Thailand)	80	118.5	Wire Harness for Automotive
Sumitomo Electric Writing Systems (Thailand)	10	361.0	Wire Harness for Automotive
Sumitomo Electric Writing Systems (Thailand)	0	148.8	Wire Harness for Automotive
Suzuki Motor (Thailand) Co. Ltd.	0	855.6	Transmission Gear
TDK (Thailand) Co. Ltd.	100	30.8	Magnetic Toner Sensor
Thai Yamaha Motor Co. Ltd.	100	571.6	Marine Engine
Toshiba Consumer Products (Thailand) Co.	90	567.7	Washing Machine
Toshiba Machine Manufacturing (Thailand)	70	880.0	Injection Molding Machine & Die Casting Machine
Toshiba Semiconductor (Thailand) Co. Ltd.	100	288.7	Metal Parts for Electronic Products
UMC Electronics (Thailand)	100	1 900.0	PCBA (Printed Circuit Board Assembly)

Source: UNCTAD (2014), based on BOI, Thailand.

Table 3.11. Japanese automotive TNCs and parts and components manufacturers are expanding in ASEAN (selected countries and cases), 2013–2014

Company	Activity	Host country	Remarks	Announcement data
Furukawa	Battery production	Indonesia	The company earmarked \$20 million in an initial investment as part of its expansion plans in Indonesia	21 May 2014
Toyota	Engine production and manufacturing learning centre	Indonesia	A groundbreaking ceremony for building a new engine plant in Karawang was held on 25 February 2014, which is expected to start operation in 2016. The company also announced plans to open a new manufacturing learning center in Indonesia.	25 February 2014
	Production of completely knocked down units and components	Malaysia	The company opened its third plants in the host country in 2013.	2 October 2013
Honda	Production of Mobilio model	Indonesia	The company is expanding its existing production capacity in the host country and opened a second factory in Karawang.	16 January 2014
	Automotive production	Malaysia	Honda expands factory in Malaysia with opening of No.2 line in Malacca.	16 January 2014
Suzuki	Automotive and components production	Indonesia	Suzuki announced a \$611 million plan to build a car-assembly plant adjacent to its engine factory in Indonesia. The latter will start operation in fiscal year 2014 and the former in 2015.	29 July 2013
Toyo Tire	Tire production	Malaysia	Started operation in May 2013.	8 May 2013
Toyota Boshoku	Automotive components	Lao PDR	Toyota Boshoku will start an operation in Lao PDR in 2014. The operation will serve as a satellite complementing the group's production base in Thailand. The company will produce interior components such as vehicle seat covers and supply them to seat-manufacturing plants in Thailand.	12 April 2013
Denso	Automotive components	Cambodia	In January 2013, Denso announced plans to establish a company later that year to produce sensor components for ignition magnetos. The new company will gradually produce other products targeted at the ASEAN region.	23 January 2013
		Myanmar	Denso established a new company in Myanmar with ASMO Co., Ltd. and its subsidiary PT. Asmo Indonesia. The operation in Myanmar is part of a plan to reinforce the company's production and supply structure in the ASEAN region. The new company began manufacturing components related to small motors used in automobiles in January 2014.	Annual Report 2014
		Thailand	Denso Thailand announced in January 2014 that the company has opened a new office at the Samrong plant and a factory expansion at the Bangpakong plant in Thailand.	14 January 2014
Mitsubishi	Automotive production	Philippines	The company announced that Mitsubishi Motors Philippines Corporation has acquired a factory site from Ford Motor (Philippines) in Laguna Province. Vehicle production will begin in January 2015.	31 March 2014
NEC Tokin	Automotive components	Philippines	The company has acquired a new plant in the Philippines for production of automotive relays (power relays used in automobiles). The company added a new production line to increase production capacity of the latest automotive relays. Subject to demand conditions, the company is also considering the potential of further production capacity increase in the country.	19 August 2013
Mazda	Production of transmission	Thailand	Mazda announced plan to construct a new transmission plant, which will commence operations in early 2016 in Thailand.	30 January 2013
Mitsubishi Fuso	Trucks production	Viet Nam	The company announced on 1 July 2014 the establishment of its new business setup for local assembly of trucks in Viet Nam.	2 July 2014
Bridgestone	Tire production	Viet Nam	Bridgestone announced in October 2013 that it will increase production capacity at its new passenger car tire plant in Viet Nam.	15 October 2013

Source: UNCTAD 2014.

million, which began operation in October 2012. In 2013 it began a power project in Thanh Hoa, Viet Nam worth \$2.5 billion. The same year, Sumitomo Corporation won contracts to upgrade the communication networks and the railway and safety services in Myanmar. The company also started work to build an air traffic control system in the Lao People's Democratic Republic. Other Japanese companies such as Itochu, Kyushu Electric Power, KDDI and NEC are building infrastructure in a number of ASEAN Member States.

In food and beverages, Asahi acquired Etika International Holdings (Singapore), with assets in Malaysia, for \$329 million in 2014. The deal gives Asahi access to markets in Indonesia and Viet Nam, while strengthening its presence in Malaysia, adding to the Permais businesses it acquired in 2011. In Thailand, Asahi formed a joint venture with Osotspa (Thailand) to manufacture and market Asahi's branded products. In Indonesia, it formed a joint venture with Indofood to manufacture and market non-alcoholic beverages.

ASEAN's market growth and potential have attracted Japanese TNCs to expand in the region to increase production capacity. The improving operation environment, growing supporting industry and rising industrial activity are also encouraging these TNCs to expand production in additional product categories. The expansions of this first group of Japanese TNCs are encouraging its suppliers in ASEAN to expand or invest in the region. This chain effect, emanating from regional demand growth and enhanced by regional integration, has translated into many recent expansions of operations by Japanese TNCs.

Regional expansion has also been influenced by in-country expansion and agglomeration. Some ASEAN Member States have emerged as significant production hubs for certain automotive parts and electronics components. The high concentration of firms and growing industrial activity within the cluster areas encouraged the expansion of facilities by existing firms, including attracting new firms from elsewhere in the region to set up operations in the same area.

Japanese companies are expanding their operations in the region, partly influenced by their strategy to pursue parallel production facilities and division of labour in the region. In the case of the former, Japanese TNCs such as those in Thailand have established or are considering establishing parallel affiliates in at least one other ASEAN Member State. Some are moving labour-intensive operations from ASEAN Member States with higher wage costs, as well as from China to CLMV countries, because of the significant wage cost differentials and their diversification strategies. But most maintain horizontal operation facilities in China and in ASEAN. By doing so, these Japanese affiliates are strengthening their groups' production networks, making it possible for intermediate products to be supplied by affiliates from either direction (i.e. from ASEAN to China and vice versa). At the same time, some Japanese TNCs are upgrading their operations in ASEAN Member States with higher wage costs to use more complex production technology, new product categories and production processes that require higher precision and more technological content. The earthquake/tsunami experience in Japan in 2011 is influencing Japanese companies to diversify the production of high-tech parts beyond Japan (Cheewatrakoolpong et al. 2013).

Japanese TNCs are expanding through M&As. Some Japanese companies are also expanding in the region through M&As, which provide rapid access to markets, customer bases, business networks and acquisition of strategic assets. Japanese M&A purchases in ASEAN rose significantly in 2013 and more prominently in services activities, such as in banking and finance. Japanese finance companies and banks are actively investing in the region (table 3.12; annex table 3.3). Mitsubishi UFJ Financial Group, Sumitomo Mitsui Financial Group and Sumitomo Life Insurance made a number of significant acquisitions in ASEAN in 2013–2014.

In manufacturing, M&A activities included the acquisition of companies that produced automotive parts, industrial machinery and chemicals (table 3.13). Well-known Japanese companies such as Furukawa, Daikin Industries, Mitsubishi Electric, Shin-Etsu Chemical, Marubeni, Sumitomo, Fuji Electric and Canon in 2013–2014 acquired manufacturing assets in the region. Japanese automotive companies and parts and components manufacturers have also expanded in ASEAN in the same period through acquisitions of other parts and components suppliers. For instance, Mitsubishi Motors acquired a 90%

Table 3.12. Assets bought by Japanese companies in ASEAN, through M&As, 2010–2013
(Millions of dollars)

ASEAN country	2010		2011		2012		2013	
	Value	Major M&A activities	Value	Major M&A activities	Value	Major M&A activities	Value	Major M&A activities
Total in ASEAN	1 928	Food and beverages, Finance, Rubber and plastic products, Mining	5 162	Finance, Health services, Electronics, Food and beverages, Mining	2 544	Finance, Trade, Business services, Food and beverages, Chemical, Electronics	8 461	Finance, Utility services, Accommodation and food services, Metal products
Cambodia	..	..	..	..	1	Finance	..	..
Indonesia	..	..	1327	Finance, Mining, Utility services	210	Trade services, Finance, Chemical products	712	Metal products, Food and beverages, Machinery equipment
Malaysia	773	Finance, Mining, Rubber and plastic products	1803	Health services, Food and beverages, Chemical products	420	Trade services, Business services	69	Metal products, Trade services, Machinery equipment
Myanmar	..	..	..	..	..	..	2	Paper products
Philippines	..	..	..	..	10	Trade services	565	Utility services
Singapore	1 066	Food and beverages, Finance	1 423	Electronics, Transportation services, Finance	1 182	Finance, Business services, Food and beverages, Electronics, Chemical products	533	Accommodation and Food services, ICT, Business services
Thailand	41	Motor vehicles and equipment, Metal products	370	Finance, Metal products, Transportation services	72	Pharmaceutical, Paper products	5 478	Finance, Rubber and plastic products
Viet Nam	48	Food and beverages, Metal products	238	Chemical products, Finance, ICT services	659	Finance, Business services, Metal products, Food and beverages	1 103	Finance, Construction

Source: UNCTAD M&A database.

Table 3.13. Japanese companies' acquisition of assets in ASEAN, 2013–2014 (selected deals)
(Millions of dollars)

Year	Ultimate acquiring company	Target company	Target nation	Value	Shares acquired
Manufacturing					
2013	Nippon Steel Corp	BlueScope Steel Ltd-ASEAN Building Products Business	Indonesia	680	50
2013	Shin-Etsu Chemical	Asia Silicones Monomer Ltd	Thailand	147	50
2013	Mitsui & Co	Daihatsu(Malaysia)Sdn Bhd	Malaysia	27	20
2013	Furukawa Electric	Hydro Aluminium Malaysia Sdn Bhd	Malaysia	20	100
2013	Mitani	DAMA Enterprise Pte Ltd-Sale Business of Acrylic Board	Singapore	11	100
2014	Saraya	Goodmaid Chemicals Corp Sdn Bhd	Malaysia	10	100
2013	Japan Pile	Phan Vu Investment Corp (PVI Corp)	Viet Nam	4	19
2014	JX Holdings	Doho Metal (Thailand) Co Ltd	Thailand	2	100
2013	Taisei Oncho	Seaprodex Refrigeration Industry Corp (Searefico)	Viet Nam	2	19.69
2013	Unicharm	Myanmar Caring Product Ltd	Myanmar	2	10
2014	Toyota Tsusho	Borneo Technical Co (M) Sdn Bhd	Malaysia	..	100
2014	Canon	Material Automation (Thailand) Co Ltd	Thailand	..	100
2013	Daikin Industries	AAF International (Thailand) Ltd	Thailand	..	100
2014	Toyota Tsusho	Borneo Technical (Thailand) Ltd	Thailand	..	100
2013	Taiyo Nippon Sanso	Subah Oxygen Sdn Bhd	Malaysia	..	100
2013	Mitsubishi Electric	Mitsubishi Elevator Vietnam Co Ltd	Viet Nam	..	0
2013	Toyota Tsusho	Terengganu Silica Consortium Sdn Bhd	Malaysia	..	20
2014	Showa Denko KK	Rexam Hanacans JSC	Viet Nam	..	90
2013	Marubeni	Anshin Precision Industries Sd Sdn Bhd	Malaysia	..	0
2014	Sumitomo	AWCG Pte Ltd	Singapore	..	0
2013	G-Tekt	Auto-Body Manufacturing Indonesia PT	Indonesia	..	50
2014	Mitsubishi Motors	Asian Transmission Corp	Philippines	..	90
2013	Fuji Electric	Tusco Trafo Co Ltd	Thailand	..	67.7
Bank and finance					
2013	Mitsubishi UFJ Finl Grp	Bank of Ayudhya PCL	Thailand	5 315	72.01
2013	Mitsubishi UFJ Finl Grp	Vietnam Joint Stock Commercial Bank for Industry & Trade	Viet Nam	742	19.73
2014	Sumitomo Mitsui Finl Grp	Bank Tabungan Pensiunan Nasional Tbk PT	Indonesia	526	15.74
2014	Sumitomo Life Insurance	BNI Life Insurance PT	Indonesia	357	40
2013	Sumitomo Life Insurance	Bao Viet Holdings	Viet Nam	341	18
2013	Dai-ichi Life Insurance	PT Panin Life	Indonesia	337	0
2014	Nomura Holdings	Capital Nomura Securities PCL	Thailand	102	60.67
Infrastructure and utility services					
2013	Marubeni	Maynilad Water Services Inc	Philippines	400	20
2013	ORIX	Global Business Power Corp	Philippines	165	20
2013	Kyudenko	Asia Projects Engineering Pte Ltd	Singapore	38	82.09
Real estate					
2013	Daisho Group	Westin Singapore Hotel	Singapore	369	100
2013	Sumitomo Mitsui Finl Grp	Hoa Binh Construction & Real Estate Corp	Viet Nam	10	17.44
2013	Mitsui & Co	Medini Iskandar Malaysia Sdn Bhd	Malaysia	..	19.99

Source: Based on UNCTAD, M&A database.

Notes: Data run through first half of 2014. The value of some deals cannot be determined as they are not publicly reported.

stake of Asian Transmission Corporation in the Philippines, Showa Corporation acquired an additional stake of Showa Auto-parts Vietnam from Itochu Corporation, Toyota Tsusho acquired Borneo Technical Company in Malaysia and G-Tekt acquired a 50% interest in Auto-Body Manufacturing Indonesia.

Japanese companies such as Ebara Foods, Rakuten, Mitsui & Co, Family Mart, Tomoshia Holding and Ezaki Glico acquired food and beverages and retail companies to expand in the region.

3.3.6 Japanese regional production networks in ASEAN

The international production networks of Japanese TNCs have a wide geographical scope, linking manufacturing affiliates in ASEAN with operations in other Asian economies, including with parent companies in Japan and beyond. This section, however, focuses only on that part of these international production networks located in ASEAN (i.e. regional production networks).

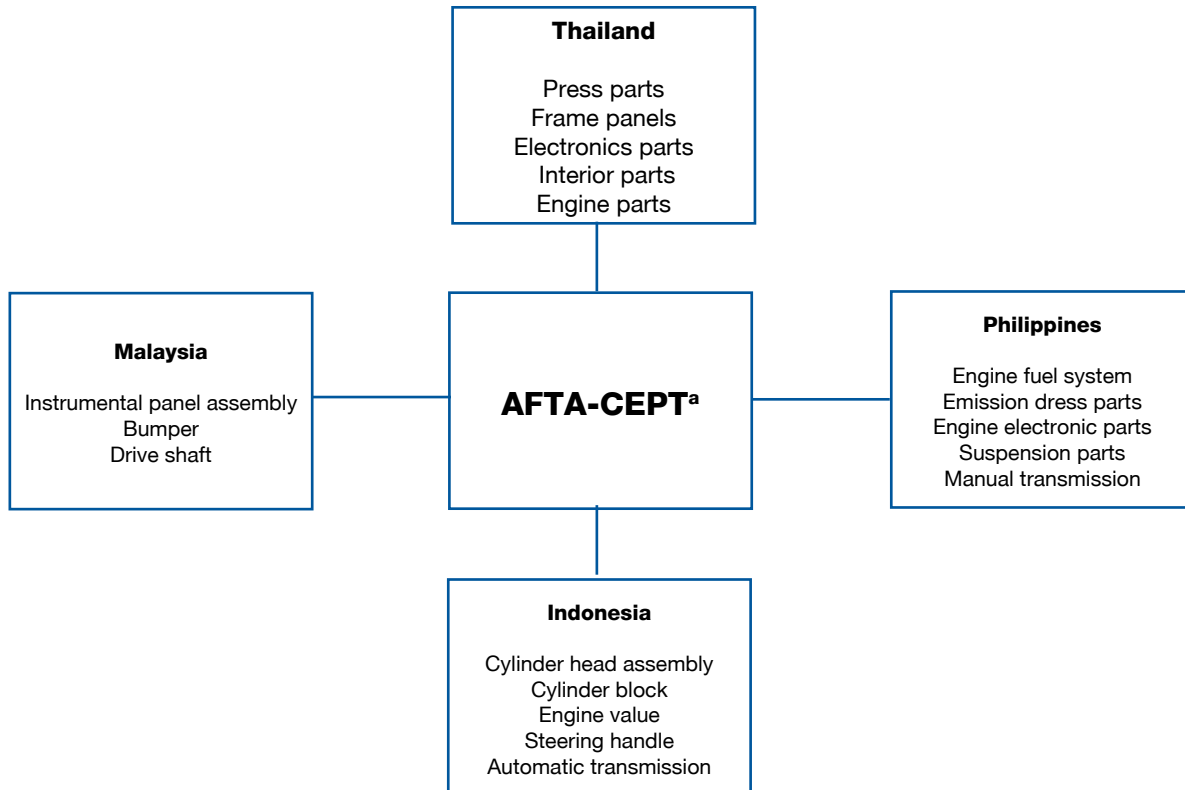
Regional production networks of Japanese companies in ASEAN are not new but are being expanded and strengthened. Japanese regional production networks in ASEAN have been well documented (Hiratsuka 2011, Cheewatrykoolpong et al. 2013, and Yeung 2001). The recent rise in regional expansion by Japanese TNCs (section 3.3.5) is also contributing to an increase in regional production network activities. Greater use of regional production networks increases the need to expand existing operations to support the expanded or new production network arrangements. Therefore, regional production networks and regional expansion of operations are closely linked. The rise in one leads to an increase in activity of the other.

Japanese companies have been involved with such regional production networks in ASEAN since the 1980s and are now rapidly expanding them to involve more affiliates and more ASEAN Member States and covering more product categories. Such production networks involve intrafirm and interfirm arrangements with multiple plants or affiliates in a host country or multiple operations across the region, where each plant has a specific and dedicated operational focus (chapters 4 and 5). In many cases, the regional production networks are linked with other business operations or functions performed in different locations. The distribution of business functions depends on a number of factors, including the locational advantages of a prospective ASEAN host country. For example, regional headquarters or R&D functions are established in a small number of ASEAN Member States to provide support and coordination to manufacturing affiliates in the region, which include logistical, administrative, planning and marketing activities. When regional production networks are linked with other business functions in ASEAN, they are referred to as regional value chains, involving an interrelated and connected network of business operations, including that of production (chapters 4 and 5).

Regional elements and corporate strategy are shaping Japanese regional production networks. Regional production networks make economic sense from a corporate perspective, especially in terms of achieving production efficiency and a cost minimization strategy. The greater regional integration of ASEAN provides an environment

that supports regional production network activities, which facilitate firms' production efficiency and specialization based on countries' locational advantages. The clustering of firms and agglomeration of industry, such as in the automotive and electronics sectors in ASEAN, further accentuate the use of in-country and cross-country production networks because of the existence of supporting industry and the need to operate close to customers.

Figure 3.5. Production network of automotive components in ASEAN



Source: Hiratsuka (2011).

^a Now replaced by ASEAN Trade in Goods Agreement (ATIGA).

In a rapidly integrating ASEAN, where countries are working closely to promote trade and investment in the region, the case for a regional production network is further strengthened. A TNC can operate in multiple countries across the region as if operating with a single-country model. This condition also facilitates dispersing value chain functions to different countries for upstream and downstream activities, because goods can be moved and sourced easily within the region without subjecting to import duties. The lower transaction costs of this environment induce a regional production network in which parts and components are produced at different locations and are exchanged between affiliates operating in ASEAN (figure 3.5).

Regional integration can encourage TNCs to consolidate and rationalize the production system in a region. This may lead to closing horizontal production facilities in different

countries in the region and consolidating production to just one or two places to serve the region’s market. Regional integration, however, can also induce vertical regional production networks between different tiers of parts and components suppliers and with OEM.

The AFTA arrangement and the imminent AEC play a role in shaping the current wave of Japanese regional production networks in ASEAN (AIR, 2013). In an environment where tariffs will ultimately be zero or where tariff walls are being brought down rapidly as in ASEAN, automotive TNCs and parts and components manufacturers intensify the specialization of their plants in different countries. The AICO scheme, which is now defunct because ASEAN’s tariff rates have reached 0%,¹⁵ was actively used by many Japanese automotive and electronic companies operating in the region. The scheme encouraged manufacturing companies to undertake production networks involving two or more affiliates and associates’ plants based in two or more ASEAN Member States (table 3.14).

Table 3.14. AICO influences Japanese automotive and electronics TNCs to become involved in regional production networks (selected cases)

Company	Number of AICO arrangements	Product category	Participating countries
Sanden	1	Automotive components	Singapore, Thailand
Denso	12	Automotive components	Indonesia, Malaysia, Philippines, Thailand
Toyota	38	Automotive CKD pack	Indonesia, Malaysia, Philippines, Thailand
Honda	51	Automotive CKD pack	Indonesia, Malaysia, Philippines, Thailand
Sony	2	Electronics	Singapore, Thailand, Viet Nam
Isuzu	2	Automotive CKD pack	Indonesia, Philippines, Thailand
Matsushita	2	Electronics	Indonesia, Malaysia, Thailand, Philippines
Nissan	6	Automotive CKD pack	Indonesia, Malaysia, Thailand, Philippines
Mistubishi Electric/Lippo Melco	3	Automotive components	Indonesia, Philippines, Thailand
Showa	1	Automotive components	Indonesia, Thailand
Mitsubishi	2	Automotive CKD pack	Indonesia, Philippines, Thailand
Asahi Glass	1	Safety glass	Philippines, Thailand
Daihatsu	1	Automotive CKD pack	Indonesia, Malaysia
Mistuba	1	Automotive components	Philippines, Thailand
Yamaha	1	Automotive CKD pack	Indonesia, Malaysia
Hino	3	Automotive CKD pack	Indonesia, Malaysia, Thailand

Source: ASEAN Investment Report (2013).

TNCs’ diversification strategies are helping strengthen regional production networks. The earthquake in Japan and floods in Thailand in 2011 disrupted the production and supply chains of the automotive and electronics industry.¹⁶ The experience of these natural disasters, which can occur in any country, has helped push an increasing number of Japanese companies to set up parallel plants in other ASEAN Member States in order to diversify risks.

Many major Japanese manufacturing TNCs are developing regional production networks. Japanese TNCs that produce products and intermediate goods for the automotive, electronics and machinery industries, among others, are involved with some forms of regional production networks. Some have more complex webs, while others are connected to a production network simply as contract manufacturers. The former include the major Japanese TNCs such as Toyota, Honda, Nissan, Mazda, Suzuki Motor, Mitsubishi, Isuzu, Sony, Panasonic, Canon and Nikon (JAMA 2013, box 3.2). The latter include parts and components manufacturers such as Sanden, Denso, Nidec and Yazaki (chapter 5).

Some Japanese manufacturers (e.g. Honda, Isuzu and Mitsubishi) not only produce or assemble specific automotive models in ASEAN but also have established subsidiaries and plants to produce specific parts –as in Indonesia, the Philippines and Thailand – to support operations in these countries (Annex table 3.4). Some Japanese automotive companies have recently set up parts and component plants in Myanmar and Cambodia to tap the low labour cost in those countries. These plants form part of the group’s regional production networks (chapter 1).

Denso, a subsidiary of Toyota, is an automotive parts and components manufacturer that has extensive operations in the region. While it is a major supplier to Toyota affiliates in the region, it also produces parts and components for other automotive manufacturers in the host country, for other affiliates and customers in the region, as well as for export elsewhere. In this connection, Denso is not only a member of Toyota’s regional production networks but also a member of the production networks of other Japanese companies that it supplies.

Regional production networks can be complex arrangements involving different affiliates of TNCs and contract manufacturers within a host country and in different ASEAN Member States. Such networks involve close interconnected relationships between firms, products and production processes. The products can take the form of initial raw materials for the production of parts and components, which are then used in assembling the final products for local market or for export. Japanese automotive groups such as Mitsubishi, Nissan, Hino and Suzuki Motor are planning to further expand their operation in ASEAN, including to strengthen their in-country production networks in some targeted countries. The affiliates of these TNCs are planning to manufacture different auto parts such as engines, crank shafts and transmission gears, primarily for these groups’ consumption in Thailand.

Figure 3.6 shows some automotive parts and components manufacturers in Indonesia. Some produce parts for their groups of companies as well as for customers operating in the host country or for export to other affiliates or customers in other ASEAN Member States or outside the region.

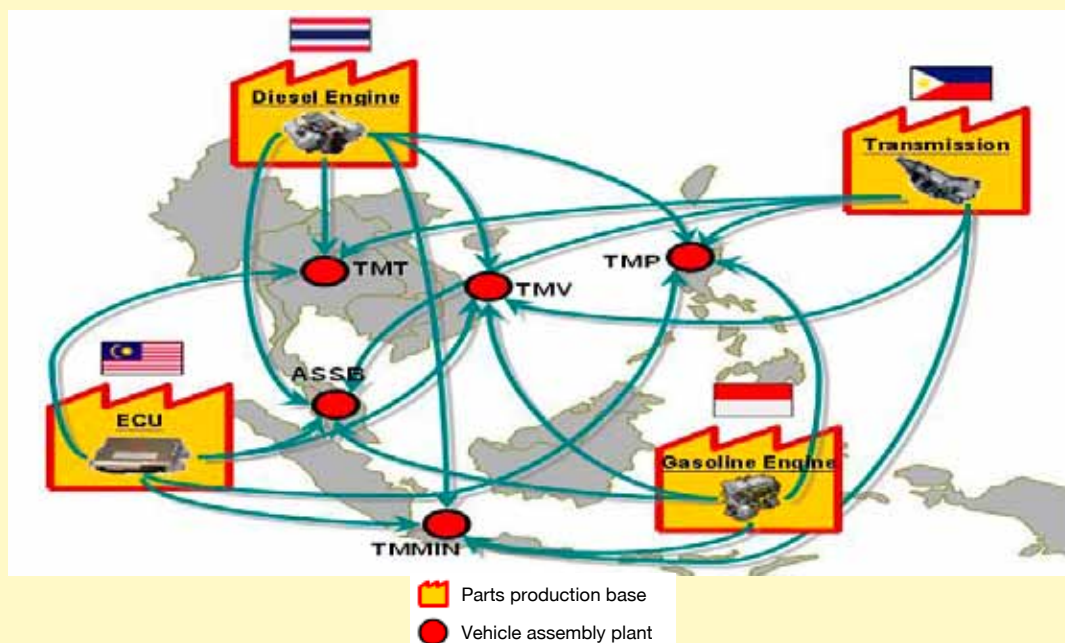
Other Japanese companies manufacturing machinery parts and components are also involved in regional production networks. For instance, Minebea (manufacturer of precision components) has production facilities in Cambodia to assemble precision

Box 3.2. Toyota regional production networks in ASEAN

Toyota’s regional production networks and supply chains in ASEAN include the production by affiliates of transmissions, engines and engine control units (box figure 3.2.1). These components are used in the assembly of completely built-up models for sales in the region and for export. For instance, gasoline engines produced in its plant in Indonesia are supplied to its operation in the same host country, as well as in Malaysia, the Philippines and Viet Nam. Similarly, transmission parts manufactured in the Philippines are supplied to affiliates in Indonesia, Malaysia, Thailand and Viet Nam, as well as an assembly plant in the Philippines.

In addition, Toyota Motor Asia Pacific (Thailand) supports Toyota production operations and supply networks in Asia, in Thailand, Indonesia, Malaysia, the Philippines, Viet Nam and India.⁵ It also provides support related to production, purchasing and logistics for the group in ASEAN and other Asian economies. Its Singapore affiliate also supports Toyota marketing and sales operations in Asia.

Box figure 3.2.1. Toyota: Auto parts production and supply chains in ASEAN



Source: Toyota.

Notes: ASSB = Assembly Services Sdn. Bhd., TMMIN = PT Toyota Motor Manufacturing Indonesia, TMP = Toyota Motor Philippines Corporation, TMT = Toyota Motor Thailand, TMV = Toyota Motor Vietnam.

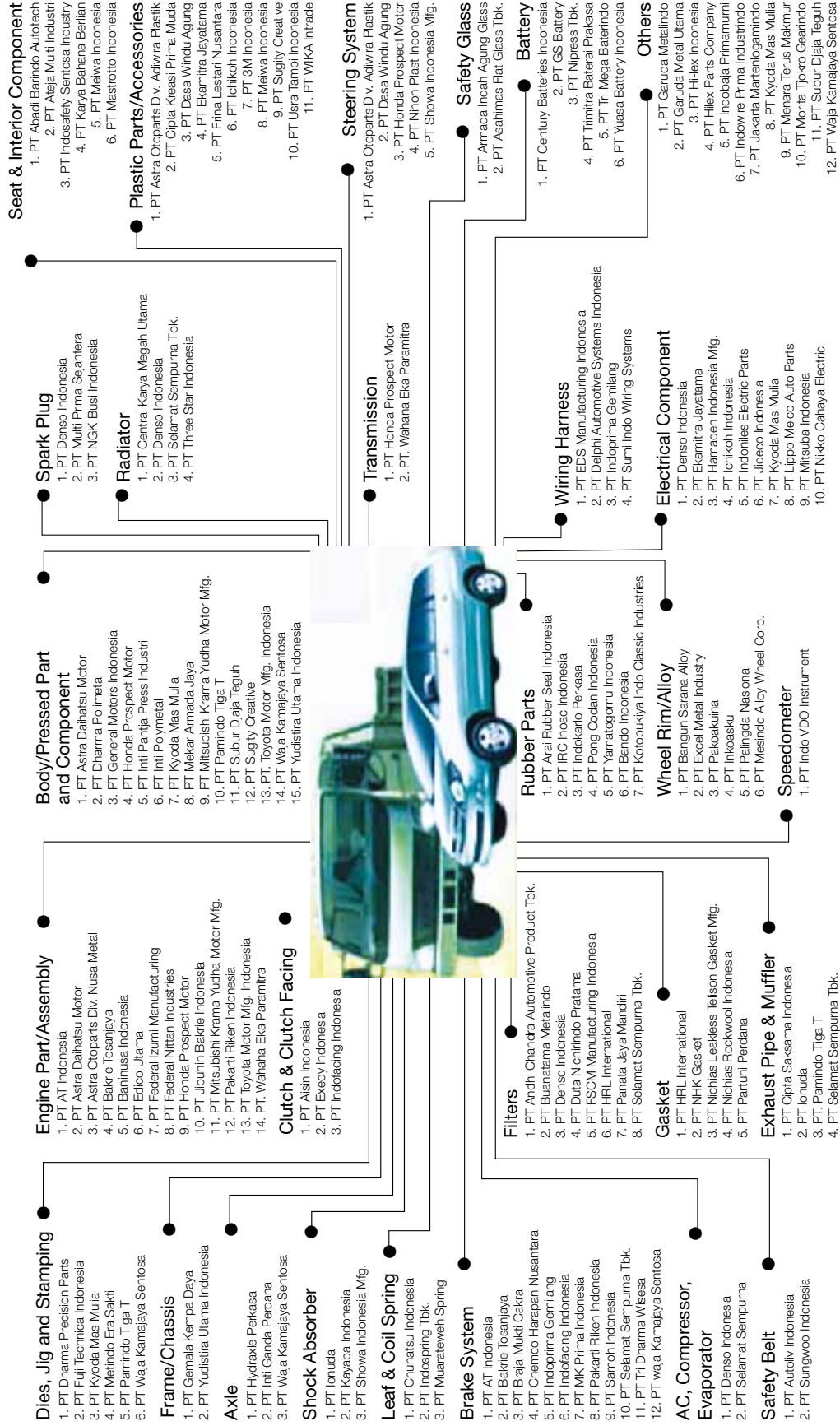
ECU = Engine Control Units.

The Toyota Motor Asia-Pacific (TMAP) facilities in Thailand and Singapore collaborate closely, which helps Toyota respond to customers’ needs in Asia more effectively through better integration of development, production and marketing processes among its subsidiaries and associates.

Source: ASEAN Investment Report (2013).

Figure 3.6. Indonesia: Selected automotive component manufacturers

Automobile components made by GIAMM members



Source: GIAMM.

motors from components supplied by production bases in Thailand and Malaysia. It subsequently expanded its production line in Cambodia to concentrate on labour-intensive manufacturing value chains.

Japanese TNCs continue to expand in ASEAN; some are further strengthening their regional production networks. Nikon established a plant in the Lao People’s Democratic Republic in 2013. Components are shipped from Thailand to the plant, where labour-intensive segments of the production process are undertaken. The finished products are then shipped back to Thailand for finalization.¹⁸

Yazaki Corporation already has a number of production facilities in Indonesia, the Philippines, Thailand and Viet Nam and has announced plans to construct two additional new plants in Viet Nam in 2014. In 2012, it established a plant in Cambodia, close to the Thai border, to supply components to Japanese automotive manufacturers in Thailand.

Daihatsu began operating its electronic automatic transmission plant in Negeri Sembilan, Malaysia, in March 2014 and is investing in building a new engine manufacturing plant in a joint-venture with Perodua (Malaysia).¹⁹ Daihatsu also has assembling facilities and manufacturing plants for the production of key automotive parts in Malaysia and Indonesia.

Nidec Corporation, prompted by the supply disruption caused by the flooding in 2011, diversified parts of its hard disk drive operations in 2012 by establishing plants in Cambodia and Malaysia. In 2013, it also received approvals to expand its production capacity in Thailand.

Nikon, Toshiba, Yazaki, Minebea and Nidec have recently set up plants in one or more CLMV countries. By locating labour-intensive operations in these countries and then exporting the production to factories in Thailand and elsewhere in ASEAN, these companies are contributing to the growth of regional production networks.

Table 3.15. Breakdown of input procurement by Japanese affiliates in ASEAN, 2012
(Billions of dollars)

	Manufacturing	Non-manufacturing	Total
Procurement of input	233.1	177.9	411.0
Local purchases	136.3	89.2	225.4
from Japanese firms	66.0	29.9	95.9
from local firms	65.7	46.3	112.1
from other firms	4.5	12.9	17.4
Imports	96.8	88.8	185.6
from Japan	64.2	37.9	102.1
from other markets	32.6	50.9	83.4

Source: UNCTAD based on METI data.

Table 3.16. Source of input for Japanese manufacturing affiliates in selected ASEAN Member States, 2013
(Per cent)

Host country	Locally procured	Japan	ASEAN	China	Others
Thailand	53	30	5	7	7
Malaysia	42	28	12	7	11
Indonesia	41	33	14	5	9
Singapore	40	27	16	7	9
Viet Nam	32	35	12	11	9
Philippines	28	42	11	9	11
Lao People's Democratic Republic	11	19	43	23	5
Cambodia	11	23	37	22	8

Source: UNCTAD, based on JETRO survey.

Japanese manufacturing affiliates in ASEAN import over 27% of their inputs from Japan and 58% locally (table 3.15). These numbers indicate the relatively strong trade in inputs between Japanese companies in ASEAN and Japan, and between related companies and partners in ASEAN. Japanese companies have been increasing efforts to source inputs locally in ASEAN Member States (table 3.16). These manufacturers include Japanese, non-Japanese and local suppliers. Their interaction in cross-supplying and sourcing intermediate inputs strengthens regional production networks in their industries.

Toyota and other Japanese automotive manufacturers have adopted a policy of sourcing all components and materials required for production in ASEAN from ASEAN suppliers, encouraging suppliers based in Japan to invest in ASEAN Member States and to become part of their production networks. Many automotive manufacturers and their first-tier suppliers source within ASEAN, which has an impact on contract manufacturing involving firms from Japan, ASEAN and other countries. This sourcing strategy increases local linkages and encourages Japanese suppliers to invest and operate close to customers and often in the same location and industrial cluster.

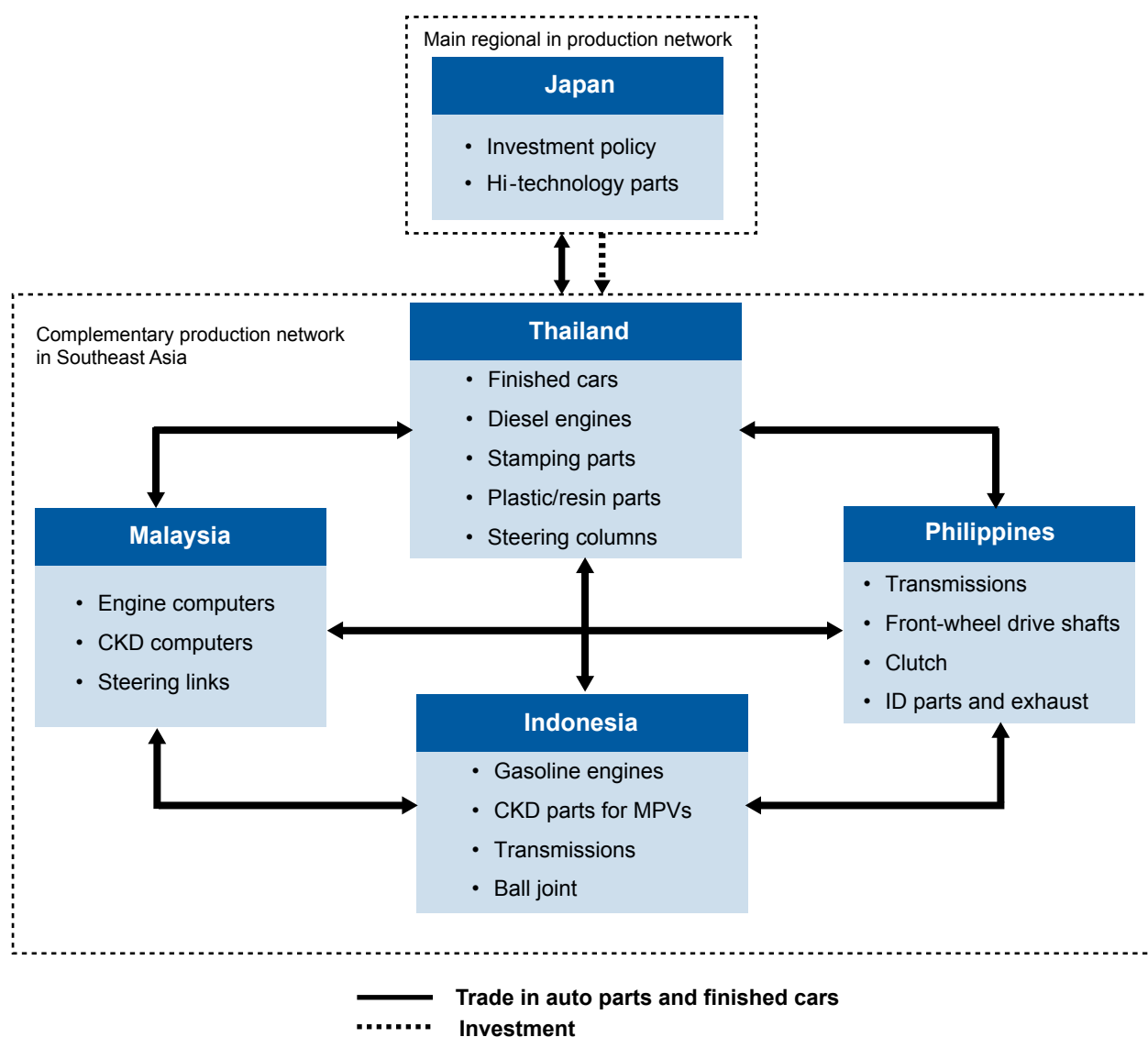
Regional production networks are part of the international production networks of Japanese TNCs. Major Japanese TNCs such as Toyota, Nissan, Sony and Toshiba that operate globally have production hubs in different parts of the world for different reasons. Their networks in ASEAN are connected in some way to their broader international production networks or the global value chains that they control. Figure 3.7 illustrates the connection of regional production networks of Japanese automotive production between ASEAN and Japan. Some manufacturers have also established production connections and exchanges of parts between affiliates and partners in other Asian economies such as China, India and Taiwan Province of China.

For instance, although Toyota has a strong regional production network in ASEAN, its production links extend to cover different components such as engine stamping parts and CKD jacks manufactured and sourced from Taiwan Province of China with technology

inputs supplied from companies based in Japan (Cheewatrakoolpong et al. 2013). Key parts such as engines produced in Malaysia and Indonesia and transmissions produced in the Philippines are supplied to its operation in China. These key components are from its own operation and from contract manufacturers based in ASEAN. Such production networks in Toyota’s system help strengthen ASEAN-China economic development and facilitate trade flows between ASEAN and China through intra-firm arrangements.

To overcome cost challenges, Japanese companies are setting up horizontal or parallel production facilities in China and ASEAN. This corporate strategy is helping in the process of linking ASEAN and China in the production and trade landscape, hastening the ACFTA development.

Figure 3.7. International production network of the auto industry in ASEAN



Source: ADBI (www.adbi.org/files/2013.02.21.wp409.impact.asean.production.networks.pdf), adjusted from Tsukamoto (2006).

3.3.7 Drivers and determinants of Japanese FDI in ASEAN

Cost minimization strategies and the need to operate in cost-competitive locations have pushed Japanese companies to establish production facilities in ASEAN. The attraction of a regional market and the influence of the AEC have also been encouraging these companies to expand their operations and invest in the region in recent years. Opportunities to exploit complementary locational advantages and tap economies of scale to achieve production efficiency are further motivations and determinants of Japanese FDI in ASEAN. Diversification of risks has also become a significant motivation for Japanese FDI to ASEAN in recent years. In light of the impact of the 2011 earthquake and flooding on production in Japan and in Thailand, Japanese companies have started to diversify or are planning to establish parallel facilities abroad or in other locations, some of which are in ASEAN Member States. Japanese market-seeking FDI is not restricted to services by also manufacturing operations.

The determinants of Japanese FDI depend on the industry in which they operate. Services, real estate and infrastructure activities are more closely related to market factors and investment opportunities. Market size, regional integration, rising purchasing power and growing middle-income consumers are important considerations. Manufacturing FDI can be influenced by both market and efficiency-seeking factors, while availability of and access to natural resources are important for resource-seeking FDI.

Market-seeking FDI

With limited revenue growth in their home market, Japanese TNCs in the service industry are investing in ASEAN to expand their revenues and customer bases. They see ASEAN as a rapidly growing market that offers opportunities for investment and for revenue growth.

Traditionally, Japanese banks' operations in ASEAN have been limited to corporate banking. Now, these banks are rapidly extending their operations to retail activities, partly because of the growing opportunities for retail banking. Some examples include the acquisition of a 72% stake in Thailand's Bank of Ayudhya by Bank of Tokyo-Mitsubishi UFJ for \$5.3 billion in 2013 and the acquisition by Sumitomo Mitsui Banking Corporation of a 40% stake in Indonesia's Bank Tabungan Pensiunan Nasional through successive acquisitions in 2013 and 2014 amounting to \$3 billion.

Japanese insurance TNCs have made a number of acquisitions in the region. Meiji Yasuda Life Insurance bought a 15% stake in Thai Life Insurance in 2013 for an estimated \$700 million and increased its shareholding in PT Avrist Assurance in Indonesia to about 30%. Sumitomo Life acquired a 20% interest in Viet Nam's largest life insurer, Bao Viet, in 2012 and Dai-ichi Life purchased a 40% stake in Indonesia's PT Panin Financial in 2013. These acquisitions contributed to the increase in Japanese investment in finance and insurance in ASEAN.

The increasing affluence in ASEAN and the prospects of the rapidly growing regional market are also attracting Japanese manufacturing investment, particularly from companies that produce for the local or regional market such as in the automotive industry. For example,

Dowa Thermotec constructed a factory in 2013 in Karawang, Indonesia, to provide heat treatment services to manufacturers of auto components. Many of these manufacturers also operate in the same industrial parks.

Efficiency-seeking FDI

ASEAN has been an attractive location for Japanese manufacturing FDI because of cost competitiveness and other locational factors. The breakdown of sales of Japanese affiliates in ASEAN shows that a large proportion of the sales or production of Japanese affiliates in the region is to the export market (table 3.17). In 2012, sales of Japanese affiliates in ASEAN amounted to over \$540 billion. In manufacturing, 48% of the sales are accounted for by exports and over half of the local sales in manufacturing were accounted for by those to Japanese firms in the host country. Many Japanese parts and components companies invest in ASEAN not only because of cost but also because of the need to be close to customers. The rapid growth in industrial activities and in production in the automotive and electronics industries also helps attract parts and component companies to set up operations in these industrial clusters.

Table 3.17. Breakdown of sales by Japanese affiliates in ASEAN, 2012
(Billions of dollars)

	Manufacturing	Non-manufacturing	Total
Sales	325.3	216.2	541.5
Local (host country) sales	168.7	121.1	289.7
to Japanese firms	92.3	37.9	130.2
to local firms	68.9	67.9	136.8
to other firms	7.6	15.2	22.8
Exports	156.6	95.1	251.8
to Japan	51.2	22.6	73.8
to other markets	105.4	72.5	177.9

Source: UNCTAD, based on METI data.

The influence of regional integration

Regional integration factors such as the AFTA and regional schemes such as the AICO have influenced or facilitated Japanese FDI and expansion in the region. In expectation of the imminent realization of the AEC, Japanese TNCs have expanded in the region and have announced significant investment plans over the next few years. Regional factors and the prospect of a single market and production base have influenced Japanese companies to increasingly think ASEAN and adopt regional strategy, building on their existing value chains or linking into others' regional value chains.

In the past, regional integration tended to be associated with the consolidation of production bases in the countries involved. For instance, in the electric and electronics industry, major Japanese manufacturers such as Panasonic, Sony and Toshiba considerably reduced the number of production bases in ASEAN during the 2000s, as efforts to realize the AFTA intensified. This tendency was particularly apparent in the production of household appliances. Panasonic used to operate a stand-alone production base in each ASEAN country before integration. In response to the AFTA, Panasonic reorganized its production system and concentrated most of its operations in Thailand. Sony concentrated most of its production in Malaysia (Karikomi and Miyajima 2014). Other Japanese companies, however, concentrated their operations and different business functions in other ASEAN Member States.

Although regional integration can have an effect on the consolidation of production facilities, many Japanese companies are increasingly pursuing vertical production networks to achieve production and cost efficiencies in an integrating ASEAN. Some are taking advantage of the benefits of ASEAN's regional integration by pursuing production fragmentation and division of labour in the region. As Japanese companies put in place a diversification strategy to minimize the risk of production disruption, they are also increasingly establishing horizontal integration through plants in one or more ASEAN Member States and combining the specific locational advantages of the host country and local market opportunities.

ASEAN has a number of FTAs and economic partnership agreements (EPAs) with its major trading partners. For the operation of Japanese manufacturing affiliates, the most relevant FTA is the AFTA. A JETRO survey shows that the share of Japanese affiliates taking advantage of the free trade provisions is greater for trade with ASEAN than for any other trading partner countries (table 3.18).

Table 3.18. Share of Japanese affiliates taking advantage of FTAs/EPAs

Host country	Trading partner	Share of affiliates taking advantage of FTAs, EPAs	
Thailand	Export	Japan	34
		ASEAN	49
		China	38
		India	33
		Korea, Republic of	36
		Australia	39
	Import	Japan	38
		China	42
		ASEAN	54
		Korea, Republic of	37
Malaysia	Export	India	41
		Japan	33
		ASEAN	37
		China	38
		Australia	51
	Import	India	51
		Japan	32
		ASEAN	46
		China	30
		Korea	52
Singapore	Export	ASEAN	42
		India	36
		Japan	40
		China	34
		Australia	24
		Korea, Republic of	52
	Import	Japan	31
		ASEAN	37
		China	27
Indonesia	Export	Japan	38
		ASEAN	55
	Import	Japan	51
		ASEAN	61
Viet Nam	Export	China	44
		Japan	22
		ASEAN	37
	Import	China	26
		Japan	23
		ASEAN	34
Philippines	Export	China	24
		Japan	17
	Import	ASEAN	29
		Japan	14
		ASEAN	24

Source: UNCTAD, based on JETRO survey.

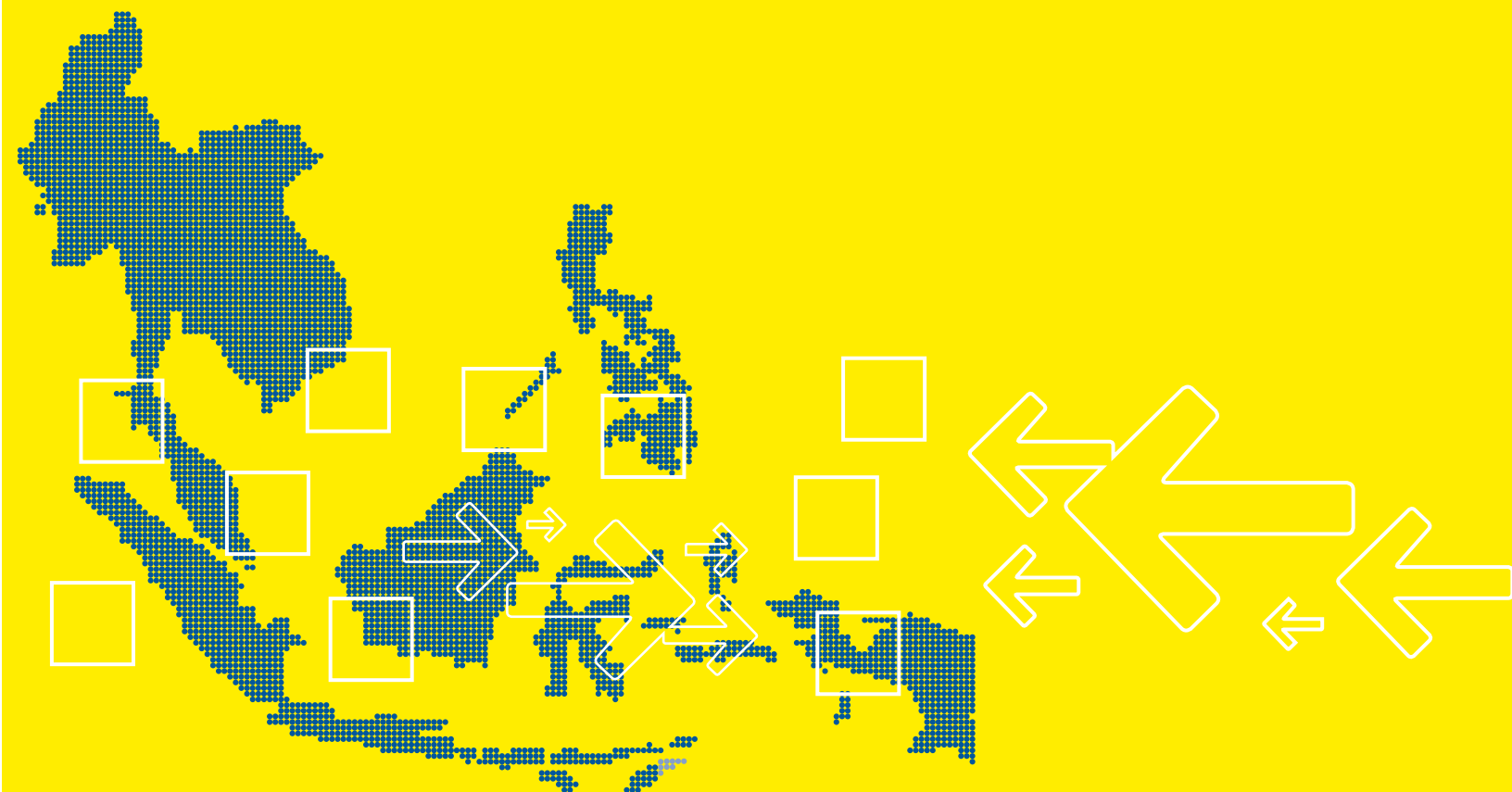
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PART TWO

REGIONAL VALUE CHAINS IN ASEAN



CHAPTER 4

REGIONAL VALUE CHAINS IN ASEAN

4.1 Introduction

Regional value chains (RVCs) in ASEAN are spreading, involving more companies, countries and a wider range of products that help connect the region. The intraregional trade (exports and imports) in manufacturing, including in intermediate goods, parts and components, grew by 12% annually between 2000 and 2013. Intra-ASEAN manufacturing value added inputs in ASEAN exports have risen nearly 10-fold, from \$56 billion in 1990 to \$514 billion in 2011. Intra-ASEAN trade in intermediate goods is expected to grow more, aided by growth in RVCs and more active expansion of operations by TNCs in the region in 2012-2013 (chapter 1).

Intra-ASEAN trade is concentrated in key product categories such as electronics, automotive, automotive parts and components, machinery and palm oil. Intra-regional trade in these products is increasing the intensity of intra-regional production, investment, trade and business linkages involving foreign and indigenous companies operating in ASEAN. The region is a major global producer and exporter of these products, and many global companies are involved in the production of these export items in the region (AIR, 2013).

RVCs and regional production networks are not new to ASEAN. Many TNCs have used regional production networks in ASEAN since the 1980s. In some cases, these networks are part of a larger international production networks or global value chains (GVCs) of major TNCs that operate in the region (section 4.6). The ability of TNCs (lead firms) to slice, distribute and coordinate different value chain segments and functions, including determining who is to supply what and from where, has strongly facilitated RVCs in ASEAN.

The case for RVCs can be better appreciated from looking through a regional integration lens. The stronger the form of regional integration, the more intense and geographically widespread RVCs will be in a region where significant complementary locational advantages exist. RVCs strengthen regional connectivity through production, investment, trade and business linkages that involve operations by TNCs and suppliers at different levels (intra- and inter-TNCs relationship) and the interrelationship between TNCs and local firms in different parts of ASEAN. Although RVCs can develop without regional integration, ASEAN's integration accentuates and encourages RVCs for various reasons (section 4.4).

At each segment of a value chain, there are different groups of players. For an entire value chain, there is a web of complex groups of players that come together to produce from raw materials or key components through to the manufacturing and delivery of final products to customers. For some industries or products (e.g. personal computers) a segment of the value chain (e.g. hard disk drives, or HDDs) has its own value chain

life, involving lead firms, brand owners, contract manufacturers, local companies and suppliers, including other service providers (e.g. electronics manufacturing services) (chapter 5).

More often now, TNCs are using a portfolio of channels and approaches to conduct international business. At different segments of a value chain, TNCs decide how best to participate – whether through FDI, contractual arrangements, business linkages, intra-firm trade or arm’s-length transactions. They invest abroad to internalize proprietary advantages, contract out certain operational processes for cost reasons, pursue flexible manufacturing, exploit complementary skills and technology advantages of partners and become involved in using other NEMs that are part and parcel of their global or regional operation strategy.

This chapter analyses the magnitudes and development of RVCs in ASEAN and establishes how regional integration shapes the environment conducive for RVCs. It also examines how RVCs increase the connectivity of ASEAN Member States, thereby contributing to increasing the competitiveness of the region for production networks, investment and intra- and inter-firm transactions involving different member countries. Figure 4.1 provides an analytical framework highlighting the connection between regional integration, RVCs and ASEAN connectivity through companies, countries and industrial linkages. The analyses of this chapter are further supported by cases of products, companies and industries examined in chapter 5, which present the connections of different players and ASEAN Member States in their respective RVC processes.

Figure 4.1. Regional integration, RVCs and ASEAN's connectivity



Source: UNCTAD 2014.

4.2 What is a regional value chain?

RVCs develop when a company is able to slice different segments of a value chain to be performed by different players (foreign and local firms) or within the same group of companies in different locations in a region. A lead company may exercise influence

on how to produce (through FDI or an outsourcing strategy or an arm's-length option) and who is to supply what (which suppliers or service providers) and from where (box 4.1). Which segments of RVCs are to be produced and supplied by whom and from where will depend on a combination of corporate objectives and strategies and locational determinants, including regional integration elements.

Regional value chains in ASEAN involve interrelated value additions or creations arising from different segments of value added through the operations of foreign and local companies based in the region. Some key segments of a value chain may be operated by lead firms, while other segments (those with lower value added or that require a special skill set or technology) may be outsourced to long-established partners or other suppliers. All of these intra- and inter-firm connections may be conducted within a region.

RVCs provide participating companies the opportunity to benefit from the specialization and support of other firms in the chains. These firms can be related within the same

Box 4.1. Definitions of RVCs and GVCs

RVCs refer to regional value creation or addition involving interrelated stages or segments of operations by related or unrelated groups of companies operating in different countries in a region. For each segment, participating companies have a choice of operation modes (e.g. FDI, outsourcing or buying from independent suppliers). Some value chains can be complex and long (e.g. sophisticated automotive manufacturing value chains involving extensive networks of firms and suppliers), while others can be short and simple (e.g. value chains in the production of a single auto part as a component for automotive manufacturing). The complexity or segments of a GVC or RVC can vary depending on products, intermediate goods and the industry involved. Some industries or intermediate goods can be part of another industry or product value chains. RVCs in general are established and operated within a specific region or as part of wider GVCs.

About 60% of the over \$20 trillion in global trade today consists of trade in intermediate goods and services that are incorporated at various stages in the production process of goods and services for final consumption. The fragmentation of production processes and the international dispersion of tasks and activities within them have led to the emergence of borderless production systems – which may be sequential chains or complex networks and which may be global or regional or span only two countries. These systems are commonly referred to as global value chains (GVCs).

GVCs are typically coordinated by TNCs, with cross-border trade of production inputs and outputs taking place within their networks of affiliates, contractual partners in non-equity modes of international production (*WIR 2011*) and arm's-length suppliers. Global trade and FDI have grown exponentially over the last decade as firms have expanded their international production networks, trading inputs and outputs across borders between affiliates and partners in GVCs.

TNCs' decisions on where to locate and with whom to partner are decisions on where to invest and from where to trade. These decisions drive patterns of value added in GVCs. TNCs manage GVCs through complex webs of supplier relationships and various governance modes. Different governance modes have different development implications.

Source: Based on *WIR 2013*.

group of companies (e.g. Toyota and Denso), other original brand manufacturers (who themselves are also TNCs, such as Western Digital and Seagate Technology which supply HDDs to other electronics TNCs) or contract manufacturers or electronic manufacturing services (EMS) (e.g. Foxconn, Flextronics, Jabil) or independent suppliers (e.g. foreign and local parts and components manufacturers).

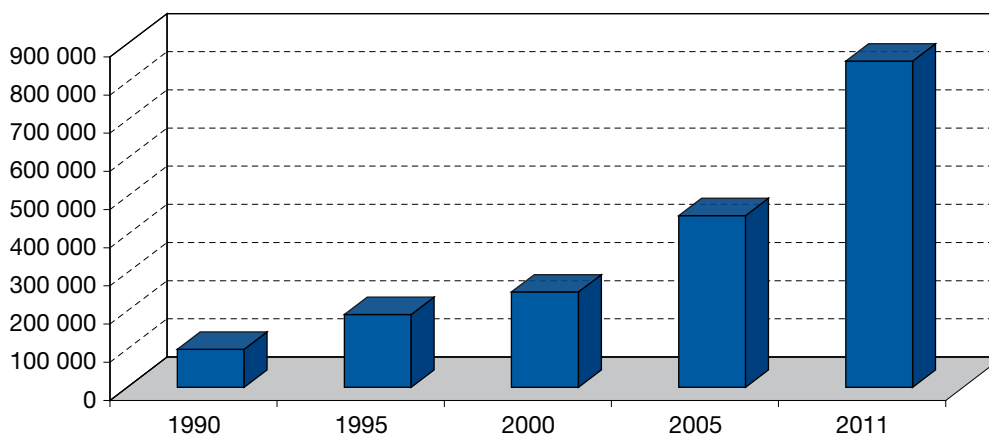
4.3 RVCs in ASEAN: A macro perspective

Given that no aggregated data exist that directly measure RVCs in ASEAN, this report uses a number of proxies to approximate the intensity and development of RVCs in the region. Product and industry cases in chapter 5 are used to illustrate how companies operating in the region are involved with RVC and regional production network strategies influenced by the opportunities created in an integrating ASEAN.

Although trade in value added data estimated from the input-output tables¹ can be broken down into value added inputs used in exports of products by ASEAN Member States, the data set has some shortcomings in that it is not comparable to measuring the actual magnitude of exports from the region.² Nonetheless, the data set is useful in indicating trends and developments in value added inputs in exports of ASEAN and intraregionally. Imports data from ASEAN Member States on intra-ASEAN trade are examined at the six and eight HS code levels for a number of products to determine trade connectivity between countries and companies, which involves TNCs and their relationships with suppliers in the region.

Intra-ASEAN value added inputs in ASEAN exports rose significantly between 1990 and 2011 based on input-output statistics (figure 4.2). ASEAN value added inputs in the region's total exports are high and have been increasing, from 65% in 1995 to 69% in 2011 (box 4.2; figure 4.3). This development suggests

Figure 4.2. ASEAN exports incorporating intra-ASEAN value added inputs are rising
(Millions of dollars)



Source: UNCTAD-Eora GVC database.

Note: The absolute number of value added inputs may under report the actual trade data collected through the customs reporting system which is based on FOB and CIF basis.

that export-oriented foreign and local companies operating in the region have increased their sourcing of inputs from the region to use in producing or assembling subsequent components or final products in the value chains they are associated with.

Box 4.2 GVC terminology used in this chapter

A country's exports can be divided into (1) domestically produced value added and (2) imported (foreign) value added that is incorporated into exported goods and services. Exports can go to a foreign market either for final consumption or to be used as intermediate inputs to be exported again to third countries (or back to the original country). The analysis of GVCs takes into account both foreign value added in exports (the *upstream* perspective) and exported value added incorporated in third-country exports (the *downstream* perspective). The indicators used in this section are as follows:

1. **Foreign value added: FVA** (foreign value added as a share of exports) indicates what part of a country's gross exports consists of inputs that have been produced in other countries. It is the share of the country's exports that is not adding to its GDP.
2. **Domestic value added: DVA** is the part of exports created in-country, i.e. the part of exports that contributes to GDP. The sum of foreign and domestic value added equates to gross exports. Domestic value added can be put in relation to other variables:
 - a. As a share of GDP, it measures the extent to which trade contributes to the GDP of a country.
 - b. As a share of global value added trade (the "slice of the value added trade pie"), it can be compared to a country's share in global gross exports (*relative value capture* from trade).
3. **Domestic value added incorporated in other countries' exports: DVX** (as a share of exports) indicates to what extent the countries' exports are used as inputs to exports from other countries. At the global level, the sum of this value and the sum of foreign value added is the same.
4. **GVC participation** indicates the share of a country's exports that is part of a multi-stage trade process, by adding to the foreign value added *used* in a country's own exports (FVA) also the value added *supplied* to other countries' exports (DVX). Although the degree to which exports are used by other countries for further export generation may appear less relevant for policymakers as it does not change the domestic value added contribution of trade, the participation rate is a useful indicator for the extent to which a country's exports are integrated in international production networks and it is thus helpful in exploring the trade-investment nexus.

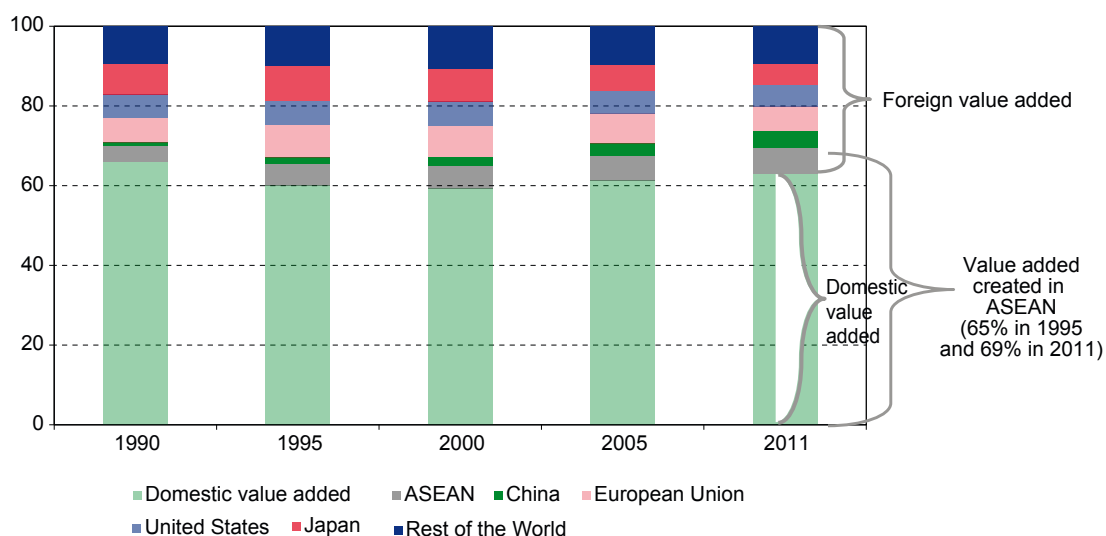
The GVC participation rate corrects the limitation of the foreign and domestic value added indicators in which, by definition, countries at the beginning of the value chain (e.g. exporters of raw materials) have a low foreign value added content of exports. It gives a more complete picture of the involvement of countries in GVCs, both upstream and downstream.

GVC indicators can also be used to assess the extent to which **industries** rely on internationally integrated production networks. Although a number of complex methods have been devised to measure the length of GVCs, the degree of double counting in industries, conceptually, can serve as a rough proxy. Data on value added trade by industry can provide useful indications of comparative advantages and competitiveness of countries, and hence form a basis for development strategies and policies.

Source: Adapted from WIR 2013.

About 80–85% of the intraregional value added inputs are sourced domestically or in country, which means that foreign and local companies operating in an ASEAN country in general are using significant amounts of locally produced value added inputs in their exports. This further suggests the existence of a strong TNC-supplier relationship or cross-sourcing between different levels of suppliers operating in the same country. The suppliers can be foreign owned or local companies operating in an ASEAN country. They may operate with multiple facilities within an ASEAN country and connect with other companies or affiliates of the same group of companies (chapter 5).

Figure 4.3. Value added exports from ASEAN, by domestic, ASEAN and other top four foreign country value added creators, 1990, 1995, 2000, 2005 and 2011
(Per cent)



Source: UNCTAD-Eora GVC database.

The manufacturing industry accounted for a majority of the intraregional value added inputs in ASEAN export. For instance, in 2011 some 60% of the intra-ASEAN value added inputs in ASEAN exports came from manufacturing activities.³ The electronics industry was the single most active user in intraregional intermediate inputs (table 4.1).

More than 50% of electronics storage imports in ASEAN, including HDDs, are accounted for by intraregional trade (table 4.2). Intraregional imports in storage units are concentrated in a few ASEAN Member States, which include Malaysia, Singapore and Thailand. The largest source of imports of electronics storage for the region is intra-ASEAN (table 4.3). These statistics suggest an active RVC in the production and trade of electronics storage among these ASEAN Member States. In textiles and apparels, the RVC appears to be declining in intensity. Intra-ASEAN imports of textiles and apparel as a percentage of total ASEAN imports in this sector declined from 60% in 2004 to just 19% in 2013. Although RVCs exist in the region for this sector, companies operating in ASEAN are sourcing intermediate inputs more often from sources outside the region – strengthening the connection of the region in GVCs and with major source destinations.

Table 4.1. ASEAN exports incorporating intra-ASEAN value added inputs, by industry, 1990, 1995, 2000, 2005 and 2011

(Millions of dollars)

ASEAN inputs by industry	1990	1995	2000	2005	2011
Total intra-ASEAN value added inputs in ASEAN exports	99 579	190 947	249 982	449 746	855 052
Manufacturing industry value added inputs in ASEAN exports	56 341	114 433	152 282	270 839	514 226
Textiles, clothing and leather	5 856	10 728	16 516	25 736	43 470
Chemicals and chemical products	2 917	7 332	10 829	20 634	43 009
Machinery and equipment	1 829	4 730	7 053	13 483	28 242
Electrical and electronic equipment	19 315	36 124	49 124	90 336	171 598
Motor vehicles and other transport equipment	2 151	4 375	7 066	12 454	22 046
<i>Memorandum</i>					
ASEAN value added inputs in manufacturing in world exports	69 990	140 849	194 392	355 529	680 448

Source: UNCTAD-Eora GVC database.

Note: The numbers may under-report the actual trade volume of ASEAN due to differences in methodologies in collecting or compiling I-O and customs-based trade statistics.

Table 4.2. ASEAN total import and intra-regional trade (import) of electronic storage units^a and textiles and garments, 2004–2013

(Millions of dollars)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013 ^b
Storage Units										
Total ASEAN import	3 508.6	3 850.0	4 600.8	3 612.0	3 607.6	2 724.0	11 113.9	4 010.3	5 345.8	4 565.8
Intra-ASEAN import	1 987.3	1 972.7	2 536.6	1 764.0	1 454.1	1 283.4	2 002.8	2 214.7	2 679.7	2 407.7
Percentage of intra-ASEAN trade (import) (%)	56.6	51.2	55.1	48.8	40.3	47.1	18.0	55.2	50.1	52.7
Textiles and apparel										
Total ASEAN import	12 690.8	13 175.9	14 409.4	15 692.5	18 994.0	17 009.8	25 740.4	30 338.1	35 076.1	36 638.4
Intra-ASEAN import	7 556.6	7 878.9	9 198.6	7 431.8	7 110.0	6 063.6	15 144.7	8 291.3	10 087.6	7 026.3
Percentage of intra-ASEAN trade (import) (%)	59.5	59.8	63.8	47.4	37.4	35.6	58.8	27.3	28.8	19.2

Source: ASEAN Secretariat, ASEAN Trade Statistics Database (accessed on 11 June 2014).

^a HS code 847170 of which HDD is included.

^b 2013 figures are preliminary as of 11 June 2014.

HDD – part of electronics storage – production in ASEAN is primarily for export outside the region, which makes ASEAN Member States important players in the provision of electronic components in consumer electronics GVCs (table 4.4; table 4.5). However, more than 50% of HDD imports into the region are intra-ASEAN, involving in particular Malaysia, Singapore and Thailand. Major global HDD manufacturers and their component suppliers (many are foreign TNCs) operate in these three countries (chapter 5). Malaysian and Singaporean component manufacturers also contributed to the local value added

Table 4.3. Top 10 destinations of ASEAN exports and imports of electronic storage units^a
(Millions of dollars)

2010		2011		2012		2013 ^b	
Top destination	Value	Top destination	Value	Top destination	Value	Top destination	Value
China	6 917.2	United States	6 406.7	China	6 825.5	China	4 675.8
United States	5 010.3	ASEAN	5 512.0	United States	4 975.2	United States	4 660.1
EU-28	4 102.8	China	3 268.9	EU-28	3 419.9	Hong Kong (China)	3 524.3
Hong Kong (China)	2 327.4	EU-28	1 932.7	Hong Kong (China)	3 229.9	EU-28	3 387.1
ASEAN	1 952.6	Japan	1 429.0	ASEAN	2 496.6	ASEAN	2 352.5
Japan	1 382.0	Hong Kong (China)	806.9	Japan	1 372.9	Japan	1 266.2
India	504.0	Australia	355.0	Australia	467.0	Mexico	634.1
Mexico	491.5	India	279.3	Mexico	428.5	Australia	436.8
Australia	411.6	Mexico	268.4	India	387.2	Taiwan Province of China	347.7
Taiwan Province of China	340.9	Taiwan Province of China	198.0	Taiwan Province of China	310.9	India	329.4
Others	902.9	Others	572.8	Others	924.1	Others	834.6
Total	24 343.2	Total	21 029.8	Total	24 837.8	Total	22 448.6
China	3 346.3	ASEAN	2 214.7	ASEAN	2 679.7	ASEAN	2 407.7
ASEAN	2 002.8	China	925.4	China	1 370.9	China	1 268.4
United States	1 610.2	United States	254.5	United States	708.3	EU-28	227.2
EU-28	1 484.4	Japan	169.9	Japan	164.6	United States	220.2
Hong Kong (China)	1 177.2	EU-28	169.5	EU-28	151.1	Japan	166.9
Japan	506.3	Hong Kong (China)	87.4	Mexico	62.5	Taiwan Province of China	81.9
Republic of Korea	193.8	Mexico	71.0	Hong Kong (China)	62.1	Hong Kong (China)	68.5
Taiwan Province of China	186.4	Republic of Korea	56.9	Taiwan Province of China	58.7	Mexico	57.7
Australia	126.8	Taiwan Province of China	44.9	Republic of Korea	53.3	Republic of Korea	49.4
United Arab Emirates	106.4	Australia	6.9	Costa Rica	11.6	Australia	7.1
Others	373.3	Others	9.3	Others	23.0	Others	10.8
Total	11 113.9	Total	4 010.3	Total	5 345.8	Total	4 565.8

Source: ASEAN Secretariat, ASEAN Trade Statistics Database (accessed on 11 June 2014).

^a Storage units are HS code 847170, which includes HDDs.

^b 2013 figures are preliminary as of 11 June 2014.

inputs in HDD component manufacturing. They produce in most cases to supply foreign companies operating in their home countries.

Aside from the regional connection between ASEAN Member States in the production of electronics storage and HDDs, the region has important connections in the value chains of these products with a number of other countries such as China, Japan and other Asian economies. ASEAN also established an important link with the United States and the

Table 4.4. ASEAN trade in HDD, 2012 and 2013
(Millions of dollars)

Export/Import	2012	2013
ASEAN export	8 582	7 256
Intra-ASEAN export	1 569	1 618
ASEAN import	2 190	2 172
Intra-ASEAN import	1 305	1 212

Source: ASEAN Secretariat, ASEAN Trade Statistics Database (accessed on 11 June 2014).

Note: HS code 84717020 for HDD. Do not include Malaysia's extra-ASEAN trade as it is only available for 6-digit code.

European Union in the production and trade of these products through TNCs' intra- and inter-firm GVC activities.

Involvement in RVCs and links to GVCs vary by industry, particularly between the primary and the manufacturing sector (measured by foreign value added share in exports from ASEAN). The three manufacturing industries that have the largest foreign inputs are the motor vehicles and other transport equipment industry; the coke, petroleum products and nuclear fuel industry; and the electrical and electronic equipment industry (table 4.6). The table communicates three important messages:

- (i) ASEAN is strongly connected to GVCs in these industries and products through high foreign value added inputs incorporated in the region's exports.

Table 4.5. Top 10 destinations of ASEAN's export and import of HDD^a
(Millions of dollars)

Export/import	2012		2013 ^b	
	Economy	Value	Economy	Value
Exports	China	2 670.7	ASEAN	1 617.8
	United States	1 737.6	United States	1 545.9
	ASEAN	1 569.4	China	1 251.5
	EU-28	782.9	Hong Kong (China)	910.0
	Hong Kong (China)	709.3	EU-28	728.1
	Japan	533.3	Japan	465.6
	Australia	169.9	Mexico	226.5
	Republic of Korea	104.8	Australia	178.5
	Mexico	99.1	India	87.3
	India	76.1	Republic of Korea	84.6
	Others	128.5	Others	160.6
Total		8 581.7		7 256.4
Imports	ASEAN	1 305.2	ASEAN	1 212.0
	China	604.8	China	620.7
	Japan	120.5	Japan	116.9
	United States	61.7	EU-28	86.7
	Republic of Korea	38.6	United States	57.8
	Taiwan Province of China	15.8	Republic of Korea	27.3
	EU-28	15.8	Taiwan Province of China	21.2
	Hong Kong (China)	15.4	Hong Kong (China)	19.8
	Australia	4.6	Australia	3.5
	India	2.1	Mexico	3.3
	Others	5.3	Others	3.3
Total		2 189.8		2 172.5

Source: ASEAN Secretariat, ASEAN Trade Statistics Database (accessed on 11 June 2014).

^a HS code 84717020. Do not include extra-ASEAN trade from Malaysia as it is only available at the 6-digit code.

^b 2013 figures are preliminary.

- (ii) Over the period between 1990 and 2011 (the latest available data), the domestic value added content in ASEAN’s exports rose, which is suggestive of growing RVCs.
- (iii) The data suggest that not only are imports replaced by the direct investment and operations of TNCs in the region, but also domestic producers have gained competitiveness to produce more value added products in these industries.

The importance of RVCs is increasing in the case of ASEAN. Over the past two decades, ASEAN has established regional networks in both upstream and downstream directions of the value chains, accounting for 15% of all GVCs in 1990, 18% in 2000 and 21% in 2011 (table 4.7). ASEAN’s GVC participation remained high throughout the period but its RVC participation has been rising constantly.

The extent to which RVCs, rather than GVCs, are utilized varies by industry (figure 4.4). The four industries that demonstrate the largest involvement in RVCs are all natural-

Table 4.6. ASEAN is strongly connected in GVCs but for some industries RVCs are significant and increasing

(Share of foreign value added in ASEAN exports, 1990 and 2011)

	Sector/industry	1990	↑→↓	2011
Primary	All industries	34.1	↑	37.0
	Primary total	7.5	↑	10.1
	Agriculture, hunting, forestry and fishing	8.3	↑	16.0
	Mining, quarrying and petroleum	7.2	→	7.4
Manufacturing	Manufacturing total	44.4	→	45.8
	Food, beverages and tobacco	17.6	↑	27.4
	Textiles, clothing and leather	32.2	↑	37.3
	Wood and wood products	18.5	↑	26.5
	Publishing, printing and reproduction of recorded media	27.9	↑	39.6
	Coke, petroleum products and nuclear fuel	63.4	↓	57.5
	Chemicals and chemical products	37.8	→	37.9
	Rubber and plastic products	27.6	↑	39.0
	Non-metallic mineral products	31.9	↑	34.3
	Metal and metal products	37.5	↑	44.0
	Machinery and equipment	47.4	↓	46.2
	Electrical and electronic equipment	54.9	↓	53.5
	Precision instruments	36.8	→	38.6
Motor vehicles and other transport equipment	72.7	↓	62.5	
Services	Services total	18.6	↑	21.9
	Electricity, gas and water	10.9	↑	21.8
	Construction	24.9	↑	31.3
	Trade	14.9	→	14.9
	Hotels and restaurants	12.4	↑	17.9
	Transport, storage and communications	27.7	↑	30.8
	Finance	10.6	↑	14.3
	Business services activities	19.2	↑	23.1
	Health and social services	18.3	↑	22.6

Source: UNCTAD-Eora GVC Database.

Note: Based on two- to three-digit level of ISIC.

Table 4.7. GVC and RVC participation by ASEAN, 1990–2011
(Per cent of total exports)

Year	FVA: Foreign value added			DVX: Domestic value added incorporated in other countries' exports			Value chain participation		
	Total	Created outside ASEAN	Created within ASEAN	Total	Incorporated outside ASEAN	Incorporated within ASEAN	GVC participation	RVC participation	RVC/GVC
	(A) = (B+C)	(B)	(C)	(D) = (E+F)	(E)	(F)	(A + D)	(C + F)	(C+F)/(A+D)
1990	34.1	30.1	4.0	18.0	13.9	4.0	52.1	8.0	15.4
1995	39.9	34.5	5.3	18.2	12.9	5.3	58.1	10.6	18.2
2000	40.7	35.1	5.7	20.7	15.0	5.7	61.4	11.4	18.6
2005	38.6	32.5	6.1	23.5	17.4	6.1	62.2	12.2	19.6
2011	37.0	30.6	6.4	24.9	18.4	6.4	61.9	12.9	20.8

Source: UNCTAD-Eora GVC Database.

Note: At the regional/global level, (C) and (F) have the same value. This is because the intraregional value of production networks is the same from the input-suppliers' point of view and from the input-receivers' point of view.

resource based industries, followed by business activity-related industries (e.g. trade, transport services, telecommunications, construction and finance). These industries tend to expand regionally, rather than globally. Even for these industries, however, 70–80% of their production networks are with countries outside ASEAN.

Value created by domestic entities constitutes 60–70% of total value added exports from ASEAN, and the remaining share is accounted for by foreign companies through their inputs to the ASEAN products. Furthermore, in this domestic value, a considerable share is generated by foreign affiliates operating in ASEAN. The overall contribution by such companies to ASEAN trade is significant. For example, exports by just Japanese and United States affiliates operating in ASEAN account for some 20% of total exports from ASEAN in 2011 (figure 4.5).

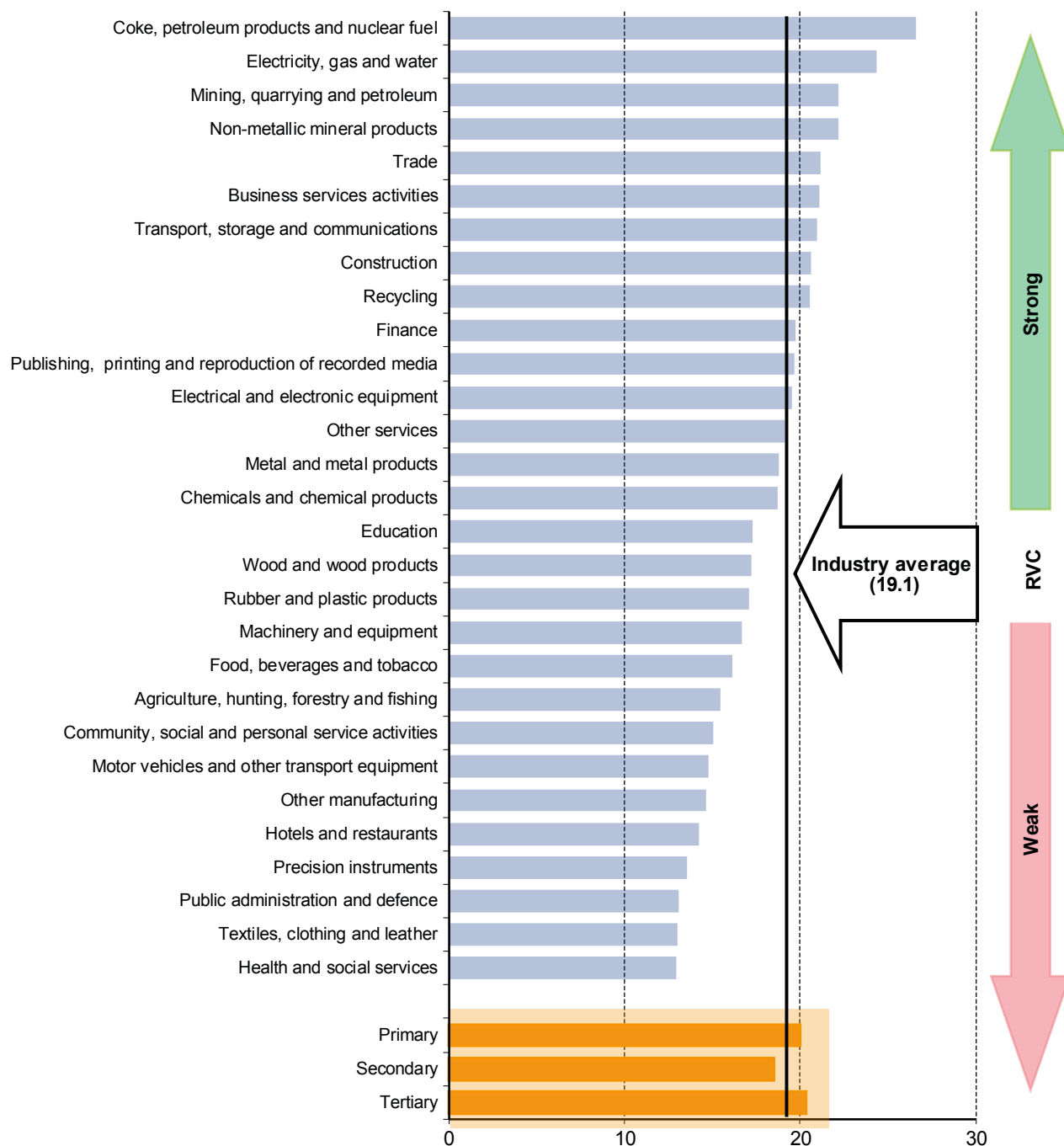
Value chains in selected industries

(i) Automobiles

Automotive value chains are typically characterized by completely built-up units (CBUs), in which firms undertake full production of assembling automobiles. These firms drive the value chain, incorporating activities such as R&D, automotive design, and marketing and distribution. Firms in the next tier are those engaged in completely knocked down (CKD) parts. These firms undertake the modules, such as production of engines, gearboxes, batteries, wheels and car air-conditioners. Component firms make up the last segment of car value chains. The highest value added is enjoyed by CBU firms, followed by CKD firms and then component firms. There is wide variation in CKD firms and value captured, as engine makers are far more sophisticated than battery makers. The diversity is highest among component makers.

Some countries in ASEAN have considered the development of the automotive industry to be strategically important. Some, such as Thailand and Malaysia, have adopted different approaches in the development of the industry. The difference is reflected in their respective value chain patterns (figure 4.6).

Figure 4.4. RVCs are significant in some industries, compared to GVCs in 2010
(Share of RVC in GVC participation)

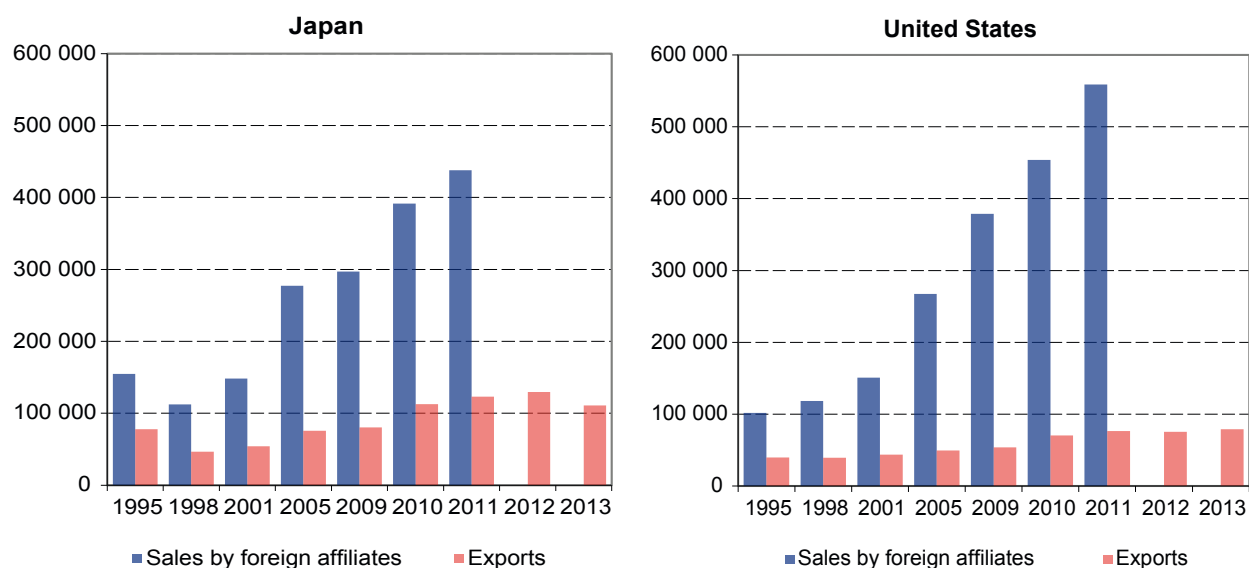


Source: UNCTAD-Eora GVC database.

Note: The higher the share of RVC participation in GVC participation, more production networks are established in the region.

Thailand. Thailand is a hub of automobile production in ASEAN. Consequently, various inputs and materials used for assembly have been imported from both within ASEAN (through regional production networks) and outside ASEAN (through international

Figure 4.5. Exports to ASEAN from Japan and the United States and sales by Japanese and United States affiliates in ASEAN, 1995–2013^a
(Millions of dollars)



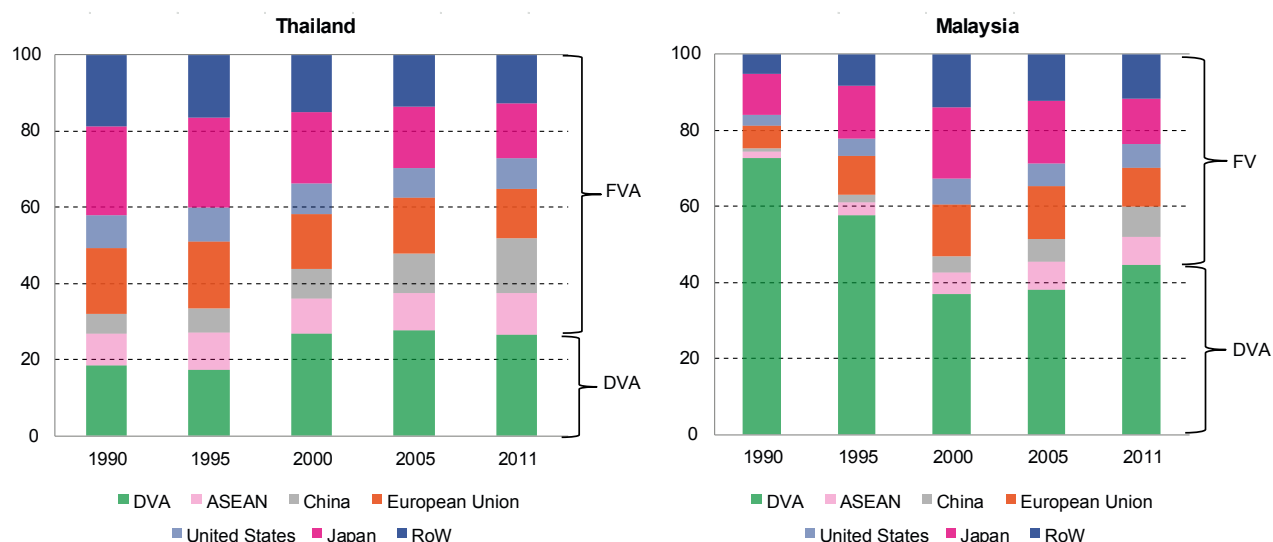
Source: UNCTAD FDI/TNC database (for sales by foreign affiliates) and UNCTAD GlobStat (for exports).

^a For sales data, all affiliates for Japan and majority-owned foreign affiliates for the United States.

production networks). The share of foreign value added (imported inputs) in exports of automobiles from Thailand accounts for 70–80% of the total value of those exports over the past two decades. This significant high share suggests that domestic productive facilities and capacities are small. However, because of increases in production in Thailand by foreign TNCs, as well as the rise of domestic component manufacturers, the domestic value added component has been gradually increasing since about 2000, when foreign automobile TNCs started to invest heavily in Thailand. As a corollary, the share of inputs imported, particularly from Japan, has been declining from 19% in 1990 to 13% in 2011. The same applies to the share imported from the European Union. However, at 14%, the share of inputs imported from China and used in the automobile exports from Thailand is now even larger than the share from Japan

Malaysia. In Malaysia, the importance of domestic supplies in automobile production (and exports) was far greater two decades ago and is still two times larger than that of Thailand. While inputs imported from foreign countries (foreign value added) have been rising, nearly half of exports in automobiles are created domestically. The share of foreign value added increased until 2000, when it started to decline. This corresponds with the start of TNCs' involvement in producing parts and components, as well as the emergence of domestic firms supplying parts and components to national automobile firms. Among imported foreign inputs, the importance of Japan as a source declined as it did in Thailand, mainly because of replacement by local production by Japanese affiliates. ASEAN plays an increasingly important role in Malaysia over the years, providing inputs to Malaysian automobile exports. As in the case of Thailand, automotive value added inputs from China have been increasing constantly.

Figure 4.6. Distribution of value added exports in automobiles from Thailand and Malaysia, by value added creators, 1990–2011
(Per cent)



Source: UNCTAD-Eora GVC database.

Notes: DVA = domestic value added, FVA = foreign value added, RoW = rest of world.

Other ASEAN Member States such as Indonesia and the Philippines are also important automotive production hubs in the region, with many automotive manufacturers and suppliers operating in these countries. The CLMV countries are also beginning to attract parts and components suppliers, and countries such as Myanmar are beginning to attract major automotive manufacturers to establish production plants. These companies have strong connections in the network of companies that operate in ASEAN.

(ii) Electronics

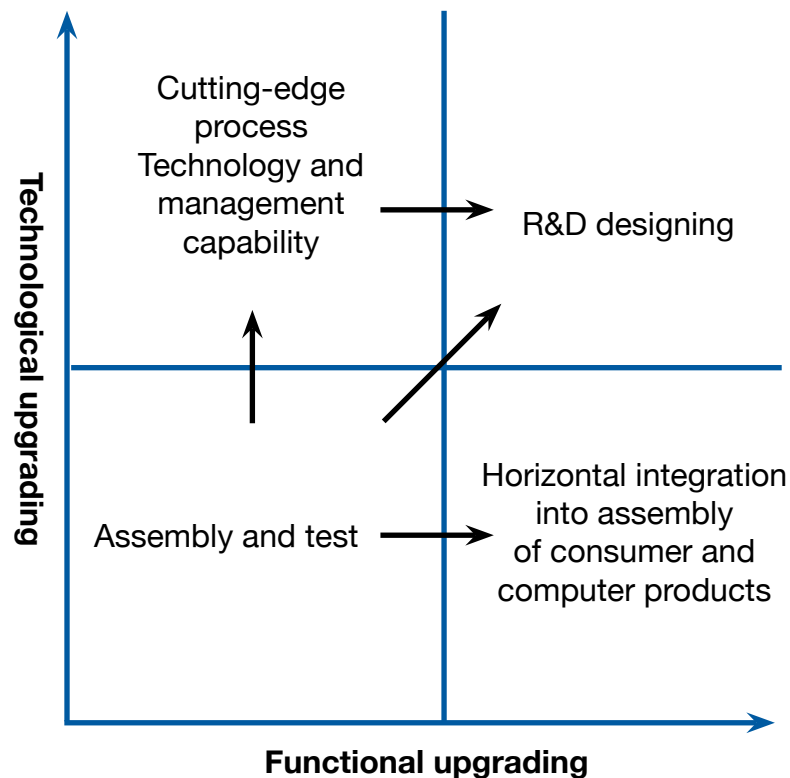
Figure 4.7 presents some key elements of an electronics component value chain. The least value added is associated with assemblers, while the highest value added is enjoyed by firms engaged in R&D and marketing. The value chain in ASEAN is characterized by all segments except for frontier R&D operations.

Some ASEAN Member States such as Malaysia, the Philippines, Singapore and Thailand have a large-scale electronics industry base. Malaysia and Thailand have similar GVC patterns (figure 4.8). ASEAN, China, the European Union, the United States and Japan have contributed almost the same shares of inputs to the electronics exports from Malaysia and Thailand. In the case of the Philippines, the Japanese share of foreign value added is the largest, followed by that of ASEAN.

(iii) Textiles and clothing

The textile and clothing value chains involve many interrelated activities and a large number of factories (figure 4.9). Clothing value chains are driven by brand holders, so upstream material developers enjoy control of textile value chains.

Fig 4.7. Electronics components value chains



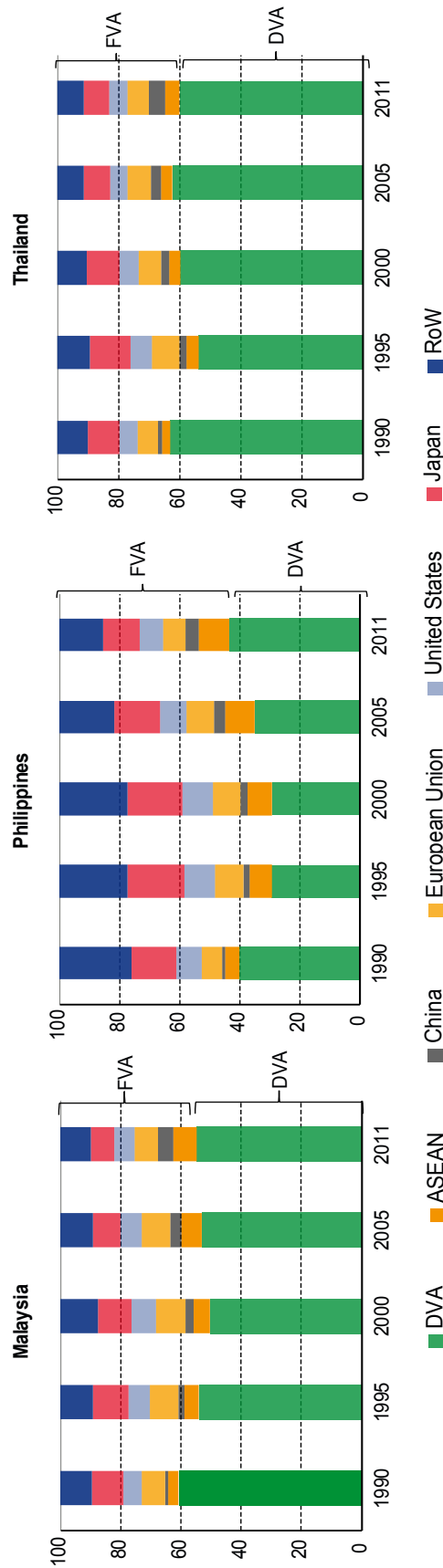
Source: Adapted from Schmidt (2006).

Clothing production in countries such as Cambodia, the Lao People's Democratic Republic and Myanmar are dominated by cut, make and pack (CMP) operations. These countries do not exhibit extensive use of foreign inputs in their exports (figure 4.10). The value added created in this industry is not large. However, Cambodia is increasingly using more foreign inputs in its textile and clothing exports – raising export values five times between 2001 and 2013 and attracting eight times larger FDI stock in this industry. ASEAN and China account for half of the foreign inputs. Viet Nam provides a dynamic case of the industry evolution, particularly in the 2000s. Four-fifths of value added exports from that country were attributed to foreign countries in 2011, with the remaining one-fifth from domestic entities, including both local and foreign firms.

4.4 Regional integration encourages RVCs

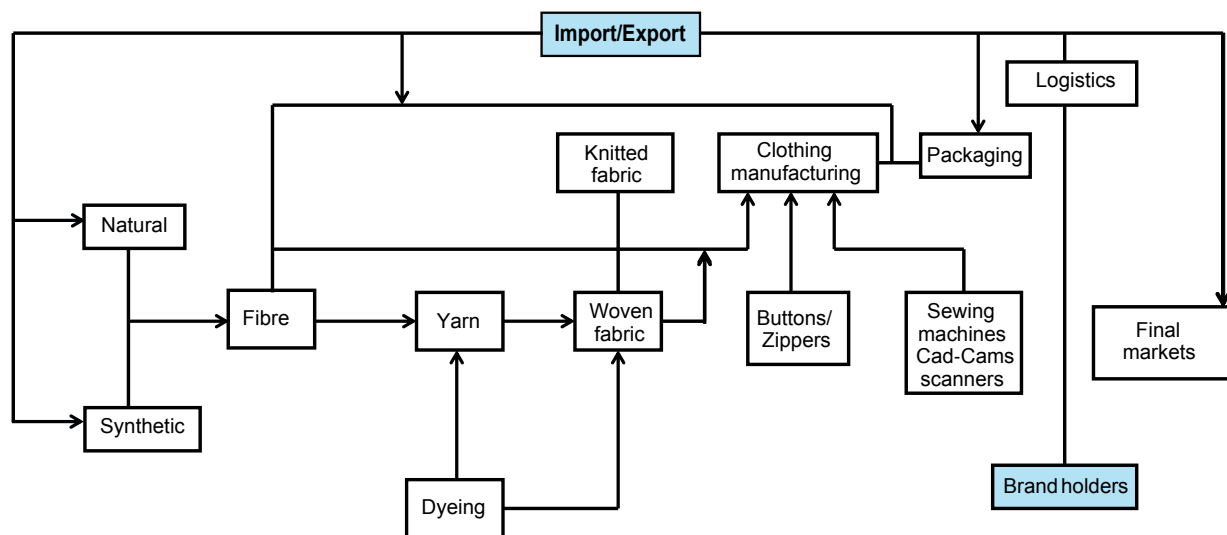
Regional integration encourages more firms to tap RVCs, expanding the involvement of more member countries, because of emerging regional opportunities, a more efficient production environment and the various benefits relating to regional integration (table 4.8). Regional integration improves the regional policy framework and increases cooperation among the member countries in lowering transaction costs. It arises from a more coordinated and liberalized policy environment in which barriers to invest, produce and move goods across boundaries are lowered

Figure 4.8. Distribution of value added exports in electronics from Malaysia, the Philippines and Thailand, by value added creators, 1990–2011
(Per cent)



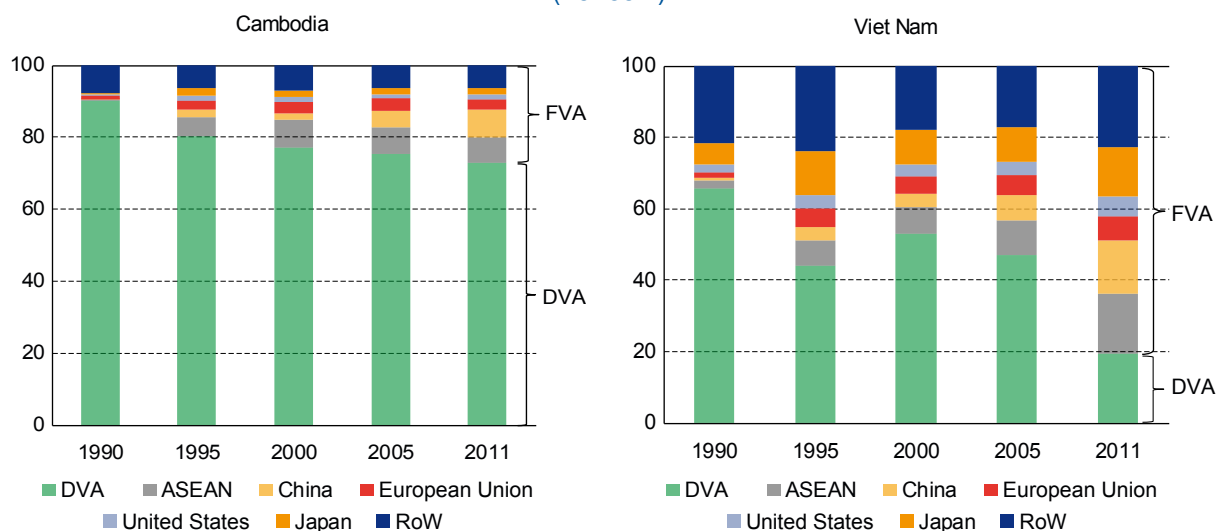
Source: UNCTAD-Eora GVC database.
Notes: DVA = domestic value added, FVA = foreign value added, RoW = rest of world.

Figure 4.9 Textile and clothing value chains



Source: Developed from Rasiah (2012).

Figure 4.10. Distribution of value added exports in textiles and clothing from Cambodia and Viet Nam, by value added creators, 1990–2011 (Per cent)



Source: UNCTAD-Eora GVC database.

Notes: DVA = domestic value added, FVA = foreign value added, RoW = rest of world.

or eliminated. Harmonization of policies and measures and the large regional market associated with regional integration are also important factors.

Other regional locational benefits such as access to factors of production, which a single host country may have limitations in providing, are also important influences. For example, a single country or a small country may face challenges in providing the labour needed for labour-intensive operations. But through regional integration, firms can overcome labour constraints by locating labour-intensive operations in labour-abundant countries while

Table 4.8. Selected ASEAN regional measures/agreements and their effects on the RVCs landscape

Regional initiatives	Measures/mechanism	Selected effects on RVCs
ASEAN Comprehensive Investment Agreement (ACIA)	<ul style="list-style-type: none"> Removes investment impediments and opens up industries for investment Provides investment promotion and protection Enhances regional investment cooperation and facilitation Increases transparency and provision of investment information 	<ul style="list-style-type: none"> Improves regional investment environment through collective and individual actions in liberalization, facilitation and promotion of ASEAN as an investment region Increases the competitiveness of ASEAN for FDI and intra-ASEAN investment Supports investment networks in ASEAN, which can lead to increase in regional production networks and RVC activities, including multi-plant operations regionally Supports contract manufacturing and related investment by first, second and third tier component manufacturers
ASEAN Trade in Goods Agreement (ATIGA)	<ul style="list-style-type: none"> As at 1 April 2014, 88% of the 99,434 total tariff lines in ASEAN are at 0% rate for intra-ASEAN imports. However, about 99% of the total tariff lines of the 6 major ASEAN economies (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand) are already at 0% rate. By 31 December 2015, it is estimated that about 96% of the total tariff lines in ASEAN will have zero internal tariffs. 	<ul style="list-style-type: none"> Lowers transaction cost. Zero tariff = goods move across the region as if within a single country. Facilitates regional sourcing of final products and intermediate goods increases production efficiency. Facilitates intra- and inter-firm trade within the region, hence increasing regional connectivity. Supports contract manufacturing by ASEAN and non-ASEAN firms across the region because of the ease in movement of goods regionally and at lower cost.
Customs and Trade Facilitation	<ul style="list-style-type: none"> ASEAN single window 	<ul style="list-style-type: none"> Facilitates easier, smoother and more efficient flow of goods and customs clearance. Reduces lead-time from factory to customers. Streamline of customs procedures and processes, hence reducing cost of physically moving goods regionally.
Industrial Cooperation	<ul style="list-style-type: none"> AICO^a SMEs cooperation 	<ul style="list-style-type: none"> Supports regional production network through exchange of parts and components by automotive, electronics and other companies Improves both regional cooperation in SME development and capacity for national SMEs to be regional players, thereby supporting industry in the region.
ASEAN Connectivity	<ul style="list-style-type: none"> Connecting ASEAN through physical infrastructure, people and institutions Open skies policy 	<ul style="list-style-type: none"> Increases connectivity in ASEAN, which helps lower further the transaction costs of doing business Facilitates investment in power and cross-border energy trade – increasing the reliability of power and other energy supply Better connectivity of transport infrastructure lowers the cost of transporting and delivering goods and services across ASEAN and to the world Increases efficiency of traveling within the region and with other international hubs Easier access to skills and professionals in the region
ASEAN Framework Agreement on Services (AFAS)	<ul style="list-style-type: none"> Mutual recognition of standards Services liberalization packages on WTO-plus principle 	<ul style="list-style-type: none"> Facilitates movement of skills and professionals in the region Investment opportunities in the services sector
Strengthening external relations	<ul style="list-style-type: none"> ASEAN-China FTA ASEAN-India FTA ASEAN-Japan CEP RCEP Others 	<ul style="list-style-type: none"> Expands market reach for companies operating in ASEAN to other partner markets and resources Increases opportunity for RVCs to link with operations in partner countries

Source: UNCTAD, based on and expanded from AIR (2013).

^a No new AICO applications from 1 January 2013 because most ATIGA tariffs are already at a 0% rate, so there is no AICO tariff benefit to be gained.

keeping other operations in a labour-limited host country that offers other advantages. Such value chain operations benefit firms as well as countries.

The existence of economic complementarity among neighbouring countries and the willingness of firms to tap regional complementarity in achieving production efficiency is an important condition for regional production networks and RVCs. The different stages of economic and industrial development, including wage cost differential of ASEAN Member States also lead firms to pursue regional division of labour strategies.

Regional integration also facilitates a more efficient use of integrated business models. Not all segments of a value chain can be efficiently undertaken within a country model of operation because of geographical limitations such as land availability and agroclimatic constraints. Regional integration makes an integrated business strategy easier to execute. In agriculture value chains, upstream activities in plantations can be conducted in countries that offer the right agroclimatic conditions. The agricultural produce can then be exported to another country or a home country in which there are no import tariffs on goods moving across boundaries for processing or transformation into intermediate inputs for the next stage of the value chain operations.

ASEAN is integrating strongly through the AEC. This regional integration development is influencing significantly the RVC landscape in the region. It facilitates intra-ASEAN trade, promotes investments, supports intraregional services liberalization and strengthens infrastructure connectivity, including industrial and regional customs cooperation as well as SME development (figure 4.11). The various regional initiatives and arrangements such as the ACIA, the ATIGA, the AFAS and the ASEAN connectivity programme generate different benefits (table 4.8).

Figure 4.11. Key pillars of ASEAN's regional integration



Source: ASEAN Secretariat.

4.5 RVCs strengthen ASEAN's connectivity

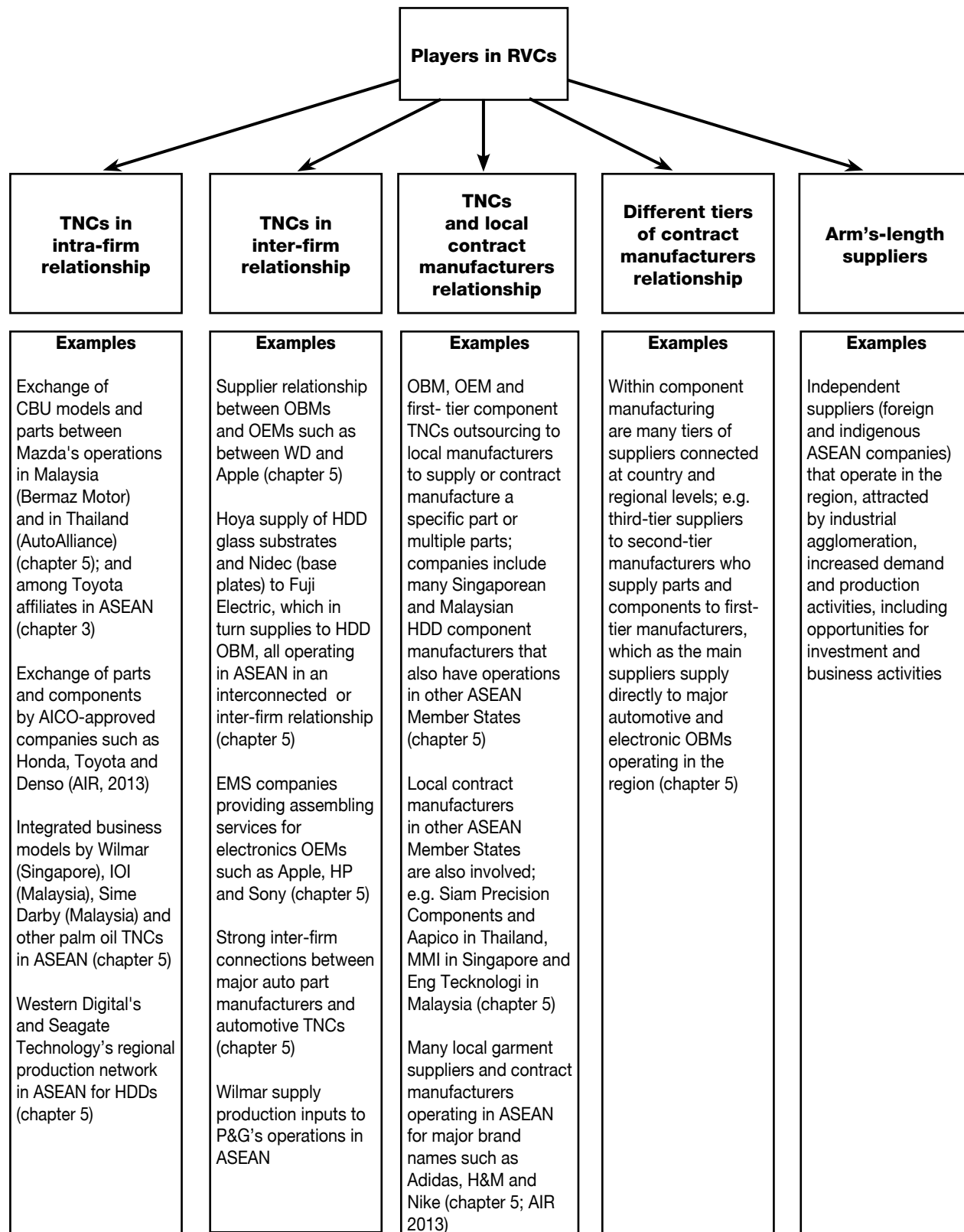
RVCs are significant to ASEAN in a number of ways. They help strengthen regional integration and connectivity through production, investment, trade and business linkages by ASEAN and non-ASEAN firms operating in the region (chapter 5). They also strengthen industrial agglomeration with clusters of many different parts and components manufacturers serving original brand manufacturers in the region. As such, they help build a stronger supporting industry within an ASEAN member country or regionwide. This development further improves the region's investment environment, increasing ASEAN's attractiveness for FDI and enticing more TNCs to establish operations in a vibrant supporting industry (e.g. automotive components manufacturing). In addition, RVCs facilitate the development of ASEAN firms through greater capacity and opportunities to regionalize, hence strengthening business linkages and regional connectivity.

RVCs involve different set of players in a production relationship or connection. They can develop between firms within a group of TNCs; between firms in two unrelated groups of TNCs; and between TNCs and suppliers, which include contract manufacturers, service providers and independent arm's-length suppliers (figure 4.12). Through operations in different ASEAN Member States, these relationships help connect ASEAN as a whole into RVCs.

RVCs connect ASEAN Member States in a number of ways, including regional production networks among TNC affiliates that can develop within a single country, between two or more ASEAN Member States or throughout the entire value chains encompassing many ASEAN Member States as is the case of the integrated palm oil companies and other companies using an integrated business model (figure 4.13; chapter 5).

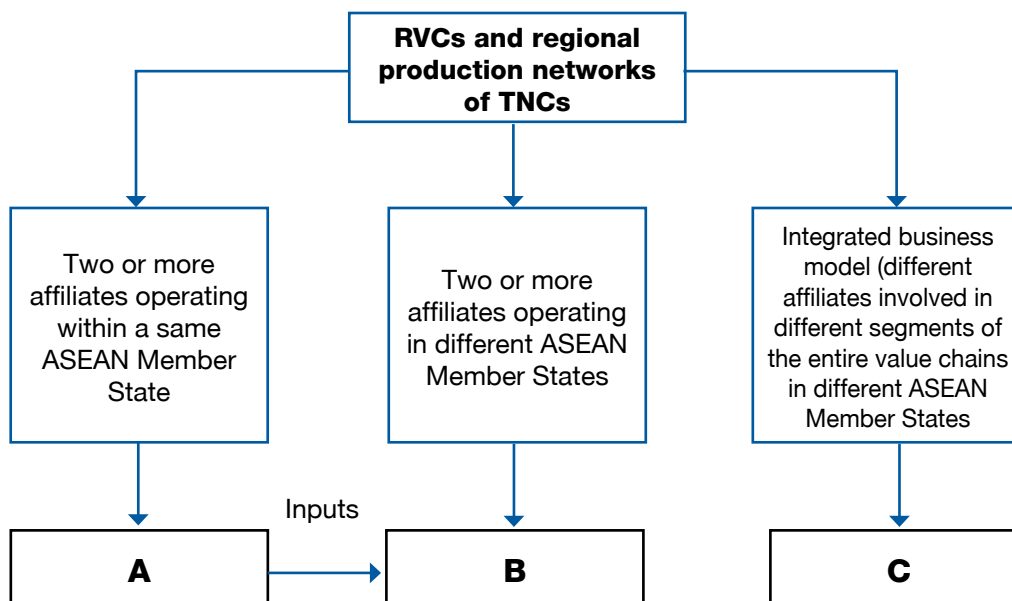
Production networks among TNC affiliates are a form of RVC. They can develop when two or more affiliates are involved in different stages of production or producing different parts and components but are connected in the value or supply chain. The output of one affiliate becomes an input of another within the same group of companies. For instance, the plantations of IOI, Sime Darby and Wilmar in Indonesia and Malaysia supply crude palm oil and kernel to the group's refineries in host and home countries as well as to customers in other ASEAN locations. The production connection among affiliates can also occur between different functions within a TNC group, such as between the manufacturing of intermediate inputs or components and their assembly by another affiliate into a finished or semi-finished product. For example, some key HDD components (e.g. media and heads) manufactured by subsidiaries in Thailand and Malaysia are supplied to affiliates assembling HDDs in the two countries. Production networks form part of a TNC's business networks, connecting operational functions involving different affiliates set up for different purposes such as sourcing raw materials, manufacturing, assembling, marketing and distribution, design, R&D and HQ functions and shared services (chapter 5). Some of these functions can be located in one or more ASEAN Member States.

Figure 4.12. RVCs connect companies and countries in ASEAN



Sources: UNCTAD (2014), based on chapter 5 and (AIR, 2013).

Figure 4.13. RVCs and regional production networks connect countries



Source: UNCTAD (2014).

Inter-firm relationships between unrelated firms strengthen firms' and countries' connectivity in an RVC. The connections between original brand manufacturer (OBM) TNCs and the different levels of suppliers in the automotive and electronic industries operating in different ASEAN Member States provide some examples (chapter 5). In addition, many Japanese parts and components TNCs have established operations in various ASEAN Member States to achieve manufacturing flexibility and to serve their clients who are also operating in the region. These companies include Asahi Glass, Furukawa, and Fuji Electric.

Some palm oil companies such as Sime Darby and Wilmar have adopted an integrated business model, which involves operation in the entire value chain from plantations to manufacturing and marketing of finished consumer goods. At different segments of the palm oil RVC other players (local and foreign companies) are involved. Different segments of the chains are located in different ASEAN Member States because of access to raw materials and plantations, costs, the need to operate close to major customers, and the influence of host country's policies, including level of industrial infrastructure development. These palm oil companies also connect with other downstream users of palm oil such as P&G, Unilever and Nestle, which also have multi-plant facilities in the region. This supplier-customer relationship strengthens oil palm or agriculture RVCs in ASEAN, as well as connectivity between countries.

Table 4.9 provides further evidence and documents how companies are connected in specific RVC operations, which in turn contribute to increasing regional connectivity.

RVCs can occur when a TNC operating in an ASEAN country uses contract manufacturers or service providers based in one or more ASEAN Member States to supply intermediate

Table 4.9. Selected cases of interconnection of countries and companies in RVC in ASEAN

Company	Industry	Status in RVC	Key value chain segments in ASEAN	Selected connected companies	Selected main connected countries
Mazda Motor (Japan)	Automotive	OBM	<ul style="list-style-type: none"> Component manufacturing Vehicle assembly Sales and distribution 	<ul style="list-style-type: none"> Intra-company facilities in Malaysia and Thailand Cross-country connections through affiliates in Malaysia, Thailand and Viet Nam Strong relationship with foreign-owned suppliers (e.g. Toyo Tyres, Panasonic, NSK) in the region and local companies in the host country Strong relationship with local suppliers Joint venture partners with local companies such as Bermaz Motor (Malaysia) Distribution centres in different ASEAN Member States 	Indonesia, Malaysia, Thailand and Viet Nam Through suppliers' connectivity and distribution centres in the region, more ASEAN Member States are connected in addition to the four main countries
Naza Automotive Manufacturing (Malaysia)	Automotive	Contract manufacturer and assembler	<ul style="list-style-type: none"> R&D Component manufacturing Assembly Sales and distribution 	<ul style="list-style-type: none"> Intra-company facilities in Malaysia Local indigenous suppliers connection in Malaysia Foreign suppliers in host country such as Denso, Jackspeed, Goodyear, Auto Parts Manufacture and Delloyd Auto Parts Suppliers from Singapore and Thailand such as Denso and Delloyd Auto Parts Distribution centres Relationship with Kia Motor and Peugeot networks 	Brunei Darussalam, Indonesia, Malaysia, Singapore, Thailand, Viet Nam
Fuji Electric (Japan)	Electronics (HDD, integrated circuits (ICs) and other business activities)	Component manufacturer for HDD and integrated device manufacturer for ICs	<ul style="list-style-type: none"> Fabrication and back-end assembly of ICs Manufacturing of HDD components Sourcing of subcomponents from other suppliers in the region Supplier to HDD manufacturers Marketing and distribution Involved in intra-firm activities 	<ul style="list-style-type: none"> Packaging and testing plant in the Philippines Water production and front end processing in Malaysia, including testing in the same country Sources inputs from suppliers in a number of ASEAN Member States (e.g. Indonesia, Malaysia, Thailand and Viet Nam) Suppliers in the region include Uekatsu in Malaysia for aluminium grinded substrates and Uyemura for chemical, Hoya in Thailand and Viet Nam for glass substrates; Nidec in Indonesia for base plates 	Plants in Malaysia and the Philippines Singapore, with marketing and distribution functions Represented in other ASEAN Member States to distribute and sell its products and services Involves other ASEAN Member States such as Indonesia, Thailand and Viet Nam in other business functions, including suppliers based in these countries
Infineon (Germany)	Electronics (ICs)	Integrated device manufacturer	<ul style="list-style-type: none"> Fabrication Testing Manufacturing Sales and distribution Regional HQ functions 	<ul style="list-style-type: none"> Water fabrication in Malaysia and Singapore Intra-firm facilities in these two host countries Testing and packaging of ICs in Malaysia; back-end manufacturing in Indonesia and Singapore Regional HQ operations in Singapore Connects with suppliers based in the region such as BASF and Siemens, especially in Malaysia 	Malaysia, Singapore and Indonesia for manufacturing activities, with distribution and sales in most ASEAN Member States
Wilmar (Singapore)	Agriculture (palm oil)	Integrated business operator	Entire value chains from plantation, refinery, manufacturing, marketing, logistics and regional HQ functions to R&D	<ul style="list-style-type: none"> Intra-company facilities in Indonesia, Malaysia, the Philippines and Viet Nam Major supplier to other oleochemical companies and consumer goods TNCs such as P&G and Unilever operating in ASEAN Member States Distribution and marketing functions in different ASEAN Member States Supply of oil palm merchandise to retailers and supermarkets in the region 	All ASEAN Member States
Western Digital (United States)	Electronics (HDD)	Electronics component manufacturer (HDD OBM)	<ul style="list-style-type: none"> Manufacturing Assembly Sourcing and outsourcing Marketing and distribution Regional HQ operation 	<ul style="list-style-type: none"> Conducts intra-firm activities involving production of key HDD parts and assembly functions, which link affiliates in Malaysia, Thailand and Singapore Many foreign and local suppliers operating in ASEAN, supplying specific and precision components to Western Digital 	Manufacturing and assembly operations in Malaysia and Thailand Operations in Singapore; distribution activities in other ASEAN Member States Source parts and components from suppliers operating in Malaysia, Singapore, Thailand and other ASEAN Member States

Source: UNCTAD (2014), based on chapter 5.

goods (e.g. JCY (Malaysia), Patec (Singapore) and Beyonics (Singapore). Some ASEAN EMS companies such as Integrated Micro-Electronics (Philippines), SMT Technologies (Malaysia), Venture (Singapore) and Hana Microelectronics (Thailand) are in this category. ASEAN Member States can be connected when a TNC's production network within a host country involves contract manufacturers or suppliers based in another ASEAN country. Suppliers can be local- or foreign-owned companies. They help build supporting industries and industrial clusters, and generate agglomeration benefits. Suppliers can also be independent companies unrelated to a TNC (arm's-length transaction). This linking of different players in different ASEAN Member States contributes to linking countries in the region.

4.6 GVCs and ASEAN's connection to the world

ASEAN remains the world largest or major exporter of an increasing number of products, from computer components, electronic goods, automotive and outsourcing services to agriculture-based commodities (AIR, 2013). ***The imports and exports of intermediate goods including finished products associated with the region are high, which suggests the growing connection of ASEAN in GVCs. The operations of many major global TNCs in the region have also contributed towards ASEAN's participation in GVCs through their international production networks*** (box 4.3).

Box 4.3. TNCs and GVCs connection

TNCs are involved in 80% of global trade. They shape value added trade patterns through intra-firm, NEM and arm's-length transactions. UNCTAD estimates that about 80% of global trade (in terms of gross exports) is linked to the international production networks of TNCs, either as intra-firm trade, through NEMs (which include contract manufacturing, licensing, and franchising), or through arm's-length transactions involving at least one TNC.

Source: WIR 2013.

For instance, the *Toyota* group of companies manufactures parts and components in ASEAN, which are assembled with other parts sourced regionally and from inputs obtained outside the region for its International Multi-purpose Vehicle models that are subsequently exported to various parts of the world. *Seagate Technology* uses R&D inputs from other affiliates in the United States and manufactures key parts and components in ASEAN, which are then assembled into HDDs along with other components sourced regionally and from abroad. The final products (HDDs) are then supplied to computer and consumer electronic TNCs based in other Asian countries (including in ASEAN), the United States and Europe. *IOI*, a Malaysian TNC with various palm oil value chain activities, has operations in Malaysia and Indonesia, and supplies processed palm oil to its own refineries in Europe, the United States, Canada and China for further processing and downstream operations in these countries. Palm oil derivatives and products are then supplied to its major consumer goods TNCs based in these regions. The automotive

industry in some ASEAN Member States has also contributed to helping these countries participate in a stronger GVC relationship (box 4.4).

Box 4.4. Global value chains in the Thai automotive industry

The Thai automotive industry provides an example of the pivotal role of TNCs in shaping patterns of value added trade and domestic value creation (box table 4.4.1). It is one of the fastest-growing industries in Thailand, accounting for about \$34 billion in gross output. Some 80% of production is exported. The domestic value added share is only about 25% of the export value (figure 4.6). Of that 25% of domestic value added, only 60% is produced by firms in the automotive industry, and 40% is contributed by firms in supplier industries, including services.

More than half of the gross output of the industry is produced by a relatively small group of foreign affiliates of TNCs: 52 foreign affiliates, part of 35 business groups or TNC networks – corresponding to 4% of the 1,300 companies registered – produce 56% of total output. To a large extent, these foreign affiliates also drive the upstream and downstream linkages of the industry in Thailand.

Box table 4.4.1. Role of TNCs in shaping value added trade in the Thai automotive industry

Indicators	Values	Example affiliates and co-affiliates
Automotive industry production in Thailand		
Gross output	~\$34 billion	
Export share in gross output	78%	
Domestic value added share in exports	25%	
Share of domestic value added contributed by industries other than automotive in Thailand	40%	<ul style="list-style-type: none"> • Mitsubishi: Tri Petch Isuzu Sales Co. Ltd. • Honda: Thai Honda Manufacturing Co. Ltd.
Number of foreign affiliates of TNCs	52	<ul style="list-style-type: none"> • BMW Manufacturing (Thailand) Co. Ltd.
Number of business groups (TNC networks) to which these foreign affiliates belong	35	
Foreign affiliates as share of total number of firms registered	4%	
Upstream: foreign value added used by the automotive industry in Thailand (imports)		
Foreign value added share in exports	75%	<ul style="list-style-type: none"> • Mitsubishi: NHK Manufacturing, Malaysia (electronic components)
Number of potential intra-firm supplier links	~6,000	<ul style="list-style-type: none"> • Honda: Kyusyu TS Co., Ltd., Japan (plastics)
Number of countries in which these intra-firm suppliers are based	61	<ul style="list-style-type: none"> • BMW: SGL Carbon Fibers Limited, UK (chemicals)
Estimated share of foreign value added sourced intra-firm (intra-firm import propensity)	27%	
Downstream: exports from the automotive industry in Thailand		
Number of potential intra-firm client links	850	<ul style="list-style-type: none"> • Mitsubishi: Guangzhou Intex Auto Parts Co., China (automotive parts)
Number of countries in which these intra-firm clients are based	57	<ul style="list-style-type: none"> • Honda Trading de México, SA, Mexico (wholesale)
Estimated share of intra-firm exports (intra-firm export propensity)	65%	<ul style="list-style-type: none"> • BMW Brilliance Automotive Ltd., China (wholesale)

Source: UNCTAD analysis, based on the UNCTAD-Eora GVC Database and Orbis.

Box 4.4. Global value chains in the Thai automotive industry (concluded)

The total TNC network of the 52 foreign affiliates in Thailand comprises some 6,000 co-affiliates located in 61 countries (the sum of affiliates of all 35 business groups). About 27% of the foreign value added used by individual affiliates in Thailand (of the 75% of foreign value added in exports) is sourced intra-firm from within their own TNC networks or business groups. On the downstream side, an estimated 65% of foreign affiliate exports is absorbed by firms within their own network. Downstream linkages are more concentrated, with potential intra-firm export connections limited to some 850 co-affiliates.

Source: WIR 2013.

In ASEAN, RVCs and GVCs are closely linked. The complex TNCs' intra-firm and inter-firm connections and their linkages with local suppliers has contributed to the rise in RVCs. But a large proportion of the intermediate goods or finished products produced in ASEAN Member States is destined for further value adding activities or consumption outside ASEAN. In this connection, RVCs transformed products into value added inputs for GVC activities performed outside the region.

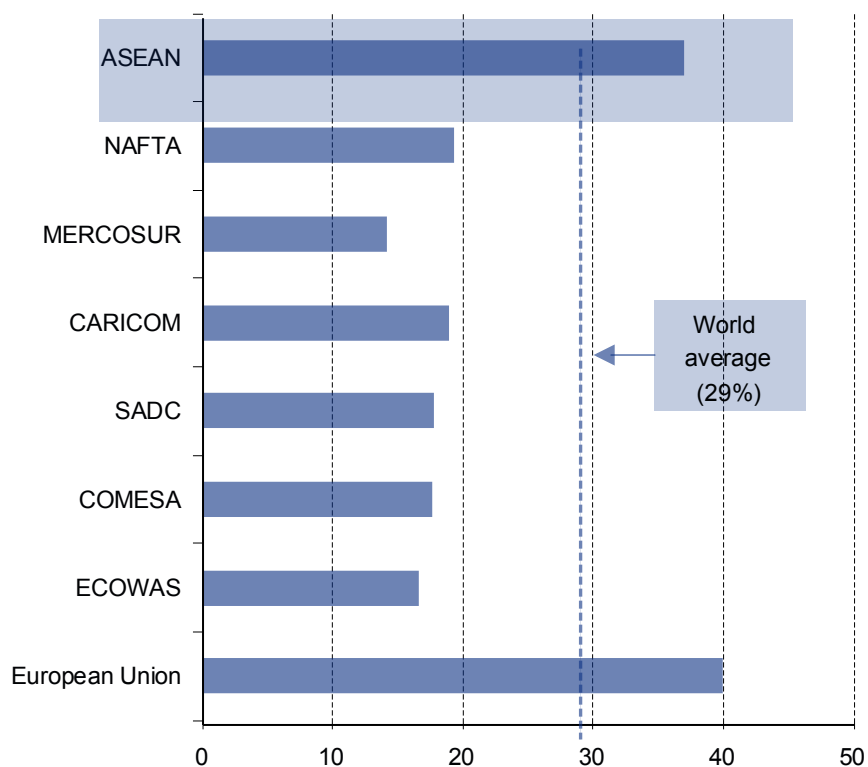
ASEAN is strongly connected in GVCs with a high degree of foreign value added inputs incorporated in the region's exports, compared with many other regions. These ASEAN exports are subsequently integrated into the exports of other countries as intermediate products, establishing further the GVC links involving ASEAN and the major importing countries outside the region.

In 1990 one-third of ASEAN exports contained value added inputs created by foreign countries (foreign value added or FVA) (see figure 4.3; box 4.2). This share today is 37%, higher than that in other developing regions and the world average (29%) (figure 4.14). This reflects the higher presence of FDI in ASEAN than in other developing regions: the share of FDI stock in GDP, for example, was 65%, while in other regions the shares are considerably lower. Over the past two decades, ASEAN has used significant foreign inputs in its exports. However, since the beginning of the 2000s, the share has declined because of increases in the share of value added created by domestic entities, both local and foreign firms operating in ASEAN.

The major sources of foreign inputs used in ASEAN exports are from Japan and the United States (figure 4.3). The value added inputs contribution from these two countries have been declining but the share of ASEAN inputs used in these countries' exports has been increasing over the past two decades. This development suggests the increasing competitiveness of ASEAN products used as intermediate inputs by these countries over the years.

The decline in inputs from Japan and the United States in ASEAN exports is compensated by the production of Japanese or American affiliates' operations in the region. The operations of these affiliates replaced imports from Japan or the United States through local production of intermediate inputs in ASEAN. This is confirmed by comparing data

Figure 4.14. ASEAN imports more foreign value added in the region's exports, 2011
(Per cent)



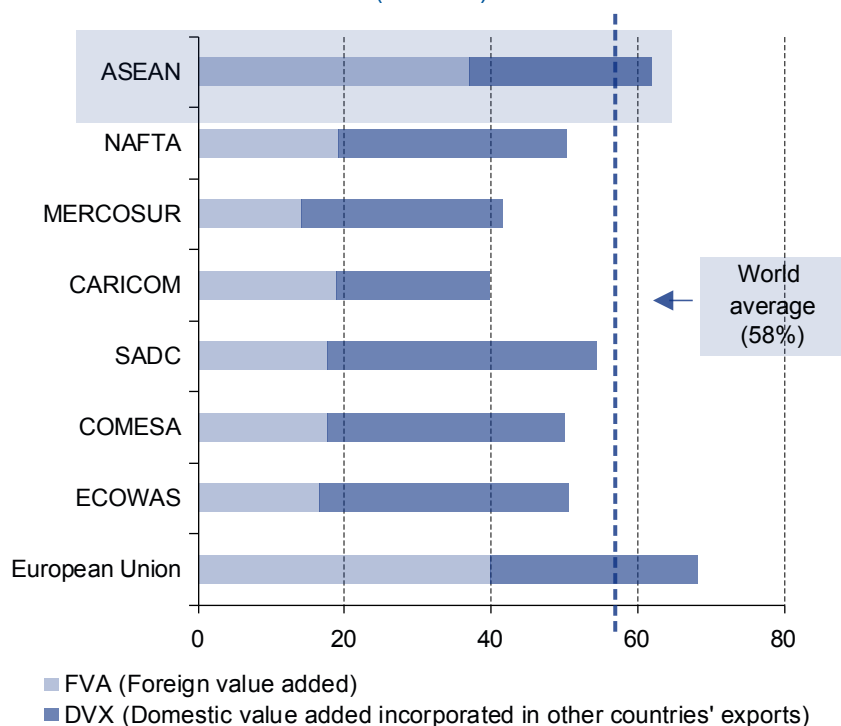
Source: UNCTAD-Eora GVC database.

Notes: CARICOM = Caribbean Community, COMESA = Common Market for Eastern and Southern Africa, ECOWAS = Economic Community of West African States, MERCOSUR = Mercado Común del Sur, NAFTA = North American Free Trade Agreement, SADC = Southern African Development Community.

on exports to ASEAN from Japan and the United States with sales by Japanese and United States affiliates in the region (see figure 4.5). The sales of Japanese and United States affiliates in ASEAN increased by three times and five times respectively between 1995 and 2011. In contrast, inputs from ASEAN and China in the region's exports have been increasing. In 2011, ASEAN inputs accounted for 6.4% of the region's exports, compared with 4% in 1990. China's inputs rose from 1% in 1990 to 4% in 2011.

Similarly, ASEAN is more involved in GVC participation than any other regional groups except the European Union (figure 4.15). However, differences from other regional groups become smaller when both upstream and downstream activities are considered. The degree of participation is also associated with inputs from the region in downstream operations, which influence the export structure of ASEAN. The region's exports are more manufacturing oriented and include both intermediate and final products. By contrast, the exports of other developing country regional groups are more commodity-dependent and tend to be used or incorporated into other products as basic materials (such as energy, raw materials, foods). However, ASEAN Member States are involved in GVCs to different degrees (figure 4.16).

Figure 4.15. ASEAN as a group is more involved in GVC participation, 2011
(Per cent)



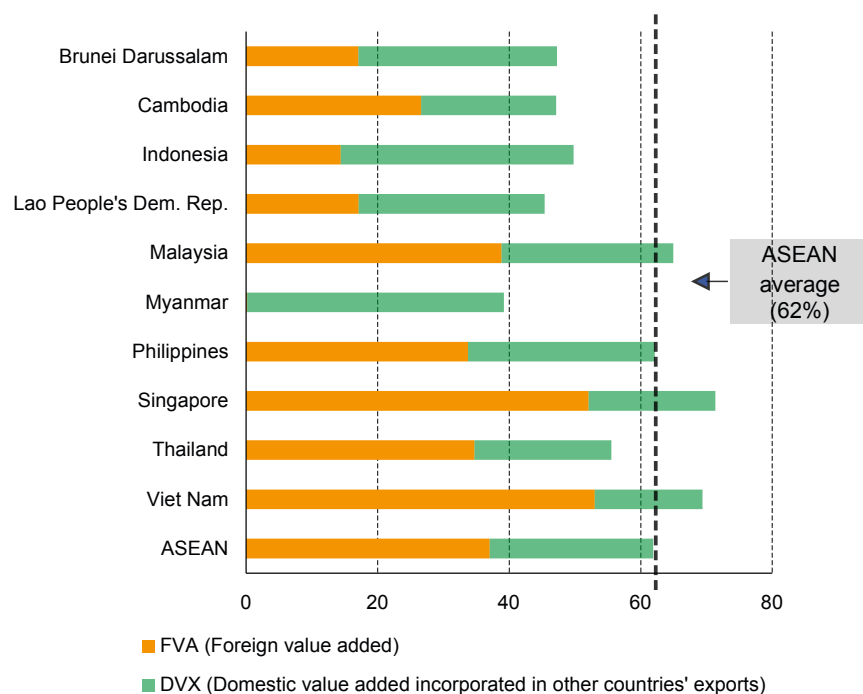
Source: UNCTAD-Eora GVC database.

Notes: CARICOM = Caribbean Community, COMESA = Common Market for Eastern and Southern Africa, ECOWAS = Economic Community of West African States, MERCOSUR = Mercado Común del Sur, NAFTA = North American Free Trade Agreement, SADC = Southern African Development Community.

RVCs in ASEAN are growing. The expanding operations of TNCs in the region and the increasing capacity of local firms in producing inputs used in subsequent stages of the value chains in ASEAN play roles in this growth. Regional integration is also contributing towards this trend in RVCs, which are connecting ASEAN Member States through FDI, NEMs, trade in intermediate inputs, finished goods and arm’s-length transactions. Regional integration is also influencing the RVC landscape and encouraging more companies to operate in ASEAN Member States for various economic and strategic reasons. RVCs strengthen ASEAN’s connectivity through business, investment and trade ties, complementing the three pillars of ASEAN Connectivity through physical, people and institutional connections.

Firms involved in RVCs in ASEAN are also helping the region connect in GVCs through production from ASEAN as value added inputs for exports of non-ASEAN countries and in the growing number of intra-TNC and inter-TNC transactions between those operating in ASEAN and affiliates or customers in home countries or elsewhere. ASEAN Member

Figure 4.16. GVC participation by ASEAN Member States differs, 2011
(Per cent)



Source: UNCTAD-Eora GVC database.

States import intermediate inputs from outside the region, which are used in ASEAN exports – strengthening the GVC connections. Through the imports and exports of value added inputs in ASEAN exports and in exports of non-ASEAN countries, the region is linked with major partner countries. The close FDI and trade connection associated with TNCs and local firms plays a key role in linking ASEAN to the global economy and the international production system.

Despite ASEAN's relatively successful efforts in participating in GVCs, challenges remain. Most ASEAN Member States participate in the low-value end of the GVC spectrum. In garment manufacturing, for instance, the major exporting ASEAN Member States participate in the CMP segment. They need to move into more value added operations such as in design, fabric development and developing their own brands, for instance for markets in the region. In the electronics and automotive industry, while some ASEAN Member States have been able to move up the value chains and strengthen RVC connectivity, many remain in the category of local contract manufacturers in these industries. The pool of ASEAN companies with capacity to go regional or to move up into OEM status would need to be expanded to provide another channel in connecting ASEAN more strongly and globally.

Notes

- ¹ A standard estimation method used in GVC/RVC data.
- ² For example, goods (merchandise) trade data collected through the customs report system may not necessarily equate to trade in intermediate inputs/goods and final demand data reported in the input-output table.
- ³ The latest year for which UNCTAD-Eora GVC data are available.

CHAPTER 5

CONNECTING ASEAN THROUGH RVCs: INDUSTRY CASES AND COMPANY EXAMPLES

5.1 Introduction

Following from the analyses of chapter 4, this chapter examines specific cases of RVCs in ASEAN in order to highlight a number of key aspects:

- (i) How firms operating in different ASEAN Member States are connected in product and industry value chains through backward and forward linkages or upstream and downstream operations;
- (ii) How ASEAN Member States are more closely connected through such firms' regional investments, production networks, intra-firm trade, contractual arrangements, supplier relationships and other TNC-local business linkage arrangements; and
- (iii) How ASEAN is connected in GVCs involving TNCs and through firms that are involved in RVCs.

RVCs in ASEAN occur at a number of levels, for instance vis-à-vis manufacturing at the sub-components, components, assembly and post-assembly stages; each stage located in one or more economy across the region. For parts and components that a company does not produce itself (or produces in insufficient quantity) it can source or contract them through suppliers in the region. RVCs also manifest themselves through interconnection of the business functions of affiliates operating in different ASEAN Member States. Intra-firm RVC business connections within a TNC group can include R&D, the manufacturing of key components, assembly, sourcing of other intermediate inputs, testing, regional administrative and logistics operations, and marketing and distribution functions based in different ASEAN Member States.

5.2. Electronics value chains in ASEAN

Electronics value chains involve manufacture of many different types of components, which are then assembled and tested by EMS companies for their customers or put together into a final product at plants owned by OBMs such as Toshiba, Apple and Samsung. The production of each component and subcomponent has its own value chain cycle and involves complex production networks of companies and suppliers operating in close proximity or geographically far apart. This is illustrated in this section with the hard disk drive (HDD) value chain.

5.2.1 Hard disk drive value chains

The HDD industry is a success story for ASEAN. The region is a major exporter of computer data storage, which includes HDDs (AIR, 2013). Major HDD OBMs, along with many HDD component suppliers, have a significant presence in the region. Their operations help

transformed ASEAN into a major global HDD production and supply chain centre. The lion's share of the HDD production is exported within ASEAN and to China, the United States, Hong Kong (China), the European Union and Japan, connecting ASEAN in the computer and electronics device manufacturing in the region and with these countries.

A HDD value chain process involves design, R&D, production, transportation, marketing and distribution, and assembly of the many precision components that make up the final product. The process of manufacturing a HDD is complex and fragmented. Many HDD components and parts are manufactured by different suppliers or firms operating in ASEAN and elsewhere (table 5.1). Some suppliers manufacture a single source component, while others manufacture a number of different components from facilities they own in ASEAN and non-ASEAN countries for one or multiple customers.

HDD value chains involve many categories of players, connected through the value added that each contributes in making specific parts and components essential for the subsequent assembly stage. A fully manufactured or assembled HDD product by lead brand owners such as Western Digital and Seagate Technology then becomes an intermediate input for a computer value chain, which also has levels of production complexities and fragmentation involving OBM, specialized firms, dedicated contract manufacturers, indigenous parts and components manufacturers, and independent suppliers.

At the components level, many manufacturers (foreign and indigenous) operate in ASEAN (figure 5.1). For instance, Singapore-based MMI produces different types of components for all the major HDD OBMs (box 5.1). These companies are the backbone that supports the fast-growing HDD industry. Their presence adds to the locational advantages of ASEAN in attracting other HDD-related component manufacturers, HDD brand owners and lead firms in the computer or consumer electronics industry to set up operations in the region.

Relatively low labour cost, experience with electronics production and the existence of HDD components clusters in ASEAN also helped attract major global HDD brand owners to set up operations in the region, as well as first and second-tier suppliers. OBMs assemble various HDD products in the region with parts and components sourced from their network of suppliers, many of whom are TNCs that also operate in ASEAN. In addition to assembly, these brand owners also have factories in a number of ASEAN Member States to manufacture key components and parts. The lion's share of the HDD production of these companies is used by their customers operating in ASEAN and exported out of the region to computers or consumer electronics OBMs in different parts of the world. Many of these companies, such as Toshiba and Samsung, also have a significant presence in the region (AIR, 2013).

An increasing number of indigenous ASEAN companies are participating in the region's value chains. Many started as small firms or suppliers or contract manufacturers. Over time, they grew bigger and gained experience operating as suppliers to TNCs. Rising costs at home and the need to operate close to major customers encourage these ASEAN component companies to set up operations in neighbouring countries, where

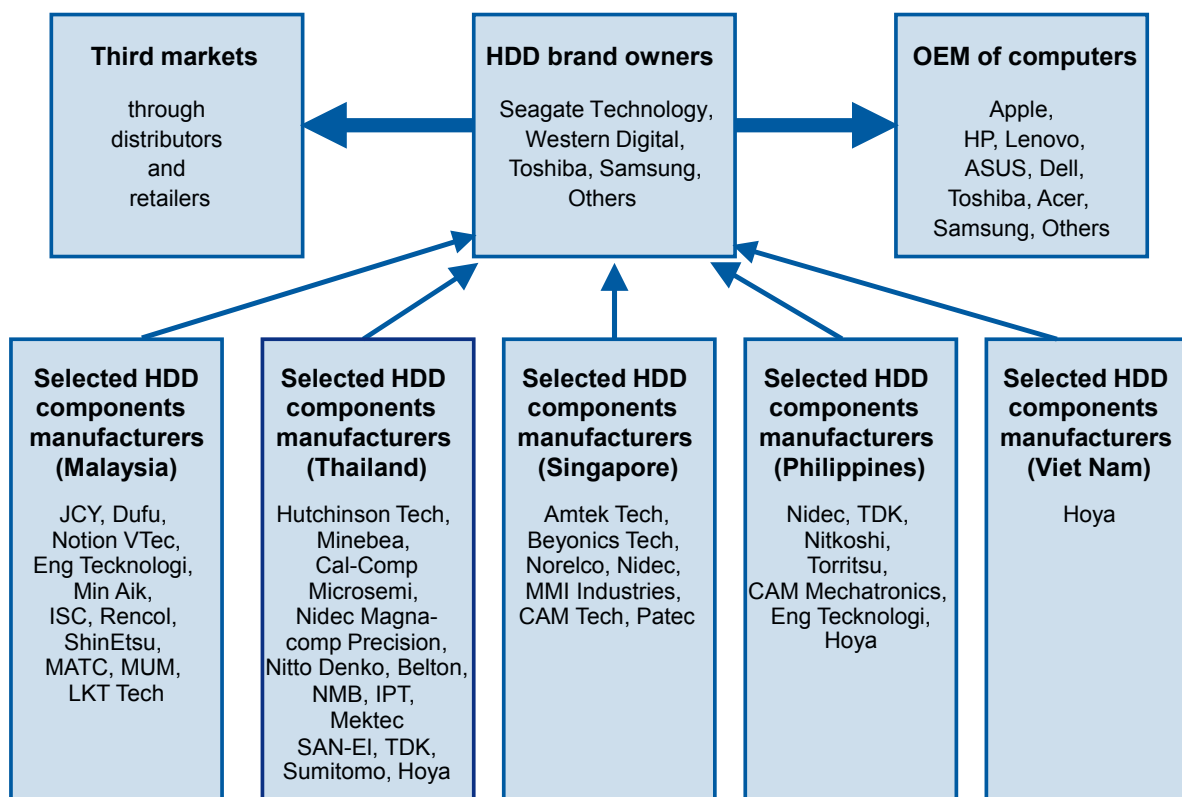
Table 5.1. HDD cluster in ASEAN: Characteristics and relationship between brand owners and suppliers

HDD Brand Owners	1 st Tier Suppliers	2 nd Tier Suppliers	3 rd Tier Suppliers
<p>Final assemblers and lead firms in the HDD value chains.</p> <p>As a result of a series of M&As and industry consolidation over time, the major HDD TNCs today are dominated by three companies (i.e. Western Digital, Seagate Technology and Toshiba).</p> <p>These brand owners control and coordinate the HDD value chains. They determine who is to supply what components and from where. Aside from assembling they also manufacture key HDD components.</p> <p>They keep a close watch on quality especially parts and components produced by their suppliers. Visits to suppliers' facilities are common.</p> <p>They influence (directly and indirectly) the equipment, tools and raw materials that their suppliers should source from who and where.</p> <p>They have factories and R&D facilities in many different countries, including in ASEAN and involving intra-firm trade.</p>	<p>Key components and parts involved:</p> <ul style="list-style-type: none"> • HGA • Actuator • Motors • PCBA • Base/Cover • Media <p>Some of the components/parts such as HGA/HAS are also manufactured by HDD brand owners in their own factories in ASEAN.</p> <p>In most ASEAN countries, this segment is dominated by the presence of foreign parts and components manufacturers operating in a cluster near to HDD brand owners. Flexible manufacturing and quick response/ delivery to customers' request are crucial – hence the need for close proximity.</p> <p>Some local companies from Singapore and Malaysia are involved in this stage as their relationship with the brand owners mature and they became more compelling suppliers.</p>	<p>Key components and parts involved:</p> <ul style="list-style-type: none"> • Suspension • Sub-assembly and Coil • Motor parts <p>Local suppliers in this tier in some countries are more visible.</p> <p>The local suppliers provide parts, components and services to the first tier suppliers and in some cases to the HDD brand owners.</p>	<p>Key components and parts involved:</p> <ul style="list-style-type: none"> • Metal/Other Parts • Tooling • Indirect materials <p>Few foreign components and parts companies in this segment. More local companies supplying intermediate inputs and services to 1st and 2nd tier suppliers.</p>

Source: UNCTAD 2014.

their key customers also operate. Examples include Eng Technologi, MMI, Armstrong, Dufu Technology and Miyoshi Precision (table 5.2). These ASEAN companies form an important group of players which have contributed to developing a competitive supporting industry within the region's HDD industrial cluster.

Figure 5.1. HDD value chains and component suppliers in selected ASEAN Member States



Sources: UNCTAD (2014), based on media reports, companies' websites and annual reports.

Given the technological fragmentation and precision requirements, the HDD components industry in ASEAN is dominated by foreign TNCs (table 5.3). They are more regionalized, with operations in more ASEAN Member States, than indigenous ASEAN HDD component companies.

FDI by HDD component manufacturers and lead firms in ASEAN is both efficiency-seeking and market-seeking. Keeping production costs low, gaining access to competitive intermediate inputs, increasing manufacturing flexibility and operating close to major customers in the region are important drivers for these components and assembly TNCs. Regional integration provides these firms with an opportunity to more efficiently coordinate and connect in the value chains, benefiting from their business strengths that match the locational advantages offered in the region. Operating in an integrating ASEAN in a number of Member States is increasingly similar to operating in a single-country model.

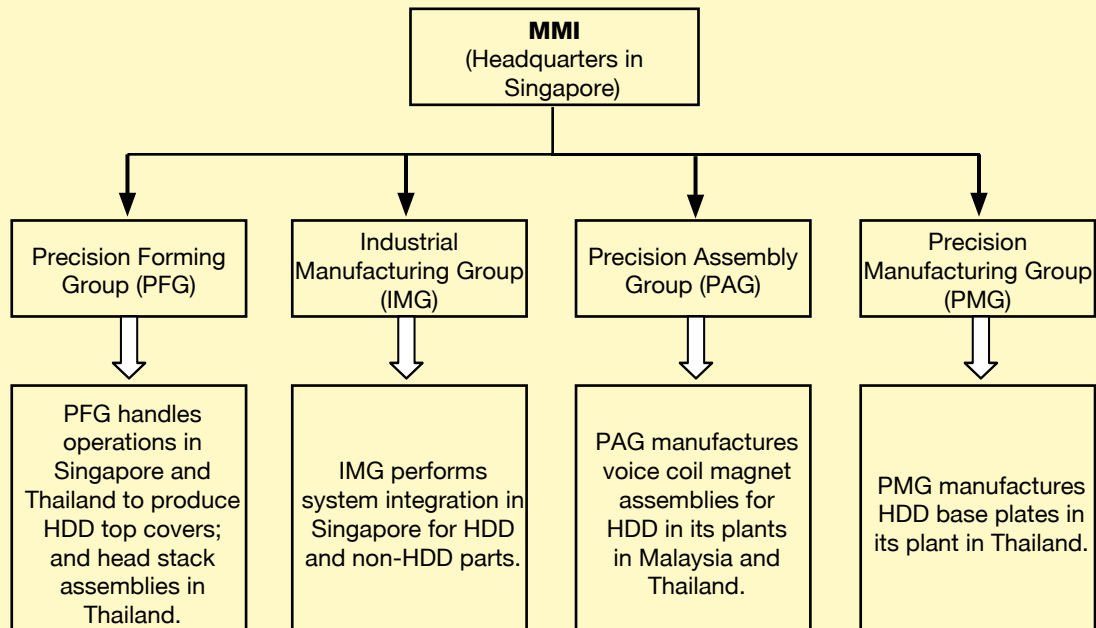
HDD regional value chains: Connecting companies and countries in ASEAN

The close connection of firms in an RVC can be better appreciated by examining the relationship of component manufacturers, brand owners and the electronics customers. The relationship between major HDD manufacturers (e.g. Western Digital and Seagate Technology) and their suppliers (e.g. Fuji Electric and MMI) and customers (e.g. Apple

Box 5.1. MMI (Singapore)

MMI, headquartered in Singapore, is a manufacturer of HDD components including head stack assembly components, structural and enclosure components, and electromagnetic assemblies. It has HDD components manufacturing facilities in Malaysia and Thailand, and operations in China and the United States (box figure 5.1.1). It has established manufacturing facilities close to its customers.

Box figure 5.1.1. MMI's HDD components manufacturing operations in ASEAN



MMI supplies HDD OBM's across five areas of product lines. The company's key customers include Western Digital and Seagate Technology. Some components are shipped directly to the customers, while others are supplied through subcontractors. MMI is also a major contract manufacturer of assembly and test automation equipment for the disk drive industry, supporting media, drives and magnetic heads operations.

Source: UNCTAD (2014), based on MMI company's information (www.mmi.com.sg/index.php?option=com_content&view=article&id=53&Itemid=217).

and Samsung) provides an illustrative case of a TNC production network and a customer-supplier connection in ASEAN throughout the RVC (figure 5.2).

The relationship in the HDD value chains is complex from upstream (second- and third-tier component manufacturers) to downstream (OBMs). Most component manufacturers are also TNCs: Nidec, Hutchinson Technology, TDK, Fiji Electric and Hoya, for example, have only a few HDD customers because at this stage of the value chain segment there are only a few OBMs in the industry. They supply specific parts and components to Western Digital, Seagate Technology and others for the production or assembly of key components such as read/write heads, spindles, magnetic discs and motors.

Table 5.2. Selected component suppliers in ASEAN

Foreign/TNC component suppliers				Indigenous ASEAN component suppliers			
Name	Home Country	Selected intermediate components	Selected ASEAN countries	Name	Home Country	Selected intermediate components	Selected ASEAN countries
Nidec	Japan	Motors and motor components, base plates, Base plates	Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam	Altum Precision Magnetric	Malaysia	Base plates, actuators, hubs	Thailand
TDK	Japan	Suspension assemblies	Thailand	Eng Technology	Malaysia	Base plates, actuators, hubs	Thailand, Philippines
Hutchinson Technology	United States	Suspension assemblies, hard drive harness	Thailand with service offices in Malaysia and Philippines.	JCY	Malaysia	Top covers, base, actuators	Thailand, Philippines
Showa Denko	Japan	Platters	Singapore	MMI Industries	Singapore	VCM, base plates, top covers, HSA	Malaysia, Thailand
Furukawa	Japan	Wire, heat sinks, drive platters, other parts/ services	Thailand	CAM Technology	Singapore	Base plates	Malaysia
Hoya	Japan	Glass substrate	Philippines, Thailand, Viet Nam	Cheung Woh Technology	Singapore	Voice coil, air combs	Malaysia
Nitto Denko	Japan	HDD parts/ services	Thailand	Beyonics Technology	Singapore	Suspension	Malaysia
Minebea	Japan	Actuators, spindle motors	Thailand	Patec	Singapore	Cover, actuator arm, disk clamp	Indonesia
NMB	Japan	Motors	Thailand	Miyoshi Precision	Singapore	Integrated engineering services, including for HDD	Malaysia, Philippines, Thailand
Nippon Super Precision	Japan	Motor hubs, parts related to spindle motors	Philippines, Thailand	Broadway Industrial	Singapore	Actuator arm and assembly	Thailand
Nok Precision	Japan	Top cover, gasket, ramp, clash stop	Thailand	Armstrong	Singapore	Stamping, moulding and other material parts for HDD	Indonesia, Malaysia, Thailand, Viet Nam
Min Aik	Taiwan Province of China	VCM, APFA, bracket, ramp, top cover assembly	Malaysia, Thailand, Singapore	Dufu Technology	Malaysia	Spacers, clamps and other precision components for HDD	Singapore, Thailand

Source: UNCTAD (2014), based on company websites, annual reports and media news.

Notes: VCM = Voice coil motor; APFA = Actuator pivot flex assembly PCB = Printer circuit board.

At the brand owner level, Western Digital and Seagate Technology have multiple customers. They supply HDDs to customers such as Apple and HP, among others. HDD component manufacturers (foreign and indigenous) may supply parts and components to one or more major brand owners or first-tier component manufacturers. Some companies supply more than one type of component to their major customers.

HDD original brand manufacturers

A series of M&As has led to a highly concentrated industry dominated by just three companies: Western Digital, which accounts for 45% of the global market share, Seagate

Table 5.3. Major HDD component manufacturers in Malaysia and Thailand are dominated by foreign-owned operations (selected cases), 2014¹

Company	Headquarters	Types of components/parts
Malaysia		
Alliance Contract Manufacturing	Singapore	Hard disk drives (PS) removable hard disk cartridges & printer mechanisms (WTI).
AV Industries	Malaysia	Actuators for hard disk drives.
Blackcurrant Technology	Malaysia	Industrial controllers, hard disk drives, computer scanners & printers
CAM Precision Components	Singapore	Hard disk drives & parts.
Cheung Woh Technologies	Singapore	Voice coil motor (vcm) for hard disk drive
Epson Precision	Singapore	Hard disk drive parts.
Fuji Electric	Japan	Hard disk media & substrates.
Hiroshige	Japan	Vtr drums, air conditioner valves & hard disk drive parts (80% export)
Iomega	United States	Re-manufacturing of hard disk drives (100% export)
ISC Micro Precision	Japan	Pivot assembly units for hard disk drives
JCY HDD Technology	Malaysia	Components, parts & modules for hard disk drives (HDD)
MATC Technology	Taiwan Province of China	Re-manufacturing of hard disk drive components.
MBM Oceanic	Malaysia	Cartridge storage media & removable hard disk drives.
Min Aik Technology	Taiwan Province of China	Hard disk drive parts.
MMI Industries	Singapore	Voice coil motors & precision machined parts (including sub-assembly parts) for hard disk drives
MMI Precision Assembly	Singapore	Voice coil motors & precision machined parts for hard disk drives.
PCA Hard Com	Malaysia	Hard disk drives (HDD) components, parts modules & related activities.
PCA Mahlin Technology	Malaysia	Printed circuit board assemblies and hard disk drive part.
STEC Technology	United States	Memory & storage products such as memory modules, cards, flash drives & hard disk drives & PC card adaptors. A member of Western Digital.
Syquest Technology	United States	Removable cartridge hard disk drives & removable cartridge hard disks (80% export)
Taiyo Technology	Japan	E block core ass. & covers for hard disk drives, slide blocks connectors, metal shafts, IC board bases, motor parts & sliders.
Teleplan Technology Services	Netherlands	Re mfg. of computer products & peripherals & mfg. of hard disk drives, re mfg. of LCD modules including panels, re mfg & mfg of consumer products
Totoku	Japan/ Taiwan Province of China	Degaussing coil, carriage assemblies for computer hard disk drive
TSL Assembly Industries	Malaysia	Hard disk drives.
Unisteel Technology	Singapore	Precision parts for computer hard disk drives.
Western Digital	United States	Hard disk drives & components.
Xyratex Technologies	United Kingdom	Remanufacturing of computer products & peripherals (incl. hard disk drives, notebooks & display monitor) & mfg. of hard disk drives.

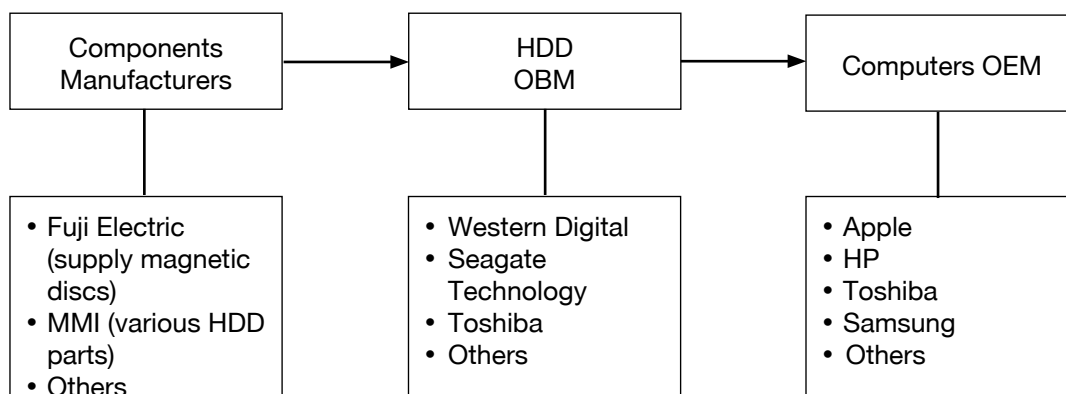
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Table 5.3. HDD component manufacturers in Malaysia and Thailand are dominated by foreign owned operations (selected cases), 2014¹ (concluded)

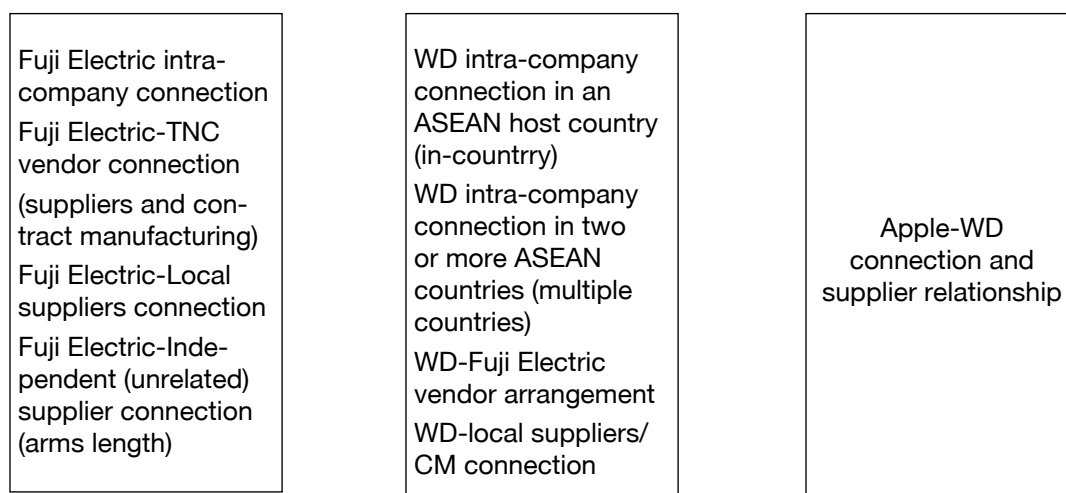
Company	Headquarters	Types of components/parts
Thailand		
Aapico Hitech Parts	Thailand	Stamping Parts for Automotive Products; Stamping Parts for HDD
Boyd Technologies	United States	Stamping Parts for HDD
Cal-comp Electronics	Taiwan Province of China	PCBA for HDD, external HDD and other electronic components.
Elec & Eltek	Singapore	PCB for HDD/PCBA for Automotive Parts
Fujikura Electronics	Japan	Coil Assembly for HDD, Integrated Carriage for HDD; Plastic Parts for Electronic Products
Greatland Electronics	Taiwan Province of China	Transmission Lines for HDD
Habiro	Japan	Metal Parts for HDD Spindle Motor
HGST	United States	Data Storage Devices (Hard Disk Drive); Data Storage Device Components; Head Stack Assembly (HSA); R&D for HDD, Hard disk drive.
Integrated Precision Engineering	Hong Kong, China	Stamping Parts for HDD
JCY HDD Technology	Malaysia	Metal Parts for HDD
Joinsoon Electronics Manufacturing	Taiwan Province of China	Transmission Lines for HDD
Mektec Manufacturing Corporation	Japan	PCBA for HDD
Min Aik Technology	Taiwan Province of China	Hook Up & Pivot Assy (HDD Part)
Miyoshi Precision	Singapore	Stamping Parts for HDD; Cover Assembly for Hard Disk Drive
MPM Technology	Singapore	Base Plate for HDD
NHK Spring	Japan	Seal Products for HDD, HDD Head Part
NIDEC Component Technology	Japan	Base Plate and Base Plate Parts for HDD
Nippon Super Precision	Japan	Metal Parts for HDD Spindle Motor
NMB-Minebea Thai	Japan	Mechanical Parts for HDD
Nok Precision Component	Japan	Latch (HDD Parts); Crash Stop (HDD Parts); Ramp for HDD; Top Cover, Electronic Parts
NTN Manufacturing	Japan	Hydrodynamic Bearing for HDD Motor
Seagate Technology	United States	Slider (HDD Parts)
Seiko Instruments	Japan	Hard Disk Drive Machine; HDD Machine Components, Miniature Ball Bearing for HDD; Pivot Cartridge Parts, Stamping Parts for HDD; Shaft, Sleeve, Shaft Assy, Sleeve Assy & Bearing.
Shin-Ei Precision	Japan	Base Plate for HDD
Shin-Etsu Magnetics	Japan	Voice Coil Motor for HDD
Siam Precision Components	Thailand	Stamping Parts for HDD
Stars Microelectronics	Thailand	PCBA for HDD; Semiconductor
Thaixon Tech	Taiwan Province of China	Stamping Parts for HDD
Unicorn Electronics Components	Taiwan Province of China	Transmission Lines for HDD
Kuroda	Japan	Long-Lever for HDD

Source: UNCTAD, based on BOI Thailand approved list of selected HDD component manufacturers (http://www.boi.go.th/index.php?page=search_promoted&primary_select=C_NAME&primary_sort=asc&secondary_select=OFF_PRO&secondary_sort=asc&language_search=English&province=all&key word=HDD), extracted 8 July 2014; MIDA, media and companies' websites.

Figure 5.2. Connections between players in different segments of the ASEAN HDD RVC



Level of connections



Source: UNCTAD (2014).

Technology, with over 40%, and Toshiba, with 10% (University of Oregon 2013). The case of Western Digital’s (annex 5.1) and Seagate Technology’s (annex 5.2) operations in ASEAN illustrates the extent of regional connectivity associated with these OBMs.

Customers for HDDs

HDDs are used in many electronic products such as computers and other consumer electronics as well as in enterprise HDDs. The customers of HDD manufacturers are other electronic companies. For instance, as mentioned earlier, Western Digital and Seagate Technology supply both HP and Apple (box 5.2). In the case of the latter, they produce and deliver specific computer parts for the manufacturing of Apple products, which in turn are assembled along with other computer or electronic parts by EMS companies such as Foxconn (Taiwan Province of China).

Box 5.2. Apple: Components outsourcing

Apple sources components for its products from multiple suppliers. A number of components are obtained from single sources, for certain business reasons. The company uses some custom components that are not commonly used by its competitors, and new products introduced by Apple usually use custom components that are available from only one source.

Apple also relies on a number of sole-source outsourcing partners in the United States, Asia and Europe to supply and manufacture many critical components. The final assembly of most of the company's hardware products is done by contract manufacturers in Asia. It also performs final assembly of certain products at its manufacturing facility in Ireland. Apple has outsourced much of its transportation and logistics management to third parties.

A significant share of the contract manufacturing is performed by a small number of partners, often in single locations. Some of these outsourcing partners are the sole-source suppliers of components and the manufacturers for many of the company's products.

Building reliable relationships with suppliers in ensuring quality, delivery and acceptable prices of components and assembly of products are important aspects of sourcing. Apple has entered into agreements with many suppliers for the supply of components and for manufacturing services. It works closely with its outsourcing partners on manufacturing schedules and supplier codes of conduct.

Source: UNCTAD 2014, based on Apple Inc., Form 10-K, 2013 Annual Report.

Some 25% of Apple's top 200 suppliers operated in ASEAN in 2013 (table 5.4). These suppliers accounted for more than 97% of procurement expenditures for materials, manufacturing and assembly of Apple's products worldwide in 2013. Although they are listed by corporate names in the table, in most cases each corporation has multiple factories located in different parts of a host country or/and in different countries that are involved in supplying components, manufacturing or assembly for Apple.

5.2.2 Regional value chains of selected electronic TNCs in ASEAN

The operations of four TNCs – Infineon (annex 5.3), Fuji Electric (annex 5.4), Altera (annex 5.5) and Inari Amerton (annex 5.6) – in the electronics industry in ASEAN highlights the connectivity between them and their component suppliers in the region. In consequence they connect ASEAN Member States through their RVCs, and the ASEAN region with the world through their GVCs.

In a similar, but more complex connectivity is seen in the case EMS TNCs, which work for multiple clients. Major EMS companies such as Hon Hai (Taiwan Province of China), Jabil (United States), Sanmina (United States), Celestica (Canada) and UMC Electronics (Japan) operate in ASEAN with multiple facilities (table 5.5). Together with the HDD network of value chain players, HDD components manufacturers and indigenous suppliers, they form an extensive web of interconnected companies across the entire consumer electronics value chain. In providing services for consumer electronics companies such as Apple, these EMS companies link ASEAN Member States, strengthening further the regional connectivity.

Table 5.4. Some 25% of Apple's top 200 global suppliers operate in ASEAN in 2013^a

Company	Headquarters	Factories in ASEAN countries that supply to Apple
Alps Electric	Japan	Malaysia
Analog Devices Inc.	United States	Philippines
Arvato Digital	Germany	Singapore
Asahi Glass	Japan	Thailand
Austria Microsystems (AMSAG)	Austria	Philippines
Coilcraft	United States	Indonesia, Malaysia, Singapore, Viet Nam
Dai-Ichi Seiko	Japan	Singapore
Delta Group	Taiwan Province of China	Thailand
Dou Yee Technologies	Singapore	Singapore
Dover Corp.	United States	Malaysia
Dynacast International	United States	Indonesia, Singapore
Emerson Electric	United States	Philippines
Fairchild Semiconductor International	United States	Malaysia, Philippines
Foster Electric	Japan	Viet Nam
Fujikura	Japan	Thailand
Heptagon Advanced Micro-Optics	Singapore	Singapore
Hon Hai Precision Industry (Foxconn)	Taiwan Province of China	Viet Nam
Ibiden	Japan	Malaysia
Infineon Technologies AG	Germany	Malaysia
Intel Corp.	United States	Malaysia, Viet Nam
Lateral Solutions	Australia	Malaysia
Maxim Integrated Products	United States	Philippines, Thailand
Micron Technology	United States	Singapore
Minebea	Japan	Thailand
Mitsumi Electric	Japan	Philippines
Molex	United States	Malaysia, Singapore
Murata Manufacturing	Japan	Indonesia, Malaysia, Singapore, Thailand, Viet Nam
NEC Tokin Corp.	Japan	Thailand, Viet Nam
Nidec Corp.	Japan	Indonesia, Philippines
Nippon Mektron	Japan	Thailand
NXF Semiconductors	Netherlands	Malaysia, Philippines, Thailand
OSRAM Opto Semiconductor	Germany	Malaysia,
Panasonic Corp.	Japan	Indonesia, Malaysia, Singapore, Thailand
Philips Lumileds Lighting	United States	Malaysia, Singapore
Renesas Electronics Corp.	Japan	Malaysia
Rohm	Japan	Malaysia, Philippines, Thailand
Samsung Electro-Mechanics	Republic of Korea	Philippines, Thailand
Seagate Technologies	United States	Thailand
Seiko Epson Corp.	Japan	Malaysia, Thailand
Semiconductor Components Industries	United States	Malaysia, Philippines
Sharp Corp.	Japan	Viet Nam
Sony Corp.	Japan	Singapore, Thailand
STMicroelectronics	Switzerland	Malaysia, Philippines
Sumida Electric	Japan	Thailand
Sumitomo Electric Industries	Japan	Philippines
Taiyo Yuden	Japan	Malaysia, Philippines
TDK Epcos Corp.	Japan	Singapore
Texas Instruments	United States	Malaysia, Philippines
Toshiba Corp.	Japan	Philippines, Thailand
Vishay Intertechnology	United States	Malaysia, Philippines
Western Digital Corp.	United States	Malaysia, Thailand

Source: Based on Apple, Supplier List 2014.

^a Many of these companies have operations in other ASEAN countries not listed here. The ASEAN countries listed in the table refer to operations or factories that supply directly to Apple.

Table 5.5. Selected major global electronics manufacturing service TNCs with operations in ASEAN, 2014

Company	Headquarters
Hon Hai Precision Industry (Foxconn)	Taiwan Province of China
Flextronics	Singapore
Jabil	United States
New Kinpo Group	Taiwan Province of China
Sanmina	United States
Celestica	Canada
Benchmark Electronics	United States
Shenzhen Kaifa Technology	China
Plexus -- Neenah, WI	United States
Venture	Singapore
UMC Electronics	Japan
SIIX	Japan
Sumitronics	Japan
Beyonics Technology	Singapore
Kimball Electronics Group	United States
Integrated Micro-Electronics, Inc.	Philippines
VTech Communications	Hong Kong, China
V.S. Industry	Malaysia
Di-Nikko Engineering	Japan

Source: UNCTAD, based on Manufacturing Market Insider (<http://mfgmkt.com/mmi-top-50.html>).

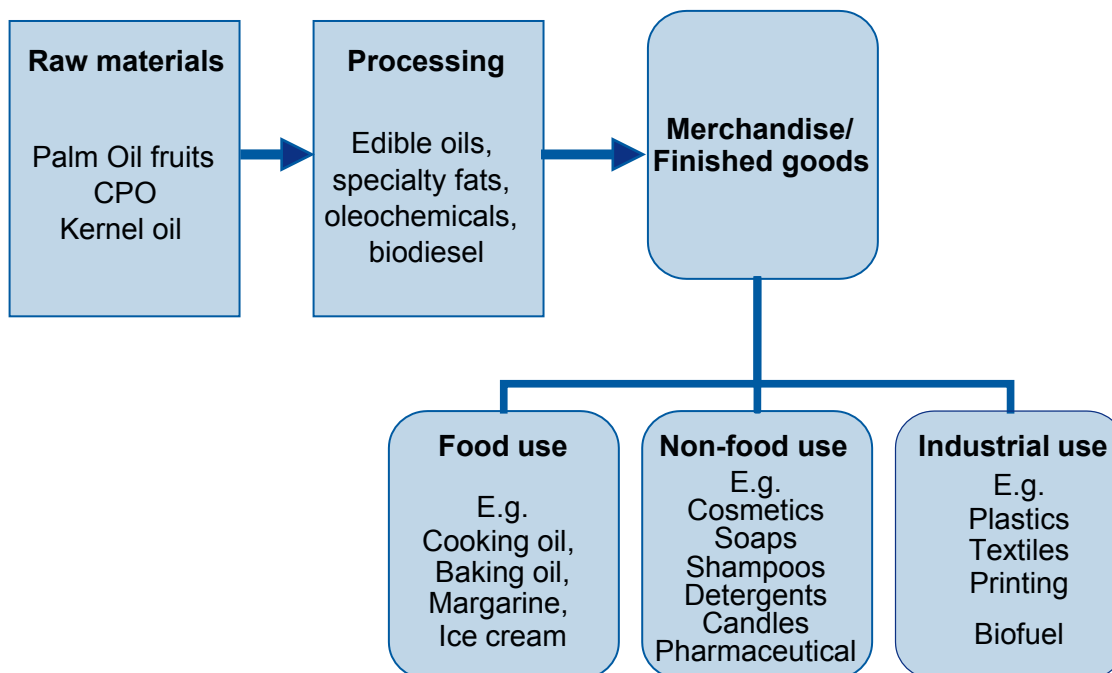
5.3 Agriculture value chains in ASEAN: the palm oil industry

The palm oil industry is important to the region. ASEAN is the world’s largest producer and exporter of crude and refined palm oil, and a key player in GVCs involving palm oil products. The production of palm oil connects ASEAN Member States with the world, including plantations and refineries to the supply of palm oil products such as cooking oil, other intermediates and household items.

5.3.1 Key elements of palm oil value chains

Palm oil can be used for many purposes. Once it is processed and refined into specialty oils and derivatives, it becomes a number of intermediate manufacturing inputs for the production of food (ice cream and margarine) and non-food commodities (e.g. hair care products, detergent, soaps and cosmetics), including for biofuel (figure 5.3).

Palm oil is an ingredient used in the production of many consumer goods by companies such as P&G, Unilever, and Nestlé. All of these companies have manufacturing operations in ASEAN. The production of palm oil connects ASEAN Member States along the value chains from outgrowers, plantations, and refineries to marketing and distribution of palm oil merchandise. The production of palm oil at different stages of the value chains involves many different companies. Many palm-oil-producing companies are headquartered in

Figure 5.3. Palm oil: intermediate inputs for production of food and non-food commodities

Source: UNCTAD (2014).

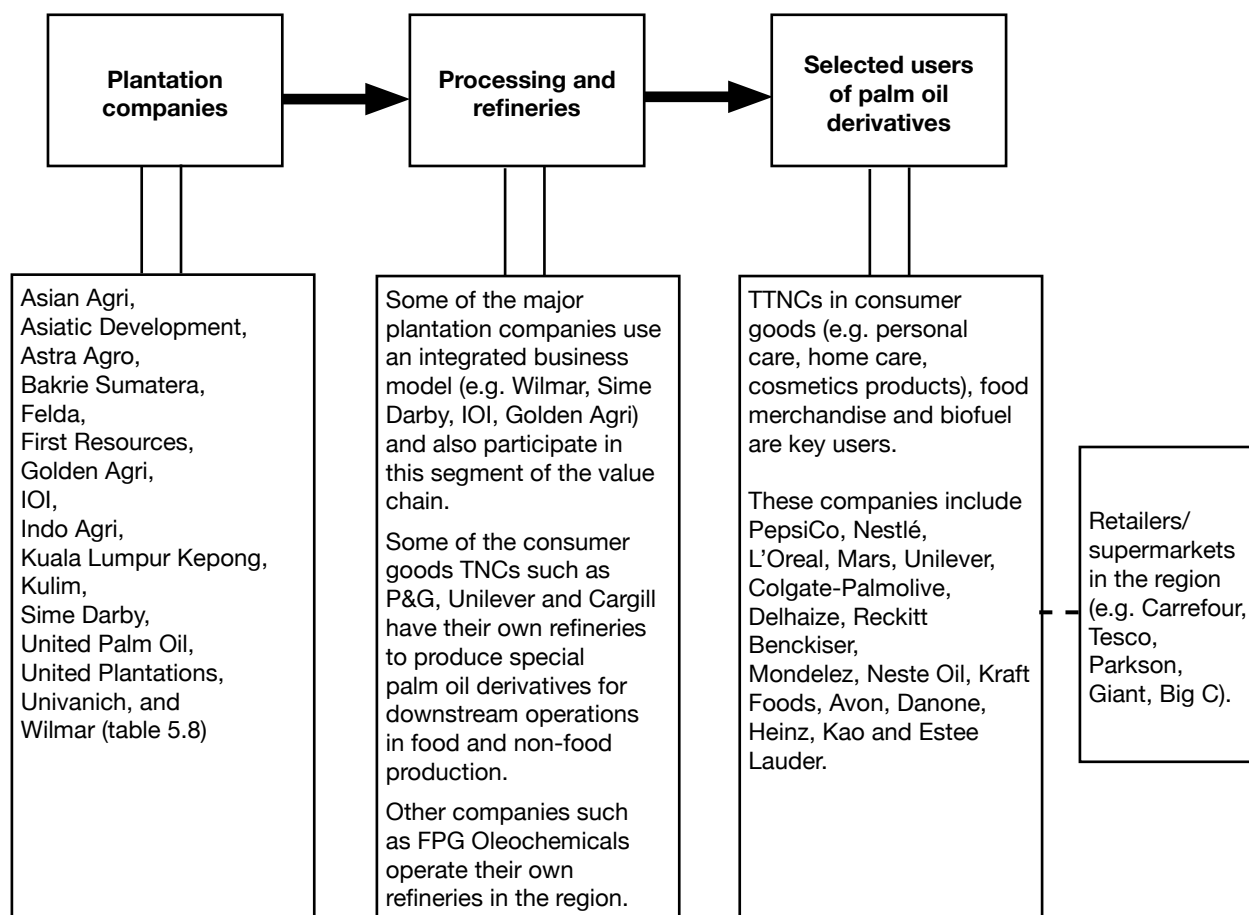
ASEAN, and some foreign TNCs that are involved in subsequent stages of the value chains have significant operations in the region, including distribution and marketing activities by retailers and supermarkets (figure 5.4).

Indonesia, Malaysia and Thailand are the major palm-oil-exporting countries. The major companies with palm oil plantations are dominated by TNCs based in Malaysia and Singapore (table 5.6). Wilmar International, headquartered in Singapore, and Malaysian TNCs such as Sime Darby and IOI are significant players in this industry. Many palm oil companies are not TNCs but small local companies operating in different segments of the palm oil value chains in ASEAN. They play an important role, contributing to the RVCs as outgrowers, contract farmers, millers and logistics service providers supporting other firms, including major TNCs. For instance, Wilmar and Sime Darby are involved in contract farming with many smallholders in Indonesia. More than 85% of the palm oil fruits of Univanich Co. Ltd (Thailand) in 2013 are sourced from outgrowers in Thailand.

Some major palm oil companies are involved with integrated business operations through which they participate in the entire palm oil value chain from plantation, R&D and processing to transportation and merchandising (e.g. Wilmar, Sime Darby, IOI, Golden Agri and RCE) (table 5.6). The different segments of these RVCs can be located in different ASEAN Member States.

Although plantations in ASEAN are concentrated in three countries (Indonesia, Malaysia and Thailand), some palm oil companies have also established processing/refinery facilities in the Philippines, Viet Nam and outside ASEAN. Other refining companies such

Figure 5.4. Selected key players in palm oil value chains



Source: UNCTAD (2014).

Note: Each stage of the value chains involves logistical coordination and transportation services. Some palm oil companies such as Wilmar and consumer goods TNCs have their own transportation facilities, which coordinate regional or global movement of palm-oil-related derivatives or finished goods. Third-party transportation services may also be used by some palm oil processors. Contract manufacturers are involved at processing and product manufacturing segments, including contract farming at the plantations stage. Some companies such as Wilmar and IOI adopt an integrated business model involving in various stages of the palm oil value chains, from plantation to manufacturing and distribution of palm oil merchandise (e.g. cooking oil).

as FPG Oleochemicals, P&G and Cargill have operations at this stage of the value chain and source crushed or crude palm oil from plantation companies in the region. The palm oil RVC activities involve many indigenous ASEAN companies and through their upstream and downstream operations connect ASEAN Member States, farmers, suppliers, refinery companies and consumer goods TNCs operating in ASEAN and elsewhere. Many major food and non-food manufacturers – in particular, TNCs operating in ASEAN – use palm oil derivatives from their own refineries or a third-party supplier in the subsequent segment of the value chain (figure 5.4).

Table 5.6. Selected major palm oil companies in ASEAN

Company	Headquarters	Locations of selected plantations	Selected processing/refineries	Remarks
Wilmar*	Singapore	Malaysia, Indonesia	Malaysia, Indonesia, Philippines, Viet Nam, China, Netherlands, Germany, Ghana	Practice integrated business, involves in the entire value chain from origination to merchandising.
Sime Darby*	Malaysia	Malaysia, Indonesia, Liberia	Malaysia, Singapore, Thailand, Viet Nam, Netherlands, South Africa	Practice integrated business.
IOI*	Malaysia	Malaysia, Indonesia	Malaysia, Netherlands	Practice integrated business.
Kuala Lumpur Kepong	Malaysia	Malaysia, Indonesia	Malaysia, China, Germany	..
Golden Agri*	Indonesia	Indonesia (Plantation), PNG (Seedlings)	Indonesia, China	Practice integrated business.
RCE*	Indonesia	Indonesia	Indonesia, China	Operates through its subsidiaries; Asian Agri for upstream and Apical Group for downstream in refining, processing to trading of palm oil.
United Plantations	Malaysia	Malaysia, Indonesia	Malaysia, Indonesia (Mills)	..
Kulim	Malaysia	Malaysia, Indonesia, PNG/Solomon Islands	Malaysia, Singapore (Biodiesel); Malaysia, PNG (Mills)	..
Univanich	Thailand	Thailand	Thailand, Philippines (Mills)	The company uses contract farming. In 2013, some 87% of the company's fresh fruit bunches were from outgrowers.

Source: UNCTAD (2014), based on companies websites and annual reports.

* Adopt integrated business model involving in the entire palm oil value chains from plantations, processing to merchandising.

5.3.2 Palm oil regional value chains: From plantation to refinery and manufacturing operations

The case of Wilmar (supplier) and P&G (customer) illustrates how firms operating in different segments of a palm oil RVC in ASEAN are connected, facilitating the connectivity of the region through production, investment, trade and business linkages that involve different players in different stages of the RVC.

Wilmar (supplier)

Wilmar's core activities include oil palm cultivation, oilseed crushing, edible oils refining, production of specialty fats and oleochemicals, biodiesel manufacturing, merchandising and distribution of a wide range of intermediate and final products arising from palm oil.

Over 98% of the company's oil palm plantations are in Indonesia and Malaysia. The company has significant processing and refinery facilities in ASEAN (i.e. Indonesia, Malaysia, the Philippines, Viet Nam) and in four other countries outside the region. The company also uses outgrowers and contract farming, and owns mills to process fresh fruits from surrounding plantations. Crude palm oil and crude palm kernel oil are sold and processed in the company's own facilities. The group's shipping operation is managed by a subsidiary in Singapore, while R&D activities in ASEAN are conducted in Singapore, Malaysia, Viet Nam and Indonesia.

Wilmar sells its palm-oil-generated merchandise through a global network of distributors and brands. It supplies palm oil derivatives to a wide range of customers including major

TNCs in food manufacturing, cosmetics, pharmaceuticals and consumer goods. The customers include P&G, Unilever, Mondelez and Reckitt Benckiser.

P&G (customer)

Wilmar is a major supplier of P&G. Palm oil from Wilmar is sent to P&G's refineries in ASEAN Member States for processing into oleochemicals and subsequently for manufacturing of consumer products under P&G's brand names.

P&G is one of the largest consumer goods companies in ASEAN. It has eight manufacturing sites, eight mega distribution centres and a business service centre in ASEAN. Its major manufacturing operations are in Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam, and the company is involved with RVCs in a wide range of product categories.

Singapore is the regional headquarters for P&G in the Asia-Pacific region. It hosts regional business units for specific products (e.g. hair care and color, skin and personal cleansing, and fabric and home care). The Philippines hosts the company's business service centre, which serves one-third of P&G's global operations. Thailand serves as the ASEAN marketing hub for beauty, fabric and home care products.

P&G's oleochemicals plant in Kuantan, Malaysia, processes feedstock from Indonesia and Malaysia into chemicals that go to other P&G plants in ASEAN and other parts of the world as raw materials (figure 5.5). Singapore hosts P&G's only perfume manufacturing plant in Asia, which supplies fragrances and scents for other P&G products to the company's other plants across Asia (figure 5.6). In Thailand, P&G's hair care manufacturing plant is the company's largest hair care export plant in the world, while P&G's Cabuyao plant in the Philippines is one of the company's largest multi-category manufacturing facilities in Asia. In Indonesia, P&G has a state-of-the-art baby care plant which uses derivatives refined by facilities in other ASEAN Member States.

As a downstream palm oil user, P&G has a network of operations in different ASEAN Member States to manufacture consumer goods for the region's market as well as for export outside that market. Although much of P&G's production in ASEAN is internalized, in some situations third-party contract manufacturers are used – strengthening the value chain and its connectivity with other companies in the region.

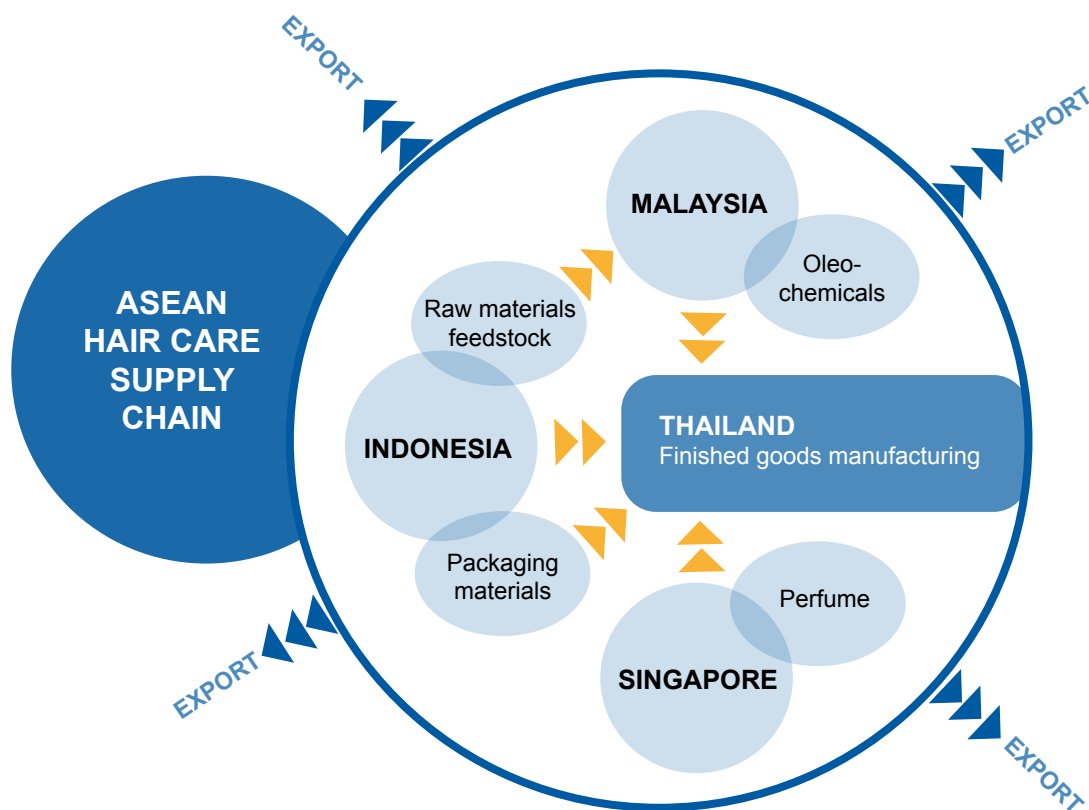
5.4 Automotive value chains in ASEAN

Automotive value chains in ASEAN involved many countries in the region. The regional value chains cover automotive OBM, assemblers and manufacturers of parts and components. The latter includes many foreign and local TNCs operating in the automotive industry in the region.

5.4.1 Connecting companies, suppliers and countries in ASEAN

Many major global automotive manufacturers have a significant presence in ASEAN. They operate in a number of ASEAN Member States in intra-firm activities, producing

Figure 5.5. P&G: ASEAN hair care supply chain

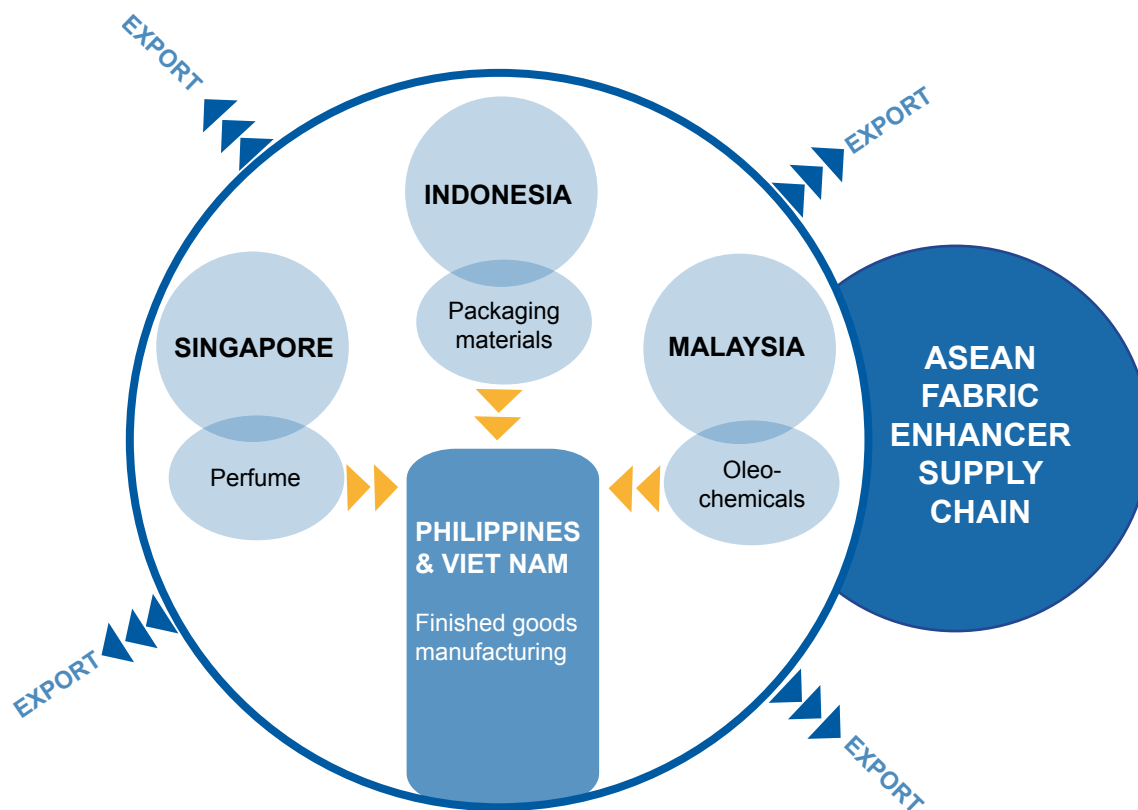


Source: P&G, cited in AIR (2013).

and exchanging key parts and components including completely built-up units (CBUs) among affiliates in the region (chapter 1; chapter 3). In some ASEAN Member States, these companies have multiple in-country production plants and affiliates. In addition to assembly functions, these companies also have non-manufacturing operations in different ASEAN Member States connected to their regional production networks; for example, R&D, training and testing facilities, regional headquarters, marketing and distribution centres. The manufacturing and non-manufacturing functions together form these companies' RVCs and establish the connectivity of different affiliates operating in different ASEAN Member States. Further, the RVCs of these companies also expand to link to the many suppliers who also operate in different ASEAN Member States to supply these companies with different parts and components.

The cases of Toyota (chapter 3) and Mazda (annex 5.7) illustrate the connectivity of these companies' operations in ASEAN Member States, especially among affiliates and with suppliers. The connections between an ASEAN contract manufacturer, OBMs and other suppliers demonstrate the complexity of automotive RVCs and the connectivity of companies in the region. At the parts and components manufacturing level, the associations between the different tiers of manufacturers, and with automotive OBMs, are even more complex. Nonetheless, together they form important segments of the regional automotive value chain in components manufacturing and automotive assembly.

Figure 5.6. P&G: ASEAN fabric enhancer supply chain



Source: P&G, cited in AIR (2013).

Different automotive brands and models are assembled in plants in different ASEAN Member States with significant parts and components manufactured and sourced within the region and in-country. The CBUs or CKDs are then sold in the host country of assembly or distributed in different ASEAN Member States and exported outside the region. The manufacturing of parts and components involves many categories of foreign and local companies, including affiliates of major automotive brand manufacturers in ASEAN (e.g. Denso, a member of the Toyota group that has multiple plants across the region).

The interconnection of automotive manufacturers and suppliers forms an important symbiotic relationship. The existence of a strong supporting industry is crucial for efficient automotive manufacturing operations. The increase in automotive manufacturing activities raises demand for parts and components, which in turn induces investment by parts and components companies to expand capacity and to operate close to the manufacturers. The increase in parts and components operations by these companies further strengthens the supporting industry clusters, which in turn increases the attractiveness of the region for investment and expansion by automotive OBMs.

The component level of the automotive RVC involves categories of players and degrees of association and relationship with OBMs. An automotive manufacturer faces an extensive

web of suppliers from intra-firm, contract manufacturer and arm's-length sources. They can be first-, second- or third-tier suppliers operating (in a majority of cases) in the same host country as the automotive manufacturer or regionally. Some of these auto parts manufacturers, such as Sumitomo Electric, have multiple plants in different ASEAN Member States (table 5.7). Some, such as TRW, supply multiple customers and other automotive assemblers in the same host country (table 5.8). Some parts and components manufacturers supply other suppliers in ASEAN, establishing connections between first-tier suppliers and second- and third-tier suppliers in the region (box 5.3). Automotive manufacturers such as GM source parts and components from diverse suppliers in

Table 5.7. Sumitomo Electric Industries with multiple operations in different ASEAN countries to supply automotive manufacturers in the region*

ASEAN host country	Selected automotive related subsidiaries/operations
Cambodia	<ul style="list-style-type: none"> • Sumi Wiring Systems
Indonesia	<ul style="list-style-type: none"> • Fukoku Tokai Rubber • Sumi Indo Kabel • Sumi Indo Wiring Systems • Sumitomo Wiring Systems Batam • Taiyo Sinar Raya Teknik • Tokai Rubber Indonesia • Tokai Rubber Auto Hose
Malaysia	<ul style="list-style-type: none"> • J.K. Wire Harness • Sumiden Electronic Materials • Sumitomo Electric Interconnect Products • Sumitomo Electric Sintered Components
Philippines	<ul style="list-style-type: none"> • First Sumiden Circuits. • International Electric Wires Phils. Corp. • International Wiring Systems (Phils.) Corporation • Philinas Kyohritsu Inc. • SDE (Philippines) Corp. • Sumi Philippines Wiring Systems Corporation • Sumidenso Automotive Technologies Asia Corporation
Singapore	<ul style="list-style-type: none"> • Sumitomo Electric Automotive Products • Sumitomo Electric Hardmetal Asia Pacific • Sumitomo Electric Interconnect Products
Thailand	<ul style="list-style-type: none"> • Sews-Components • Sumitomo Electric Wiring Systems • Thai Semcon • Tokai Eastern Rubber • Tokai Rubber Compounding • SEWS Asia Technical Center • Sumitomo Electric • SWS Logistics & Marketing
Viet Nam	<ul style="list-style-type: none"> • Sews-Components Vietnam • Sumiden Vietnam Automotive Wire • Sumidenso Vietnam • Sumi-Hanel Wiring Systems • Sumi Vietnam Wiring System

Source: UNCTAD 2014, based on Sumitomo Electric Industries (<http://global-sei.com/globalnet/index.html>)

Table 5.8. TRW produces and supplies different parts and components from its Thai operations to different automotive assemblers in Thailand

Product	Modules		Steering & Suspension		Braking	OSSE (pass-thru)		OSS
	GM	Isuzu	Auto Alliance	Mitsubishi	Toyota	Honda	Toyota	Auto Alliance
Front & Rear Corner Module	X	X						
Cross Member Module	X							
PR Axle Module	X	X						
Ball Joint			X	X				
Conventional Linkage			X	X				
Pitman Arm			X					
Drum Brake					X			
Air Bag ECU						X	X	
Air Bag Sensors						X	X	
Steering Wheel and DAB								X

Source: http://www.hemaraj.com/e_newsletters/Sep_11/2_DVT_Program_TRW.pdf

different ASEAN Member States – indicating a wider regional connection of activities between the company and suppliers in ASEAN (box 5.4).

In the past few years, many automotive manufacturers and parts and components suppliers have stepped up their operations in the region by expanding production capacities and adding product lines (chapter 1). The Japanese automotive companies and component manufacturers have been particularly active in expanding their presence regionally, strengthening further their regional production networks and value chains. Although various reasons are driving this expansion in the industry, the imminent debut of the AEC and the growing regional demand for automobiles play important roles.

The automotive industry is increasingly connecting ASEAN Member States in production, investment, exports, companies' connectivity and intraregional trade. Where the major global automotive manufacturers have a significant manufacturing presence in several specific countries (e.g. Indonesia, Malaysia, the Philippines, Thailand), the automotive parts and component manufacturers are spread across the region. In the major automotive-producing ASEAN Member States, automotive manufacturers have multiple plants and subsidiaries in a host country, which involve operations in a few segments of the value chain, including production of key components and assembly of certain models through to marketing and distribution functions. For instance, Toyota affiliates in Indonesia, Malaysia, the Philippines and Thailand exchange parts such as engines, transmissions and engine control units for assembly of certain CBUs (chapter 3). Some of these CBUs are cross-exported between affiliates in these countries and distributed through distribution centres in the other ASEAN Member States and outside the region. Some major automotive companies have also established plants in Myanmar and Viet Nam, encouraging parts and components manufacturers to set up operations close to them, and expanding further their regional presence.

Box 5.3. Nok Corporation: Supplying to other automotive parts and components manufacturers in ASEAN

Nok Corporation (Japan) manufactures automotive and electronics parts and components in a number of ASEAN Member States, including Indonesia, Thailand and Viet Nam. It has a business centre for the region based in Singapore. Nok supplies parts and components to other suppliers operating in different ASEAN Member States, establishing links between first-tier and second- and third-tier suppliers (box table 5.3.1).

Box table 5.3.1. NOK's operations in ASEAN supply other parts and components manufacturers in the region (selected customers)

Customers	Location of customer's facilities
Aisin Ai	Thailand
Denso Group in Thailand	Thailand
Hino Motors Manufacturing	Thailand
Siam Toyota Manufacturing and other Toyota affiliates in Thailand	Thailand
Siam Aisin	Thailand
Honda Automobile and other Honda affiliates in Thailand	Thailand
IHI Turbo	Thailand
Inergy Automotive Systems	Thailand
Isuzu Motors	Thailand
Kayaba	Thailand
Koyo Manufacturing	Thailand
Minebea Group of Companies	Thailand
Mitsubishi Motors	Thailand
NSK Bearing Manufacturing	Thailand
Yamada Soomboon	Thailand
JTEKT	Thailand
JTEKT Automotive	Malaysia
Modenas	Malaysia
Perodua Manufacturing	Malaysia
Aisan Nasmoco Industry	Indonesia
Akashi Wahana	Indonesia
Astra Daihatsu Motor	Indonesia
Kawasaki Motor	Indonesia
Kayaba	Indonesia
Showa Manufacturing	Indonesia

Source: UNCTAD (2014), based on information from NOK's website.

Major components TNCs such as Bosch, Johnson Controls, Furukawa and Yazaki have multiple plants and affiliates in ASEAN (table 5.9). Denso's operations in ASEAN supply various types of parts and components to many major automotive producers operating in the region. These customers include Toyota, Yamaha Motor, Suzuki and Auto Alliance. Aisin Seiki in ASEAN supplies to companies such as Toyota, Daihatsu, Honda, Nissan, Ford and GM. Faurecia, which expanded its operation in Thailand in 2013–2014, supplies

Box 5.4. GM's production in Thailand involves parts and components manufacturers operating in different ASEAN Member States

Many auto part manufacturers supply GM in Thailand. These suppliers include foreign and local parts and components manufacturers operating in different ASEAN Member States (box table 5.4.1).

Box table 5.4.1. GM also sources regionally

Selected suppliers of GM	Headquarters of parent company	Locations of supplier's operations in ASEAN
Thai Arrow Products Company Molten Asia Polymer Products Delphi Automotive Systems Mitsubishi Electric Thai Auto-Parts Bosch Automotive Sanko Gosei Technology AGS Auto Parts Tokai Rika Usui International Corp Stars Technologies Industrial Maxxis International Sanko Kiki	Japan Japan United States Japan Germany Japan Canada Japan Japan Japan Japan Taiwan Province of China Japan	Thailand
Jatim Autocomp KDS EDS Manufacturing	Japan Japan Japan	Indonesia
Murata Electronics Delphi Automotive Systems Heraeus Materials	Japan United States Germany	Singapore
Amkor Technology Laguna Auto-Parts Manufacturing Corp. ON Semiconductor	United States Japan United States	Philippines
SCG Industries Nichicon	United States Japan	Malaysia

Source: UNCTAD (2014), adapted from GM Thailand, News, "GM Southeast Asia honors best regional automotive suppliers at first Annual Quality Excellence Awards ceremony". http://en.chevrolet.co.th/about-us/news-events/2012/10/GM_Southeast_Asia_honors_best_regional_automotive_suppliers_at_first_Annual_Quality_Excellence_Awards_ceremony.html.

parts and components for the production of Ford EcoSport in that country. Toyota Boshoku established a plant in the Lao People's Democratic Republic in 2013 to produce interior components and seat covers for many automotive manufacturers operating in the region. Continental produces different parts and components in different ASEAN Member States and for different customers (table 5.10).

Indigenous ASEAN parts and components companies have also become more regional, establishing plants in proximity to their major customers in ASEAN. For instance, Patec (Singapore), with operations in Indonesia, manufactures auto parts primarily for customers such as Toyota and Astra in that country. Aapico, headquartered in Thailand,

Table 5.9. Top 20 global OEM automotive part manufacturers have multiple plants in ASEAN, 2013^a

Corporation	Headquarters	Global OEM automotive parts sales, 2012 (\$ Millions)	Operations in selected ASEAN countries
1 Robert Bosch	Germany	36 787	Malaysia, Philippines, Singapore, Thailand, Viet Nam
2 Denso	Japan	34 200	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam
3 Continental	Germany	32 800	Malaysia, Philippines, Singapore, Thailand
4 Magna International	Canada	30 428	Thailand
5 Aisin Seiki	Japan	30 080	Indonesia, Singapore, Thailand
6 Johnson Controls ^b	United States	22 515	Indonesia, Malaysia, Singapore, Thailand
7 Faurecia	France	22 500	Thailand
8 Hyundai Mobis	Republic of Korea	21 351	Malaysia
9 ZF Friedrichshafen	Germany	18 614	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam
10 Yazaki	Japan	15 801	Cambodia, Indonesia, Philippines, Singapore, Thailand, Viet Nam
11 Lear	United States	14 567	Philippines, Singapore, Thailand, Viet Nam
12 Delphi Automotive	United States	14 432	Singapore, Thailand
13 TRW Automotive Holdings	United States	14 141	Malaysia, Thailand, Singapore
14 BASF	Germany	13 168	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam
15 Valeo	France	12 816	Indonesia, Malaysia, Thailand
16 Sumitomo Electric Industries	Japan	11 232	Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam
17 Toyota Boshoku	Japan	10 484	Indonesia, Lao PDR, Malaysia, Philippines, Thailand, Viet Nam
18 JTEKT	Japan	9 793	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam
19 Hitachi Automotive Systems	Japan	9 613	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam
20 Cummins	United States	9 025	Philippines, Singapore, Thailand

Source: UNCTAD, based on Top Suppliers, Automotive News, 17 June 2013 (<http://www.autonews.com/assets/PDF/CA89220617.PDF>).

Notes: Aside from have a significant presence, many of these companies have multiple plants or operations in the same host country. For instance, Valeo, Denso and TRW have several different plants in Thailand, BASF in Malaysia and Sumitomo Electric has multiple plants with different product lines for auto and non-automotive across the majority of ASEAN countries.

^a Includes manufacturing, sales and R&D functions.

^b Has other business units such as for building efficiency in also Philippines and Viet Nam.

manufactures parts and components for major automotive customers in that country and for exports (box 5.5).

Two company cases – Mazda (annex 5.7), an original brand owner, and Naza Automotive Manufacturer (annex 5.8), a contract manufacturer – highlight the connection between the companies and their suppliers in ASEAN.

Table 5.10. Continental: Producing different automotive parts and components in different ASEAN countries

Locations	Tire	ContiTech	Chassis & Safety	Interior	Powertrain
Malaysia					
Alor Setar	x				
Penang				x	x
Petaling Jaya	x				
Shah Alam				x	
Philippines					
Calamba			x		x
Manila				x	
Singapore					
Singapore	x	x		x	
Thailand					
Amata City					x
Bangkok	x				

Source: Continental (1 January 2014)
 (http://www.continental-corporation.com/www/portal_com_en/themes/continental/continental_global/asien_en.html)

Box 5.5. AAPICO Hitech: Connection between automotive assemblers and an auto parts manufacturer

Through its various subsidiaries, AAPICO manufactures various types of parts and components as an independent supplier as well as a contract manufacturer to some automotive manufacturers in Thailand.

AAPICO manufactures the chassis frame of the Isuzu D-Max model pickup truck. It supplies the frame to Isuzu Motors (Thailand) in component parts, which are then welded into full frames by Isuzu. The Group manufactures and supplies fuel tanks to Auto Alliance (Thailand), which manufactures cars for Ford and Mazda.

AAPICO's subsidiary (AAPICO Forging PLC) in Thailand manufactures forged and machined parts, and supplies key customers such as Auto Alliance (Thailand), TRW, and Thai Yamaha. In pressed parts and stamping parts such as floor parts, cross members, pillars, brackets, and clips, including subassemblies, it manufactures and supplies Auto Alliance, Isuzu and Nissan Motors in the country.

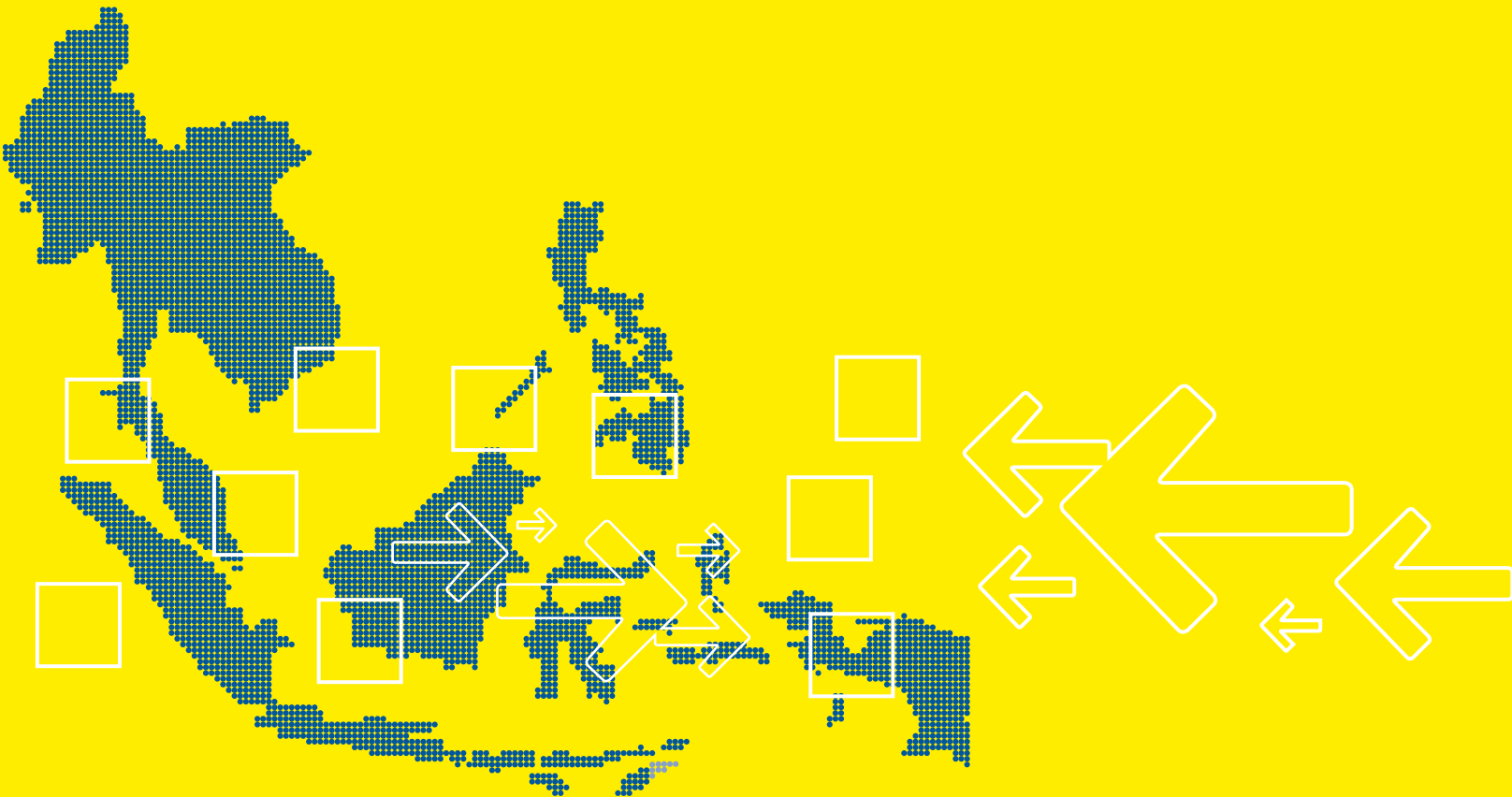
The company manufactures many plastic parts for cars and electrical appliances. Plastic fuel tanks are produced under a technical agreement with Kautex Textron (Germany) for Auto Alliance (Thailand).

Able Sanoh Industries (1996) (ASICO) is a joint venture between AAPICO, Sanoh Industries and Sojitz Group of Japan. It manufactures chassis parts and engine parts, and supplies major automotive companies such as Honda Automobile (Thailand), Thai Honda Manufacturing and Nissan Motors (Thailand).

Aapico also supplies other customers in the ASEAN region including Mazda, Toyota, Mitsubishi Motors, BMW, Hyundai, Hino, Perodua, Renault and Land Rover.

Source: UNCTAD (2014), based on AAPICO Hitech.

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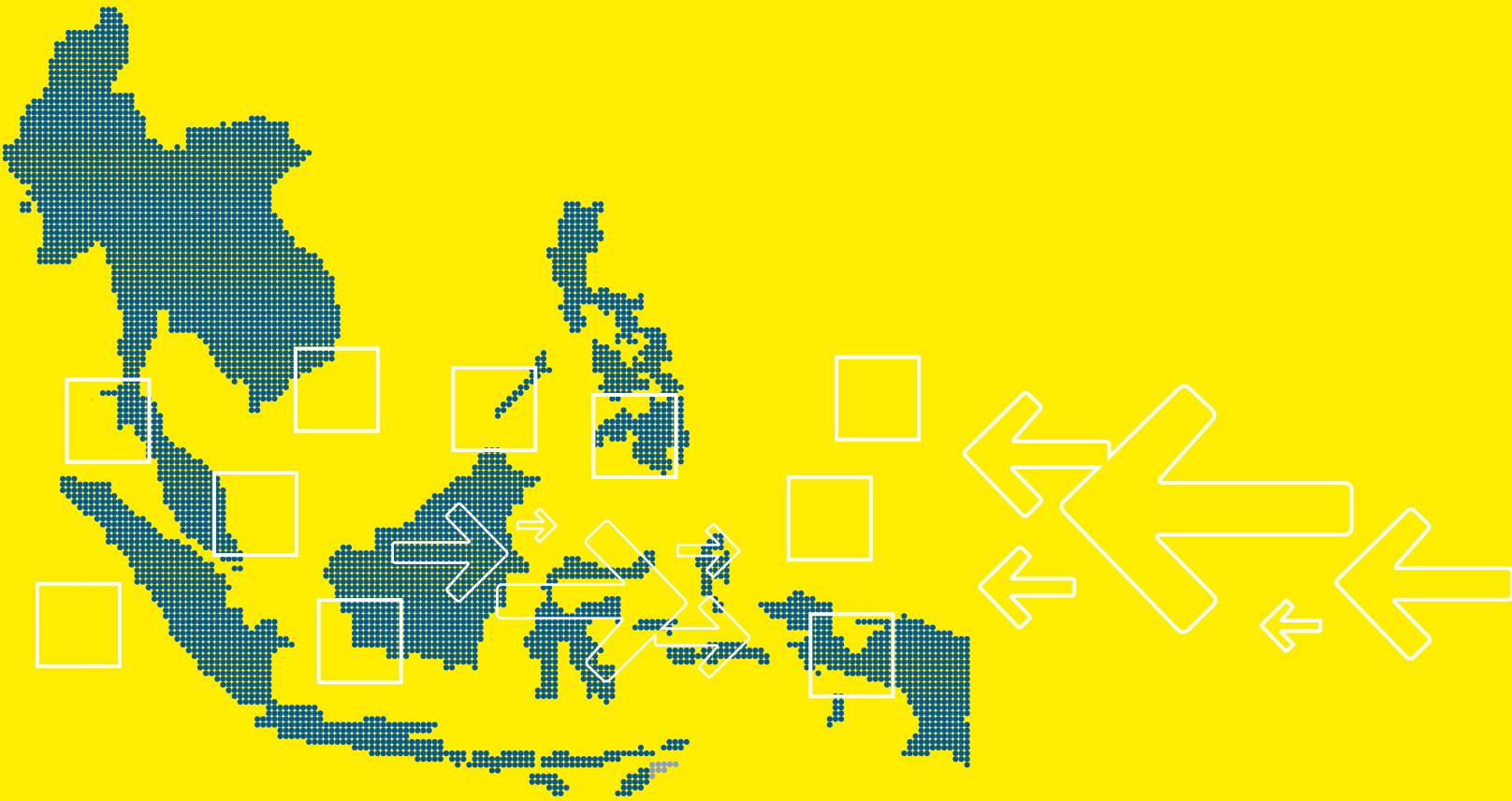


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ANNEXES



Annex table 2.1
Investment policy measures in ASEAN: selected individual actions
and measures introduced or announced in 2012

Country	Investment-specific measures	Investment-related measures
Brunei Darussalam	<ul style="list-style-type: none"> • On 17 November 2011, Brunei Darussalam joined the Paris Convention for protection of industrial property. The Stockholm Act (1967) of the Paris Convention came into effect on 17 February 2012. • A tax exemption is available for pioneer industries companies. A 15 per cent credit can be claimed on new investment of new plant and machinery made between January 2012 and December 2017. The credit may be carried forward for 2 years. 30 per cent of local equity participation is required for foreign investment in manufacturing and fisheries sectors. 	<ul style="list-style-type: none"> • The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure came into effect on 24 July 2012 along with the submission of its instrument of accession. • The Patents Cooperation Treaty (PCT) came into effect on 24 July 2012 along with the submission of its instrument of accession to the PCT. International application filed on or after the date will automatically include the designation of Brunei Darussalam and subsequently enter the national phase under the Patents Order 2011. • On 1 January 2012, the Tax Administration and Revenue Services (STARS) were launched to facilitate e-filing system on taxation. • Other facilitating laws were put into force since January 2012 i.e., Brunei Darussalam's Patents Order 2011, and Consumer Protection (Fair Trading) Order 2011. <p>In 2011-2012, Brunei Darussalam has also signed Double Taxation Agreements (DTA) with Qatar, Sweden, Denmark, Norway, Finland, Iceland, Greenland, and the Faroe Islands.</p>
Cambodia	<p>International Agreements Royal Kram No. NS/RKT/1212/012 dated December 26, 2012 on Promulgation of the Law on Adoption on (1) ASEAN Multilateral Agreement on the full Liberalization of the Passenger Air Services, including Two Protocols. (2) Protocol to Implement the Sixth Package of Commitment of Air Transport Services under ASEAN Framework Agreement on Service. (3) Memorandum of Understanding on ASEAN's Air Service Agreement with Dialogue Parties. The law on ASEAN Multilateral agreement on the full liberation of the passenger air services contains nineteen Articles and two Protocols.</p> <ul style="list-style-type: none"> ○ December 2012: setting up of one-stop service in Cambodia as a window through which investment-related applications are applied and investment-related approvals or denials are issued ○ setting up a follow-up mechanism for investment including a "complaint desk" for applicants within the Council for the Development of Cambodia (CDC) to ensure the smooth and transparent processes of the applications and approval and denials ○ Sub-decree No. 174 (Royal Government of Cambodia) dated October 11, 2012 on Management of the Import of Uncut Diamonds and the Export of Cut Diamonds in Implementing the Project for Granting KIMBERLY Certificate; aims to promote the investment in the import and export of cut and uncut diamonds. 	<ul style="list-style-type: none"> • Prakas No. B 7.012.140 (National Bank of Cambodia) dated September 13, 2012 on Maintenance of Reserve Requirement against Commercial Banks' Deposits and Borrowings. • Sub-decree No. 140 (Royal Government of Cambodia) dated September 06, 2012 on Organization and Functioning of the Secretariat of the Cambodia Telecom Regulator. • Sub-Decree No.88 (11 June 2012): increase in the specific tax and export duty rates of certain motorcycles and seafood; effective from 1st July 2012. • Cambodia has brought down the import tax rate to 0 per cent and VAT exemption for agricultural equipment and machinery. • Additional tax incentive for paddy production is offered with additional 3 years of tax exemption on profit. • Prakas No. 277 (Ministry Economic and Finance) dated June 08, 2012 on Modification of Customs Rate on Certain Import Products; aims to modify the customs rate on the products of 46 tariff lines of the Cambodian Customs Tariff in order to harmonize with AHTN2012.

Country	Investment-specific measures	Investment-related measures
Cambodia	<ul style="list-style-type: none"> ○ Sub-decree No.171 (Royal Government of Cambodia) dated October 8, 2012 on Organization and Functioning of the General Secretariat of the National Committee for Management and Development of the Cambodian Beach Areas; aims to conserve natural resources and the environment, and to analyze, review and comment on ongoing investment projects in beach areas as well as decision-making on any investment projects which have been proposed by domestic and foreign investors. ○ Special Order (7 May 2012): measures to strengthen and increase the effectiveness of the management of Economic Land Concessions (ELCs). ○ Prakas No. 141 (Ministry Industry Mining, and Energy) dated February 08, 2012 on Procedure and Formality of Application for Approval Letter on Import of Equipment for Metrology and for Metrology standard. ○ Instructional Circular # 01 (3 Feb 2012): all assignments for the private investment and development in the coastal areas of the Kingdom of Cambodia shall comply with the determined principles of the Government on public, social and environmental safety. ○ 16 January 2012: Order #001 (16 Jan 2012): compliance by factory and handicraft operations to Law on Management of Factories and Handicrafts, and the Prakas on Procedure for Implementing Provisions on Operation of Factories and Handicrafts. ○ Decision #03 (13 Jan 2012) on the establishment of Neang Koh-Koh Kong as a Special Economic Zone Administration. 	<ul style="list-style-type: none"> • Sub-decree No.108 (Royal Government of Cambodia) dated March 18, 2013 on Organization and Functioning of the General Secretariat of National Committee for Urbanization and Land Management; The Sub-decree assisting the Committee in leading, advising, providing consultation and coordination service for the work on the master land use plan and on land use projects and monitoring and evaluating the implementation of land management at national, regional and sub-national levels and the implementation of the master land use plan and land use projects at municipal/capital level and the master land use plan at srok /khan Level.
Indonesia	<ul style="list-style-type: none"> • On 27 December 2012, Bank Indonesia issued Regulation No. 14/26/PBI/2012 on business activities and office network in accordance with banks' core capital. The regulation is applicable not only to Indonesian commercial banks but also to Indonesian syariah banks. • October 2012: launch of the Online Tracking System under its One Stop Service in Indonesia, which will enable investors across the world to determine the position and status of their investment application through the BKPM web portal, http://www.bkpm.go.id. Through this system, investors can access online the status of the following types of licenses: Registration, Principle License, Approval for Machinery, Goods and Material Import Facilities, and Business License. Indonesia made amendment in its investment administrative guidelines in particular with respect to the application of its tracking system. • On 2 October 2012, the Business Competition Supervisory Commission published Regulation No. 3 of 2012 and No.4 of 2012 to amend its requirements for reviews of mergers, acquisitions and consolidations of companies. • On August 7th, 2012, Presidential Regulation No. 71 of 2012 regarding the Execution of Land Procurement for Public Interest Development was issued to implement Law No. 2 of 2012 on Land Procurement for Public Interest Development; aims to accelerate the land procurement process for infrastructure projects. 	<ul style="list-style-type: none"> • On 14 November 2012 the Minister of Manpower and Transmigration signed Regulation No 19/2012 on Conditions for Outsourcing the Implementation of Work to Other Companies. It emphasizes that the work that can be contracted out to a service provider must be supplemental work. • Bank Indonesia issued Regulation No. 14/25/PBI/2012, regarding the Receipt of Foreign Exchange from Export Proceeds and the Withdrawal of Foreign Exchange from Foreign Debt. The regulation requires that foreign exchange from export proceeds be received through a foreign exchange bank in Indonesia. • The Ministry of Trade issued Regulation No.59/MDAG/PER/9/ 2012 on September 21, 2012, amending some of the provisions on the Importer Identification Number. • Presidential Regulation 71/2012 entered into force on 7 August 2012 as an implementing regulation of the Land Acquisition Law introduced in late 2011. The regulation provides a legally prescribed time frame for each stage of the land acquisition process to achieve the desired legal certainty.

Country	Investment-specific measures	Investment-related measures
Indonesia	<ul style="list-style-type: none"> • In July 2012, Bank Indonesia issued new bank ownership rules through Regulation No.14/8/PBI/2012. The Regulation limits ownership by single shareholder or corporate group (both for domestic and foreign) of Indonesian Banks. It also provides additional requirements which are applicable to foreign “controlling shareholder”. • Bank Indonesia issued Regulation No. 14/24/PBI/2012 introducing the Single Presence Policy for Indonesian banks. It requires parties with controlling stakes in more than one bank to merge their banks and to establish a bank holding company to hold the bank shares they own, or to set up a “holding function,” where a bank or the Indonesian Government consolidates all the activities of its subsidiary banks under a single controlling entity. • On 12 July 2012, Indonesia’s parliament adopted the Higher Education Law which allows foreign universities to acquire accreditation to operate in Indonesia. • In June 2012, BKPM Regulation No. 3 of 2012 on Guidelines and Procedures of Investment Controlling and Implementation Indonesia was issued; aims to provide directions and/or procedures for investment agencies in conducting their roles on controlling, coaching, and monitoring investments in regions and sub regions. • Indonesia has enhanced the role of regional government to facilitate foreign investment in those specific areas; Based on Head of Investment Coordinating Board Regulation No.1/2012, 10th of May 2012 foreign investor can submit Investment Application directly to the Council of Sabang Area through Management Board of Sabang Area on a one stop shop system for new investment, changes in investment, expansion, revocation and cancellation of principle license in Sabang Area. • Government requires exporters to receive export proceeds through domestic banks and that debtors channel the proceeds of foreign borrowing through domestic banks (the policy does not involve any holding periods or requirements for Rupiah conversion) • On 21 February 2012, GR No. 24/2012 was issued on the Mineral and Coal Mining Business in Indonesia. Foreign-owned mining companies operating in coal, minerals and metals progressively divest their holdings to Indonesians – including the central government, regional governments, State-owned enterprises or other domestic investors – to reach the maximum authorized ceiling of 49% by the tenth year of operation. • On 7 February 2012, the Presidential Regulation (PR) No.16/2012 was issued on general plan of capital investment (RUPM), as basis in formulating policies related with investment activities. • Tanjung Lesung and Sei Makei Kei stipulated as a special economic zones through GR No. 26/2012 and No. 29/ 2012, respectively. 	<ul style="list-style-type: none"> • The Minister of Manpower and Transmigration issued Decree No 40 of 2012 on Certain Positions That Are Restricted for Foreign Workers on 29 February 2012. • On February 23, 2012, the Government of Indonesia issued Government Regulation No. 27 of 2012 regarding Environmental Permits; aims to provide greater legal certainty for businesses in terms of environmental licensing while ensuring the protection and management of the natural environment. • Central Bank of Indonesia (BI) to roll out the new rule barring ownership of a majority stake in the national banking system in late July 2012. In the new regulation, BI plans to restrict ownership of bank shares by bank and nonbank investors up to a maximum of 40 per cent, for non-financial institutions are legal entities and a maximum of 30 per cent for sole proprietorships or family maximum of 20 per cent. • BI also announced to set up new caps on single foreign shareholders’ stakes in the country’s commercial banks so as to prevent foreign investors from acquiring majority stakes.
Lao People’s Democratic Republic	<ul style="list-style-type: none"> • Creation of One-Stop Service for investment applications in Lao People’s Democratic Republic. 	<ul style="list-style-type: none"> • On 4 November 2012, Lao PDR has concluded double taxation agreements (DTAs) with Luxembourg. • In January 2012, a new tax treaty was concluded between Lao People’s Democratic Republic and Malaysia.

Country	Investment-specific measures	Investment-related measures
Malaysia	<ul style="list-style-type: none"> • Under the Economic Transformation Programme, Malaysia will undertake the eco-system approach to promote private investments in both the manufacturing and services sectors. The selective approach adopted by the Government will be intensified to target niche products, technologies and services and filling the gaps to complete the value chain. In addition, focus will be on leveraging on the mega trends development to target products with technological advancements and new product applications. Besides targeting new and re-investments, the Malaysian Investment Development Authority (MIDA) will intensify collaborations with relevant agencies in the areas of human capital and talents, infrastructure, utilities and R&D to enhance its investment promotion agenda. Further, investment promotion will be pursued within the context of promoting quality investments, i.e. projects that are of high technology; high value-added; knowledge-intensive; skills-intensive; export oriented; capital-intensive, design and R&D-intensive, projects that have high GNI impact and have strong linkages with domestic industries. • Malaysia concluded FTAs with Australia. The Malaysia-Australia Free Trade Agreement (MAFTA) was signed on 30 March 2012 and entered into force on 1 January 2013. 	<ul style="list-style-type: none"> • On 27 September 2012, Malaysia deposited at WIPO its instrument of accession to the WIPO Copyright Treaty (WCT) and WIPO Performances & Phonograms Treaty (WPPT). • On 1 June 2012, Regulation pertaining to voluntary notification of copyright was entered into force. There was no formal copyright registration process prior to the Regulation. Being a party to the Berne Convention, copyrighted works are protected immediately upon creation and the fulfillment of certain conditions in the Copyright Act. • On 15 February 2012, the Intellectual Property Corporation of Malaysia (MyIPO) announced the amended Industrial Designs Regulations. With the Amendment, industrial design applications to be filed electronically while previously only patent and trademark applications were accepted.
Myanmar	<ul style="list-style-type: none"> • On 2 November 2012, a new Foreign Investment law No. 12/2012 was issued. The law also covers incentive legislation, guide on equity ownership issues and the operations of the Foreign Investment Commission. The Law offers a wide range of possibilities for 100% foreign ownership. Nonetheless, restriction for foreign investment applies on selected activities. • Some of the highlights in the new law include, among others, the specific definition of investment, description of rights and obligations of investors, policy's changes in permission of land use, transfer right of foreign currency and extension/relief of customs duties and/or other internal taxes. On land use, depending on the type of business and investment amount, up to an initial 50 years of land use is allowed with an extension of 10 years and another 10 years (total 70 years), while in the previous law, the initial land use is allowed for up to 30 years with an extension of 5 years for three times. In addition, investors can now lease land not only from the Government but also from the private sector. On transfer right of foreign currency, investors can now remit at the prevailing exchange rate; while previously investors could only remit at the official exchange rate. The transfer can also be done through a bank that can operate Foreign Banking. The new Foreign Investment Law is available at www.dica.gov.mm. 	<ul style="list-style-type: none"> • On 26 March 2012, the Ministry of Finance and Revenue unveiled tax reforms in Yangon. A series of 16 separate Notifications was issued covering reforms in corporate tax rates, commercial tax rates, and income tax rates. • Policies issued on foreign currency as follows: <ul style="list-style-type: none"> ○ In April 2012, the Central Bank of Myanmar took the first step toward moving the country's exchange rate system from the fixed exchange rate system to a managed float regime with technical assistance from the IMF. ○ In May 2012, 14 private banks were allowed to offer foreign-currency accounts. ○ In July 2012, foreign exchanges licenses were granted to selected private banks while in the past it was only granted to two state banks. • A "visa-on-arrival" service was reintroduced to people who travel to Myanmar for the purposes of performing business and attending events.

Country	Investment-specific measures	Investment-related measures
Philippines	<ul style="list-style-type: none"> In October 2012, the National Economic Development Agency (NEDA) issued Executive Order EO No.98 on Promulgating the Ninth Regular Foreign Investment Negative List. In July 2012, Executive Order No.79 (Mining Act Amendment) was signed to maximize the proper use of mineral resources for national development. The policy expanded the areas closed to mining operations by including tourism development areas and prime agricultural lands in the designated “no mining” zones and stipulated that the granting of mining rights will be subject to competitive public bidding. It also put on hold the issue of new mining contracts until new legislation modifying existing revenue sharing schemes and mechanisms have taken effect to ensure compliance with environmental standards. The Order also requires a review of the performance of existing mining operations. 	<ul style="list-style-type: none"> The Philippines launched its Public-Private Partnership (PPP) Centre. The Centre will facilitate the coordination and monitoring of PPP programs and projects. On 6 July 2012, President Aquino signed Executive Order No. 79 institutionalizing and implementing reforms in the Philippine mining sector. Senate Resolution No. 639 (Introduced by Senator Villar) Urging the Committee on Economic Affairs and Trade and Commerce to Conduct an Inquiry, In Aid of Legislation, on the State of the Philippines’ Business Climate vis-à-vis its Conduciveness and Competitiveness to Accept Foreign Investors with the End View of Increasing Foreign Direct Investment (FDI) in the Country thereby Increasing National Economic Growth.
Singapore		<ul style="list-style-type: none"> On taxation measures, Singapore has made an improvement in its recent 2012 Budget to specify clear guidelines as to when a company will not be taxed on their gains from disposal of equity investments to provide upfront tax certainty. Removal of requirement for law firms to forward the stamp duty certificates for documents lodged electronically at the Singapore Land Authority (SLA). As of 6 Mar 2012, law firms do not have to forward the stamp duty certificate to the SLA as proof that the stamp duty has been paid. The stamp duty certificate reference number would instead be extracted from SLA’s eLodgment system and transmitted to the Inland Revenue Authority of Singapore (IRAS) daily for the system to verify that stamp duty has been paid. This system verification saves time and effort for lawyers and frees SLA officers to perform other manual checks.
Thailand	<ul style="list-style-type: none"> The Board of Investment (BOI) announced that all areas throughout the country (except Bangkok) shall be designated as Investment Promotional Zone until 31 December 31 2012. 	<ul style="list-style-type: none"> Starting on 1 February 2012, companies have to use the company’s registration number issued by the Department of Business Development of the Ministry of Commerce as a tax ID number. The corporate income tax was reduced from 30% to 23% in 2012 and will be further reduced to 20% in 2013. Thailand has called for the commencement of negotiations towards a DTA with Cambodia. DTA between Thailand and Myanmar became effective for tax periods beginning on or after 1 January 2012.

Country	Investment-specific measures	Investment-related measures
Viet Nam	<ul style="list-style-type: none"> • In December 2012, the Ministry of Finance announced tax reduction for foreign-invested enterprises that engage in expansion projects from existing investments. • Decree No.73/2012/ND-CP pertaining to foreign investment and cooperation in education and vocational training was issued in September 2012. The Decree specifies provisions on foreign cooperation and investment in the field of education and vocational training, including joint training, establishment of educational institutions with foreign capital, establishment of representative offices of foreign education in Viet Nam. Apply for organizations and individuals in Viet Nam, international organizations, institutions and individuals co-operating and investing in the field of education and vocational training. • On 15 June 2012, the Bilateral Investment Treaty between Morocco and Viet Nam was signed. 	<ul style="list-style-type: none"> • On 26 September 2012, the Letter 1551/TTg-KTTH was issued stipulating the credit activities permitted within the provisions of the Law on Credit Institutions; Law on State Bank of Vietnam; or the Civil Code; or credit activities which are not prohibited by regulations are VAT exempt. Interest income is confirmed as part of VAT exemption. • On 21 June 2012, Resolution No.29/2012/QH13 was approved; aims to introduce a number of favorable tax policies for certain entities. • On April 18, 2012, Viet Nam and Singapore initiated negotiations towards a DTA. • Circular No.06, which took effect on 1 March 2012, provides detailed guidance on some key changes to VAT rules. • Decree 57/2012/ND-CP on financial scheme for foreign credit organizations, banking branches: (i) specifies the financial system for institutions and branches of foreign banks established, organised and operated under the Law on Credit Institutions, and (ii) introduces new principles of financial management institution in credit institutions, i.e. provides branches of foreign bank with financial autonomy, self-responsibility for business operations, obligations and commitments, and financial disclosure as prescribed by law.

Sources: ASEAN Secretariat and country reports of ASEAN Member States.

Annex table 3.1. Chinese companies are major players in infrastructure and mining developments in selected ASEAN, various years

Host country	Selected project	Year	Chinese company	Amount	Notes
Cambodia	<i>Oil-related</i>				
	Refinery in Preah Sihanouk province and Kampot province	2013-2015	Sinomach	\$2.3 billion	China Perfect Machinery Industry Corp., a subsidiary of Sinomach, signed a contract in December 2012 with the Cambodian Petrochemical Company to build the refinery. China EXIM Bank provided a \$1.67 billion loan facility.
	Oil exploration	..	China National Offshore Oil Corporation and China Petrotech Holdings Ltd.	unknown	Exploration rights granted to these companies.
	<i>Hydro-power</i>				
	Kamchay hydroelectric dam	2008-2011	Sinohydro Corporation	\$280 million	China EXIM Bank provided a loan facility.
	Stung Atay hydropower dam	2008-2013	Datang	\$255 million	..
	Kirirom III hydropower dam	2009-2012	State Grid Corporation of China	\$47 million	..
	Tatay river hydropower dam	2010-2014	China National Heavy Machinery Co. Ltd.	\$540 million	China EXIM Bank provided a loan facility.
	Lower Stung Russei Chrum Hydropower Station	2012-2014	China Huadian Corp.	\$580 million	..
	Cambodia plans to build 10 dams between 2010 and 2019, six of which, including the above three are financed by China mainly through the Chinese EXIM Bank.				
	<i>Power plant and power transmission facilities</i>				
	Power transmission line through Kampong Cham, Prey Veng, Kampong Speu and Preah Sihanouk	2012-		\$53 million	Concessional loan from the Chinese government.
	Coal power plants in Preah Sihanouk province		Inner Mongolia Erdos Hongjun Investment (in Cambodia International Investment Development Group Co Ltd.)	\$383 million	..
	<i>Metal</i>				
	Bauxite Processing Plant in Kratie province	2011-	Inner Mongolia Erdos Hongjun Investment	unknown	..
	Gold mine in Chi Kraeng district, Siem Reap province	2011-	unknown	unknown	..
	Street plant in Preah Vihear province Special Economic Zone	2011-	Guangxi Nonferrous Metal Group	\$500 million	..
	Sihanoukville Special Economic Zone	2009-	Hodo Group - Taihu Cambodia International Economic Cooperation Zone Investment Co. Ltd.	unknown	..
	<i>Real estate</i>				
	Boeung Kak Lake Villa	2007-	Inner Mongolia Erdos Hongjun Investment	\$98 million	Joint venture with Cambodia Shukaku and a loan facility from the World Bank.
	Gambling resort project in Botum Sakor National Park	2008-	Tianjin Union Development Group	\$3.8 billion	..
<i>Transportation and Infrastructure</i>					
Cambodia-China Friendship Mekong-Stung Treng Bridge	2012-	Shanghai Construction (Group) General Company		Government of China provided a soft loan of \$116 million.	
Takhmao Bridge	2011-2015	Shanghai Construction (Group) General Company	\$32.9 million	..	
Railway, seaport and steel plant project	2013-2017	China RailwayGroup and Cambodian Iron and Steel Mining Industry Group	\$11.2 billion	The port and railway infrastructure would cost \$9.6 billion while the steel plant \$1.6 billion.	
<i>Telecommunication</i>					
4G telecommunication network in Cambodia	2013	Xinwei Telecom Enterprise Group-CooTel	unknown	Contract project	

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Annex table 3.1. Chinese companies are major players in infrastructure and mining developments in selected ASEAN, various years (continued)

Host country	Selected project	Year	Chinese company	Amount	Notes
Indonesia	<i>Oil-related</i>				
	Acquisition of Seram Non-Bula Block Oil from Kuwait Petroleum Corp.	2006	China International Trust & Investment Corp. - Citic Resources Holdings	unknown	..
	Acquiring shares from Chevron Corp's Indonesian deep-water project	2011	Sinopec-Sinopec International Petroleum Exploration and Production Corp.	\$680 million	..
	Oil storage terminal at the Batam free trade zone	2012-	Sinopec-Sinopec Kantons Holdings (95%), Sinopec Engineering as contractor	\$850 million	..
	<i>Hydropower</i>				
	PLTU Nangroe Aceh Darussalam Thermal Power Plant	2008-2013	Sinohydro	unknown	China EXIM Bank provided a loan facility.
	7,000 megawatt hydropower plant in North Kalimantan	2014-2021	China Power Investment Corp. And Anhui Conch Cement	\$17 billion	..
	Hydroelectric power plant in Karama, Sulawesi Selatan province		China Gezhouba Group Corp. PT Perusahaan Listrik Negara (PLN)		..
	<i>Coal/Thermal power plant</i>				
	Indramayu coal-fired plant in West Java	2007-2011	China National Machinery Industry Co Ltd. (Sinomach), China National Electric Engineering Co Ltd (CNEEC) and an Indonesian local company	\$860 million	China Development Bank provided a loan facility.
	Awar-Awar Coal-fired Power Plant in East Java	2010-2014	China National Machinery Industry Co Ltd.	\$588 billion	..
	Maritime Works Construction General Contract on Adipala Coal Power Plant	2011-2013	China Harbour Engineering Corp.	\$100 million	..
	Coal-fired steam power plant in Bali province	2012-2014	China Huadian Group Co.	\$638 million	..
	Cilacap power plant extension project in Central Java (phase I & II)		China Energy Engineering Corp. And Indonesian PT D&C Engineering Company	\$700 million	Non-collateral loan from China Development bank to Sumber Segara Primadaya.
	Mine Mouth steam power plant, 1,240 MW, South Sumatra		China Huadian Corporation and PT Bukit Asam Tbk		
	<i>Metal</i>				
	Krakatau Steel's blast-furnace complex in Cilegon	2012-2014	Metallurgical Group Corp. and Indonesia's PT Krakatau Engineering	\$694 million	..
	Nickel processing plant in Situbondo, East Java	2012-2016	Shenwu Group	\$176 million	..
	Ferronickel plant in Sulawesi in China-Indonesia Industrial Investment and Cooperation Zone	2013-	Dingxin Group and Bintangdelapan Mineral	\$20 million	Finance provided by China Development Bank, Shanghai Decent Investment and China-Asean Investment Cooperation Fund.
	Bauxite and aluminum processing plant	2013-	Hangzhou Jinjiang Group and Indonesia's PT Borneo Alumindo	\$1.7 billion	..
	Smelter on Bintan Island, Riau Province	2013-2016	Shandong Nanshan Aluminium Co. Ltd. (95%) and Indonesia's PT Mitra Karsa Utama (5%)	\$5 billion	..
	300,000-tpy nickel pig iron project		Tsingshan Holding Group	\$384 million	Loan from China Development Bank.
	Aluminum processing plant in Keta-pang, West Kalimantan	2013-2017	Hongqiao Group and PT Cita Mineral Investindo	\$1 billion	..
	<i>Port</i>				
	Container and iron-ore trans-shipment terminal in Tanjung Sawuh	2013-2016	China Merchants	\$2.4 billion	..
	Road and port in Muring Raya, Central Kalimantan		China Harbour Engineering Co and PT Daya Bumindo	\$1.1 billion	..

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Annex table 3.1. Chinese companies are major players in infrastructure and mining developments in selected ASEAN, various years (continued)

Host country	Selected project	Year	Chinese company	Amount	Notes
<i>Transportation</i>					
	South Sumatra Rail Project	2010-	China Railway Group	\$4.8 billion	70% of the project funded by Agricultural Bank of China.
	Monorail project in Jakarta	2013-2016	China Communications Construction Company Ltd.	\$1.5 billion	..
	Monorail project in Bandung, West Java	2014-	China Nasiona Machinery Import & Export Corporation and Panghegar Group	\$992 million	..
	Mining infrastructure and transportation in Papua and Central Kalimantan		China Railway Group and Indonesia's PT Indika Energy	\$6 billion	China EXIM Bank will provide loan for the project.
<i>Highway and bridge</i>					
	Cileunyi-Sumedang-Dawuan (Cisumdawu) toll road	2012-2014	Shanghai Construction Group, Wijaya Karya and Waskita Karya	\$106 million	90% funded by China EXIM Bank.
	Tayan bridge in West Kalimantan	2012-2015	China Communications Construction Company Limited - China Road and Bridge Corporation and Indonesia's state-owned Wijaya Karya	\$4 billion	Partially funded by the Chinese Government.
	Medan-Kualanamu expressway project in Sumatra Utara	2013-2016	China Harbour Engineering Corp. and China State Construction Engineering Corp.	\$150 million	Partially funded by the China EXIM Bank.
<i>Others</i>					
	Cement factory in eastern Indonesia		Anhui Conch Cement	\$2.35 billion	..
	Oki Pulp & Paper Mills and pulp mill in south Sumatra		APP funded by China Development Bank	\$1.8 billion	China Development Bank provided a loan facility.
	Construction of IPTV network in Indonesia		ZTE, in cooperation with Telkom Indonesia	unknown	..
	Tsingshan Industrial Park in Sulawesi	2013-2015	Tsingshan Holding Group	over \$1 billion	..
	MOU on an industrial zone for transferring investments from Anhui province		Indonesia Investment Coordinating Board (BKPM) and the provincial government of Anhui, China	unknown	..
Lao People's Democratic Republic	<i>Hydropower plant and power infrastructure</i>				
	Nam Lik 1-2 Hydropower Project	2007-2010	Sinohydro and China Three Gorges Corporation - China International Water and Electric Corporation	\$149 million	Commercial loan from China Development Bank
	Xepone 3 Hydropower Station	2008-	China National Machinery & Equipment Import & Export Corporation	..	..
	Nam Kham 2 and hydropower project	2009-	Sinohydro and Electricite Du Laos	\$430 million	Preferential loan from China EXIM Bank.
	Nam Ou Hydropower Project	2011-	Sinohydro	\$ 2 billion	Loan facility from China Development Bank.
	Nam Ngiep 1 hydropower project	2014-2019	China Three Gorges Corporation- China International Water and Electric Corporation	\$868 million	..
	Laos Hongsa Coal-Fired Power Plant Project	2010-2015	China National Electric Engineering Co. Ltd.	\$1.68 billion	..
	Five electricity transmission lines and four transformer stations	beginning in 2015	Beijing KeDong Electric Power Control System Co.Ltd.	..	..
	Other Chinese companies such as China National Electrical Equipment Corporation, Datang International Power Generating Company, Norinco International Cooperation are also involved in Lao People's Democratic Republic power infrastructure sector.				
<i>Mining</i>					
	Bauxite Project in Champasak Province	2007-	China Nonferrous Metals Int'l Mining Co. Ltd.	..	..
	Mining - Sepon Mine through acquisition	2009-2020	China Minmetals Corp.- Minmetals Resources	\$1.39 billion	..

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Annex table 3.1. Chinese companies are major players in infrastructure and mining developments in selected ASEAN, various years (continued)

Host country	Selected project	Year	Chinese company	Amount	Notes
	Potash salt ore mine in Khammouane Province		Asian Potash Corp. Ltd.	\$50 million	Finance provided by the China-ASEAN Fund.
	<i>Railway</i>				
	Vientiane-China rail link	2013-2018	China Railways Corporation	\$7.2 billion	Financing facility provided by China EXIM Bank. This will involve a 420 km high-speed railway connecting Vientiane and Yunnan Province of China.
	Others				
	Lao Ganmontac Cement Plant	2006-	Sinohydro	\$68 million	..
	ASEM VILLA Project	2011-2012	Sinomach - CAMC Engineering	\$100 million	..
Malaysia	<i>Transport infrastructure</i>				
	Penang Second Bridge	2008-	China Communications and Construction Co. Ltd - China Harbour Engineering Company (in joint venture with UEM Builders Sdn Kawan)	\$1.5 billion	\$800 million facility provided by China EXIM Bank.
	Road and tunnel projects in Penang State	2013-	Chinese firm Beijing Urban Construction Group (partnered with Malaysia's Consotium Zenith Sdn Bhd)	\$2.6 billion	..
	<i>Hydropower</i>				
	Bakun Hydroelectric project in Sarawak	2003-2010	Sinohydro	\$1.4 billion	..
	Murum Hydroelectric Project	2008-2013	China Three Gorges Corporation and Sinohydro	\$920 million	..
	Hulu Terengganu Hydroelectric Project	2010-2015	Sinohydro (in joint venture with Loh & Loh Construction Sdn Bhd)	\$276 million	..
	<i>Metals</i>				
	Eastern Steel Project in Kemaman	2012-2013	Shougang Group (in joint venture with Hiap Teck Venture Berhad; Shougang hold 40% of shares)	\$574 million	\$150 million loan provided by HSBC, Bank of China and Industrial and Commercial Bank of China.
	Gebeng iron ore processing plant	2013-	Prosperity Minerals Holdings Ltd	\$19.5 million	..
	A steel plant, aluminum processing facilities and a palm oil refinery at Kuantan Industrial Park	2013-	Prosperity Minerals Holdings Ltd Guangxi Beibu Gulf International Port Group Co.Ltd.	\$1.6 billion	..
	<i>Telecommunication</i>				
	Telecommunication - Building a unified mobile network with fully transformed 2G/3G/4G network	2011	ZTE Corp (in cooperation with Digi Telecommunications)	unknown	..
	Telecommunication- Building 100 Mbps wireless network across key cities in Malaysia	2011	ZTE Corp (in cooperation with U Mobile)	unknown	..
	Huawei Regional Data Hosting and Logistics Center in Nusajaya, Iskandar Malaysia	2013	Huawei Technologies and Khazanah Nasional Berhad	unknown	..
	<i>Industrial park</i>				
	Malaysia-China Kuantan Industrial Park	2013-	Gunagxi Beibu Gulf International Port Group Co. Ltd., SP Setia and the Pahang state government	\$806 million	..
	Expansion of Kuantan Port	2013	Gunagxi Beibu Gulf International Port Group Co. Ltd. (40% of shares)	\$ 971 million	..
	<i>Automobile</i>				
	Chery Alado Automobile Sdn Bhd	2014	Chery Automobile Co. (in joint venture with Malaysian partners)	unknown	..

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Annex table 3.1. Chinese companies are major players in infrastructure and mining developments in selected ASEAN, various years (continued)

Host country	Selected project	Year	Chinese company	Amount	Notes
	<i>Real estate</i>				
	property development project in Medini Iskanda	2011	Qingdao Zhuoyuan Investment Holdings	\$820 million	..
	Buying land in Johor state	2012	Country Garden Holdings Co Ltd.	\$328.6 million	..
	Mersing Laguna Reclamation	2012-2015	Sinohydro	unknown	Part of the larger \$7.2 billion project.
	Buying six sites in Johor Bahru	2013	Guangzhou R&F Properties	\$1.4 billion	..
	Others				
	Railway car manufacturing and maintenance center in Batu Gajah of Perak State	2013	China South Locomotive and Rolling Stock Corporation Ltd.	\$131 million	..
Myanmar	<i>Oil and Gas</i>				
	Sino-Burma Oil & Gas Pipelines	2012-2013	Oil pipeline: China National Petroleum Corp. (CNPC) and Myanmar Oil and Gas Enterprise (MOGE); Gas pipeline: CNCP, MOGE, Daewoo International, Korean Gas Corp., IndianOil and Gas Authority of India Ltd.	\$2.54 billion	..
	<i>Hydropower plant</i>				
	Yeywa Dam in Mandalay Division	2004-2010	China International Trust & Investment Co (CITIC) and Sinohydro Corporation	\$700 million	China EXIM Bank provided a \$200 million loan for the project.
	Hatgyi Dam in Karen State	2006-	Sinohydro and Electricity Generating Authority of Thailand (EGAT)	\$1 billion	..
	Tasang Dam in Shan State	2007-	China Three Gorges Corporation, EGAT /56.5%) and others	\$12 billion	..
	Ywathit Dam in Karenni State	2010-	Datang Corp.	unknown	..
	Laiza Dam in Kachin State		China Power Investment (CPI)	..	..
	Chibwenge hydropower plant in Kachin State	-2013	China Power Investment (CPI)	..	..
	Myitsonne Dam in Kachin State (suspended)		China Power Investment (CPI)	\$3.6 billion	..
	Khaunglanphu dam (suspended)		China Power Investment (CPI)	..	..
	Chibwe Dam in Kachin State (suspended)		China Power Investment (CPI)	..	..
	Lakin Dam (suspended)		China Power Investment (CPI)	..	..
	<i>Mining</i>				
	Tagaungtaung Nickel and Ferro-Nickel Mine in Mandalay and Sagaing Divisions		China Non-ferrous Metal Mining Company (CNMC) and Myanmar's Ministry of Mines	\$800 million	..
	Letpadaung Copper Mine		Wanbao Mining Ltd. (a subsidiary of Norinco) and Union of Myanmar Economic Holdings Ltd (a subsidiary of the military in Burma)	..	..
	Mwetaung Nickel Mine		Zijin and Norinco are in cooperation with the Burmese government	..	..
	Ferrotitanium Mine in Kokang		Zongshen IndustrialGroup	\$100 million	..
	<i>Railway</i>				
	Kyaukphyu-Kunming Railway (negotiating)		China Railway Engineering	\$20 billion	..

Source: ITUC/GUF Hong Kong (China) Liaison office.

Annex table 3.2. Japanese FDI flows in ASEAN, by industry, 2000–2013

(Millions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Annual average	
															2000–2003	2010–2013
Agriculture, fishery and forestry	0.5	-8.9	-11.7	-21.1	-8.3	25.0	-7.4	29.3	48.8	14.3	31.8	77.2	77.1	62.2	-10.3	62.1
Mining and quarrying	-29.0	27.6	82.5	-581.9	197.3	143.6	232.6	372.8	610.3	184.5	605.8	82.7	197.5	-655.1	-125.2	57.7
Manufacturing	-428.8	1 327.4	2 807.5	2 800.6	2 196.3	3 264.4	3 675.7	4 417.7	3 207.7	2 351.3	6 777.6	6 20.4	13 347.3	13 076.1	1 626.7	9 930.3
Construction	0.1	-52.1	104.9	101.1	102.8	37.5	51.0	48.9	10.5	10.6	66.1	197.7	152.1	45.8	38.5	115.4
Trade/commerce	529.4	292.5	687.2	271.1	1 068.0	1 382.9	1 854.6	1 211.1	429.9	973.7	435.3	850.5	2 590.8	1 318.7	445.0	1 298.8
Finance	-101.4	1413.6	538.3	39.7	826.1	320.4	2 822.1	1 636.2	-744.8	-224.8	1 819.1	-1 111.8	3 718.6	4 476.5	472.5	2 225.6
Real estate	-19.1	-106.9	-1.0	-25.1	-31.7	-18.2	85.1	242.0	-24.5	278.2	326.1	-58.2	600.8	388.2	-38.0	314.2
Services	1.1	-75.4	190.5	-145.3	251.5	674.4	271.2	646.2	377.6	-118.7	456.0	2 097.0	1 456.3	1 104.4	-7.3	1278.4
Others	14.5	-13.0	-919.6	130.3	-61.4	358.8	96.3	643.7	396.4	36.8	38.0	279.6	32.6	631.3	-196.9	245.4
Unspecified	1001.0	-278.9	917.1	1 308.3	1 693.5	723.5	1074.7	-446.1	-24.1	409.3	615.4	773.8	1 604.0	2 456.3	736.9	1 362.4
Total	968.2	2 525.8	4 395.6	3 877.6	6 234.1	6 912.2	10 156.0	8 801.7	42 87.8	3 915.2	11 171.2	9 708.8	23 777.1	22 904.4	2 941.8	16 890.4

Source: ASEAN Secretariat, ASEAN FDI database (accessed on 1 August 2014).

Notes: Data for 2012–2013 do not include Lao People's Democratic Republic. Philippines data excludes reinvested earnings as geographical breakdowns are not available.

Annex table 3.3. Japanese companies' acquisition of assets in ASEAN, 2013–first half of 2014 (selected deals)
(Millions of dollars)

Year	Ultimate acquiring company	Target company	Target nation	Target industry	Value	Shares acquired
Manufacturing						
2013	Nippon Steel Corp	BlueScope Steel Ltd-ASEAN Building Products Business	Indonesia	Iron and steel forgings	680	50
2013	Shin-Etsu Chemical Co Ltd	Asia Silicones Monomer Ltd	Thailand	Custom compounding of purchased plastics resins	147	50
2013	Mitsui & Co Ltd	Daihatsu (Malaysia) Sdn Bhd	Malaysia	Automobiles and other motor vehicles	27	20
2013	Unicharm Corp	CFA International Paper Products Pte Ltd	Singapore	Industrial and personal service paper	20	100
2013	Furukawa Electric Co Ltd	Hydro Aluminium Malaysia Sdn Bhd	Malaysia	Aluminum sheet, plate, and foil	20	100
2013	Punch Industry Co Ltd	Panther Precision Tools Sdn Bhd	Malaysia	Special dies, tools, and jigs and fixtures	15	86
2013	Mitani Corp	DAMA Enterprise Pte Ltd-Sale Business of Acrylic Board	Singapore	Plastics materials and basic forms and shapes	11	100
2014	Saraya Co Ltd	Goodmaid Chemicals Corp Sdn Bhd	Malaysia	Soap & other detergents, except specialty cleaners	10	100
2013	Alpha Corp	CI Technology Co Ltd	Thailand	Household appliances, nec	5	100
2013	Japan Pile Corp	Phan Vu Investment Corp (PVI Corp)	Viet Nam	Concrete block and brick	4	19
2014	JX Holdings Inc	Doho Metal (Thailand) Co Ltd	Thailand	Rolling, drawing, & extruding of nonferrous metals	2	100
2013	Taisei Oncho Co Ltd	Seaprodex Refrigeration Industry Corp (Searefico)	Viet Nam	Plumbing, heating and air conditioning	2	19.69
2013	Unicharm Corp	Myanmar Caring Product Ltd	Myanmar	Sanitary paper products	2	10
2013	SMS Co Ltd	Vietnam High Technology Services & Solutions Providing Joint Stock Co	Viet Nam	Professional equipment and supplies, nec	1	33.4
2013	Ebara Foods Industry Inc	CareFood Industries Sdn Bhd	Malaysia	Pickled fruits and vegetables, salad dressings	1	15.86
2013	New Long Seki	Masemachiku	Indonesia	Plastics materials and synthetic resins	..	100
2013	Gulliver International Co Ltd	V-Gulliver Co Ltd	Thailand	Automobiles and other motor vehicles	..	49
2013	Ryobi Holdings Co Ltd	Transimex-Saigon Corp	Viet Nam	Arrangement of transportation of freight and cargo	..	24.9
2014	Toyota Tsusho Corp	Borneo Technical Co (M) Sdn Bhd	Malaysia	Automotive parts, supplies	..	100
2014	Canon Inc	Material Automation (Thailand) Co Ltd	Thailand	Computers and peripheral equipment and software	..	100
2013	Rengo Co Ltd	TCG Rengo Subang (M) Sdn Bhd	Malaysia	Corrugated and solid fiber boxes	..	75
2013	INCJ	Nanox Philippines Inc	Philippines	Electronic components, nec	..	81
2013	Daikin Industries Ltd	AAF International (Thailand) Ltd	Thailand	Industrial and commercial fans and blowers	..	100
2014	Toyota Tsusho Corp	Borneo Technical (Thailand) Ltd	Thailand	Industrial and personal service paper	..	100
2013	Taiyo Nippon Sanso Corp	Subah Oxygen Sdn Bhd	Malaysia	Industrial gases	..	100
2013	Mitsubishi Electric Corp	Mitsubishi Elevator Vietnam Co Ltd	Viet Nam	Industrial machinery and equipment	..	0
2013	Mitsubishi Nichiyu Forklift	Nichiyu Asia Pte Ltd	Singapore	Industrial machinery and equipment	..	30
2013	Toyota Tsusho Corp	Terengganu Silica Consortium Sdn Bhd	Malaysia	Industrial sand	..	20
2013	Kitz Corp	Mikuni Engineering (S) Pte Ltd	Singapore	Industrial supplies	..	100
2014	Showa Denko KK	Rexam Hanacans JSC	Viet Nam	Metal cans	..	90
2013	Marubeni Corp	Anshin Precision Industries Sd Sdn Bhd	Malaysia	Metal stampings, nec	..	0
2014	Sumitomo Corp	AWCG Pte Ltd	Singapore	Miscellaneous apparel and accessory stores	..	0
2013	G-Tekt Corp	Auto-Body Manufacturing Indonesia PT	Indonesia	Motor vehicle parts and accessories	..	50
2014	Mitsubishi Motors Corp	Asian Transmission Corp	Philippines	Motor vehicle parts and accessories	..	90
2013	Mitsui & Co Ltd	Minh Phu - Hau Giang Seafood Ltd	Viet Nam	Packaged frozen foods	..	30.77
2014	Taisho Pharmaceutical Holdings	Roche Holding AG-Flanax Brand Assets	Philippines	Pharmaceutical preparations	..	100

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Annex table 3.3. Japanese companies' acquisition of assets in ASEAN, 2013–first half of 2014 (selected deals)
(Millions of dollars)

Year	Ultimate acquiring company	Target company	Target nation	Target industry	Value	Shares acquired
2014	Investor Group	Phu My Plastics & Chemicals Co Ltd	Viet Nam	Plastics materials and synthetic resins	..	93.11
2014	Nippon Molymer Co Ltd	Munekata Thai Plastics Co Ltd	Thailand	Plastics products, nec	..	86
2013	Fuji Electric Co Ltd	Tusco Trafo Co Ltd	Thailand	Power, distribution, and speciality transformers	..	67.7
2014	Tomoshia Holdings Co Ltd	Sakura Food Co Ltd	Viet Nam	Prepared fresh or frozen fish and seafoods	..	79.3
2013	Di-Nikko Engineering Co Ltd	Takaya Electronics (Thailand) Co Ltd	Thailand	Printed circuit boards	..	50
2014	Dai Nippon Printing Co Ltd	MK Smart JSC	Viet Nam	Semiconductors and related devices	..	36.33
2013	Investor Group	PT IndoJapan Steel Center	Indonesia	Sheet metal work	..	60
2013	Daikin Industries Ltd	PT Tata Solusi Pratama	Indonesia	Warm air heating and air-conditioning equipment	..	100
Bank and finance						
2013	Mitsubishi UFJ Finl Grp Inc	Bank of Ayudhya PCL	Thailand	Banks	5 315	72.01
2013	Mitsubishi UFJ Finl Grp Inc	Vietnam Joint Stock Commercial Bank for Industry & Trade	Viet Nam	Banks	742	19.73
2014	Sumitomo Mitsui Finl Grp Inc	Bank Tabungan Pensiunan Nasional Tbk PT	Indonesia	Banks	526	15.74
2014	Sumitomo Life Insurance Co Ltd	BNI Life Insurance PT	Indonesia	Life insurance	357	40
2013	Sumitomo Life Insurance Co	Bao Viet Holdings	Viet Nam	Life insurance	341	18
2013	Dai-ichi Life Insurance Co Ltd	PT Panin Life	Indonesia	Life insurance	337	0
2014	Nomura Holdings Inc	Capital Nomura Securities PCL	Thailand	Security brokers, dealers, and flotation companies	102	60.67
2013	Dai-ichi Life Insurance Co Ltd	PT Panin Internasional	Indonesia	Life insurance	..	36.84
2013	Meiji Yasuda Life Insurance Co	Avrist Assurance PT	Indonesia	Life insurance	..	6.87
Infrastructure and utility services						
2013	Marubeni Corp	Maynilad Water Services Inc	Philippines	Water supply	400	20
2013	ORIX Corp	Global Business Power Corp	Philippines	Electric services	165	20
2013	Kyudenko Corp	Asia Projects Engineering Pte Ltd	Singapore	Engineering services	38	82.09
2013	Chubu Electric Power Co Inc	Gunkul PowerGen Co Ltd	Thailand	Cogeneration, alternative energy sources	..	49
2013	Nippon Koei Co Ltd	PT.Cikaengan Tirta Energi	Indonesia	Electric services	..	90
2014	JFE Holdings Inc	Erraenersi Konstruksindo PT	Indonesia	Engineering services	..	55
2013	Taiyo Nippon Sanso Corp	Vietnam Japan Gas Co Ltd	Viet Nam	Gas production and/or distribution	..	73.23
2013	NTT	Digital Port Asia Ltd	Thailand	Telephone communications	..	74
Real estate						
2013	Dai-sho Group	Westin Singapore Hotel	Singapore	Hotels and motels	369	100
2013	Sumitomo Mitsui Finl Grp Inc	Hoa Binh Construction & Real Estate Corp	Viet Nam	Residential construction, nec	10	17.44
2013	Mitsui & Co Ltd	Medini Iskandar Malaysia Sdn Bhd	Malaysia	Land subdividers and developers	..	19.99
						/...

Annex table 3.3. Japanese companies' acquisition of assets in ASEAN, 2013–first half of 2014 (selected deals)
(Millions of dollars)

Year	Ultimate acquiring company	Target company	Target nation	Target industry	Value	Shares acquired
Food and beverages, supermarkets						
2014	Asahi Group Holdings Ltd	Etika Dairies Sdn Bhd	Malaysia	Dry, condensed, and evaporated dairy products	329	100
2014	Investor Group	Tirta Bahagia Group-Bottled Water Business Assets	Indonesia	Malt beverages	189	100
2013	Yamazaki Baking Co Ltd	PT Yamazaki Indonesia	Indonesia	Bread and other bakery products, except cookies	16	51
2014	Ezaki Glico Co Ltd	PT Dalya Citramandiri-Wholesale Business	Indonesia	Groceries and related products, nec	..	100
2013	FamilyMart Co Ltd	Central Retail Corp-Supermarket	Thailand	Grocery stores	..	100
2013	Rakuten Inc	Rakuten Belanja Online	Indonesia	Retail stores, nec	..	49
Other services						
2013	Investor Group	CSC Automated Pte Ltd	Singapore	Computer facilities management services	90	100
2014	IT Holdings Corp	MFEC PCL	Thailand	Computer facilities management services	30	17.62
2013	Hitachi Ltd	Sunway E-Systems	Malaysia	Computer programming services	7	51
2013	Zenrin Co Ltd	Infotrack Telematics PTE Ltd	Singapore	Computer related services, nec	4	63.12
2013	T-GAIA Corp	Avantouch Systems Pte Ltd	Singapore	Prepackaged software	2	4.8
2013	Investor Group	CSC ESI Sdn Bhd	Malaysia	Computer facilities management services	..	100
2013	PAL Co Ltd	Cradance Services Pte Ltd	Singapore	Business consulting services, nec	..	20
2013	Dentsu Inc	Brandscape Co Ltd	Thailand	Business consulting services, nec	..	100
2013	Sumitomo Corp	Tiki Corp	Viet Nam	Information retrieval services	..	30
2013	Nippon Steel & Sumitomo Metal	PALSYS Software Co Ltd	Thailand	Prepackaged software	..	100
2014	SoftBank Corp	Inr3 Digital PCL	Thailand	Prepackaged software	..	23

Source: UNCTAD, M&A database.

Annex table 3.4. Selected Japanese automotive manufacturers' production facilities in ASEAN, 2012

Manufacturer	Name of subsidiary/affiliates	Date of establishment	Equity	Models/Products stake	Employees
Indonesia					
Automobile production					
Daihatsu	P. T. Astra Daihatsu Motor	Jan 92	61.75%	Xenia, Terios, Luxio, Ayla, Gran Max	10,934
Hino	P.T. Hino Motors Manufacturing	Dec 82	90%	Trucks and buses	1,902
Honda	P. T. Honda Prospect Motor	Mar 99	51%	Jazz, CR-V, Freed	3,460
Isuzu	P.T. Isuzu Astra Motor	Apr 08	45%	Medium Duty Trucks, Light Duty Trucks, Small-Sized Buses, Panther, Wagon and Trucks	1,090
Mitsubishi	P.T. Yudha Tiga Berlian Motors	Jun 73	2%	COLT T120SS, L300, Outlander Sport	1,950
Mitsubishi Fuso			0%	Canter, FUSO	
Nissan	P. T. Nissan Motor Indonesia	Oct 95	75%	Grand Livina, Livina, X-TRAIL, Serena, March, Juke, Evalia	2,017
Suzuki	P. T. Suzuki Indomobil Motor	Jan 91	90%	APV, Carry, ERTIGA	4,430
Toyota	P. T. Toyota Motor Manufacturing	Apr 71	95%	Innova, Fortuner, Etios, Valco, Engines	6,829
	P.T. Sugity Creatives ¹	Apr 95	0%	NAV1	1,966
UD Trucks	P.T.Astra Multi Trucks Indonesia	Apr 96	12.5%	Trucks and buses	80
Components manufacturing					
Honda	P.T. Honda Precision Parts Mfg	Jul 02	95%	Automatic transmissions and engine valves for automobiles	1,640
Isuzu	P. T. Mesin Isuzu Indonesia	Feb 83	68.10%	Diesel engines and related parts	356
	P. T. Asian Isuzu Casting Center	Apr 97	77.50%	Casting Parts	514
Mitsubishi	P. T. Mitsubishi Krama Yudha			Pressed parts and engines	-
Mitsubishi Fuso	Motors & Manufacturing	Aug 73	32.3%	Engine, Body parts	1,261
Malaysia					
Automobile production					
Daihatsu	Perodua Manufacturing ²	Feb 93	-	ALZA, MYVI, VIVA	6,800
Hino	Hino Motors Manufacturing (Malaysia)	Oct 12	58%	Manufacture of Hino branded trucks and buses	
-					
Honda	Honda Malaysia	Nov 00	51%	City, Civic, Accord, CRV, Jazz, Jazz (Hybrid)	180
Isuzu	Isuzu Hicom Malaysia	Jul 96	51%	Medium Duty Trucks, Light Duty Trucks, Small-Sized Buses, Pick-Up Trucks	702
Mazda	Inokom Corporation	Aug 97	-	Mazda 3, CX-5	-
Mitsubishi Fuso	Mercedes-Benz Malaysia	Jan 05	-	Canter, FUSO	68
Nissan	Tan Chong Motor Assemblies	Aug 76	-	Serena, Frontier, Urvan, Sylphy, X-Trail, Grand Livina, Teana, Navara, NV200, Almera	2,567
Subaru	Tan Chong Motor Assemblies	Aug 76		Subaru XV	2,567
Suzuki	HICOM Automobile Manufacturers	Sep 83		Swift	1,886
Toyota	Assembly Services ³	May 68		Hiace, Hilux, Vios, Innova, Fortuner, Camry	3,202
UD Trucks	Tan Chong Motor Assemblies	Aug 76		Trucks and buses	2,567
Myanmar					
Automobile production					
Suzuki	Suzuki (Myanmar) Motor	Feb 13	100%	Carry Truck	-
Philippines					
Automobile production					
Hino	Pilipinas Hino Inc.	Mar 75	15%	Trucks and Buses	560
Honda	Honda Cars Philippines Inc.	Oct 90	4.24%	City	550
Isuzu	Isuzu Philippines Corporation	Aug 95	5%	Assembly of buses and small and medium-sized CVs	484
Mitsubishi	Mitsubishi Motors Philippines Corp	Jan 87	51%	Delica, Adventure, Lancer Ex	855
Nissan	Nissan Motor Philippines, Inc.	Jun 83	5.36%	Almera, X-TRAIL, Grand Livina	220
Toyota	Toyota Motor Philippines Corp	Aug 88	34%	Innova, Vios	1,390
Components manufacturing					
Honda	Honda Parts Manufacturing Corp	Dec 92	100%	Manual transmissions, Automobile service parts (mainly stamped parts including the bulkhead)	600
Isuzu	Isuzu Autoparts Manufacturing Corp	Nov 96	100%	Transmissions	434
Mitsubishi	Asian Transmission Corp		84.7%	Processing and assembly of transmissions	410
Toyota	Toyota Autoparts Philippines	Aug 90	95%	Transmissions, Continuous velocity joints	908
Singapore					
Non-manufacturing facilities					
Honda	Singapore Safety Driving Centre	Jul 83	27.5%	Education at the time of obtaining motorcycle riding or automobile driver's licenses and safety training for companies and communities.	260
Honda	Bukit Batok Driving Centre	Apr 88	26%	Education at the time of obtaining motorcycle riding or automobile driver's licenses and safety training for companies and communities.	360
Isuzu	Isuzu Motors Asia	Mar 96	100%	Buying and selling of complementary parts in the region. Works as holding company for regional business entities and their management.	14
Nissan	Nissan Singapore	Apr 12	100%	Support of marketing and sales operations in Singapore	6
Toyota	Toyota Motor Asia Pacific ⁴	Jul 90	100%	Parts supply to all ASEAN countries and sales support for marketing in Asia.	385

Annex table 3.4. Selected Japanese automotive manufacturers' production facilities in ASEAN, 2012 (continued)

Manufacturer	Name of subsidiary/affiliates	Date of establishment	Equity	Models/Products stake	Employees
Thailand					
Automobile production					
Hino	Hino Motors Manufacturing (Thailand)	May 62	80%	Trucks and Unit Production for Toyota	3,657
Honda	Honda Automobile (Thailand)	Dec 00	75.94%	City, City(CNG), Jazz, Jazz (Hybrid), Civic, Civic (Hybrid), Accord, CR-V, BRIO, BRIO Amaze	6,000
Isuzu	Isuzu Motors Co., (Thailand)	Apr 66	71.10%	Large And Small-Sized CVs and Pick Up Trucks	6,600
Mazda	Auto Alliance (Thailand)	Nov 95	50%	Mazda BT-50, Mazda 2, Mazda 3	8,750
Mitsubishi	Mitsubishi Motors (Thailand)	Jan 87	100%	Triton, Pajero Sport, Mirage, Lancer EX, Attrage	7,434
Mitsubishi Fuso	TC Manufacturing and Assembly	Dec 09	-	CANTER, FM, FN and FV	
Nissan	Nissan Motor (Thailand)	Sep 77	75%	Frontier Navara, Teana, March, Almera, Sylphy, Pulsar	7,072
Suzuki	Suzuki Motor (Thailand)	Aug 11	100%	Swift	1,200
Toyota	Toyota Motor Thailand	Oct 62	86.4%	Camry, Corolla, Hilux, Yaris, Vios, Wish, Fortuner, Prius	16,714
	Toyota Auto Works5	Jun 88	-	Hiace	313
Components manufacturing					
Isuzu	Isuzu Engine Manufacturing	Jul 87	57.30%	Diesel engines	1,317
	Thai International Die Making	Sep 87	56.40%	Forging of press molds, Press processing	711
	IT Forging (Thailand)	Dec 94	59.60%	Forged parts	278
Nissan	Nissan Powertrain (Thailand)	Aug 87	90%	Engines	807
Mitsubishi	MMTH Engine Company ⁶	May 88	-	Engines, Stamping parts	911
Toyota	Siam Toyota Manufacturing	Jul 87	96%	Engines, Propeller Shaft	3,225
	Toyota Motor Asia Pacific Engineering Manufacturing	Apr 07	100%	Development and evaluation efforts for locally produced vehicles as well as operational support for Toyota production affiliates in Asia, Oceania and the Middle East	2,391
Viet Nam					
Automobile production					
Hino	Hino Motors (Vietnam)	Jun 96	51%	Trucks and buses	98
Honda	Honda Vietnam	Mar 96	42%	Civic, CR-V	8,500
Isuzu	Isuzu Vietnam	Oct 95	35%	Medium Duty Trucks, Light Duty Trucks & Bus Chassis	198
Mazda	Vina Mazda Automobile Manufacturing	Sep 10	-	Mazda 2, Mazda 3, CX-5	300
Mitsubishi	Vina Star Motors Corporation	Apr 94	25%	Assembly of Pajero Sport & Zinger	360
Mitsubishi Fuso			-	Canter	-
Suzuki	Vietnam Suzuki Corporation	Apr 95	100%	Carry, APV	588
Toyota	Toyota Motor Vietnam	Sep 95	70%	Camry, Corolla, Fortuner, Innova, Vios	1,680

Source: UNCTAD 2014, based on JAMA 2013.

¹ P.T. Sugity Creatives is 6.5% owned by P. T. Toyota Motor Manufacturing Indonesia.

² An investment through local affiliated company.

³ Assembly Service is 100% owned by WMW Toyota Motor Sdn. Bhd.

⁴ Initially established as Toyota Motor Management Service Singapore Pte. Ltd., which was later changed to the present name in 2001.

⁵ Toyota Auto Works is 37% owned by Toyota Motor Thailand.

⁶ MMTH Engine Company is 100% owned by Mitsubishi Motors (Thailand).

Annex 5.1. Western Digital

Like many major electronics and personal computers TNCs, Western Digital’s multiple factories and the HDD value chain that it coordinates through a network of suppliers in ASEAN help connect countries in the region.

The preponderant share of Western Digital’s global HDD production is done in facilities in ASEAN, involving many foreign and indigenous contract manufacturers and suppliers. Western Digital is itself a direct investor and a contract manufacturer for computer customers/OBMs, sourcing many parts and components from its value chain partners and is involved in intra-firm trade, including arm’s-length transactions from and within ASEAN.

In 2012, some 58% of Western Digital’s revenues were generated in Asia – mainly from ASEAN and China. About 63% of its sales were to direct customers (e.g. OBMs), 25% through distributors and 12% retailers.

Annex table 5.1.1. Western Digital: Selected facilities and operations in ASEAN

Host country	Factories and operations
Malaysia – Johor	Manufacturing of substrates
Malaysia – Kuala Lumpur	Manufacturing of hard drives and PCB, including performing R&D activities
Malaysia – Kuching	Manufacturing and development of substrates
Malaysia – Penang	Manufacturing of heads/media, SSD R&D and slider fabrication
Philippines – Laguna	Manufacturing of HGAs and slider fabrication
Singapore	Administrative functions, manufacturing of hard drives and media, and HDD/SDD R&D activities
Thailand – Bang Pa In	Slider fabrication, manufacturing of hard drives and HGAs including R&D activities
Thailand – Navanakorn	Manufacturing of HGAs
Thailand – Prachinburi	Manufacturing of hard drives

Sources: Western Digital, Annual Report 2012 and 2013, and Western Digital Profile.

Note: HGA = head gimbal assembly, PCB = printed circuit board, SSD = solid-state drive.

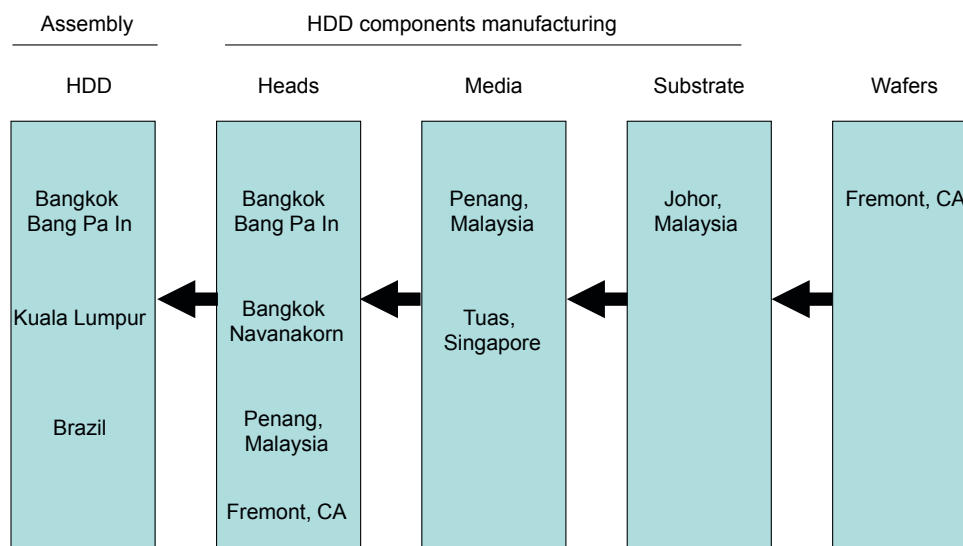
The key components of Western Digital’s hard drives are magnetic heads; magnetic media; suspensions with related head gimbal assemblies (HGAs) and head stack assemblies (HSAs); spindle motors; custom and standard electronics such as systems-on-chips, magnetic media, motor controllers, pre-amps and printed circuit boards; base and top covers; and magnets and related voice coil motors. The group’s hard drive production is based on high volume and utilization, low-cost assembly and testing, and close relationships with strategic component suppliers to access best-of-class technology and manufacturing quality (Western Digital 2013).

The company has established multiple factories in different ASEAN Member States, producing hard drives and components such as HGAs, substrates and slider fabrication (annex table 5.1.1). Intra-firm trade in the components and parts involves different affiliates in ASEAN. Annex figure 5.1.1 illustrates the connection of Western Digital’s facilities across ASEAN and the sequential processes involved, from the initial wafers from its operations in the United States through to the final assembly done in Thailand and Malaysia. In some ASEAN Member States, Western Digital also has multiple facilities and production lines for undertaking assembly functions.

Western Digital’s facilities in Thailand concentrate in mass volume production with support from Singapore facilities for testing, R&D activities and quality assurance functions, including other administrative services. Its facilities in Singapore have moved to focus less on mass volume manufacturing, which has gradually been transferred to facilities in Thailand and Malaysia. Lower labour costs were an important decision factor in moving HDD volume manufacturing to these countries. The Singapore facilities provide administrative

and R&D support to operations in the other ASEAN Member States. Part of the Singapore facilities is for pilot production, engineering and shared service centre functions.

Annex figure 5.1.1. Western Digital: selected operations and connections in ASEAN



Source: Western Digital Profile.

Western Digital sources many other components that it does not manufacture from third-party suppliers, including contract manufacturers operating in the region. This sourcing strategy gives the company the business flexibility needed to select the highest-quality, low-cost supplies as product designs and technologies evolve. To diversify risks and achieve manufacturing flexibility, the company uses multiple suppliers for some components. In some cases, however, it relies on a number of sole-source suppliers (e.g. one major supplier for a key component).

Western Digital's case illustrated the complexities, close relationship with suppliers, and fragmentation of the HDD production value chain in which the company plays a significantly influential role in coordination. Many parts and components are sourced from many contract manufacturers and suppliers. When the HDD value chain ends, with a finished product, it immediately becomes a key component of a larger and more complex computer or other electronics equipment value chains.

Western Digital connects ASEAN through FDI, multiple factories, production networks and intra-firm trade including complex sourcing of parts and components from suppliers within and outside the region. Although it is a lead firm in the HDD regional value chain, it is also one of the many suppliers or contract manufacturers of computer and consumer electronic OBMs, especially for Apple.

Annex 5.2. Seagate Technology

Seagate is a major global HDD brand owner and a competitor of Western Digital. Its value chains include designing, manufacturing, sales and marketing functions which are performed in different global locations. Most of the company's manufacturing operations are also conducted in ASEAN and China. In FY2012, some 55% of the company's revenues were generated from Asia. About 72% of the total revenue came from direct customers, 21% from distributors and the remaining 7% from retailers.

Seagate has multiple operation facilities and production lines in ASEAN, in particular within Malaysia, Singapore and Thailand. The company has other related operations and facilities in other ASEAN Member States. It has administrative activities in a few ASEAN Member States, including a product development function in Singapore. In its manufacturing operations in ASEAN, Seagate manufactures a number of key HDD components such as substrates, drives and media (annex table 5.2.1).

Annex table 5.2.1. Seagate Technology: Global locations of major operations

Location	Use/Functions
United States	
California	Product development and marketing and administrative
Colorado	Product development
Minnesota	Manufacture of recording heads and product development
Oklahoma	Administrative
Europe	
Northern Ireland	Manufacture of recording heads
Asia	
China	
Suzhou	Manufacture of drives
Wuxi	Manufacture of drives and drive subassemblies
Malaysia	
Johor	Manufacture of substrates and administrative
Penang	Manufacture of drive subassemblies and administrative
Singapore	
Woodlands	Manufacture of media and administrative
Ang Mo Kio	Manufacturing support, product development and administrative
Science Park	Product development
Thailand	
Korat	Manufacture of drives and drive subassemblies and administrative
Teparuk	Manufacture of drive subassemblies and administrative
Republic of Korea	
Suwon	Product development

Source: Seagate Technology 2012 Annual Report and Form 10K.

Like Western Digital, Seagate is a significant supplier to many computer and consumer electronic customers, including Apple. It also works closely with many components suppliers and contract manufacturers, most of which operate in Asia including in ASEAN Member States.

Annex 5.3. Infineon Technologies

Infineon Technologies (Germany) offers semiconductor and system solutions with a focus on several segments: automotive, industrial power control, power management and multimarket, chip card and security. The company is the world's second largest supplier of chips for the automotive industry.

Infineon operates as an integrated device manufacturer in the integrated circuit (IC) industry. It conducts almost all of its own manufacturing activities. The company's front-end R&D, wafer fabrication, packaging and testing, and sales and distribution are vertically integrated with operations worldwide. However, the company also has established technology and industry partnerships with large foundries such as GlobalFoundries and TSMC, mainly by subcontracting advanced wafer fabrication to them. Sales and distribution of Infineon products are carried out worldwide.

RVC in ASEAN

Since 2005, Infineon Technologies has deepened its technology base in Malaysia by setting up a wafer fabrication plant in Kulim High-Tech Park, Kedah. Infineon Malaysia is the group's only vertically integrated manufacturing site outside Germany. Technologies developed from other global design and development (D&D) centers are transferred to wafer fabrication plants in Malaysia and Singapore. Subsequently, the wafers or chips are sent for mid-end and back-end IC packaging and testing in Malaysia, as well as back-end semiconductor manufacturing in Singapore and Indonesia (annex figure 5.3.1).

The company's regional headquarter in Singapore is a D&D center where the company focuses on IC design, software engineering and system development for automotive and industrial application segments, and product development, as well as sales and marketing for the region. Besides the D&D activities, Infineon in Singapore also conducts front-end and back-end wafer processing, and backend semiconductor manufacturing.

The major focus of the centre in Singapore is IC testing. Some production from the Batam (Indonesia) and Kulim (Malaysia) plants is shipped to the Singapore operation for final testing. Some final products from the plant in Kulim, Malaysia, are also shipped to the centre in Singapore for distribution in Asia. Some of the chips on wafers produced by the Kulim plant are shipped to the Batam plant for further processing.

Not all advanced fabrication is insourced by Infineon Singapore. The company outsources its wafer fabrication for embedded flash at 40nm and above to GlobalFoundries, which is a contract manufacturer located in Singapore. Some of the production is sent to the company's plant in Indonesia for further processing (annex figure 5.3.2). Infineon began its back-end IC packaging and testing operations in Indonesia.

Since advanced machinery suppliers have a strong presence in Singapore, Infineon-Singapore sources its manufacturing machinery from local and foreign vendors operating in that country. These vendors also supply advanced machinery, spare parts and maintenance services to Infineon's operations in Malaysia (annex figure 5.3.2). Some technologies from the developmental work of Infineon Singapore are transferred to Malaysia's wafer fabrication operation. The company's wafer fabrication operation in Malaysia mainly sources its manufacturing inputs from local vendors in that host country. These vendors include European TNCs' affiliates in Malaysia, e.g. BASF for chemicals, Linde for production gases and Siemens for transformers. Siemens in Indonesia supplies transformers to Infineon in Malaysia.

Achieva Limited (Singapore), a leading Asia-Pacific distributor and solutions provider in electronics and IT-related products, is a distributor of Infineon for the ASEAN region.

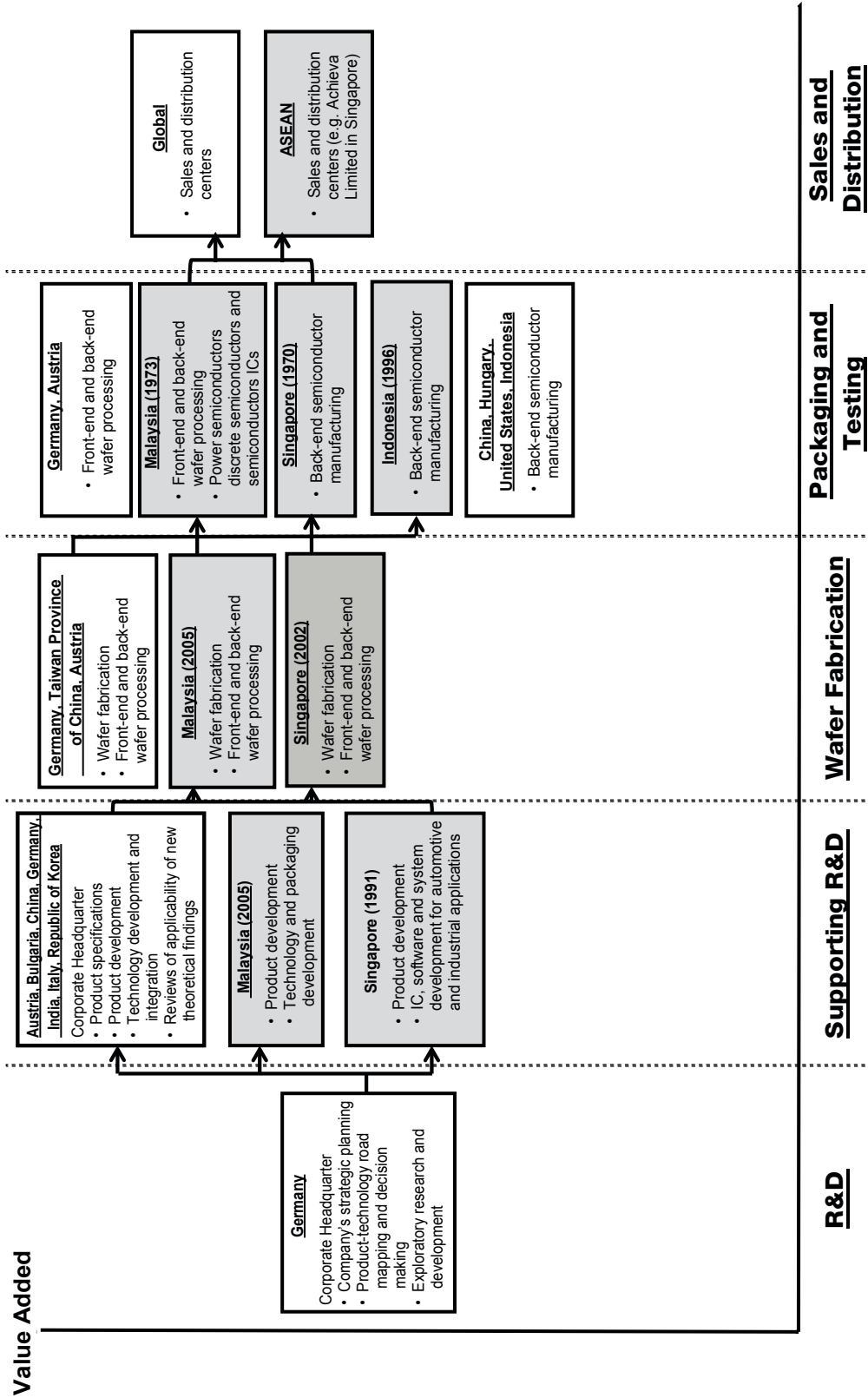
GVC involving ASEAN

Beyond ASEAN, the Malaysia operation sources machines from Japan and United States, spare parts from Europe and transformers from China. Infineon's production requires intensive technical knowledge, manufacturing machines, and parts and components from multiple sites around the world. It has a vast

base of input suppliers spanning beyond Singapore, Indonesia and Malaysia, and includes cross-regional suppliers, each serving different needs of its production (annex figure 5.3.2).

Owing to requirements for high reliability and consistency in components, the company keeps its exploratory R&D and most frontier technological activities in Europe, close to its major automotive customers. Infineon's front-end processes are conducted in Villach (Austria), Regensburg (Germany), Dresden (Germany) and Kulim (Malaysia). Chips produced in these locations are sent to its plants in Batam (Indonesia), Malacca (Malaysia), China and other parts of the world for further processing.

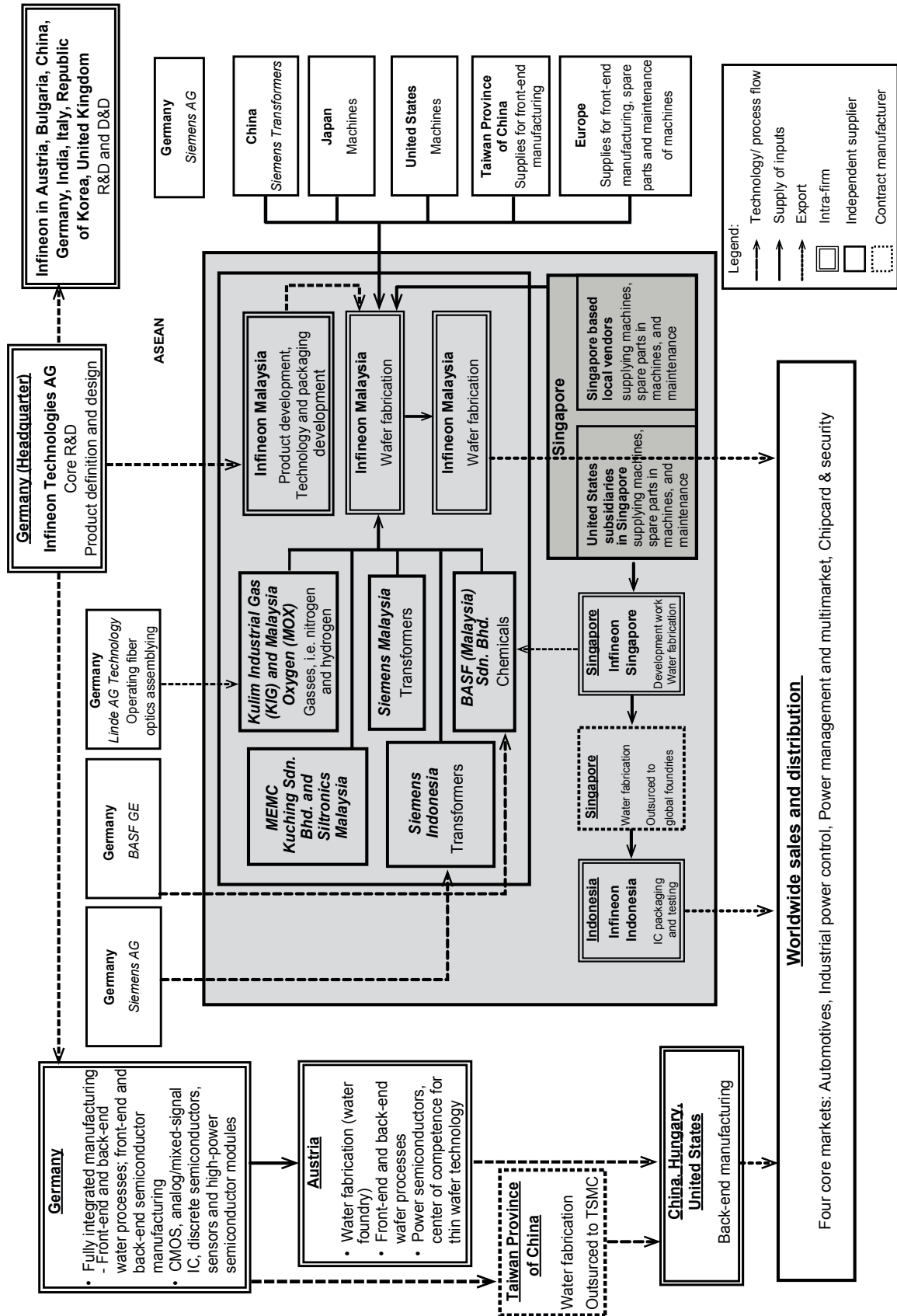
Annex figure 5.3.1. Infineon's production stages and processes in selected ASEAN countries and GVC linkages



Source: UNCTAD and ASEAN (2014).

Note: The year in each parenthesis indicates the initial year of operation.

Annex figure 5.3.2. Infineon's GVC and RVC in ASEAN



Source: UNCTAD and ASEAN (2014).

Annex 5.4. Fuji Electric

Fuji Electric (Japan) operates in five business segments: power and social infrastructure, industrial infrastructure, power electronics, electronic devices and food and beverages. The company's power electronics technology combines power semiconductors, circuits, HDDs, control systems and similar technologies.

Fuji Electric is an integrated device manufacturer in the semiconductor industry. It carries out wafer fabrication activities and back-end assembly modules for its insulated gate bipolar transistor (IGBT) segment in Malaysia. The company has expanded the IGBT manufacturing capability and capacity in that country.

In ASEAN, the company has multiple production lines for HDD components such as magnetic discs. It sources specialized components from other Japanese suppliers for the production of its HDD components from Indonesia, Malaysia and Thailand (chapter 3).

RVC in ASEAN

Fuji Electric also has a packaging and testing plant in the Philippines. The plant conducts back-end IC manufacturing processes and the manufacturing of other discrete products. The integrated plant in Malaysia is an important foreign supply chain to Fuji Electric. The plant also has wafer production facilities for magnetic disks (annex figure 5.4.1). The wafer fabrication facilities also conduct front-end wafer processing for other ICs, power semiconductors and IGBT where relevant process technologies are passed on from the company's operations in Japan, Germany, Taiwan Province of China and China. The intermediate products are then packaged and tested in the Kulim plant before shipping to a number of countries for sales and distribution.

The company's semiconductor and IGBT manufacturing mainly serves customers for inverters, uninterruptible power supplies and electric motors. It also serves customers for emerging technologies especially renewable energy (solar and wind energy).

Fuji Electric Malaysia sources its manufacturing machines from all over the world, including Japan and the United States. The majority of the production inputs are sourced from Japanese subsidiaries in Malaysia, as well as in other ASEAN Member States such as Indonesia, Thailand and Viet Nam. Fuji Electric Malaysia sources aluminium grinded substrates from Uekatsu Industry-Malaysia and Uyemura-Malaysia for its chemicals requirements (annex figure 5.4.2).

A network of Japanese firms operating in other ASEAN Member States (e.g. Indonesia, Thailand and Viet Nam) supplies specific parts and components to Fuji Electric Malaysia. Hoya in both Thailand and Viet Nam supplies glass substrates to Fuji Electric's HDD production in Malaysia, and Nidec in Indonesia supplies base plates.

The company's wafer fabrication operation in Malaysia sources production gases from Kulim Industrial Gas and Gas Malaysia, which are local vendors that have technology collaborations with European companies. The products are shipped to the sales and distribution center in Singapore, before being exported abroad. Fuji Electric has a back-end manufacturing plant in the Philippines that focuses on mass production of industrial and automotive products.

Distribution in ASEAN

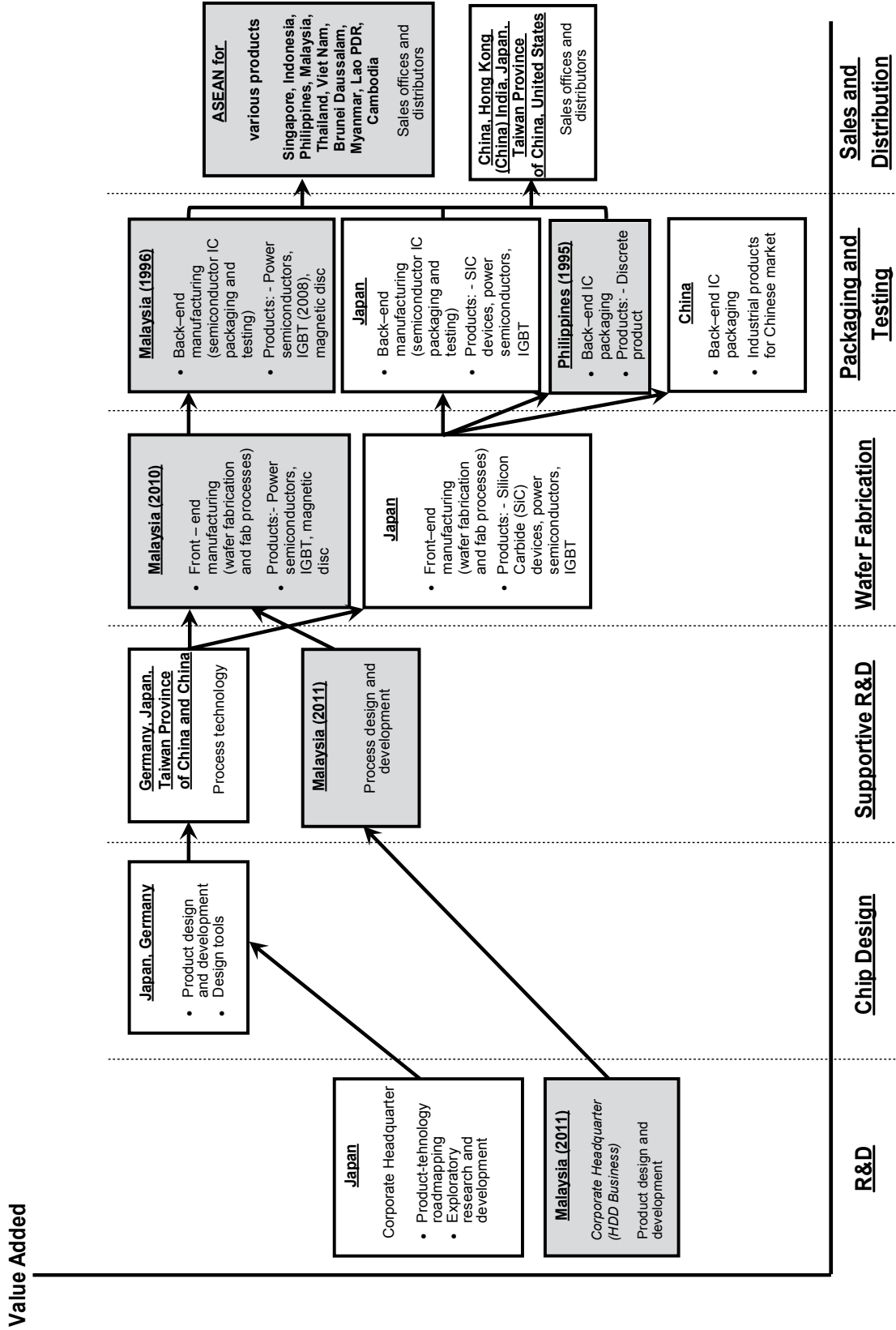
Fuji Electric has a vast sales and distribution network in ASEAN for various other products, with at least one sales office or one distributor in every ASEAN country. The company appointed I.E.M. Company Ltd and Khin Maung Nyunt Trading Co. Ltd. as its distributors for AC (alternating current) drives in Myanmar. The company's AC drives, motors and servo systems are distributed by CV. Primakarya Lajumandiri and PT Palm Semesta Engineering in Indonesia. Fuji Electric also set up a distribution center (Fuji Technology in Brunei Darussalam) for its instrumentation. In the Philippines, Hoei Electronics Co. Ltd. distributes the

company's semiconductors, whereas KC Industrial Corporation and Yu Eng Kao Electrical Supply distribute the company's AC drives. Fuji Electric's appointed distributors for semiconductors in Singapore include Hwei Electronics, KD Electronics, Solekia, TKS and Tsuzuki Densan. It also has distributors in Thailand and Viet Nam, including S.T. Control (Thailand), TDS Technology (Thailand), Hao Phuong (Viet Nam) and Linh Trung (Viet Nam).

GVC from ASEAN

For the HDD segment, like most of the integrated device manufacturers in the industry, Fuji Electric keeps its exploratory R&D in Japan, although it delegates the decision-making power to its subsidiary in Malaysia. The company has also set up R&D and D&D centers in selected countries (China, Germany, Japan and Taiwan Province of China) to conduct knowledge-intensive activities, including product D&D, and process technology development. Through this process Fuji Electric Malaysia and its operations in other ASEAN Member States are connected in the group's GVCs.

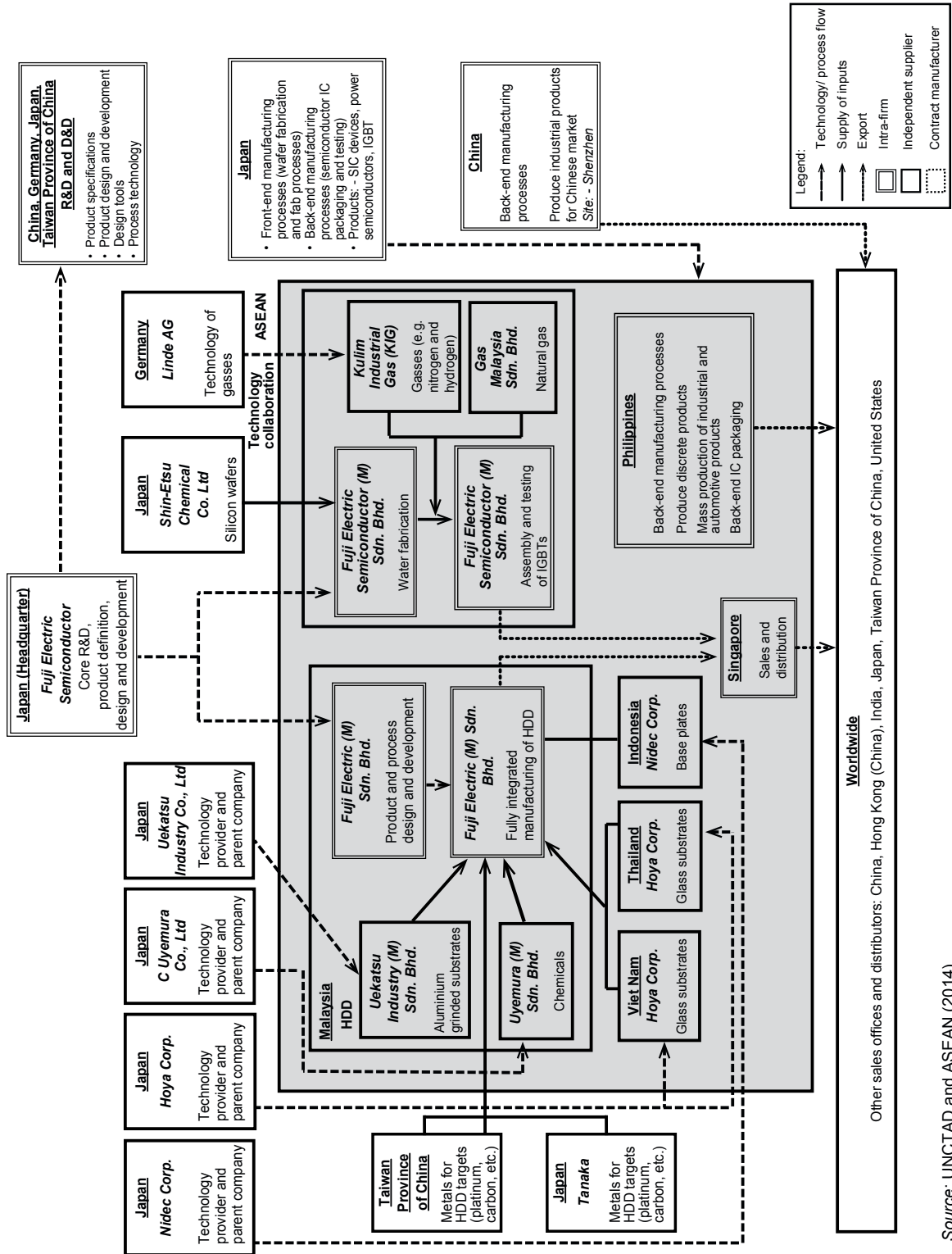
Annex figure 5.4.1. Fuji Electric's production stages and processes in selected ASEAN countries



Source: UNCTAD and ASEAN (2014).

Note: The year in each parenthesis indicates the initial year of operation.

Annex figure 5.4.2. Fuji Electric's RVC in ASEAN and connecting ASEAN through GVCs



Source: UNCTAD and ASEAN (2014).

Annex 5.5. Altera Corporation

Altera Corporation (United States) is an IC “fabless” company. The company designs and markets programmable logic devices (PLDs) by subcontracting its production to wafer fabrication, assembly and test houses located in different parts of the world. The company’s products include *field-programmable gate arrays* (FPGAs), systems on chips (SoCs), complex programmable logic devices (CPLDs), software tools and embedded processors ranging from low-end to high-end products.

Malaysia houses the group’s main design and development centre outside the United States. The main technological activities Altera conducts there include subsequent developmental work derived from the core R&D centre in the United States (e.g. test system development and process and product development).

Since 2012, Altera Malaysia has begun to upgrade to doing more software engineering and computer programming development which involves more knowledge-intensive IC design activities. It also participates in the co-development of some flagship projects for the company’s customers.

RVC in ASEAN and GVC involving ASEAN

Altera does not conduct its own manufacturing but outsources its designs to contract manufacturers (annex figures 5.5.1 and 5.5.2). The corporate headquarters controls the strategic planning of the company, product-technology mapping, exploratory R&D and supply chain management. The company has a number of collaborative technology partners from different countries. Its R&D and D&D centres are strategically located in selected countries.

Production outsourcing

Designs from the headquarters and the various development centres are transferred to foundries that offer chip fabrication services. Altera has outsourced all its chip fabrication to pure-play foundries such as TSMC. Since 2013, Altera has begun to outsource part of its chip fabrication to Intel, the largest integrated device manufacturer in the industry. After the developmental work is completed in the Penang design centre, the designs are sent to key suppliers or outsourced for production to contract manufacturers in the United States and in Taiwan Province of China.

Fabricated chips from Intel are subsequently shipped to the Republic of Korea for back-end wafer processing and front-end packaging and test. These processes are outsourced to Advanced Semiconductor Engineering (ASE) (Taiwan Province of China) and Amkor Technology (United States). The intermediate products are then shipped to the Philippines for back-end packaging and final testing by Amkor Technology in that host country. The fabricated chips made by TSMC in Taiwan Province of China are sent for front-end chip packaging to ASE, also in Taiwan Province of China. The intermediate products are subsequently sent to ASE Malaysia for back-end packaging and testing.

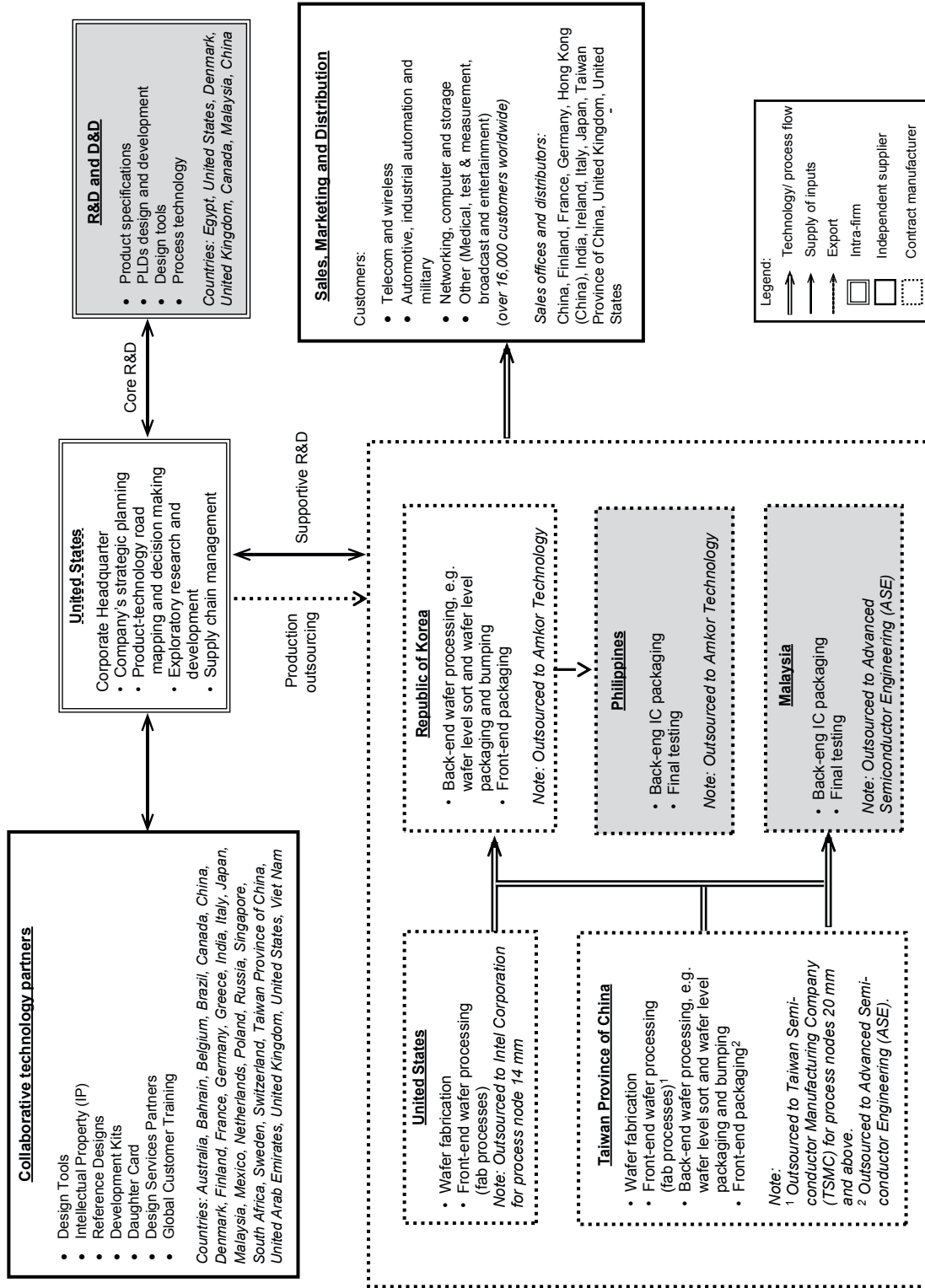
Technological linkages in the host country

Altera transfers process technologies and manufacturing rules to ASE Malaysia, which is a Taiwanese-owned outsourced semiconductor assembly and test company operating in Malaysia. Altera Malaysia has established other key technology linkages throughout its operation in Malaysia. The company deepened its backward linkages with a locally owned material supplier – Penchem Technologies. Local universities such as the University of Science Malaysia are also involved in the process development.

Distribution in ASEAN

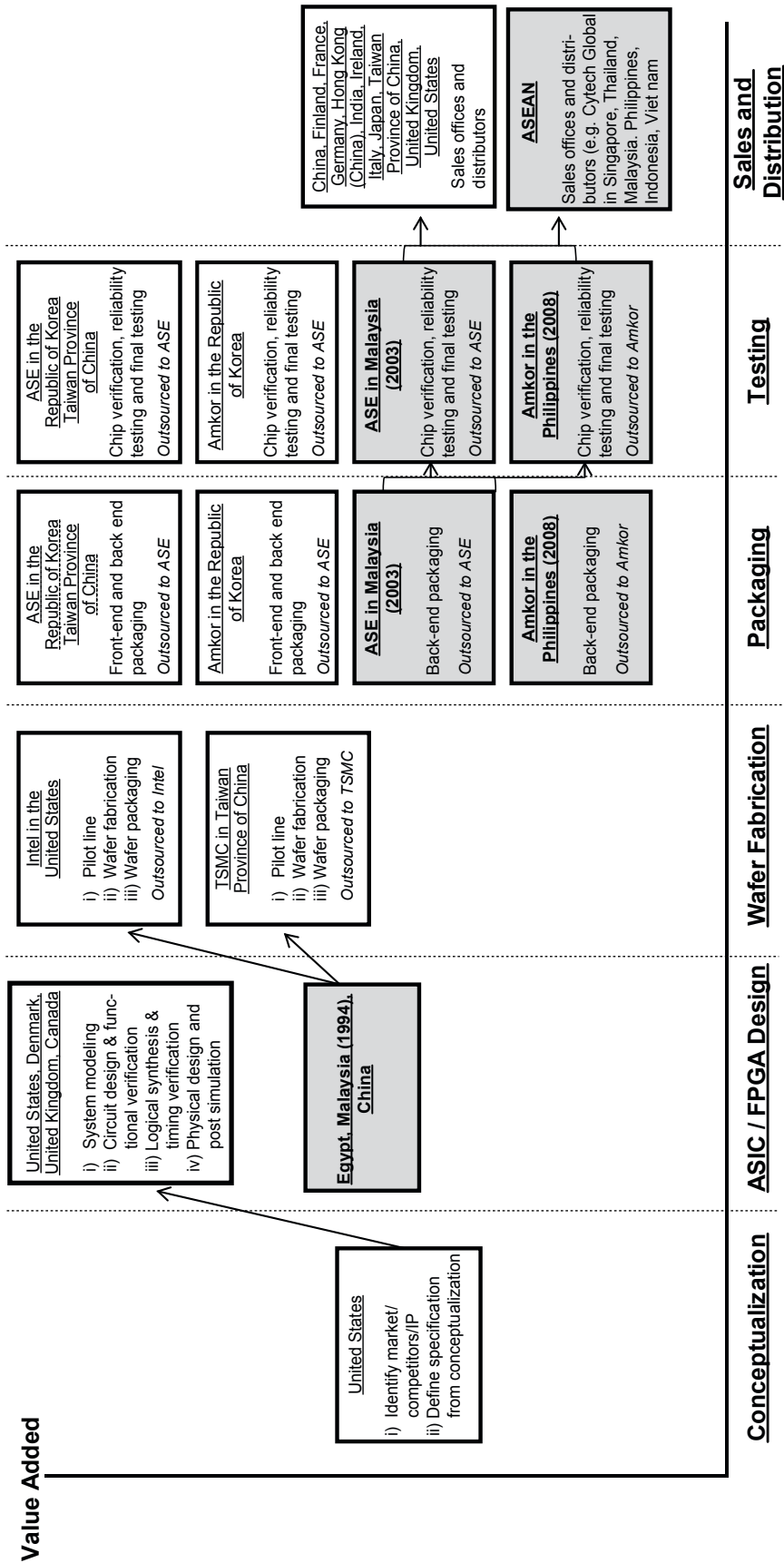
To expand the company’s distribution network in ASEAN, Altera has a distribution agreement with Cytech Global in six ASEAN Member States (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam). Altera’s motivation for expanding its technology solutions in ASEAN was mainly the increasing growth and IC design activities in the region.

Annex figure 5.5.1. ASEAN countries in Altera's GVCs



Source: UNCTAD, based on a report prepared for the ASEAN Investment Report 2013-2014.

Annex figure 5.5.2. Altera's production stages and processes in selected ASEAN countries and GVCs linkages



Source: UNCTAD and ASEAN (2014).

Note: The year in each parenthesis indicates the initial year of outsourcing contract.

Annex 5.6. Inari Amertron

Inari Amertron (Malaysia) illustrates a case of how a local supplier and contract manufacturer is connected in RVC and GVCs. Inari Amertron is a electronics manufacturing services (EMS) provider in back-end semiconductor packaging which comprises back-end wafer processing, package assembly and Radio Frequency (RF) final testing for the semiconductor industry. It mainly serves the wireless RF and microwave telecommunication semiconductor market. Inari South Keytech, a fiber-optic division of Inari Amertron, supplies mainly to Avago.

The company is an integral part to the supply chain of TNCs such as the Singaporean owned Avago Technologies. Inari Amertron also serves as one of the important contract manufacturers to the United States based Agilent Technologies and the Germany based OSRAM Opto Semiconductors.

The key activities conducted by Inari Amertron as a semiconductor EMS include direct current and RF wafer testing, wafer back-grinding, wafer sawing, wire bonding, substrate molding and substrate sawing. The company has conducted supportive R&D in its HQ (Malaysia) to processes of fine pitch flip chip assembly.

RVC in ASEAN

The company is a main contract manufacturer of Avago Technologies. Almost 98% of Inari Amertron's technologies are transferred from its customers, such as Avago in Singapore (annex figure 5.6.1). Almost 80% of Inari Amertron's revenue comes from Avago Singapore. As a contract manufacturer, Inari Amertron's supply chain network is highly dependent on its customers' business strategies and directions.

Technology transfers from customers

Another major customer which has continuously transferred technologies to Inari Amertron's group of companies is Agilent. In ASEAN, Agilent has D&D center in Malaysia and Singapore. Some design and development works are subsequently and jointly developed with the group's subsidiary - Ceedtec. Whereas electronic test and measurement equipment are mainly handled by Ceedtec in Penang, Malaysia products related to the wireless communication segment are mainly conducted by another subsidiary, Inari Technology in Penang. Products related to wired communication segment are transferred to Inari South Keytech in Johor for further processes.

Since the acquisition of Amertron, the group has expanded its manufacturing presence in the Philippines and China. The plants serve Avago and OSRAM Opto Semiconductors in assembling wired communication components as well as light-emitting diode (LED) products respectively. Technologies to assemble LED products are also transferred from OSRAM Opto Semiconductors plant in Malaysia to Inari Amertron's manufacturing plant in China.

Customer-supplier linkages within ASEAN and worldwide

The intermediate products are shipped to China for final assembly or shipped back to customers. Products are shipped out to worldwide customers for sales and distribution in three different segments: wireless and wired communication, electronic testing and measurement, and LED. The Malaysia plants conduct the sales and marketing for some of the products shipped out from the Philippines plant (annex figure 5.6.1).

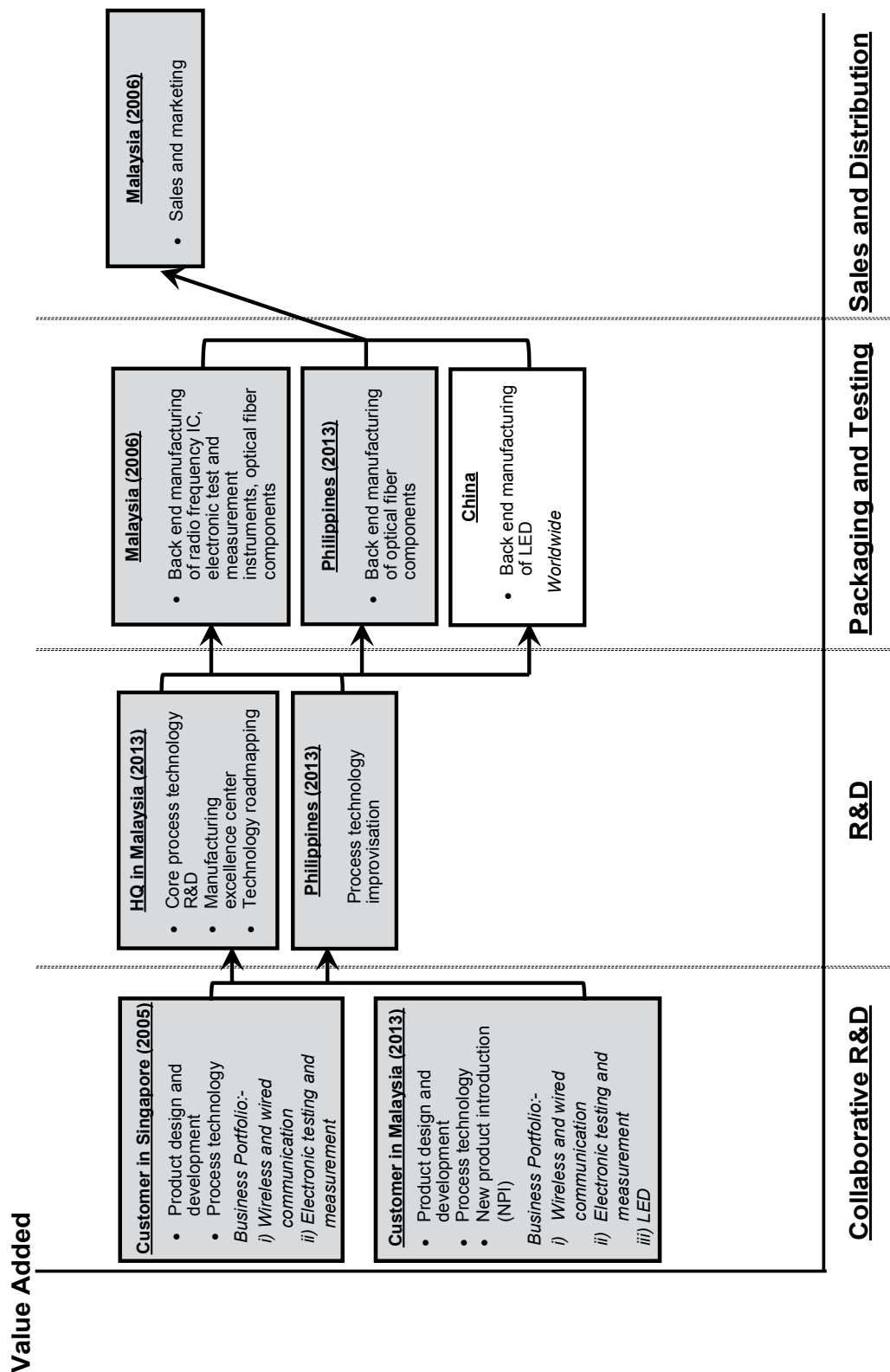
Inari Amertron's operation involves heavily in backend semiconductor packaging and testing. The company sources its production consumables locally or within the ASEAN region to maintain its price competitiveness and profit margin. As Inari Amertron serves major multinational electronics firms, especially Avago Technologies, some of its production materials and process equipment are nevertheless consigned or mandated by its customers on a global scale.

Within ASEAN, Inari Amertron mainly source from vendors in Malaysia and Singapore (annex figure 5.6.2). In Malaysia, the company obtains gold wires from Tanaka Electronics, machines and spare parts from DPE Integration, printed circuit boards from GUH Circuit Industry, and packaging materials from ISO Technology

and Public Packages for its semiconductor packaging and testing operations (annex figure 5.6.2). 3M Singapore and Indium Corporation in Singapore are important sources of packaging materials for Inari Amertron. Shenmao Technology in Singapore supplies solders to the company. Advanced processes such as wafer fabrication are conducted by manufacturers in Singapore, e.g. STMicroelectronics, before shipping to Inari Amertron in Malaysia or in Philippines for back-end processing.

Inari Amertron also sources various other components from different parts of the world, including China, Europe, Hong Kong (China), Japan, Taiwan Province of China and United States. While Japan provides important sources of leadframes, substrates and machines, Taiwan Province of China is an important source for wafers, leadframes, SMT and other supporting components. Since advanced customers such as Avago Technologies are also deciding the sources of manufacturing inputs, some supporting components and substrates of Inari Amertron are sourced from suppliers in United States and Japan (e.g. Digikey and Sumitomo respectively).

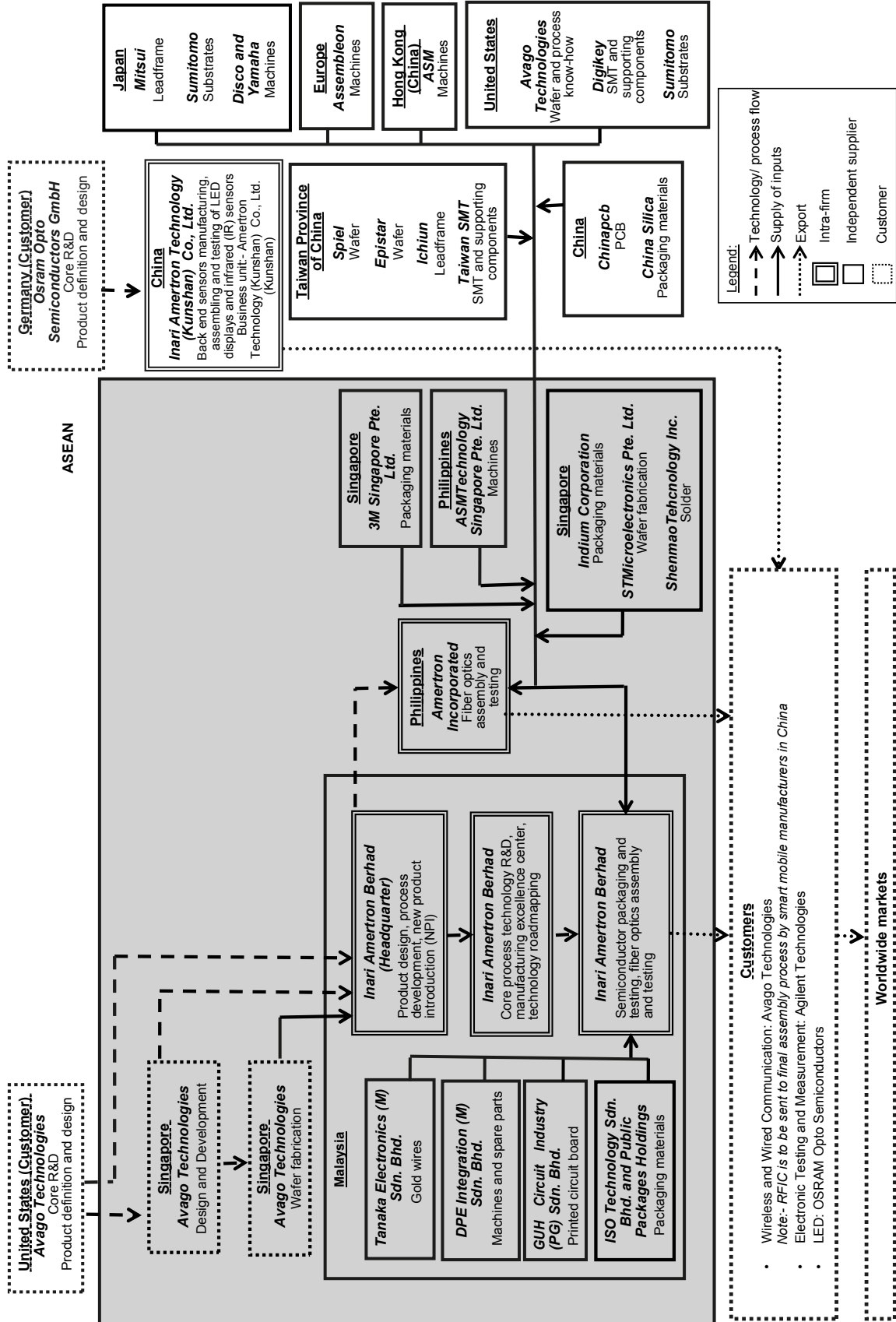
Annex figure 5.6.1. Inari Amertron's production stages and processes in ASEAN



Source: UNCTAD and ASEAN (2014).

Note: The year in each parenthesis indicates the initial year of operation.

Annex figure 5.6.2. Inari Amertron's GVC and RVC in ASEAN



Annex 5.7. Mazda Motor Corporation

Mazda (Japan) has production operations in a number of ASEAN Member States, including Indonesia, Malaysia, Thailand and Viet Nam. It is an original brand manufacturer in the automotive industry involved with designing, developing, manufacturing and marketing automobiles under its brand label. It expanded its operations in the region in 2013 with new production facilities in Malaysia, Thailand and Indonesia (box 1.2 in chapter 1). In supporting the group's strategy of achieving production efficiency and manufacturing flexibility, Mazda sources cost-competitive components and services in ASEAN. The majority of the parts and components are sourced locally or from within the region. The reason for the presence of Mazda in ASEAN is to tap the region's growing automotive markets and to manufacture automobiles. Among the developing regions, ASEAN is one of the group's highest sales locations.

The company supports joint production networks that create economies of scale, which encourages production networks and specialization among its affiliates. Adopting flexibility in production is another consideration that encourages contract manufacturing and sourcing of parts and components from efficient suppliers.

RVC in ASEAN

Mazda operations in ASEAN are concentrated in component manufacturing, sourcing, assembly, and sales and distribution (annex figure 5.7.1). Its RVC in ASEAN involves many parts and components suppliers operating in the region or in an ASEAN country where it has significant operations (e.g. Thailand and Malaysia). There are intra-firm connections between its affiliates in Malaysia and Thailand, and in these countries and Viet Nam.

Some of Mazda's suppliers from Japan have set up operations in Malaysia and Thailand, including through joint ventures with local parts and components manufacturers. In Malaysia, Mazda entered into a distribution agreement in 2008 with Bermaz Motor, a wholly owned subsidiary of Berjaya Auto. Bermaz Motor is the distributor of specific models of Mazda CBU vehicles, spare parts, accessories and tools in Malaysia. Mazda has set up an assembly plant in Malaysia in 2013 to produce energy-efficient vehicles. The first CKD model was produced in April 2013. About 30% of Bermaz Motor's production is targeted at the national market while the rest is exported to other ASEAN Member States. About 50% of the components in this CKD model were sourced locally.

Bermaz Motor sources automotive seats, audio systems, electronics components, plastic injection moulding and tires from suppliers in Malaysia. Some of them are foreign suppliers operating in the host country (annex figure 5.7.2). Key technologies and components such as engines and powertrains are imported from Mazda in Japan.

AutoAlliance, a joint venture subsidiary of Mazda and Ford Motor, in Thailand, is a manufacturer and wholesaler of automobiles, and also an assembler and wholesaler of engines. This subsidiary sources most components from local and foreign suppliers operating in Thailand. These components include gasoline reciprocating engines, diesel engines, rotary engines, and automatic and manual transmissions for vehicles. Malaysian vendors, such as Delloyd Auto Parts Manufacture, supply plastic parts, including door handles and dashboards, to AutoAlliance. Local component manufacturers such as Aapico Hitech supply specific parts to AutoAlliance (box 5.5).

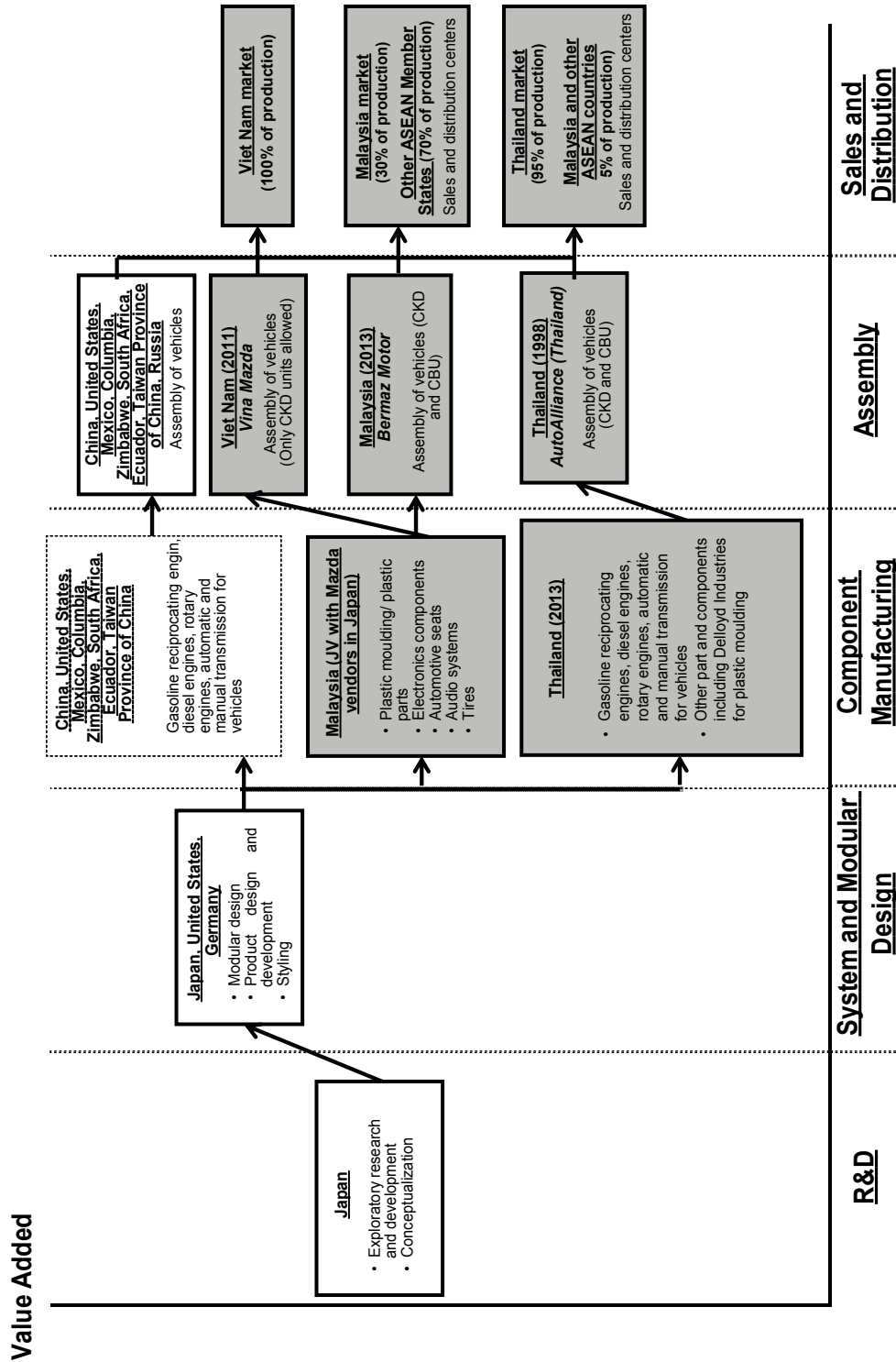
Almost all of the production of AutoAlliance (Thailand) is targeted at the local market, except for 5% of the assembled vehicles, which are exported to Malaysia and other ASEAN Member States. While Auto Alliance exports the Mazda 2 model to Malaysia, Bermaz Motor exports the CX-5 model to Thailand.

Mazda's assembler in Vietnam (Vina Mazda) does not have any export exchange with Bermaz Motor or AutoAlliance, because the country's automotive policy does not allow CBUs to be imported. Given its smaller production scale, cars assembled by Vina Mazda are sold only in the national market. A few Malaysian vendors have established joint ventures with national vendors in Vietnam, supplying absorbers and fenders to Vina Mazda.

Connections in GVC

Mazda undertakes R&D and product conceptualization at its headquarters in Japan. The company's product design, development and product styling are carried out abroad, in the United States and Germany. Some of the major car components are manufactured in countries such as Japan, China, the United States and Mexico. In addition, some parts and components are also manufactured by vendors located in Malaysia and Thailand and then supplied to assembly plants in three ASEAN Member States (i.e. Thailand, Malaysia and Viet Nam). The assembled vehicles are then shipped to these regional sales and distribution centers.

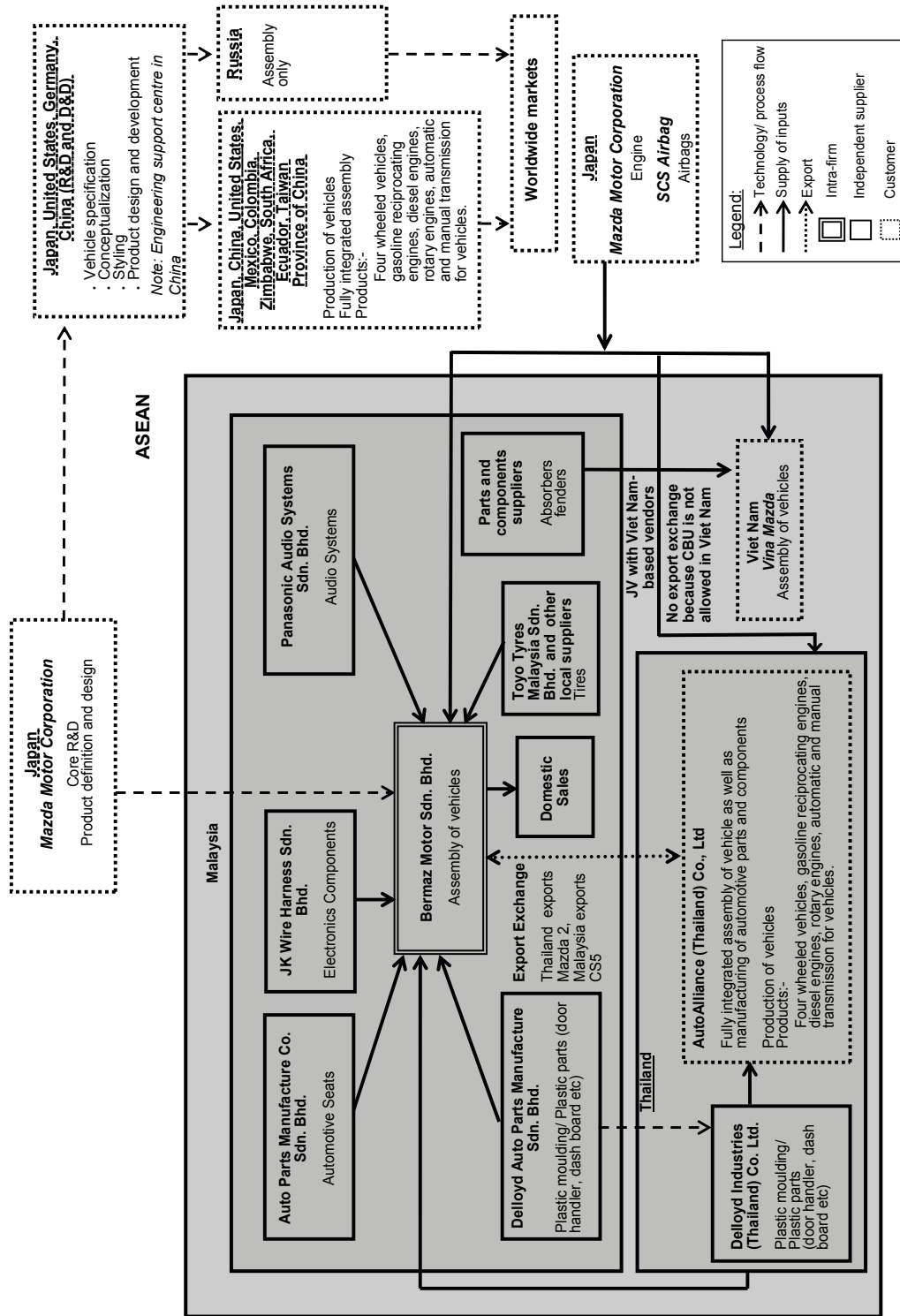
Annex figure 5.7.1. Mazda's selected production stages and processes in ASEAN



Source: UNCTAD and ASEAN (2014).

Note: The year in each parenthesis indicates the initial year of operation.

Annex figure 5.7.2. Mazda's RVC and GVC in ASEAN



Source: UNCTAD and ASEAN (2014).

Annex 5.8. Naza Automotive Manufacturing

Naza is a Malaysian car manufacturer under the Naza Group. It is a significant ASEAN automotive contract manufacturer, assembling cars for Kia (Republic of Korea) and Peugeot (France) for domestic and export markets. The company conducts R&D in Malaysia, which includes model styling, design and product research. It receives R&D support from its partner companies in France and the Republic of Korea.

Naza's assembly plant in Gurun, Malaysia conducts body welding, painting, assembly and pre-delivery inspection of the units and accessories. The plant is also equipped with a test and simulation track, which includes equipment used to measure the performance, endurance and quality of each unit produced.

RVC in ASEAN

As an automotive assembler, Naza has established a strong regional supply chain in ASEAN. The company sources all of its parts and components for the production of different models from suppliers within ASEAN. Less than 5% of the parts and components are sourced within Naza's group of companies, and a smaller amount from Singapore. About 35% of the parts and components are sourced from independent vendors in Malaysia, and more than 55% are sourced from vendors in Thailand.

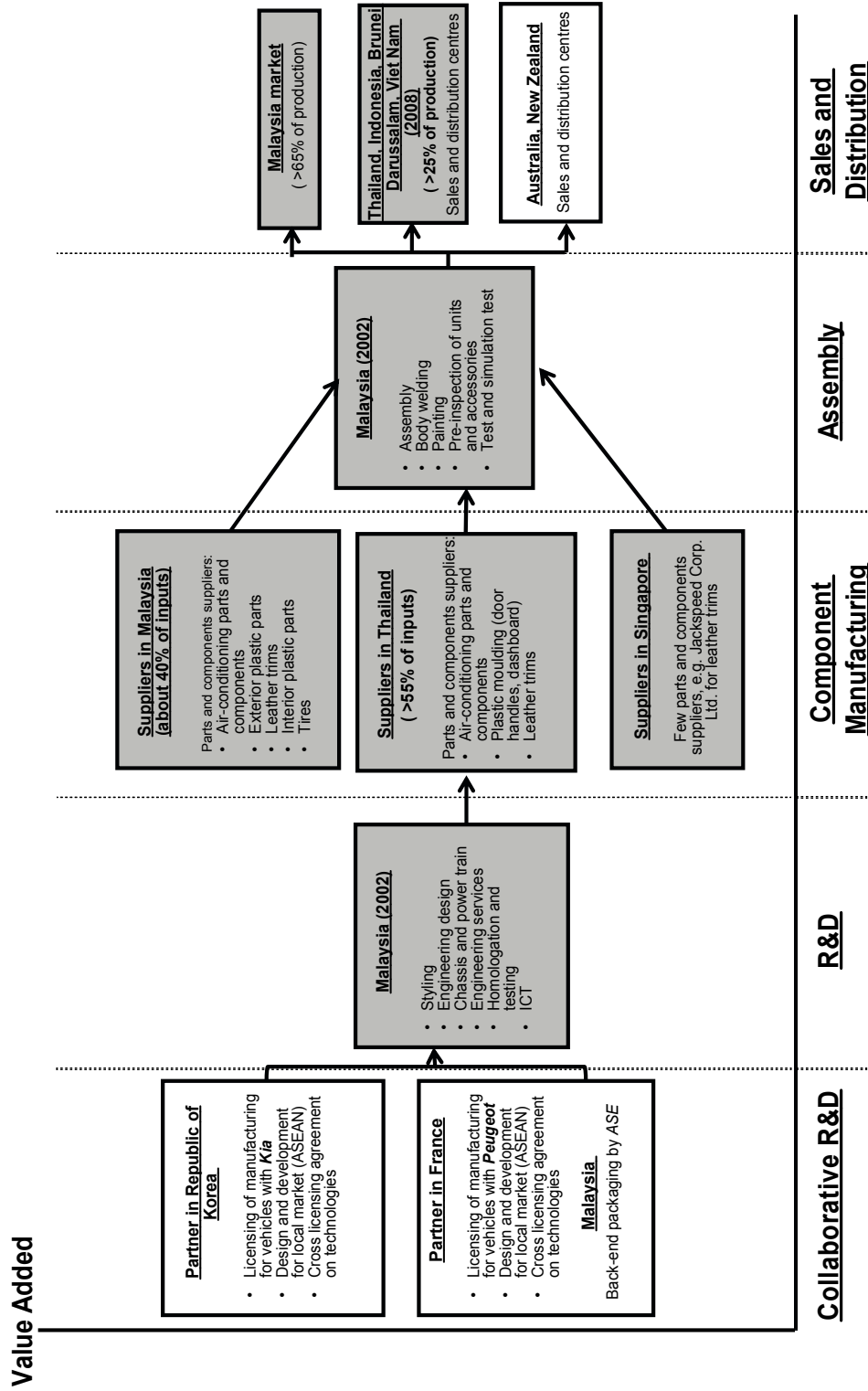
The parts and components vendors include indigenous and foreign suppliers operating in the three ASEAN Member States. For instance, Naza sources air-conditioner parts, interior plastic, leather trims, tyres and exterior plastic parts from foreign TNCs operating in Malaysia (annex figure 5.8.1). Air conditioner parts come from Denso (Thailand), plastic moulding from Delloyd Industries (Thailand), and leather trims from Jackspeed in Thailand and Singapore.

The parts and components are then shipped to the plant in Gurun, Malaysia for assembly, body welding, painting, pre-inspection of units, accessories installation and testing. More than 65% of the CBUs are sold to the Malaysia market, and the remaining ones are sent to sales and distribution centres in four other ASEAN Member States (Brunei Darussalam, Indonesia, Thailand and Viet Nam) (annex figure 5.8.2).

Nasim Sdn. Bhd. – a member of the Naza Group – was appointed by Automobiles Peugeot in the beginning of 2010 to spearhead expansion in ASEAN Member States. Malaysia is Peugeot's manufacturing hub for right-hand-drive markets in the ASEAN region. Nasim began to export Peugeot 207 to Thailand in November 2010. The car model is produced in Malaysia but was launched in Thailand by its distributor in that country, European Motor Cars Co. Ltd. Nasim began exporting the sedan to Indonesia in March 2011 and is expanding its exports of the Peugeot 207 to Brunei Darussalam. The Kia Pregio van assembled at the Gurun plant is exported to Indonesia.

Naza's operations involve a number of ASEAN Member States through its parts and components linkages with local and foreign suppliers based in different ASEAN Member States.

Annex figure 5.8.1. Naza's production stages and processes in ASEAN




Source: UNCTAD and ASEAN (2014).

Notes: The year in each parenthesis indicates the initial year of operation.



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