Overview of Inland Connections and Logistic System in ASEAN

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Increasing Global Trade

- Ave. growth rate in terms of Global Merchandise Trade recorded 8.4% (2010)

Source: Drewry Maritime Advisor, 2011
Risk management in Int’l Logistics

Standard SCM
- Focused on cost & Inventory control
- Poor risk management for emergencies

World Disaster events
- 2011 Japan Earthquake and Tsunami
- 2011 Thailand Floods
- A need for improved production and

Need for SCM 2.0
- Risk Management
- Energy efficiency
- Customer oriented
- Standardization of logistics components
- Diversification of procurement sites
- Securing adequate inventories
- Increase in port demand for secure areas
- Expansion of Transport and warehouse business
Growth in Global Logistics Market

- Major economies (EU, US, China, Japan) trying to expand FTAs
- NAFTA: Increasing trade between US → North America & Caribbean
  - Purpose is to impose preferential tariff rates to clothing and finished textiles
  - 93% of US Fiber exports: North and Central America, Caribbean
- Back-to-Back C/O in Korea-ASEAN FTA
  - Acknowledging origins of those products being Exported as original state
  - Increase in demand for distribution bases (Singapore)
- Increase in Value-added exports (by utilizing FTA agreements, provisions on origins)

Status of RTA’s in the world

Portion of FTAs in global Trade
Growth in Asian Logistics Industry

- Asia’s T&L sector expanding rapidly, in line with the region’s stellar economic growth
  - Asia’s widening manufacturing base, Deeper intra-Asian trade integration, Rising household incomes, High urbanization rates and widespread government efforts to improve infrastructure have boosted demand for T&L services
  - 9 out of 10 biggest container ports in the world were in ASIA (2009)
- # of players in Asia’s T&L sector, homegrown and global, is rising
- Competition in Asia’s T&L sector is intensifying
- Rising domestic demand in Asia will change the nature of trade in the region, creating new growth opportunities

Boosting Trading Volume in ASEAN

- CLMV (Cambodia, Lao PDR, Myanmar, Vietnam) are the countries with low economic development among the ASEAN region
- However, CLMV market shows robust economic development, Korean companies are very much interested in them

(Ex) Markets near the Thailand-Myanmar-Cambodia-Lao PDR-Vietnam-China network

### Trade volume in ASEAN countries

<table>
<thead>
<tr>
<th>Year</th>
<th>Brunei Darussalam</th>
<th>Cambodia</th>
<th>Indonesia</th>
<th>Lao PDR</th>
<th>Malaysia</th>
<th>Myanmar</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
<th>Vietnam</th>
<th>ASEAN</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million $</td>
<td>Trillion $</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>46</td>
<td>1</td>
<td>371</td>
<td>1</td>
<td>234</td>
<td>13</td>
<td>488</td>
<td>170</td>
<td>7</td>
<td>0.1</td>
<td>3.9</td>
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<tr>
<td>1991</td>
<td>36</td>
<td>1</td>
<td>551</td>
<td>2</td>
<td>712</td>
<td>16</td>
<td>1,256</td>
<td>669</td>
<td>47</td>
<td>0.4</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>46</td>
<td>28</td>
<td>873</td>
<td>11</td>
<td>1,616</td>
<td>54</td>
<td>2,380</td>
<td>1,272</td>
<td>312</td>
<td>0.7</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>175</td>
<td>169</td>
<td>3,810</td>
<td>76</td>
<td>4,150</td>
<td>216</td>
<td>7,779</td>
<td>4,553</td>
<td>2,144</td>
<td>2.4</td>
<td>36.2</td>
<td></td>
</tr>
<tr>
<td>CAGR</td>
<td>4.6%</td>
<td>19.5%</td>
<td>8.1%</td>
<td>16.0%</td>
<td>10.1%</td>
<td>9.9%</td>
<td>7.0%</td>
<td>9.7%</td>
<td>11.6%</td>
<td>21.0%</td>
<td>9.8%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

CAGR: Compound Annual Growth Rate
Promoting Free Trade Agreement

√ ASEAN countries, from 1992, trying to promote FREE TRADE and Regional Integration by expanding FTAs with other various countries

- ASEAN is emerging as the major regional hub linking ASEAN members with the region’s larger economies
  - Recently implemented regional agreements with India, Australia & New Zealand jointly
  - FTA discussions with the EU
- Unique concept of SEZ(Special Economic Zone) used in ASEAN Region
  - IMT GT
  - GMS
Promoting Logistics Industry (1)

√ ASEAN member states realized that Logistics Industry will improve the regional economic growth by enhancing transport infrastructures

- Poor transport infrastructures impede economic growth for T&L industry in ASEAN region
  - South-East Asia possess poor level of transport infrastructures in all aspects
  - Low logistics/transport efficiency eventually leads to low economic growth in the region despite the adequate supply of natural resources and labor

- Investment needed for transport/logistics infrastructure in the region (similar to the North-East Asian Economic Model)

Promoting Logistics Industry (2)

√ ASEAN’s evolving manufacturing footprints will affect the region’s T&L industry by shifting demand to newer markets

◆ Several broad trends are causing a rethink of Asian manufacturing

(ex) rising wages in China

✓ Such leads to the flight of low-cost manufacturing away from the south and coastal areas of that country to inland provinces and neighboring countries such as Vietnam

◆ T&L firms need to adapt to such rapid changing dynamics to maintain profitability

✓ North-East Asia: US$85 per Container/ South-East Asia: US$1,236 per Container

✓ According to World Bank report(2008), 10% of transport cost reduction will lead to 20% increase in trade volume
The objectives of the Logistics Roadmap are:

1. Create an ASEAN single market by 2015 by strengthening ASEAN economic integration through liberalization and facilitation measures in the area of logistics services;

2. Support the establishment and enhance the competitiveness of an ASEAN production base through the creation of an integrated ASEAN logistics environment

Source: ASEAN Secretariat, n.d. ASEAN Cooperation on Transport Facilitation and Logistics.
Major Policy Areas for the Roadmap

I. Encourage the Integration of the ASEAN National Logistics Systems
   – by increasing communications at the regional level to identify actions in the logistics sector to support and facilitate trade flows between ASEAN Countries

II. Encourage the Progressive Liberalization of Logistics Services
    – to make them better able to respond to the opportunities available for ASEAN integration and increasing competitiveness

III. Increase Trade, Logistics and Investment Facilitation
    – to identify the means needed to improve transport logistics facilities and the priorities for investment

IV. Build ASEAN Logistics Capacity
    – by encouraging human resource development in the sector, and an environment conducive to developing the sector

V. Promote ASEAN Logistics Service Providers by identifying them and providing channels for their greater participation in the sector

VI. Promote Multimodal Transport Capacity (especially containerized transport)

Source: ASEAN Secretariat, n.d. ASEAN Cooperation on Transport Facilitation and Logistics.
CONCEPT OF INTEGRATED LOGISTICS NETWORK
**Definition of Integrated Logistics Network**

√ **System-wide management of entire logistics chain as a single entity, instead of separate management of individual logistical functions**

- Standardization in distribution among countries and locals
- Increase in logistics efficiency through proficient transshipment among various transport modes
- Easier and faster customs clearance with regional agreement

### Related Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and Operationalization of Dry ports and Intermodal Transport Corridors (UNESCAP, 200)</td>
<td>- Economic benefits&lt;br&gt;- Increase in logistics efficiency</td>
</tr>
<tr>
<td>UNESCAP Transport Sector Activities and Introduction to the corridor project (UNESCAP, 2009)</td>
<td>- Increase access&lt;br&gt;- Systemic management in various transport measures&lt;br&gt;- Economic benefits</td>
</tr>
<tr>
<td>Toward a Roadmap for Integration of the ASEAN Logistics Sector: Rapid Assessment and Concept Paper Executive Summary (ASEAN, USAID, NATHAN Association)</td>
<td>- Increase in national competitiveness&lt;br&gt;- Composed of (1) shippers, traders &amp; consignees; (2) public and private service providers; (3) regional and national rules, policies and institutions; and (4) transport and communication infrastructure</td>
</tr>
<tr>
<td>Intermodal Transportation and Integrated Transport System Spaces, Networks and Flows (Jean Paul Rodrigue, 2006)</td>
<td>- Economic benefits&lt;br&gt;- Necessary to intermodal transportation&lt;br&gt;- Positive effects to technology development</td>
</tr>
<tr>
<td>The East-West Corridor (Asian Development Bank)</td>
<td>- Increase in trade&lt;br&gt;- Increase in logistics efficiency&lt;br&gt;- Decrease in regional difference</td>
</tr>
</tbody>
</table>
Current status in ASEAN region

√ ASEAN member states are planning various plans in order to integrate transport, logistics and economic system

• GMS Development Plan: Promoting cooperative development in 8 economic zones
• ASEAN Highway, Train Asian Railway: Increase connectivity among ASEAN
• ASEAN Transportation Plan 2011-2015: Integrated management in logistics system, Green Logistics, and Logistics Efficiency

Conditions for Efficient Integrated Logistics Network (1)

√ Improved transport infrastructure needed for efficient integrated logistics network

- Inconsistent levels in transport infrastructure among the ASEAN member countries
- Improved and better road and rail infrastructure are currently necessary in order to replace traditionally well-used inland waterways

### World Transportation Ranking (World Economic Forum)

<table>
<thead>
<tr>
<th></th>
<th>Myanmar</th>
<th>Lao PDR</th>
<th>Vietnam</th>
<th>Cambodia</th>
<th>Thailand</th>
<th>Malaysia</th>
<th>Indonesia</th>
<th>Singapore</th>
<th>Philippines</th>
<th>Brunei</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>145</td>
<td>146</td>
<td>120</td>
<td>66</td>
<td>39</td>
<td>27</td>
<td>90</td>
<td>3</td>
<td>87</td>
<td>30</td>
</tr>
<tr>
<td>Rail</td>
<td>144</td>
<td>N/A</td>
<td>68</td>
<td>81</td>
<td>65</td>
<td>17</td>
<td>51</td>
<td>5</td>
<td>94</td>
<td>88</td>
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<tr>
<td>Total</td>
<td>145</td>
<td>146</td>
<td>119</td>
<td>72</td>
<td>49</td>
<td>29</td>
<td>92</td>
<td>2</td>
<td>98</td>
<td>43</td>
</tr>
</tbody>
</table>

Conditions for Efficient Integrated Logistics Network (1)

√ Necessary to construct adequate number of dry ports for logistics efficiency

I. The capacity of dry ports in ASEAN is not enough to fill the demands
II. The bottlenecks on the borders arise because of the absence of organized plans for

Example (Inefficiency on the border) : Trapeang Phlong / Xa Mat (Vietnam-Cambodia)

<table>
<thead>
<tr>
<th>Myanmar</th>
<th>Bago, Mandalay, Mawlamyine, Monywa, Muse, Pyay, Tamu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lao PDR</td>
<td>Vientiane, Houyxai, Laksao, Luangprabang, Nateuy, Oudomsai, Pakse, Seno, Thakhek</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Bihn Duong, Dong Nai, Gai Lai, Ha Noi, Vihn Phuc, Bac Ninh, Lang Son, Lao Cai, Phu Tho</td>
</tr>
<tr>
<td>Cambodia</td>
<td>CWT Dry Port, Olair Dry Port, Phnom Pehn International Port, Phnom Pehn SEZ, Teng Lay</td>
</tr>
<tr>
<td>Thailand</td>
<td>Lat Kraban ICD, Chaing Kong(Chiangmai), Natha(Nong Khai)</td>
</tr>
</tbody>
</table>
Why need Integrated Logistics Network?

√ Integrated logistics network for increasing logistic efficiency and connectivity between the ASEAN member countries

I. Standardization and elevation of Infrastructure level/quality
II. Development and vitalization of dry ports
III. Eliminating the bottlenecks near the border with mutual agreements

<table>
<thead>
<tr>
<th>External Factors</th>
<th>Basic Requirements</th>
<th>Expected Outcomes</th>
</tr>
</thead>
</table>
| • Increase in trade volume between ASEAN and China  
• Bottlenecks on the borders frequently  
• Inconsistent levels in transport infrastructure among the ASEAN countries | • The standardizing and upgrading the quality of Infrastructure  
• The development and vitalizing the dry ports  
• The elimination of the bottlenecks on the borders | • Increase the logistic efficiency between ASEAN and China  
• Reduce the logistic costs in ASEAN region  
• Increase the connectivity between ASEAN countries |

Integrate Logistics Networks

Expected Outcomes:
- Increase the logistic efficiency between ASEAN and China
- Reduce the logistic costs in ASEAN region
- Increase the connectivity between ASEAN countries
CASE STUDY
EU : Pan-European Corridor

General Information

- Total of 10 corridors
- EU including East European countries, Russia, Germany, Italy, Austria, Switzerland Participated
- For improved and smoother logistics between East and West European countries
- 48,000km (Rail: 25,000km, Road: 23,000km)
- Connectivity with other logistics networks such as Trans-European Transport Network (TEN), TINA Network, Pan-European Transport Areas (PETrAs), Transport Corridor Europe Caucasus Asia (TRACECA)

Source: European Commission (2003), Status of the Pan-European Transport Corridors and Transport Areas
EU : Pan-European Corridor

Critical Success Factor 1 : Establishing adequate number of well built transport infrastructure

- EU countries realized that such elevated level of transport infrastructure is the key for efficient integrated logistics network
- Most of the investments were concentrated in East European region (poor level of transport infrastructures)
- Ultimately Pan-European Corridor was attempted in order to acquire adequate number of transport infrastructures and improve EU’s logistics level

Investments from EU Fund (Million Euro)

Source: European Commission (2003), Status of the Pan-European Transport Corridors and Transport Areas
EU : Pan-European Corridor

√ Critical Success Factor 2 : Appropriate Dry port positioning and efficient management

- Proper positioning of 10 logistics axis : selecting local logistics centers in the axis
- Assumed expected quantity of good transported before positioning the dry ports and logistics centers
- Easier and Faster customs clearance (through related Agreements between the members)

Dry ports locations in Pan-European Corridor

Source: European Commission (2003), Status of the Pan-European Transport Corridors and Transport Areas
USA: Ports-to-Plain Trade Corridor

General Information

- 9 states (TX, NM, OK, CO, ND, SD, MT, NE and WY), Canadian province (Alberta) and Mexico are included
- Total of 3,754km
- Aimed at offering rural America, its advocates and key trading partners a forum for collaboration, partnership for maximizing the potential of the region and other resources
- Produces $44.3 billion of agricultural goods, or 22.1% of the U.S. total; 6 of the top 10 farm states
- Generates $166.7 billion in trade with Canada and Mexico, nearly 20% of total U.S.-North America trade

Source: AECOM, Port-to-Plain Corridor, n.d.
Critical Success Factor 1: Establishing adequate number of well built logistics infrastructure

- Participated members realized that the level of transport infrastructure should be elevated and improved.
- Most of the investments were concentrated in the region with poor level of transport infrastructure.
- Ultimately Ports-to-Plain Trade Corridor was established for logistics efficiency and security among the North American region.

Amount of Investment to selected states (Million USD)

Source: AECOM, Port-to-Plain Corridor, n.d.  
USA: Ports-to-Plain Trade Corridor

Critical Success Factor 2: Development of dry ports in main point and efficient operation

- Establishing the corridors based on its major transport mode (Trucking)
- Easier and Faster customs clearance process among NAFTA region
- Economic benefit expected: about USD $2 Million – USD $3.75 Million per Year

<table>
<thead>
<tr>
<th>Ports-to-Plain Trade Corridor: Dry Port</th>
<th>Expected Economic output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Add 50 Spaces 8 Turns/Day</td>
<td>400 Customers $14/Customer</td>
</tr>
<tr>
<td>400 Customers $14/Customer</td>
<td>750 Customers $14/Customer</td>
</tr>
</tbody>
</table>
IMPLICATIONS
Implications

◆ Work together for better and improved fiduciary relations among ASEAN countries

  • Agreements, cooperation and amending institutions needed for easier and faster customs clearance will lead to decrease in Bottleneck events
  
  • International conventions and conferences between ASEAN member states and North East Asian Countries (Korea, Japan, China) for sharing information

◆ “Integrated Logistics Plan” needed in the ASEAN region

  • By estimating and calculating logistics demand between the member countries, any related logistics and transport facilities/infrastructure should be positioned properly

◆ Increase in ASEAN Connectivity

  • Modernize and improve transport infrastructure/facilities (AH(Asian Highway), TAR (Trans Asian Railway))
  
  • Improving inland logistics efficiency through developing inland ports

◆ Establishing Green Logistics System

  • Adopting Green Logistics and transport technologies for Rio+20 Summit
  
  • Efficiency in customs and logistics process: combining with the latest technologies
THANK YOU

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