CONNECTING TO COMPETE
The 2014 Logistics Performance Index

Surabaya
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World Bank Consultant
1. Why care about logistics?

2. What is the Logistics Performance Index?

3. The LPI’s role in policy dialogue

4. LPI 2014 results

5. Examples of LPIs from Thailand and Vietnam
Logistics costs impact productivity

Firm-level logistics expenditures as % of sales in 2011-2012

Reliability is often more important than freight costs

Logistics costs increase with decreasing logistics performance. Most of this increase comes from lower reliability and the need to increase inventory (“other costs”).

Sources: Authors, for Germany: TU Berlin, for Brazil: ILOS, for Finland: Turku School of Economics

World Bank LPI, Transport Business Summit 2014, Brussels
What is the Logistics Performance Index (LPI)?
The 6 LPI dimensions along the supply chain framework

- Point of Origin
- Seller’s Factory
- Alongside Vessel
- Delivery to Dock
- Unloaded on Dock
- Frontier/Border
- Delivered to Buyer’s Warehouse
- Importing Country
- Exporting Country

World Bank Logistics Performance Index (LPI)
LPI outline

- Published every 2 years
- Built on >5,000 country assessments by > 1,000 logistics professionals
- Respondents rate logistics performance of own country and 8 other countries on a scale of 1 to 5
- Coverage: 160 countries in LPI 2014
What is the role of the LPI?

The LPI

• Is an overall metric of supply chain efficiency.
• Provides information of where a country stands and a broad indication of problem areas.
• Is not a diagnostic tool and needs to be supported by specific tools designed to perform that function.

The LPI has had a significant impact in raising awareness and pushing for comprehensive “connectivity” and logistics policies, e.g. in Kazakhstan, APEC and ASEAN.
Regulations (customs, services) are increasingly regional, but implementation is national.

World Bank Logistics Performance Index (LPI)
LPI 2014 overall scores:
Performance converging around the world
LPI 2014: Top 10 performers by income group

**Top 10 overall**

1. Germany
2. Netherlands
3. Belgium
4. United Kingdom
5. Singapore
6. Sweden
7. Norway
8. Luxembourg
9. United States
10. Japan

**Top 10 upper middle-income**

1. Malaysia
2. China
3. Turkey
4. Hungary
5. South Africa
6. Thailand
7. Romania
8. Panama
9. Bulgaria
10. Mexico

**Top 10 lower middle-income**

1. Vietnam
2. Indonesia
3. India
4. Philippines
5. Ukraine
7. El Salvador
8. Pakistan
9. Nigeria
10. Guatemala

**Top 10 low-income**

1. Malawi
2. Kenya
3. Rwanda
4. Cambodia
5. Burkina Faso
6. Liberia
7. Ethiopia
8. Nepal
9. Burundi
10. Bangladesh

*World Bank Logistics Performance Index (LPI)*
## ASEAN LPI 2014 Ranking

<table>
<thead>
<tr>
<th>Typology</th>
<th>LPI Score</th>
<th>ASEAN countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>logistics friendly</td>
<td>3.50 - 5.00</td>
<td>Singapore, Malaysia</td>
</tr>
<tr>
<td>consistent performers</td>
<td>2.95 - 3.49</td>
<td>Thailand, Philippines, Vietnam, Indonesia</td>
</tr>
<tr>
<td>partial performers</td>
<td>2.40 - 2.94</td>
<td>Cambodia</td>
</tr>
<tr>
<td>logistics unfriendly</td>
<td>0.00 - 2.39</td>
<td>Laos, Myanmar</td>
</tr>
</tbody>
</table>

### ASEAN LPI 2014 Rankings

- **Singapore (4th)**: 4.00
- **Malaysia (25th)**: 3.59
- **Thailand (35th)**: 3.43
- **Vietnam (48th)**: 3.15
- **Indonesia (53rd)**: 3.08
- **Philippines (57th)**: 3.00
- **Cambodia (83rd)**: 2.74
- **Laos (131st)**: 2.39
- **Myanmar (145th)**: 2.25
### Thailand’s WB LPI score & rank

<table>
<thead>
<tr>
<th>Thailand (LPI)</th>
<th>2007</th>
<th>2010</th>
<th>2012</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Score</strong></td>
<td>3.31</td>
<td>3.29</td>
<td>3.18</td>
<td>3.43</td>
</tr>
<tr>
<td><strong>Rank</strong></td>
<td>31</td>
<td>35</td>
<td>38</td>
<td>35</td>
</tr>
</tbody>
</table>

**Note:**
- Different time period so comparison not really adequate
- The 2011 floods also affected the perception of respondents on Thailand’s logistics capability
- The 2013 protest in Thailand does not seem to have affected perception
9 key KPIs can reflect overall logistics performance

- Transportation cost
- Warehousing cost
- Inventory carrying cost
- Forecast accuracy rate
- DIFOT (transport)
- Rate of return goods
- Order cycle time
- Delivery cycle time
- Inventory day
## Industry comparison

### 1. Cost dimension

<table>
<thead>
<tr>
<th>Industry</th>
<th>Admin cost</th>
<th>Trans cost</th>
<th>WH cost</th>
<th>Inv cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>food products and beverages</td>
<td>1.2%</td>
<td>5.5%</td>
<td>1.8%</td>
<td>4.9%</td>
</tr>
<tr>
<td>textiles</td>
<td>2.0%</td>
<td>11.5%</td>
<td>3.3%</td>
<td>5.4%</td>
</tr>
<tr>
<td>wearing apparel; dressing and dyeing of fur</td>
<td>2.4%</td>
<td>15.4%</td>
<td>4.6%</td>
<td>4.0%</td>
</tr>
<tr>
<td>paper and paper products</td>
<td>1.6%</td>
<td>5.9%</td>
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</tr>
<tr>
<td>coke, refined petroleum products and nuclear fuel</td>
<td>1.0%</td>
<td>4.6%</td>
<td>1.9%</td>
<td>8.5%</td>
</tr>
<tr>
<td>chemicals and chemical products</td>
<td>1.6%</td>
<td>4.0%</td>
<td>1.6%</td>
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</tr>
<tr>
<td>rubber and plastics products</td>
<td>1.2%</td>
<td>4.0%</td>
<td>1.3%</td>
<td>10.8%</td>
</tr>
<tr>
<td>other non-metallic mineral products</td>
<td>3.0%</td>
<td>4.3%</td>
<td>19.7%</td>
<td>6.4%</td>
</tr>
<tr>
<td>basic metals</td>
<td>2.2%</td>
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<tr>
<td>machinery and equipment n.e.c.</td>
<td>2.3%</td>
<td>4.3%</td>
<td>7.3%</td>
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</tr>
<tr>
<td>radio, television and communication equipment and apparatus</td>
<td>1.2%</td>
<td>2.1%</td>
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<tr>
<td>motor vehicles, trailers and semi-trailers</td>
<td>0.7%</td>
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#### Logistics cost per Sales ratio

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Average Delivery Cycle Time (Days)

- radio, television and communication equipment and apparatus: 2.42
- coke, refined petroleum products and nuclear fuel: 2.02
- machinery and equipment n.e.c.: 2.00
- rubber and plastics products: 1.76
- chemicals and chemical products: 1.75
- other transport equipment: 1.66
- other non-metallic mineral products: 1.61
- paper and paper products: 1.57
- motor vehicles, trailers and semi-trailers: 1.56
- basic metals: 1.56
- furniture; manufacturing n.e.c.: 1.47
- textiles: 1.45
- food products and beverages: 1.37
- wearing apparel; dressing and dyeing of fur: 1.17
Delivery In Full On Time rate (%)

- motor vehicles, trailers and semi-trailers: 90%
- basic metals: 87%
- food products and beverages: 86%
- chemicals and chemical products: 86%
- other non-metallic mineral products: 86%
- rubber and plastics products: 86%
- furniture; manufacturing n.e.c.: 85%
- paper and paper products: 85%
- textiles: 82%
- other transport equipment: 82%
- coke, refined petroleum products and nuclear fuel: 80%
- machinery and equipment n.e.c.: 78%
- radio, television and communication equipment and apparatus: 72%
- wearing apparel; dressing and dyeing of fur: 68%
Rate of Returned goods (%)

- Other non-metallic mineral products: 4.6%
- Textiles: 4.6%
- Food products and beverages: 4.5%
- Rubber and plastics products: 4.3%
- Other transport equipment: 4.2%
- Machinery and equipment n.e.c.: 3.9%
- Basic metals: 3.8%
- Furniture; manufacturing n.e.c.: 3.7%
- Radio, television and communication equipment and apparatus: 3.7%
- Paper and paper products: 3.6%
- Chemicals and chemical products: 3.5%
- Motor vehicles, trailers and semi-trailers: 3.0%
- Coke, refined petroleum products and nuclear fuel: 2.1%
- Wearing apparel; dressing and dyeing of fur: 2.0%
<table>
<thead>
<tr>
<th>ISIC</th>
<th>Industry</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>food products and beverages</td>
<td>2.65</td>
</tr>
<tr>
<td>17</td>
<td>textiles</td>
<td>2.63</td>
</tr>
<tr>
<td>18</td>
<td>wearing apparel; dressing and dyeing of fur</td>
<td>2.80</td>
</tr>
<tr>
<td>21</td>
<td>paper and paper products</td>
<td>2.64</td>
</tr>
<tr>
<td>23</td>
<td>coke, refined petroleum products and nuclear fuel</td>
<td>2.56</td>
</tr>
<tr>
<td>24</td>
<td>chemicals and chemical products</td>
<td>2.58</td>
</tr>
<tr>
<td>25</td>
<td>rubber and plastics products</td>
<td>2.70</td>
</tr>
<tr>
<td>26</td>
<td>other non-metallic mineral products</td>
<td>2.52</td>
</tr>
<tr>
<td>27</td>
<td>basic metals</td>
<td>2.73</td>
</tr>
<tr>
<td>29</td>
<td>machinery and equipment not elsewhere classified</td>
<td>2.66</td>
</tr>
<tr>
<td>32</td>
<td>radio, television and communication equipment and apparatus</td>
<td>2.79</td>
</tr>
<tr>
<td>34</td>
<td>motor vehicles, trailers and semi-trailers</td>
<td>2.61</td>
</tr>
<tr>
<td>35</td>
<td>other transport equipment</td>
<td>2.68</td>
</tr>
<tr>
<td>36</td>
<td>furniture; manufacturing not elsewhere classified</td>
<td>2.83</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>2.67</strong></td>
</tr>
</tbody>
</table>
Vietnam’s logistics costs

<table>
<thead>
<tr>
<th></th>
<th>Transportation cost</th>
<th>Warehousing cost</th>
<th>Inv. Carrying cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing and construction</td>
<td>5.868055%</td>
<td>4.208159%</td>
<td>2.688779%</td>
</tr>
<tr>
<td>Import and export</td>
<td>10.863437%</td>
<td>1.706971%</td>
<td>2.292325%</td>
</tr>
<tr>
<td>Manufacturing and export</td>
<td>5.024449%</td>
<td>5.338047%</td>
<td>6.068492%</td>
</tr>
<tr>
<td>Overall</td>
<td>7.170385%</td>
<td>3.861790%</td>
<td>4.068259%</td>
</tr>
</tbody>
</table>
Vietnam’s DIFOT & Forecast Accuracy Rate

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing and construction</th>
<th>Import and export</th>
<th>Manufacturing and export</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Delivery In-Full and On-Time Rate</td>
<td>80.83%</td>
<td>70.68%</td>
<td>86.29%</td>
<td>78.17%</td>
</tr>
<tr>
<td>Forecast Accuracy Rate</td>
<td>81.29%</td>
<td>73.00%</td>
<td>79.71%</td>
<td>78.14%</td>
</tr>
</tbody>
</table>

World Bank Logistics Performance Index (LPI)
Summary

- Baseline logistics performance critical
- WB’s LPI is an external perceptual assessment
- Important to develop own LPI to guide national logistics policy
- Benchmarking with neighbouring countries will enable enhanced preparation for the ASEAN Economic Community (AEC)