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ASEAN and Japan: Toward Establishing a New Development Model

Fukunari Kimura
Chief Economist, Economic Research Institute for ASEAN and East Asia (ERIA)
Professor, Faculty of Economics, Keio University
1. A new development model

- Globalization means the compression of space and time, though going unevenly.
  - The emergence of production networks or the 2nd unbundling
- ASEAN and developing East Asia aggressively utilize the mechanics of production networks or the 2nd unbundling to accelerate industrialization.
- The new development model can achieve both the deepening of economic integration and the narrowing of development gaps.
2. Conceptual framework

• The fragmentation theory (the 2\textsuperscript{nd} unbundling)
  – Development gaps motivate the task-wise division of labor once service link costs are reduced.

• The two-dimensional fragmentation
  – Inter-firm division of labor in short distance generates industrial agglomeration.

• New economic geography
  – Corridor development must keep good balance between agglomeration and dispersion forces.
The 2nd Unbundling

- The 2nd unbundling, i.e., international division of labor in terms of production processes and tasks, has developed since the 1980s, based on drastic reduction in coordination costs due to ICT revolution.
- The 2nd unbundling in the manufacturing sector is most advanced in East Asia.

The fragmentation theory: Production blocks and service links

Tradeoff between the reduction in production costs in PB and the enhancement of SL costs. Fragmentation of production occurs particularly between countries at different development stages (Jones and Kierzkowski (1990)).

Before fragmentation

After fragmentation

PB: production blocks
SL: service links
Figure 9 Two-dimensional fragmentation

Source: Kimura and Ando (2005).
The evolution of the 2nd unbundling

**Cross-border production sharing**
(back-and-forth; intra-firm)

- The United States
- Mexico

**Production networks**
(“networks”; fragmentation and agglomeration; intra-firm in short distance, arm’s length in long distance)

- Japan
- Korea
- Vietnam
- Taiwan
- The Philippines
- The United States

- Headquarters or affiliates
- Unrelated firms with same firm nationality
- Unrelated firms with different firm nationality

**Source**: Ando and Kimura (2010)

2013/12/15
To achieve proper balance between agglomeration and dispersion effects, supplementary policies to enhance location advantages, particularly on the periphery side, are necessary.
Figure 5  Innovation in industrial agglomeration

International production networks

Innovation in industrial agglomeration

SMEs

SME-related policies reviewed by SME Policy Index

Technology transfer/spillover
Managerial knowhow

Access to technology
Access to finance
Fostering human resources
Establishing industrial organizations

Market access
Three-Dimensional Inclusiveness of Economic Growth

Source: ERIA (2012).
3. The current situation

• Big Three in machinery agglomerations
  – East Asia, North America, Europe
  – East Asia enhances competitiveness.

• Increasing number of countries in East Asia has come into production networks.
  – Development gaps motivate production networks.

• Production networks (the 2\textsuperscript{nd} unbundling) vs. global value chains
  – PN: time-sensitive, synchronized, coordinated links
Machinery exports and imports by regions (US$ millions)

Export shares of machinery parts and components in total exports indicate the degree of participation in international production networks.

### GDP per capita in 2018 in extended East Asian countries

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>22,791</td>
<td>28,498</td>
<td>44,697</td>
<td>57,134</td>
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<tr>
<td>Brunei</td>
<td>18,477</td>
<td>26,587</td>
<td>31,982</td>
<td>43,537</td>
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<tr>
<td>Malaysia</td>
<td>3,992</td>
<td>5,421</td>
<td>8,634</td>
<td>14,567</td>
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<tr>
<td>Thailand</td>
<td>1,983</td>
<td>2,825</td>
<td>4,992</td>
<td>9,284</td>
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<td>Indonesia</td>
<td>800</td>
<td>1,291</td>
<td>2,986</td>
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<td>Philippines</td>
<td>1,055</td>
<td>1,209</td>
<td>2,155</td>
<td>4,191</td>
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<td>Vietnam</td>
<td>402</td>
<td>637</td>
<td>1,174</td>
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<td>Lao PDR</td>
<td>308</td>
<td>474</td>
<td>1,105</td>
<td>2,354</td>
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<td>Cambodia</td>
<td>288</td>
<td>455</td>
<td>753</td>
<td>1,583</td>
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<td>Myanmar</td>
<td>178</td>
<td>216</td>
<td>742</td>
<td>1,218</td>
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<td>Australia</td>
<td>20,734</td>
<td>35,570</td>
<td>56,220</td>
<td>74,635</td>
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<td>Japan</td>
<td>37,304</td>
<td>35,781</td>
<td>42,917</td>
<td>47,281</td>
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<td>New Zealand</td>
<td>13,833</td>
<td>27,118</td>
<td>32,455</td>
<td>44,527</td>
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<td>South Korea</td>
<td>11,347</td>
<td>17,551</td>
<td>20,540</td>
<td>33,644</td>
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<td>China</td>
<td>946</td>
<td>1,726</td>
<td>4,423</td>
<td>10,711</td>
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<td>India</td>
<td>465</td>
<td>727</td>
<td>1,356</td>
<td>2,249</td>
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</tbody>
</table>

*Source: World Economic Outlook, International Monetary Fund.*  
*Notes: grey indicates GDP per capita ≤ USD 1,000; yellow indicates USD 1,000 < GDP per capita ≤ USD 3,000; light orange indicates USD 3,000 < GDP per capita ≤ USD 10,000; green indicates GDP per capita > USD 10,000.*
Income gaps are still huge at both country and provincial level. There is still a lot of room for taking advantage of the mechanics of fragmentation of production.

Source: ERIA=IDE-JETRO GSM Team.
Border development with enhancement of connectivity

GDP per capita (2005)

(source) Kudo and Kumagai (forthcoming)
GRDP per-capita (‘05), 3 sub-regions, & industrial agglomerations

Industrial Agglomerations

Source: ERIA (2010).
Production networks and distribution of the industries: A few clusters in ASEAN (2005)

We have the limited number of economic clusters in ASEAN.

Source: IDE-GSM team
LPIs in forerunner ASEAN and East Asia are relatively higher compared with the indices obtained by regression:

- higher LPI compared with GDP/GNI per capita
- better access between primary cities to primary ports
- high competitiveness in the global market
4. Required policies and economic integration

- Required policies
  - Latecomers: how to participate in production networks
    - Check (i) network set-up cost, (ii) service link cost, and (iii) production cost per se and solve bottlenecks.
  - Forerunners: how to form efficient/innovative industrial agglomerations

- ASEAN Economic Community, ASEAN+1 FTAs, RCEP, and TPP
<table>
<thead>
<tr>
<th>Fragmentation in geographical distance (par. For International fragmentation)</th>
<th>Reduction in network set-up cost</th>
<th>Reduction in service link cost</th>
<th>Reduction in production cost per se</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Investment facilitation/promotion</td>
<td>• Institutional connectivity (tariff removal, trade facilitation, ...)</td>
<td>• Liberalization of production-supporting services</td>
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<td></td>
<td>• Physical connectivity (hard and soft logistics/ICT infrastructure development)</td>
<td>• Investment liberalization</td>
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<td></td>
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<td>• Upgrading infrastructure services such as electricity supply and EPZs</td>
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<thead>
<tr>
<th>Fragmentation in disintegration (linked with the formation of industrial agglomeration)</th>
<th>Reduction in network set-up cost</th>
<th>Reduction in service link cost</th>
<th>Reduction in production cost per se</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Business matching between multinationals and local firms</td>
<td>• Reducing transaction cost in economic activities</td>
<td>• Enhancing agglomeration effects through SME development</td>
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<td></td>
<td>• Convergence/harmonization of economic institutions and legal system</td>
<td>• Strengthening innovation</td>
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Four Pathways for Realizing Vision: The Jakarta Framework

(1) Competitive and dynamic pathway
(2) Inclusive pathway
(3) Sustainable pathway
(4) Dynamic equilibrium with ASEAN centrality viz ASEAN partners
Proposed consolidated FTAs in East Asia and Asia-Pacific
5. Implication of production networks for Japan

• Enhance international competitiveness of Japanese firms
• Slow down de-industrialization by creating domestic employment
• Add stability and robustness (rather than fragility) against natural disasters and economic shocks
6. Conclusion

• ASEAN and developing East Asia are presenting a new development model.
• Japan can contribute to the completion of the model, which is also beneficial to Japan.
• The importance of the ASEAN-Japan economic relationship will be further enhanced.
References


