

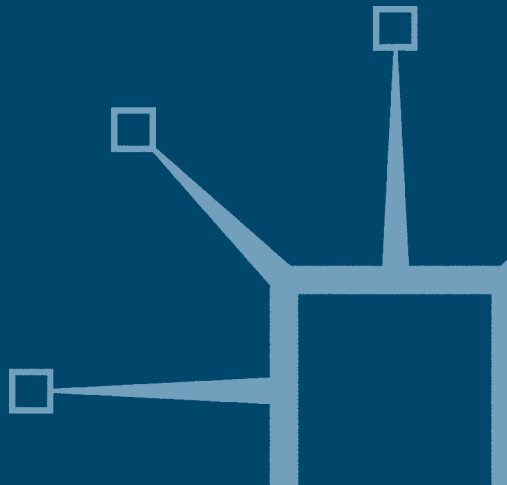
palgrave  
macmillan

# East Asia's Economic Integration

Progress and Benefit

Edited by

Daisuke Hiratsuka and Fukunari Kimura



---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:00

---

## East Asia's Economic Integration

---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:00

---

*Other titles from IDE-JETRO:*

Mariko Watanabe (editor)  
*Recovering Financial Systems*  
China and Asian Transition Economies

Daisuke Hiratsuka (editor)  
*East Asia's De Facto Economic Integration*

Hisayuki Mitsuo (editor)  
*New Developments of the Exchange Rate Regimes in Developing Countries*

Tadayoshi Terao and Kenji Otsuka (editors)  
*Development of Environmental Policy in Japan and Asian Countries*

Masahisa Fujita (editor)  
*Regional Integration in East Asia*  
From the Viewpoint of Spatial Economics

Akifumi Kuchiki and Masatsugu Tsuji (editors)  
*Industrial Clusters in Asia*  
Analyses of Their Competition and Cooperation

Mayumi Murayama (editor)  
*Gender and Development*  
The Japanese Experience in Comparative Perspective

Nobuhiro Okamoto and Takeo Ihara (editors)  
*Spatial Structure and Regional Development in China*  
An Interregional Input-Output Approach

Akifumi Kuchiki and Masatsugu Tsuji (editors)  
*The Flowchart Approach to Industrial Cluster Policy*

Masahisa Fujita (editor)  
*Economic Integration in Asia and India*

---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:01

---

# East Asia's Economic Integration

Progress and Benefit

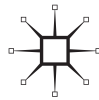
*Edited by*

Daisuke Hiratsuka

and

Fukunari Kimura

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:01



© Institute of Developing Economies (IDE), JETRO 2008

All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

No portion of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency, Saffron House, 6-10 Kirby Street, London EC1N 8TS.

Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

The authors have asserted their rights to be identified as the authors of this work in accordance with the Copyright, Designs and Patents Act 1988.

First published 2008 by  
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

Palgrave® and Macmillan® are registered trademarks in the United States, the United Kingdom, Europe and other countries.

ISBN-13: 978-0-230-55362-0 hardback  
ISBN-10: 0-230-55362-1 hardback

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

10 9 8 7 6 5 4 3 2 1  
17 16 15 14 13 12 11 10 09 08

Printed and bound in Great Britain by  
CPI Antony Rowe, Chippenham and Eastbourne

## Contents

<i>List of Figures</i>	ix
<i>List of Tables</i>	xii
<i>Notes on the Contributors</i>	xv
<i>Preface</i>	xvi
<b>1 From De Facto to De Jure Economic Integration in East Asia: Past, Present and Future</b>	<b>1</b>
<i>Daisuke Hiratsuka and Fukunari Kimura</i>	
1.1 Introduction	1
1.2 De facto economic integration	3
1.3 The problems of de jure integration in East Asia	6
1.4 Evolution of a core-periphery structure	11
1.5 Growing indigenous enterprises with MNEs	13
1.6 Benefit from economic integration	14
1.7 Policy implications of individual chapters	16
1.8 Conclusion	22
<b>Part I: The Making of Economic Integration in East Asia</b>	<b>27</b>
<b>2 The Modality of East Asia's Economic Integration</b>	<b>29</b>
<i>Fukunari Kimura</i>	
2.1 Forming a basic architecture of economic integration	29
2.2 De facto and de jure economic integration in East Asia	30
2.3 De jure economic integration in terms of trade in goods	32
2.4 De jure economic integration in terms of policy measures other than tariffs	36
2.5 Geographical boundary of de jure plurilateral integration	38
2.6 Concluding remarks	40
<b>3 The East Asian Noodle Bowl Syndrome</b>	<b>45</b>
<i>Richard E. Baldwin</i>	
3.1 Introduction	45
3.2 Current state of play	47

vi *Contents*

3.3	Fragility and emerging tensions	64
3.4	New East Asian Regional Management Effort (NEARME)	72
3.5	Concluding remarks	78
<b>4</b>	<b>Rules of Origin, Local Content and Cumulative Local Content in East Asia: Application of an International Input–Output Analysis</b>	<b>82</b>
	<i>Ikuo Kuroiwa</i>	
4.1	Introduction	82
4.2	Rules of origin	83
4.3	Calculation of local content	85
4.4	Empirical results	89
4.5	Sector analysis	101
4.6	Conclusion	109
<b>5</b>	<b>Making Sense of the Timeliness of Transportation in Economic Integration</b>	<b>118</b>
	<i>Nobuaki Hamaguchi</i>	
5.1	Introduction	118
5.2	Development of timely transportation and revealed geographical advantage	122
5.3	The timeliness issue in Japanese trade in East Asia	124
5.4	Concluding remarks	137
	<b>Part II: The Evolution of the Core–Periphery Structure</b>	<b>141</b>
<b>6</b>	<b>The Evolution of Core–Periphery Structure in East Asia</b>	<b>143</b>
	<i>Nobuaki Hamaguchi</i>	
6.1	Introduction	143
6.2	The perspective of new economic geography analysis for regional integration	144
6.3	Regional integration in East Asia	148
6.4	Perspective of the economic integration in East Asia	158
<b>7</b>	<b>Industrialization through Vertical Production Networks: Can Laos Participate?</b>	<b>162</b>
	<i>Daisuke Hiratsuka, Souknilanh Keola and Motoyoshi Suzuki</i>	
7.1	Introduction	162
7.2	Industrialization through vertical production networks	164

7.3	Transport costs	166
7.4	Potential of industrialization through vertical production networks in Laos	168
7.5	High fixed cost and border-related barriers in Laos	170
7.6	Case study of high border-related costs in Laos and their effect on its participation in vertical production networks	172
7.7	Summary and conclusion	179
<b>8</b>	<b>Structural Change in Intermediate, Consumption and Capital Goods Trade During Economic Integration: the EU Experience</b>	<b>184</b>
	<i>Bart Los and Jan Oosterhaven</i>	
8.1	Introduction	184
8.2	EU integration and trade and location theory	186
8.3	EU inter-country input–output tables and model	189
8.4	Earlier inter-country input–output research on EU integration	192
8.5	Trends in European trade, 1975–95	203
8.6	Summary and conclusion	215
	<b>Part III: The Current Status of Indigenous Enterprises</b>	<b>223</b>
<b>9</b>	<b>Spillovers and Linkages between Local and Foreign Plants</b>	<b>225</b>
	<i>Kazuhiko Yokota</i>	
9.1	Introduction	225
9.2	Industrial structure and local–multinational linkages in Thailand	228
9.3	Spillover and linkage effects	231
9.4	Further discussion on spillovers and demand linkage effects, and trade liberalization	242
9.5	FTA and its impact on local plants	249
9.6	Conclusion	251
<b>10</b>	<b>Do Local Suppliers Benefit from Economic Integration? Evidence from Outward FDI from ASEAN</b>	<b>255</b>
	<i>Daisuke Hiratsuka</i>	
10.1	Introduction	255
10.2	What determines outward FDI?	257
10.3	Pattern of outward FDI from ASEAN	262



viii *Contents*

10.4 Intra-regional FDI in ASEAN	268
10.5 Conclusion and policy implications	277
<b>Part IV: Quantitative Implications of Economic Integration</b>	<b>281</b>
<b>11 Comparing Bilateral and Multilateral ASEAN10+4 Free Trade Agreements: Possible Impacts on Member and Non-member Countries</b>	<b>283</b>
<i>Michel Fouquin</i>	
11.1 Introduction	283
11.2 The open regionalism concept and AFTA	284
11.3 Quantitative model and possible scenario	290
11.4 ASEAN10 bilateral FTAs with Japan, China, Korea and India	293
11.5 An Asian single market?	305
<b>12 How Will ASEAN+3 Integration Accelerate Investment? A CGE Analysis</b>	<b>321</b>
<i>Ken Itakura</i>	
12.1 Introduction	321
12.2 Investment theory in the Dynamic GTAP model	322
12.3 Data aggregation and simulation design	324
12.4 Simulation results	328
12.5 Concluding remarks	334
<i>Index</i>	339

## List of Figures

2.1	Fragmentation: an illustration	36
3.1	The East Asian 'noodle bowl' syndrome	48
3.2	Placement of Japanese plants in East Asia, 1975–2004; emergence of China	51
3.3	Unilateral tariff cutting in Phase II	56
3.4	Formal unilateralism; reductions in applied MFN tariffs	56
3.5	AFTA utilization rates	58
3.6	Intra-ASEAN trade by HS Chapter, 2003	59
3.7	Total manufacturing growth, 1990–2002	62
3.8	An example of interdependence in 'Factory Asia'	66
3.9	East Asian bilateral trade flows rounded to nearest 1% of regional flows	72
4.1(a)	Changes in local content (1990–2000): manufacturing sector	95
4.1(b)	Changes in import content (1990–2000): manufacturing sector	95
4.1(c)	Impact of trade structural changes (1990–2000): manufacturing sector	96
4.1(d)	Impact of technological structural changes (1990–2000): manufacturing sector	96
4.2(a)	Changes in local content (1990–2000): manufacturing sector	99
4.2(b)	Changes in import content (1990–2000): manufacturing sector	99
4.2(c)	Impact of value added coefficient changes (1990–2000): manufacturing sector	99
4.2(d)	Impact of trade structural changes (1990–2000): manufacturing sector	100
4.2(e)	Impact of technological structural changes (1990–2000): manufacturing sector	100
4.3(a)	Changes in local content (1990–2000): electronics sector	102
4.3(b)	Changes in import content (1990–2000): electronics sector	103
4.3(c)	Impact of trade structural changes (1990–2000): electronics sector	103

x *List of Figures*

4.3(d)	Impact of technological structural changes (1990–2000): electronics sector	103
4.4(a)	Changes in local content (1990–2000): automotive sector	105
4.4(b)	Changes in import content (1990–2000): automotive sector	106
4.4(c)	Impact of trade structural changes (1990–2000): automotive sector	106
4.4(d)	Impact of technological structural changes (1990–2000): automotive sector	106
5.1	World trade share of intra-regional trade	119
5.2	Advantage of better logistics	122
5.3	Japanese manufacturing FDI in East Asia: accumulated number of cases by industry	126
6.1	Share of East Asia’s intra and extra trade in world trade	146
6.2	Main routes and feeder services of East Asia container lines	154
6.3	Thailand’s regional per capita value added of manufacturing sector	155
6.4	China’s provincial per capita GDP (1990 and 2002)	157
6.5	Thailand’s regional per capita GDP	160
7.1	Relation between trade volume (1981–2004) with and distances to Laos	168
7.2	Relation between number of approved inward FDI (1988–2004) and distances to Laos	169
7.3	Cooperation of Tokyo Coil Laos with Tokyo Coil Thailand	175
7.4	Cooperation of Asahi Maxima Laos with Asahi Denki Thailand	176
7.5	Number of times to pass through trade-related barriers	178
8.1	The ‘ideal’ full-information inter-country input–output table	190
8.2	Development of specialization ratios for <i>internal</i> EU exports, 1965–85	200
8.3	Weighted averages of IO cell-level Grubel-Lloyd indexes by industry of origin	213
9.1	Output difference and labour productivity (all local plants except for machinery)	246
9.2	Output difference and labour productivity (local machinery plants)	247

---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:01

*List of Figures* xi

10.1	Parts procurement of a hard disc drive assembler located in Thailand	261
10.2	FDI inward and outward stock by region	263
10.3	Inward and outward FDI stocks of the ASEAN countries	264
10.4	Outward FDI flows of the ASEAN countries	265
10.5	Share of FDI stock abroad from Malaysia by geographical destination	265
10.6	Share of FDI stock abroad from Thailand by geographical destination	266
10.7	Share of FDI stock abroad from Malaysia by geographical destination	267
11.1	Asia-Pacific regional and bilateral trade agreements (June 2005)	287
12.1(a)	FTA effect on GDP	329
12.1(b)	FTA effect on capital accumulation	330
12.2	FTA effect on investment	331
12.3	Investment in Vietnam for baseline and policy scenario	332
12.4	Investment in Malaysia for baseline and policy scenario	332
12.5	FTA effect on foreign ownership of physical capital	333
12.6	FTA effect on export volume	334
12.7	FTA effect on import volume	335

## List of Tables

2.1	Matrix of FTAs involving countries in the Asia-Pacific region (as of November 2007)	30
3.1	Widening and deepening of the Asian manufacturing matrix, 1985, 1990, 2000	53
3.2	Intra-East Asian preference margins vis-à-vis EU and North America	60
3.3	Bound and applied tariffs in East Asia	68
4.1	Rules of origin in FTAs	84
4.2(a)	Local content (1990)	90
4.2(b)	Local content (2000)	92
4.3	Changes in local content 1990–2000	93
4.4	Local and import content (2000): manufacturing sector	94
4.5	ASEAN and ASEAN-China cumulative local content: manufacturing sector	97
4.6	Local and import content (2000): manufacturing sector	98
4.7	ASEAN and ASEAN-China cumulative local content: manufacturing sector	101
4.8	Local and import content (2000): electronics sector	102
4.9	ASEAN and ASEAN-China cumulative local content: electronics sector	104
4.10	Local and import content (2000): automotive sector	105
4.11	ASEAN and ASEAN-China cumulative local content: automotive sector	107
5.1	Japan–China trade	127
5.2	Share of air transportation and containerization in ocean transportation in Japan–China trade	129
5.3	Japan–China trade in machinery and electrical equipment	131
5.4	Japan–China trade in textile industry by transportation mode	132
5.5	Japan–ASEAN trade	135
5.6	Share of air transportation and containerization in ocean transportation in Japan–ASEAN trade	136
5.7	Japan–ASEAN trade of machinery and electrical equipment	137

6.1	Volume of sea container transportation in East Asia in 2003	149
6.2	Production share of Chinese main agglomerations	152
6.3	Malaysia: number of approved FDI and per capita GDP by state	159
7.1	Courier service cost from and to selected countries	171
7.2	Documents needed for an out-plan import of machinery by land	173
8.1	Pearson correlations between levels and changes in specialization, EU5, 1965–85	199
8.2	ROW export specialization as a percentage of EU export specialization, 1965–85	201
8.3	Origin of total intermediate inputs (%)	204
8.4	Average self-sufficiency ratios (%), 1975–95, by sector	205
8.5	Growth of self-sufficiency ratios (%), by sector	206
8.6	Origins of tradable intermediate inputs (%), 1975–95	207
8.7	Origins of tradable consumption goods (%), 1975–95	209
8.8	Origins of tradable capital goods (%), 1975–95	211
8.9	Averages of IO cell-level Grubel-Lloyd indexes by country of origin (%)	214
9.1	Industrialization in ASEAN	227
9.2	Categorization of industries	229
9.3	Directions of resource reallocation	232
9.4	Summary statistics of variables	236
9.5	Spillover effect and plant productivity	238
9.6	Demand linkage effect and plant productivity	240
9.7	Averages of variables by ownership	244
9.8	Output difference and plant productivity	248
9.9	Trade liberalization and plant productivity	250
9.10	ISIC industry codes	252
10.1	Intra-ASEAN FDI flows by source and host country	269
10.2	Share of intra-ASEAN FDI flows by source country	270
10.3	Share of intra-ASEAN FDI flows by host country	271
10.4	FDI inflow from extra- and intra-ASEAN in manufacturing industry (approved base) by industrial sector (1999–2003)	273
10.5	Share of intra-ASEAN FDI flows in manufacturing industry (approved base) by industrial sector (1999–2003)	275
11.1	Applied tariffs in East Asia, the EU and NAFTA, by sector, 2002	289

---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:01

xiv *List of Tables*

11.2	Macroeconomic impacts (in %, SC1)	294
11.3	Impact on welfare (US\$ million, SC1)	295
11.4	Impact on agricultural trade (in %, SC1)	297
11.5	Impact on production and prices (in %, SC1)	300
11.6	Trade in industrial goods (in %, SC1)	301
11.7	Terms of trade (in %, SC1)	302
11.8	Impact on world prices (in %, SC1)	303
11.9	Major changes in bilateral trade (US\$ million, SC1)	304
11.10	Macroeconomic results (% change, SC2)	306
11.11	Trade impacts on agricultural goods (% change, SC2)	308
11.12	Impact on production and prices (in %, SC2)	309
11.13	Impact on industrial trade (in %, SC2)	311
11.14	Terms of trade (% change, SC2)	312
11.15	World prices for developing countries (% change, SC2)	313
11.16	Major changes in trade (US\$ million, SC2)	314
12.1	Aggregation of regions	325
12.2	Aggregation of sectors	326
12.3	Average tariff rates (2010, %)	328
12.4	Effect on export volume by sector in 2020	336
12.5	Effect on import volume by sector in 2020	337

---

9780230\_553620\_01\_prexvi.3d 6/30/2008  
10:00:01

## Notes on the Contributors

**Richard E. Baldwin** is Professor of International Economics at the Graduate Institute of International Studies and Policy Director of the Centre for Economic Policy Research.

**Michel Fouquin** is Deputy Director of the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII).

**Nobuaki Hamaguchi** is Professor at the Research Institute for Economics and Business Administration, Kobe University.

**Daisuke Hiratsuka** is Director General of the Development Studies Center, Institute of Developing Economies (IDE).

**Ken Itakura** is Associate Professor at the Graduate School of Economics, Nagoya City University.

**Souknilanh Keola** is Research Fellow of the Development Strategies Studies Group, Development Studies Center, Institute of Developing Economies (IDE).

**Fukunari Kimura** is Professor in the Faculty of Economics, Keio University.

**Ikuo Kuroiwa** is a Senior Research Fellow Sent Abroad (Singapore), Development Studies Center, Institute of Developing Economies (IDE).

**Bart Los** is Associate Professor of International Economics and Business, University of Groningen.

**Jan Oosterhaven** is Professor of Spatial Economics at the Faculty of Economics, University of Groningen.

**Motoyoshi Suzuki** is JICA's Policy Adviser to the Committee for Planning and Investment, LAO P.D.R.

**Kazuhiko Yokota** is a Research Associate Professor at the International Centre for the Study of East Asian Development.



## Preface

This book is intended for policy-makers, academics and students interested in ongoing economic integration in East Asia. Our goal is to provide readers with both theoretical and empirical frameworks needed to understand the current state and direction of economic integration in East Asia, while at the same time clarifying issues that must be addressed in the move towards fully-fledged economic integration.

We have provided academic resources and analysis that graduate students can use for conducting further research on the topic. The main points under discussion are accessible to general readers by way of tables, figures, explanations and concluding remarks in each chapter.

This volume is the second in our series on economic integration in East Asia. The first volume, *East Asia's De Facto Economic Integration*, focused on a deeper understanding of the ongoing de facto economic integration in East Asia. This volume, *East Asia's Economic Integration: Progress and Benefit*, focuses on de jure economic integration and the concerns arising from economic integration. The twelve chapters in this volume address the following questions: What institutional arrangements are required to support the current de facto economic integration? What will happen in the region if economies are more deeply integrated? Will each small ASEAN country be able to attract industries? In particular, will Cambodia, Laos, Myanmar and Vietnam benefit from economic integration? Will the rural areas in each country benefit from economic integration?

# 1

## From De Facto to De Jure Economic Integration in East Asia: Past, Present and Future

*Daisuke Hiratsuka and Fukunari Kimura*

### 1.1 Introduction

Economic integration in East Asia, particularly in trade, has made remarkable progress, along with high economic growth, enhancement of regional competitiveness and agglomeration of industry in the region. The rapid progress of de facto (informal) economic integration through trade and foreign investment has prompted interest in de jure (formal) integration to institutionalize regional cooperation. This would not only provide an efficient and stable regional trade and investment system but also narrow socio-economic disparities in East Asia and complement international trading systems governed by the World Trade Organization (WTO). In fact, in East Asia, regional trade arrangements have prevailed in the form of free trade agreements (FTAs) centring on ASEAN, such as ASEAN-China, ASEAN-Korea and ASEAN-Japan, to name a few. FTAs will certainly improve predictability as compared with the current trade system which carries the risk of most Asian countries raising their tariff until the bound tariff in the WTO. The suspension of the Doha round of the WTO trade negotiations in July 2006 might catalyze the regional trade arrangements, so that, at the bilateral, plurilateral and wider levels, East Asia will enter into a new era of regional trading arrangements.<sup>1</sup> Such movement is complementary to WTO processes and may induce WTO members to resume the stalled Doha trade talks.

However, the evolution and proliferation of FTAs at many different levels have raised a number of queries about where East Asia is headed. Firstly, what kinds of problems do the current FTAs face and what are their weaknesses? Which particular institutional arrangements are required to support the current de facto economic integration? Secondly, and more importantly, what will occur if there is greater economic

## 2 *East Asia's Economic Integration*

integration in East Asia? More specifically, will regional production concentrate on China due to the home market effect or will each small ASEAN country be able to continue agglomeration of industries? Will the so-called CLMV countries (Cambodia, Laos, Myanmar and Vietnam) benefit from economic integration? Will the benefits of economic integration trickle down to rural areas in each country? These concerns stem from the fact that East Asian nations vary considerably in their levels of economic development, and there are significant peripheries within each country: for example, income disparity, in terms of per capita GDP, in 2006, varied more than one hundred times between the lowest and the highest figures: for example, US\$237 for Laos compared to more than US\$30,000 for Australia, Japan, Singapore, Brunei and New Zealand. In addition, there are major disparities among the domestic regions in each country. In East Asia, there are the so-called core-periphery structures, within each country as well as across them (Krugman, 1991; Krugman and Venables, 1995).

Thirdly, of equal importance, there is concern as to whether indigenous enterprises can develop together with multinational ones. This stems from the view that since economies of scale work strongly in economic integration, multinational enterprises (MNEs) are expected to gain major benefits in East Asia where they have large operations. Fourthly, what are the policies for solving the problems in East Asia: to provide an efficient and stable regional trade and investment system, to narrow the development gaps, or to foster cooperation between indigenous firms and foreign ones?

This book aims to answer these questions from a regional perspective. In this introductory chapter, we provide an overview of the main issues and set out what the subsequent chapters address. We begin by discussing the status quo of de facto economic integration. Second, we highlight which features of the current FTAs have been designed and practised in East Asia and the type of management of FTAs most appropriate for the region. Third, we outline our views on what has been happening in East Asia, at country/city level as well as firm level, in the wake of the development of de facto economic integration. This discussion will contribute to the debate on what will happen in East Asia if the region is integrated further by de jure integration. Since the start of this research project in 2004, entitled *East Asia's Challenges*, we have conducted several field studies in East Asia. The results of these field studies will form part of our thesis on what has been happening in East Asia in the wake of the de facto economic integration. Fourth, we will discuss the impact of regional trade arrangements in East Asia, and the concerns

arising from regional integration. Fifth, we shall briefly introduce each chapter and focus on policy implications. In the concluding section, we shall outline the policy package for economic integration.

## **1.2 De facto economic integration**

### **1.2.1 The world's factory: East Asia**

East Asia, narrowly defined as ASEAN+3, is the most attractive area in terms of market size, economic growth rate, and population revealing potential markets. The economic size of ASEAN+6, or member countries of the East Asia Summit (EAS), which includes India, Australia and New Zealand (as proposed by the Japanese government), in 2006, was US\$11 trillion, accounting for about one-quarter of the world's GDP. East Asia's GDP grew more than 5.3 times in the period between 1980 and 2006. In 1980, the economic size of East Asia was just 62 per cent of the NAFTA economy. However, in 2006, it was 70 per cent of the NAFTA economy, and was almost the same economic size as that of the European Union (EU) that year. The total population of ASEAN+6 is 3 billion, which is almost half of the world's population. Needless to say, East Asia is the region with the greatest potential.

These facts suggest that East Asia, i.e. ASEAN+3, or ASEAN+6, has emerged as the world's factory. The majority of the world's production of hard disc drives (HDDs), takes place in East Asia: in Singapore, Thailand, China and, most recently, in Korea. The American companies Seagate, Maxtor and Western Digital have research and development (R&D) functions and highly capital-intensive processes of silicon bar production in the United States, but their production facilities are located in East Asia. The same applies for the Japanese companies Hitachi, Fujitsu and Toshiba, all of which base their major production processes in Singapore, Malaysia, Thailand and China. All major Japanese suppliers locate most of their production functions in these ASEAN countries and China. In addition, in 2005 East Asia produced 97 per cent of the world's personal computers and 79 per cent of the world's mobile phones, and in 2004, it produced 67 per cent of the world's semiconductors. East Asia is quite literally the world's factory that produces and exports a variety of goods.

Two types of production fragmentation have advanced in East Asia. The first is intra-firm in which MNEs split production processes at several stages, and base those in different countries depending on which is the best location. This type of fragmentation is sometimes known as vertical specialization. MNEs achieve economies of scale for each production

---

#### 4 *East Asia's Economic Integration*

process, and at the same time, in particular in East Asia, a Ricardian type of division of labour occurs within firms such that capital- and labour-intensive products and processes are allocated in different countries. We saw several such cases: (i) industrial machinery assembled in Thailand with the casting process in Vietnam; (ii) condensers for which the machinery process took place in Thailand and the manual process in Laos; (iii) footwear for which the machinery process took place in Thailand and the manual process in Myanmar; and so on.

The second type is inter-firm (arm's length) production fragmentation in which MNEs purchase parts not only from the host country's suppliers but also from third countries' suppliers in multiple countries. These suppliers are the so-called small and medium-sized enterprises (SMEs) that wish to expand their business beyond their host countries and their industry sector. Sometimes, home electric appliance parts suppliers produce goods for automobile-related suppliers, for example.

The two types of intra-firm and inter-firm production fragmentation are mixed, forming production networks. For example, with HDDs, Seagate locates the assembly of the advanced model, and the most capital-intensive processes such as disc and R&D functions in Singapore, while the assembly of the low-price model and labour-intensive products and parts takes place in China and Thailand (Hiratsuka, 2006). For this division of labour, the Seagate Singapore factory purchases some parts from the Seagate Thailand factory. Nidec and Minebea are engaged in HDD spindle motor assembly in Thailand, and Showadenko in Singapore, and Fujidenki and Komag in Malaysia produce discs. Therefore the Seagate Singapore factory purchases parts of HDD spindle motors from Thailand and discs from Malaysia and Singapore, and the Seagate Thailand factory purchases spindle motors from Thailand, and discs from Malaysia and Singapore. Eventually, the assembling of HDDs will be concentrated across a few countries and parts and components will be procured from various countries, thus forming multilayered production networks in East Asia.

This is the story for HDD, whose parts and components are very light and compact. A different picture emerges for goods with high transport costs. For example, the automobile industry is located in many countries and East Asia is becoming one of the world's major automobile production areas due to the interaction of growing markets, low wage rates and agglomeration of industry. Thailand, for instance, has been both the production and the export base for pickup trucks. Ford/Mazda, GM/Isuzu, Mitsubishi and Toyota have large operations in specific industrial districts such as Samutprakan, Rayon and Chonburi. Automobile parts are purchased mainly from domestic suppliers in order to reduce

transport costs. In particular, the Asian currency crisis in 1997 increased the purchasing from domestic suppliers because of the rise in import prices. As a consequence, Japanese automobile supporting industries have agglomerated there.

Those production networks, either across countries or within a country, are supported by a 'just in time' production operation that links assemblers, suppliers and markets with forwarders/logistic companies.

Normally, each factory employs two shifts and has a 24-hour operation. Products are shipped very frequently, e.g. every two to four hours for domestic customers, and two or three times a week for foreign ones. The 'just in time' production operation, which is simply a system that ensures necessary parts are delivered to assemblers 'just in time', enables efficient production since warehouse space is limited and necessary parts can be conveyed to the workers speedily. Local staff in charge of purchasing examine parts and material for quality, enquire about prices and delivery schedules, and place orders to suppliers. They are able to maintain accurate information about prices and other details as there is regular exchange of information. Assemblers normally outsource to three suppliers for one part in order to encourage competition and promote R&D activity. Once the sales-purchase agreement is made, parts suppliers ask logistic companies to arrange for sea, air or land cargo transportation, to take care of the export and import procedures, and to deliver parts 'just in time', from one factory to another and from one country to another. Sometimes logistic companies follow a milk-run style, picking up parts from each supplier and dropping off at assemblers, and sometimes they supply parts to assemblers from 'just in time warehouses' or 'replenishment hub centres', where companies assigned by suppliers carry parts. Local logistic companies can participate in the production and distribution networks in East Asia.

The shipment of assembled or finished goods is, however, quite a different story. Head offices in Japan and the United States receive orders from clients, allocate production to their factories across East Asia, and ask international logistic companies from East Asia factories to their sales representative offices. In sum, marketing and delivery are managed by the head offices, and factories in East Asia are simply efficient production bases controlled by the head offices.

### **1.2.2 Drive forces of regional integration**

Through the production networks, intermediate goods are delivered from factory to factory, from factory to wholesalers/retailers/consumers, within countries and/or across countries. When we examine this process from a trade perspective, it is evident that regionalization in trade has

## 6 *East Asia's Economic Integration*

progressed in East Asia. Indeed, in 2004, the intra-regional trade ratio of ASEAN+6 amounted to 43 per cent. This figure is higher than that of NAFTA (42 per cent), but lower than that of the EU (58 per cent). Most traded goods are intermediate goods rather than finished goods.

Why has there been such a rapid increase in the intra-regional trade ratio? It can be interpreted in the following way. Firstly, the economies of other countries have achieved dramatic growth. When the Japanese economy used to be a hegemony, many of the manufactured products were exported to other East Asian economies. In contrast, other East Asian economies have now succeeded in industrialization, transforming from the periphery (unindustrialized) to the core (industrialized), resulting in expansion of manufactured goods among the countries, as well as to Japan.

Secondly, East Asia has attained higher economic growth than other major regions such as NAFTA and the EU. In 1980, the economy of East Asia was just 25 per cent of the US economy, but it has now risen to 60 per cent.

Thirdly, transport costs are decreasing for various reasons. The most favoured nation (MFN) tariff has been cut in the region, driven by competition for attracting investments (see Chapter 3). Exemptions of tariffs on intermediate goods have been introduced. Infrastructure projects are carried out by public and private sectors, and logistic networks have developed. Of course, there has also been a fall in air and sea cargo fares (see Chapter 5).

Thanks to low transport costs in East Asia, manufacturing production bases are linked together, like a systematized factory with distribution networks. It is characteristic of East Asia that many countries have participated in the production and distribution networks, compared to which Europe and North America do not cover as many countries (Ando and Kimura, 2003). The process of production fragmentation has increased trade of intermediate goods within the same industries, raised East Asia's intra-regional trade ratio, and contributed to the region's rapid economic growth. In particular, in the machinery industry, production fragmentation has developed, resulting in high import value of parts and components in machinery, compared to the EU15 and NAFTA.

### 1.3 The problems of de jure integration in East Asia

#### 1.3.1 Progress of trade liberalization

It is often claimed that de facto economic integration has proceeded in East Asia, whereas de jure integration has been absent. However, de jure economic integration, particularly in the elimination of tariffs, has progressed far more in East Asia than is generally recognized. ASEAN

has formed a high level preferential trade arrangement (PTA) in a number of exclusion lists as well as in the rules of origin (RoO) with a low local content ratio of 40 per cent. Since 1992, ASEAN has gradually reduced the tariff rates for goods within the member countries. By the beginning of 2003, the original six ASEAN members (ASEAN+6) of Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand had succeeded in reducing preferential tariff rates to less than 5 per cent with plans to reduce to 0 per cent 99.4 per cent of tariff lines by 2010. Also, the newer ASEAN members of Cambodia, Laos, Myanmar and Vietnam will reduce the tariff to 0 per cent for 98.2 per cent of tariff lines by 2015. This means that ASEAN will realize the ASEAN free trade area (AFTA) by 2015, with few exclusions from tariff elimination. Considering that each country has put into place a programme to exempt tariffs on intermediate goods and that the Information and Technology Agreement provides for participants to completely eliminate duties on IT products, the actual utilization ratio of the AFTA is not so low and is in fact increasing. This is an indication that AFTA has been effective.

Besides AFTA, the ASEAN-China FTA was implemented in July 2005, reducing the tariff of normal track to 0 per cent by 2010 for ASEAN+6 and by 2015 for new members. Each country has offered sensitive lists, according to the rules specified in the agreement, which are to be reduced to not more than 50 per cent by 2015 for ASEAN+6 and China and by 2018 for the newer ASEAN members.

In December 2005, the ASEAN-Korea FTA was concluded with a provision that the agreement with Thailand would be effective once it had been signed. Since 2006, ASEAN+6 and Korea have applied the preferential tariff for normal track that covers more than 90 per cent of all the tariff lines and the total value of imports based on the 2004 trade statistics, with the aim of reducing them to 0 per cent by 1 January 2012 and 1 January 2010 respectively. Among the remaining 10 per cent, the two sides will eliminate tariffs to 0–5 per cent for 7 per cent of all the tariff lines by 2016. The remaining 3 per cent are regarded as highly sensitive goods which are classified into five groups from group A to group E according to sensitivity. The group E goods of 40 tariff lines at HS-6 level are allowed to be excluded from the scheme.

Japan enforced bilateral FTAs with Singapore in November 2002, and with Malaysia in July 2006, and signed with the Philippines in September 2006, Thailand in April 2007, and Brunei in June 2007, and is currently negotiating with Indonesia and Vietnam. Besides these bilateral FTAs, Japan has negotiated plurilateral FTAs with all of ASEAN which will permit the utilization of the preferential tariffs based on accumulated RoO between



- [read \*Ad Infinitum: A Biography of Latin\* pdf, azw \(kindle\), epub](#)
- [download online \*The Tale of the Tribe: Ezra Pound and the Modern Verse Epic\* \(Princeton Legacy Library\) here](#)
- [click \*Love, Loss, and What We Ate: A Memoir\*](#)
- **[The Gravedigger's Brawl for free](#)**
- [read \*The Naming of the Shrew: A Curious History of Latin Names\* pdf, azw \(kindle\), epub, doc, mobi](#)
- [Farbrors drÃ¶m pdf, azw \(kindle\), epub, doc, mobi](#)
  
- <http://wind-in-herleshausen.de/?freebooks/Fifty-Key-Thinkers-on-the-Environment--Fifty-Key-Thinkers---Routledge-Key-Guides-.pdf>
- <http://bestarthritiscare.com/library/The-Tale-of-the-Tribe--Ezra-Pound-and-the-Modern-Verse-Epic--Princeton-Legacy-Library-.pdf>
- <http://monkeybubblemedia.com/lib/Love--Loss--and-What-We-Ate--A-Memoir.pdf>
- <http://www.celebritychat.in/?ebooks/The-Gravedigger-s-Brawl.pdf>
- <http://www.celebritychat.in/?ebooks/Swindled---Crime-Through-Time--Book-1-.pdf>
- <http://econtact.webschaefer.com/?books/How-to-Make-Girls-Chase--Every-Tactic-And-Technique-You-Need-To-Get-The-Girl-s--Of-Your-Dream.pdf>