Border Areas as Gateway of Production Networks in Mekong Region
- Current Situations on Thai-Plus-One -

Hiroyuki Taguchi, JICA expert at NESDB, Thailand
February 14, 2014
Production Network = “Fragmentation”

One (Group) Company Fragments

Production Brocks

Service Link Costs

Larger Difference in Location Advantages
(Differences in Factor Prices, e.g. Wage Level)

Lower Service Link Costs
(Transportation, Communication, Institutional Co-ordination, etc.)

Emerging Production Networks in Mekong Region

- The big difference in wage levels (location advantages) between Thailand and CLMV attracts the extension of production networks in Mekong Region (GDP per capita: 5,000 $ in Thailand, and around 1,000 in CLMV).

- For latecomers like CLMV, accepting fragments of production block is a key for its development strategy, since it creates jobs and induces technological transfers, which can be a core for its take-off.

- For forerunners’ investors, fragmentation contributes to their cost-savings (e.g. labor costs) and better performance with big profits.

- Thus, creating production networks is win-win relationship.

- The problem is how to lower the service-link costs in Mekong Region.
Emerging Production Networks in Mekong Region: Intra-Trade of Machinery parts and components

Contribution Ratio (%) to the Increase in Mekong Intra-Trade for 1990-2010

T: Thailand, V: Vietnam, C: Cambodia, L: Lao PDR

Notes: The identification of "Machinery parts and components" is the same as the one of Kimura et al. (2007).
# Necessity to Reduce Service-link Costs in Mekong Region

## Global Ranking in Logistics Performance Index 2012 by the World Bank

(Total: 155 countries)

<table>
<thead>
<tr>
<th></th>
<th>Overall LPI</th>
<th>Customs</th>
<th>Infrastructure</th>
<th>International shipments</th>
<th>Logistics competence</th>
<th>Tracking &amp; tracing</th>
<th>Timeliness</th>
<th>GDP per Capita (US dollars 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>43,865</td>
</tr>
<tr>
<td>Malaysia</td>
<td>29</td>
<td>29</td>
<td>27</td>
<td>27</td>
<td>30</td>
<td>29</td>
<td>28</td>
<td>8,737</td>
</tr>
<tr>
<td>Thailand</td>
<td>38</td>
<td>42</td>
<td>43</td>
<td>36</td>
<td>48</td>
<td>45</td>
<td>39</td>
<td>4,992</td>
</tr>
<tr>
<td>Philippines</td>
<td>52</td>
<td>67</td>
<td>62</td>
<td>55</td>
<td>39</td>
<td>38</td>
<td>69</td>
<td>2,123</td>
</tr>
<tr>
<td>Indonesia</td>
<td>59</td>
<td>75</td>
<td>84</td>
<td>57</td>
<td>61</td>
<td>51</td>
<td>41</td>
<td>2,981</td>
</tr>
<tr>
<td>Vietnam</td>
<td>53</td>
<td>61</td>
<td>72</td>
<td>38</td>
<td>81</td>
<td>48</td>
<td>38</td>
<td>1,174</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>109</td>
<td>94</td>
<td>107</td>
<td>124</td>
<td>105</td>
<td>111</td>
<td>118</td>
<td>1,105</td>
</tr>
<tr>
<td>Cambodia</td>
<td>101</td>
<td>108</td>
<td>127</td>
<td>103</td>
<td>103</td>
<td>78</td>
<td>103</td>
<td>753</td>
</tr>
<tr>
<td>Myanmar</td>
<td>129</td>
<td>122</td>
<td>133</td>
<td>117</td>
<td>111</td>
<td>129</td>
<td>140</td>
<td>742</td>
</tr>
</tbody>
</table>

Sources:

- GDP per capita: World Economic Outlook Database, October 2012, IMF
“Border Areas” as Gateway of Production Networks

[Border Bonus]

- Location Advantages: Workers with lower wages available closely (Complementary Factor Endowment)
- Service-link Costs: Cross-border infrastructure provided by advanced countries (e.g. Thailand in Mekong region)

[Issues to be cleared]

- Institutional Arrangement: Border Logistics and SEZ
- Outer-link Connectivity to Central Cities
- Securing Labor Forces and their Skill Development
Production Networks Emerge from Border Areas
Location of Border Industrial Zones

- Hpa-an - Myawaddy - Mae Sot
- Dawei - Hit Khee - Kanchanaburi
- Savannakhet
- Dansavann – Lao Bao
- Poipet
- Bavet - Moc Bai
- Koh Kong
Institutional Arrangements

Border Logistics
- Single Window & Single Stop under CBTA / bilateral MOU
- Single-Truck Transportation across the border
- “Transit Shipment” Agreement for GSP-MFN
- Gate-Demarcation between passengers and cargoes

SEZ framework
- Privileges (corporate-tax holiday, custom-duty exemption, labor transferability, etc.)
- One Stop Services (trade and any other business licenses, currency transaction, labor permit, utility services, etc.)
- Intensive investment for infrastructure in demarcated sites
Best Practice: “Maquila” Program

Maquila Program = In-bond processing

- entitles the company to foreign investment participation in the capital and in management, of up to 100%
- entitles the company to special customs treatment, allowing duty free temporary import of machinery, equipment, parts and materials, and administrative equipment, subject only to posting a bond guaranteeing that such goods will not remain in Mexico permanently
- permits the company to bring professional or personnel they need to serve as managers, technicians, and in other fields requiring specialization (non-immigrant visas)
Mae Sot–Myawaddy–Hpa-an: Mae Sot

- Agglomeration of labor-intensive industries (garment, textile, etc.) with around 400 factories and more than 20,000 Myanmar migrant workers
- Facing minimum-wage hike from 2012-13 and Labor shortage
- Target for government SEZ consideration (AEC 2015 and EWEC)
  - One stop services
  - Transferability of daily and seasonal Myanmar migrant workers (= potential workers at planned Myawaddy factories)
  - Infrastructure: airport runaway extension, second Thai-Myanmar friendship bridge, electricity & tap water extension

Garment Factory

Around 1,600 Myanmar migrants are working in this factory owned by Thai company, producing shirts.
Mae Sot–Myawaddy–Hpa-an: Myawaddy

- Trade zone: open in 2008, 11 km away from the border, 200 ha
- Industrial zone: completed by 2015, 527 ha, north–local, south–investors, labor-intensive industries, Thai electricity, not SEZ area

Source: Myawaddy District General Administration Department
Mae Sot–Myawaddy–Hpa-an: Hpa-an

- Industrial zone: open in 2011, 185 km away from Myawaddy, 405 ha, Zone 1–foreign; Zone 2–local; Zone 3–regional; Zone 4–SMEs, garment, construction factories etc., not SEZ area

Map of Hpa-an Industrial Zone

Source: Kayin State Government
UMH (U Myint Htay) Co. Ltd. at Hpa-an I.E.  
(Interview as of June 17, 2013)

- Garment Factory (in alliance with a Japanese company), open in 2012 (the company has other two factories at Yangon)
- Production: aprons and uniform ordered from Japan (now only sewing operations / cutting and packing are at Yangon factories / but within 2013 all the operations are planned)
- Workers: 200 female in 5 production lines (within 2013, the lines will be expanded into 12 with male); Monthly wage 20,000-50,000 Kyats (30-70$), depending on the worker’s skills
- Infrastructure: the lack of electricity, and thus self-supplied by its own generators
### Road Linkage between Myawaddy and Yangon

**Truck-running Test from Bangkok to Yangon**  
*(JETRO, 2012)*

<table>
<thead>
<tr>
<th>Description</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total time needed (hours: minutes) for 870 km</strong></td>
<td><strong>68:25</strong></td>
</tr>
<tr>
<td>Truck running time</td>
<td><strong>26:36</strong></td>
</tr>
<tr>
<td>Ayutthaya - Mae Sot border (km/hour) for 445 km</td>
<td><strong>10:28 (57.1)</strong></td>
</tr>
<tr>
<td>Myawaddy border - Yangon (km/hour) for 425 km</td>
<td><strong>16:08 (40.5)</strong></td>
</tr>
<tr>
<td>(Myawaddy - Kawkareik for 54 km)</td>
<td><strong>02:57 (18.2)</strong></td>
</tr>
<tr>
<td>Waiting time</td>
<td><strong>35:45</strong></td>
</tr>
<tr>
<td>Waiting for border-gate to be opened</td>
<td><strong>14:45</strong></td>
</tr>
<tr>
<td>Waiting for traffic control to be lifted</td>
<td><strong>21:00</strong></td>
</tr>
<tr>
<td>Costum procedures</td>
<td><strong>05:54</strong></td>
</tr>
<tr>
<td>Export at Mae Sot</td>
<td><strong>00:30</strong></td>
</tr>
<tr>
<td>Import as Myawaddy</td>
<td><strong>05:24</strong></td>
</tr>
<tr>
<td>Transshipment</td>
<td><strong>00:10</strong></td>
</tr>
</tbody>
</table>

*Reference: Sea transportation between BKK and Yangon*  
*21 days*
Road Development between Myawaddy and Yangon

- Alternative by-pass road Myawaddy – Kawkareik 28 km: under construction by Thai grant towards 2015 completion
- Other road rehabilitation: feasibility studies

Source: Author based on “The Daily NNA” on December 25, 2013
Prospect of Investment Flows for Mae Sot – Myawaddy – Hpa-an: Supply-chain Extension

● Trends for Thai manufacturing firms to upgrade and to outsource labor-intensive processes in Myanmar side due to Thai minimum wage hike and the changes in the adaptation of EU-GSP (wage gap between BKK and YGN – 6:1, EU-GSP: Myanmar adapted in July 2013, Thai graduated in Jan. 2015)

● Several garment companies at Mae Sot showing concerns to set up branch factories in Hpa-an

● Issues to be cleared: SEZ adaptation to Myawaddy & Hpa-an* (for in-bond processing, labor-transferability, legalized utility services, etc.) & Road Linkage

* FS by Japanese companies
Trade Flows for Mae Sot – Myawaddy

- Trade volume: 1.3 billion USD, 55% of Thai-MM border trade
- Trade growth 2010-11: 78% (checkpoint closed until Dec. 2011)
- Exports from Thai: gasoline, beer, textile; Imports to Thai: buffalo, wood and mining products
- Expected further growth by road linkage, supply chain, Myanmar consumption etc. --- Need for logistics facilities at the border

---

**Important Customs House along MM-TH Border**

<table>
<thead>
<tr>
<th>No.</th>
<th>Checkpoint/Customs House</th>
<th>JAN-DEC 2011</th>
<th>JAN-DEC 2012</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sangkhla Buri</td>
<td>104,365.74</td>
<td>108,711.03</td>
<td>4.16</td>
</tr>
<tr>
<td>2</td>
<td>Mae Sot</td>
<td>22,105.15</td>
<td>39,376.89</td>
<td>78.13</td>
</tr>
<tr>
<td>3</td>
<td>Ranong</td>
<td>25,334.08</td>
<td>19,996.43</td>
<td>-21.07</td>
</tr>
<tr>
<td>4</td>
<td>Mae Sai</td>
<td>9,774.76</td>
<td>9,558.86</td>
<td>-2.21</td>
</tr>
<tr>
<td>5</td>
<td>Chiang Saen</td>
<td>2,452.96</td>
<td>2,532.50</td>
<td>3.24</td>
</tr>
</tbody>
</table>

Note: Unit – million baht, Source: NESDB material
## Labor Demand Prospect in Myanmar borders

<table>
<thead>
<tr>
<th>Zones</th>
<th>Industries</th>
<th>Area (ha)</th>
<th>Estimate by applying Thai industrial estates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Myawaddy</strong></td>
<td>Garment</td>
<td>527</td>
<td>932</td>
</tr>
<tr>
<td></td>
<td>Food-stuffs etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hpa-an</strong></td>
<td>Garment</td>
<td>405</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food-stuffs etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dawei</strong></td>
<td>Steel</td>
<td>2,200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Petrochemical</td>
<td>2,877</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oil &amp; Natural Gas</td>
<td>1,453</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shipbuilding</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fertilizer</td>
<td>469</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middle Industries</td>
<td>6,218</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light Industries</td>
<td>3,475</td>
<td></td>
</tr>
<tr>
<td><strong>Hit Khee</strong></td>
<td>Wire harness, Seat-cover, Textile, etc.</td>
<td>1,000</td>
<td></td>
</tr>
</tbody>
</table>

**Border Job Creation in Myanmar (Area-base Estimation)**

Mae Sot (labor-intensive industries) type:

\[ \text{200 workers/ha} \times 900 \text{ha} = 180,000 \text{ workers} \]

Rayong (heavy industries) type:

\[ \text{10 workers/ha} \times 13,000 \text{ha} \]

Mae Sot type ~ Choburi type:

\[ \text{200~50 workers/ha} \times 1,000 \text{ha} = 200,000~50,000 \text{ workers} \]

Source: JICA Research Project “Job Creation by Border Area Development between Thailand and Myanmar
Thai-Myanmar TVET Collaboration at Borders for Skill Development (JICA Research Project)

**Thai-Myanmar TVET Collaboration**
- Exchange trainers and trainees, and common curriculum among Thai and MM institutes at borders
- Targeting Myanmar workers including migrants and refugees
- Training basic & technical-skills (garment, food-processing, etc.)

**Extension of Dual System**
- Expanding companies’ partners for training institutes to ask on-the-job-trainings to meet demands from supply-chain manufacturing

**Upgrading Thai Workers’ Skills**
- Upgrading of Thai Institutes for Thai Managers and Technicians (design, fashion, QC, etc.) ready for the Supply-Chain Extension

**Community Development**
- Sharing Thai OTOP experiences by exhibition, road-show, etc.
Mae Sot Industrial and Community Education College
(Interview as of September 12, 2013)

- Providing the training courses such as trade & industry, hospitality business and business administration for 1,500 students
- Providing the trainings at Mae Sot camp in collaboration with NGO (ADRA) (program) and Government of Japan (hardware)
- Adopting a dual system to send its students to the factories for on-the-job training
Hit Khee - Kanchanaburi

- Kanchanaburi (Thai) and Hit Khee (MM) on the way from Dawei (a large project of Thai and MM) and Bangkok
- **Kanchanaburi:** IEAT-FS on “Kanchanaburi-Dawei Logistics Center”
- **Hit Khee:** 4 km across the border from Phu Nam Rom; 170 km from Bangkok, 300 km from Laem Chabang deep-sea port, and 160 km from Dawei
  - The Amata Corporation planning to set up an industrial estate with 1,000 hectare as an initial step and with 4,000 hectare as eventual aim in about five years
  - Expecting Thai and Japanese investors to set up their branch factories to save their labor costs, and the first factory to operate by mid-2015.
Source: Italian-Thai Development Plc. material
Savannakhet (Lao PDR)
Savan-SENO Special Economic Zone

- Established in 2003 by Government Decree
- Located on the way of EWEC, linked with Thai by the second International Mekong bridge and Road No. 9
- Four zones (A, B, C and D) : 954 hectare, B (Savan-Japan, PPSEZ)
- Main investors: Nikon (Sept. 2013), Logitem, Toyota Boshoku, etc. (43 companies as of July 2013).

- Privileges:
  - Corporate & income tax incentives, Custom duty exemption
  - One stop services by SEZ Authority (SEZA), led by National Committee headed by Deputy Prime Minister, multi-entry VISA
  - Land-lease price - 25 USD per m2
  - Minimum wage: 120 USD per month as of Aug. 2013
- Issues: labor forces (return of migrant workers?), new airport
Location of Zone A, B, C & D

Source: SEZA material
Trade Flows between Mukdahan and Savannakhet

Note: The second international Mekong bridge open in Dec. 2006; Source: BOT statistics
Poipet O'Neang Special Economic Zone

- Established in 2006 based on the approval by the Prime Minister
- Located 250km from Laem Chabang Port and 306 km from Bangkok
- Total areas: 467 hectare
- Main investors: Hi-Tech Apparel (Thai), and other garment, jewelry box and electronics companies that already invested and plans to set up their factories soon

- Privileges:
  - Corporate & income tax incentives, Custom duty exemption
  - One stop services, single-Truck Transportation across the border
  - Infrastructure: electricity - 5 baht per KWH from Thai, land-lease price - 35 USD per m²
  - Minimum wage: 80USD per month as of Jan. 2014

- Issues: congestion of existing border gate, consideration of new border checkpoints, demarcation between passengers and cargoes
Poipet O'Neang Special Economic Zone
Neang Kok Koh Kong SEZ

- Established in 2006 based on the approval by the Prime Minister
- Located 330km from Laem Chabang Port and 400 km from Bangkok
- Total areas: 335 hectare
- Main investors: Yazaki, Mikasa Sports, KKN Apparel (Thai), Camko Motor (Korea), etc.

Privileges:
- Corporate & income tax incentives, Custom duty exemption
- One stop services, single-Truck Transportation across the border
- Infrastructure: electricity - 6 baht per KWH from Thai, land-lease price - 30 USD per m²
- Minimum wage: 80USD per month as of Jan. 2014

Issues: widening border road in Thai, the need for “Transit Shipment” Agreement for GSP-MFN
Neang Kok Koh Kong SEZ

Legend

Industrial Estate Area
Industrial Processing Area
Export Processing Zone 245.12 ha (100%)
General Industrial Zone 56.90 ha (23%)
Commercial Zone 110.34 ha (45%)
Public Utilities and Infrastructure Zone 94.24 ha (9.1%)
Park and Green Zone 36.80 ha (10%)
Road 29.20 ha (10%)

Future Development Area or Industrial Processing Zone Expansion 94.24 ha

Land Use Plan of Industrial Estate at Koh Kong, Cambodia