Benchmarking Logistics Performance
To Enhance Competitiveness

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Agenda

• Benchmarking
• Key performance indicators
• Indonesia logistics performance survey
• Vietnam logistics performance survey
• Reflection on Thailand
Benchmarking in Logistics

• Benchmarking is an improvement technique that considers how others perform a similar activity, task, process or function.
• Benchmarking is not just a comparison of key performance indicators (KPIs) although benchmarking uses KPIs to compare operations.
## Where to start the benchmarking?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Internal Benchmarking</th>
<th>Two companies</th>
<th>Five –eight Companies</th>
<th>Many Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who participates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantitative focus (KPIs)</td>
<td>YES</td>
<td>POSSIBLE</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Process discussions and site visits possible</td>
<td>YES</td>
<td>UNUSUAL</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Confidentiality concerns</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Achieve understanding of best practice</td>
<td>NO</td>
<td>NO</td>
<td>UNLIKELY</td>
<td>UNLIKELY</td>
</tr>
<tr>
<td>Achieve understanding of best performance</td>
<td>NO</td>
<td>NO</td>
<td>UNLIKELY</td>
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<td>Achieve understanding of best practice</td>
<td>NO</td>
<td>NO</td>
<td>UNLIKELY</td>
<td>UNLIKELY</td>
</tr>
</tbody>
</table>

**External Benchmarking**

- **Competitors**
  - Two companies: POSSIBLE, YES, YES, YES, YES
  - Five –eight Companies: YES
  - Many Companies: No

- **Non competitors**
  - Two companies: YES, YES, YES, YES, YES
  - Five –eight Companies: YES
  - Many Companies: YES

- **Different industries**
  - Two companies: YES, YES, YES, YES, YES
  - Five –eight Companies: YES
  - Many Companies: YES
Framework: 9 Key Logistics Activities

- Order processing & Logistics communications
- Customer service & support
- Demand forecasting & planning
- Purchasing & procurement
- Material handling & packaging
- Inventory management
- Transportation
- Facilities site selection, warehousing & storage
- Return goods handling and reverse logistics

Source: Grant et al., 2006
Framework Development

Framework for Logistics Performance Indicators

Time Dimension
Cost Dimension
Reliability Dimension

9 Logistics Activities
Indonesia logistics performance survey

- Questionnaire was developed based on literature review
- Validated by World Bank staffs and industry expert
- Survey delivery through workshop approach in collaboration with APINDO & ALFI
- Location
  Cikarang/Jakarta/Semerang/Surabaya/Medan/Makassar
- Current status of data collection
  - Manufacturing survey: 200 respondents
  - LSP & FF survey: 170 respondents
High use of unitised cargo in domestic and international shipments...

Domestic
- 63.16% Unitised cargo (containers, trailers), Full Container Load (FCL) and/or Full Truck Load (FTL)
- 34.21% Unitised cargo (containers, trailers), Less than Container Load (LCL) and/or Less than Truck Load (LTL)
- 25.00% Break Bulk (pallets, rollers, cages, packages, etc.)

International
- 26.32% Unitised cargo (containers, trailers), Full Container Load (FCL) and/or Full Truck Load (FTL)
- 23.68% Unitised cargo (containers, trailers), Less than Container Load (LCL) and/or Less than Truck Load (LTL)
- 22.37% Air freight
- 10.53% Break Bulk (pallets, roller cages, packages, etc.)
- 5.28% mail shipping
- 2.63% Express freight
- 1.32% Dry bulk
- 2.63% Liquid bulk
- Other:

Higher portion of LCL in domestic market
Majority of Surveyed Manufacturers are selling primarily in the domestic market.
Divergences on the importance of logistics performance dimensions

Manufacturers

- Reliability: 43%
- Time: 29%
- Cost: 28%

LSPs

- Reliability: 30%
- Time: 31%
- Cost: 39%
In-house vs. Outsource

LSPs average performance
• DIFOT: 81.1%
• Damage rate: 3.7%
• C2C: 13.8 days

Manufacturer average performance
• DIFOT: 80.9%
• Damage rate: 2.1%
• C2C: 19 days
• Complain rate: 6.7%
• Forecast accuracy: 80.8%
• Returns: 3.6%
Indonesian Manufacturers’ logistics cost/sales

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport and cargo handling cost (incl. transport packaging)</td>
<td>3.95%</td>
</tr>
<tr>
<td>Warehousing (cost of running own warehouse or buying the service)</td>
<td>1.14%</td>
</tr>
<tr>
<td>Inventory carrying cost (incl. cost of capital tied in inventory)</td>
<td>7.89%</td>
</tr>
<tr>
<td>Logistics administration (cost from functions indirectly related to logistics)</td>
<td>2.81%</td>
</tr>
<tr>
<td>Other logistics costs</td>
<td>2.18%</td>
</tr>
<tr>
<td>Total Logistics Cost/Sales</td>
<td>17.97%</td>
</tr>
</tbody>
</table>
Human Resource Logistics Development Policy

Manufacturing

- On the job training: 45%
- External development programme (i.e., onsite seminars or workshops): 42%

- Internal development programme with external trainers: 30%
- On the job training: 25%
- Internal development programme with internal trainers: 21%
- Continuing professional development (i.e., external certificate or diploma courses): 16%
- External development: None, or not relevant programme (i.e., outside seminars or workshops): 15%

Note: The percentages are approximate and may need to be rounded for clarity.
Vietnam Logistics Performance Survey

- A five page questionnaire based-survey was developed to measure logistics performance. The questionnaire also assessed firm’s characteristics and human resource capability.
- The participating companies were drawn from textiles, food and beverage, electrical and mechanical engineering, automobile and plastics and chemical industries.
- A total of 160 firms responded to the survey
- The participating companies commented that they had several difficulties in understanding the data requirement in the questionnaire.
- Furthermore, many did not have the required data available, in particular cost related data for all logistics activities.
## Findings (Characteristics)

### Vietnam Sectors Surveyed

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food &amp; beverages</td>
<td>18.75%</td>
</tr>
<tr>
<td>Textiles</td>
<td>10.00%</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>23.75%</td>
</tr>
<tr>
<td>Auto</td>
<td>9.38%</td>
</tr>
<tr>
<td>Plastics and chemicals</td>
<td>23.13%</td>
</tr>
<tr>
<td>Others : Construction, Real estate</td>
<td>15.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

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Findings: the importance of logistics

(3 - Agree; 2 – Neutral; 1 – Disagree)

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Logistics has a major impact on our profitability</td>
<td>6%</td>
</tr>
<tr>
<td>Logistics has a major impact on our customer service level</td>
<td>4%</td>
</tr>
<tr>
<td>Logistics is a key source of competitive advantage for our firm</td>
<td>10%</td>
</tr>
<tr>
<td>Logistics is a top management priority in our firm</td>
<td>17%</td>
</tr>
</tbody>
</table>
## Findings: Average Logistics Costs/Sales

<table>
<thead>
<tr>
<th>Logistics Activity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>T: Transport</td>
<td>7.04</td>
</tr>
<tr>
<td>W: Warehouse</td>
<td>3.78</td>
</tr>
<tr>
<td>I: Inventory carrying cost</td>
<td>4.00</td>
</tr>
<tr>
<td>Logistics Administration (10% of T+W+I)</td>
<td>1.48</td>
</tr>
<tr>
<td><strong>Average Total Logistics Cost per Sales</strong></td>
<td><strong>16.3</strong></td>
</tr>
</tbody>
</table>
Findings: rationale behind high logistics costs

- Unawareness of logistics costs significance: 101
- Lack of transparency in supply chain: 87
- Inadequate management of distribution channel and warehouses: 79
- Poor and insufficient infrastructure: 70
- Unavailability of competent staff and professionals: 61
Findings: how to reduce logistics costs?

- Develop awareness about the vital role of logistics cost: 99
- Improve logistics infrastructure: 96
- Develop and implement total supply chain management: 91
- Prompt the outsourcing with 3PL providers: 52
- Provide training of necessary skills for all levels of authorities and enterprises: 28
Findings: Average Logistics Performance

<table>
<thead>
<tr>
<th>Logistics Activity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery In Full &amp; On Time (DIFOT)</td>
<td>80.86</td>
</tr>
<tr>
<td>Forecast Accuracy</td>
<td>78.14</td>
</tr>
<tr>
<td>Return Rate</td>
<td>3.62</td>
</tr>
</tbody>
</table>
## Findings: Monitoring performance

(3 - Agree; 2 – Neutral; 1 – Disagree)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>We regularly monitor and evaluate our logistics costs and performance</td>
<td>6%</td>
</tr>
<tr>
<td>internally</td>
<td></td>
</tr>
<tr>
<td>We regularly monitor and evaluate logistics costs and performance with</td>
<td>5%</td>
</tr>
<tr>
<td>selected suppliers and/or customers</td>
<td></td>
</tr>
<tr>
<td>We regularly benchmark logistics performance metrics against our</td>
<td>20%</td>
</tr>
<tr>
<td>competitors</td>
<td></td>
</tr>
<tr>
<td>We regularly monitor and evaluate logistics benefits of our firm</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>We regularly monitor the environmental effects of our logistics operations</td>
<td>18%</td>
</tr>
</tbody>
</table>
Findings: Future development need...

- Increasing transparency in the supply chain: 11
- Cutting logistics costs: 10
- Developing information system: 8
- Improving customer service: 8
- Structural change of distribution network: 7
- Developing logistics competence of personnel: 6
- Selection of logistics service providers: 6
- Utilizing mobile solutions: 2
Findings: HRD need

- Transport management: 76
- Inventory management: 72
- Basic logistics skills: 62
- Production planning: 61
- Language proficiency: 57
- Procurement and purchasing: 47
- Innovation and change management: 44
- Supply chain strategy: 44
- Business strategy: 34
- Warehouse management: 30
- Basic concepts linked to supply chain management: 22
## Comparative logistics costs/sales

<table>
<thead>
<tr>
<th>Country</th>
<th>Logistics Cost/Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>17.9%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>16.3%</td>
</tr>
<tr>
<td>Thailand</td>
<td>15.9%</td>
</tr>
<tr>
<td>Estonia</td>
<td>16%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>20%</td>
</tr>
<tr>
<td>Finland</td>
<td>12.1%</td>
</tr>
<tr>
<td>Germany</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: TU Berlin; Turku Finland; Thammasat Thailand; FTU Hanoi; WB Indonesia
Indonesia & Vietnam Summary

- It was interesting to observe that respondents had difficulties in answering survey questions and this could be interpreted as a lack of understanding related to logistics concepts in the country.
- The obtained logistics cost are consistent with other countries in terms of their composition with transport cost having usually the highest ratio.
- Service level capability seems to be the most worrying issue with lower levels of performance when compared with neighbouring countries like Thailand.
- Having lower labour, production or even logistics cost in itself is not sufficient to sustain an economy.
- Reliability is a key construct for logistics performance and there is an inverse relationship between logistics service quality level and logistics cost.
Reflections on Thailand

• Benchmarking is an important tool but we must be careful in the analysis
• Logistics is not a magic pill that automatically improve competitiveness
• Logistics competitiveness is not just about reducing cost but also about enhancing value
• The real question is:
  “how are firms’ meeting customers’ ever increasing requirements at the lowest possible cost?”