CONNECTING TO COMPETE

THE 2018 LOGISTICS PERFORMANCE INDEX (LPI)

UNCC, Bangkok, Thailand
1. Introduction and LPI methodology
2. LPI 2018 results: International section
3. LPI 2018 results: Domestic section
4. LPI 2018 key messages and policy recommendations
1. Introduction and LPI methodology
How the LPI is constructed

- The LPI measures performance along the logistics supply chain within a country and offers two different perspectives: international and domestic.

- Based on a worldwide survey of freight forwarders and express carriers, providing feedback on the logistics “friendliness” of the countries in which they operate and those with which they trade.

<table>
<thead>
<tr>
<th>International LPI</th>
<th>Domestic LPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides qualitative evaluations of a country in six areas by its trading partners (i.e. professionals working outside the country)</td>
<td>Provides qualitative and quantitative evaluations of a country by logistics professionals working inside it.</td>
</tr>
</tbody>
</table>

The LPI ranking is solely based on the International LPI.
LPI Methodology

- Built on > 5,000 country assessments by around 1,000 freight forwarders & express carriers worldwide
- Respondents rate logistics performance of own country and 8 other countries on a scale from 1 to 5
- Coverage: 160 countries
- Published every 2 years
- How do respondents get to participate?
  - Respondents are invited to answer an electronic survey
  - Outreach via partners such as FIATA, national associations of freight forwarders, & large logistics firms
  - Direct contacts via a mailing list of logistics operators
  - Respondent base includes multinationals, large local firms and SMEs
  - No sampling involved
Input and outcome indicators in the LPI

- Customs
- Infrastructure
- Services quality
- Timeliness
- International shipments
- Tracking and tracing

Areas for policy regulations (inputs)

Service delivery performance outcomes
Time, cost, reliability
What do we measure?

Here is a sample question from the LPI survey:

11/34 Evaluate the **quality of trade and transport related infrastructure** (e.g. ports, railroads, roads, information technology) in...

<table>
<thead>
<tr>
<th>Country</th>
<th>Very low</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea, Rep.</td>
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<td>Georgia</td>
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<td>El Salvador</td>
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<td>Denmark</td>
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<td>Sudan</td>
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<td>Libya</td>
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</tbody>
</table>

Source: 2017/2018 LPI Survey

The LPI is mostly perception-based.
LPI 2018 respondent base by region and income group

- High income, OECD: 289
- High income, non-OECD: 44
- Upper middle income: 354
- Low income: 28
- Lower middle income: 154
- South Asia: 38
- East Asia & Pacific: 75
- Middle East & North Africa: 39
- Sub-Saharan Africa: 58
- Latin America & Caribbean: 192
- Europe & Central Asia: 134
- Middle East & North Africa: 39
- Sub-Saharan Africa: 58
- East Asia & Pacific: 75
- Latin America & Caribbean: 192
- Europe & Central Asia: 134
- Middle East & North Africa: 39
- Sub-Saharan Africa: 58
- East Asia & Pacific: 75
- Latin America & Caribbean: 192
- Europe & Central Asia: 134
- Middle East & North Africa: 39
- Sub-Saharan Africa: 58
- East Asia & Pacific: 75
- Latin America & Caribbean: 192
- Europe & Central Asia: 134
2. LPI 2018 results: International section
LPI 2018 results: Top 10 by country groups

TOP 10 OVERALL

- Germany: 4.20
- Sweden: 4.05
- Belgium: 4.04
- Austria: 4.03
- Japan: 4.03
- Netherlands: 4.02
- Singapore: 4.00
- Denmark: 3.99
- United Kingdom: 3.99
- Finland: 3.97

TOP 10 UPPER MIDDLE INCOME

- China: 3.61
- Thailand: 3.41
- South Africa: 3.38
- Panama: 3.28
- Malaysia: 3.22
- Turkey: 3.15
- Romania: 3.12
- Croatia: 3.10
- Mexico: 3.05
- Bulgaria: 3.03

TOP 10 LOWER MIDDLE INCOME

- Vietnam: 3.27
- India: 3.18
- Indonesia: 3.15
- Côte d’Ivoire: 3.08
- Philippines: 2.90
- Ukraine: 2.83
- Egypt, Arab Rep.: 2.82
- Kenya: 2.81
- Lao PDR: 2.70
- Jordan: 2.69

TOP 10 LOW INCOME

- Rwanda: 2.97
- Benin: 2.75
- Burkina Faso: 2.62
- Mali: 2.59
- Malawi: 2.59
- Uganda: 2.58
- Comoros: 2.56
- Nepal: 2.51
- Togo: 2.45
- Congo, Dem. Rep.: 2.43

Axis = LPI 2018 overall score (1 = min; 5 = max)
LPI 2018 overperformers and underperformers

Note: Fitted values are based on an ordinary least squares regression using data for all countries. Underperformers (triangles) are the non–high-income countries with the 10 smallest residuals. Overperformers (squares) are the non–high-income countries with the 10 largest residuals.

Source: Logistics Performance Index 2018
LPI 2018 score by world region, 2018 vs. 2016

Note: Chart excludes high-income economies.
LPI components scores, by LPI quintile

There are significant differences in LPI performance across LPI components and quintiles:

The timeliness component outperforms the other LPI components and is viewed as the least problematic. The performance of customs and border agencies, as well as the quality of trade and transport infrastructure, are particularly low in the worst-performing countries, which also have relatively low quality of logistics services.
The demand for environmentally friendly solution is strongly and positively associated with logistics performance.

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Often or nearly always</th>
<th>Sometimes</th>
<th>Hardly ever or rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top quintile</td>
<td>28%</td>
<td>27%</td>
<td>45%</td>
</tr>
<tr>
<td>Second quintile</td>
<td>14%</td>
<td>24%</td>
<td>62%</td>
</tr>
<tr>
<td>Third quintile</td>
<td>9%</td>
<td>27%</td>
<td>64%</td>
</tr>
<tr>
<td>Fourth quintile</td>
<td>7%</td>
<td>21%</td>
<td>72%</td>
</tr>
<tr>
<td>Bottom quintile</td>
<td>5%</td>
<td>21%</td>
<td>75%</td>
</tr>
</tbody>
</table>
3. LPI 2018 results: Domestic section
Quality of infrastructure

Respondents rating the quality of trade and transport infrastructure as “improved” or “much improved” since 2016, by LPI quintile
Quality of service

Respondents rating the quality and competence of each service provider type as “high” or “very high,” by LPI quintile

<table>
<thead>
<tr>
<th>LPI quintile</th>
<th>Road transport</th>
<th>Rail transport</th>
<th>Air transport</th>
<th>Maritime transport and ports</th>
<th>Warehousing, transloading, and distribution</th>
<th>Freight forwarders</th>
<th>Customs brokers</th>
<th>Trade and transport associations</th>
<th>Consignees or shippers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom (lowest performance)</td>
<td>28%</td>
<td>19%</td>
<td>37%</td>
<td>44%</td>
<td>33%</td>
<td>32%</td>
<td>14%</td>
<td>24%</td>
<td>22%</td>
</tr>
<tr>
<td>Fourth (low performance)</td>
<td>30%</td>
<td>9%</td>
<td>39%</td>
<td>46%</td>
<td>21%</td>
<td>38%</td>
<td>26%</td>
<td>19%</td>
<td>26%</td>
</tr>
<tr>
<td>Third (average performance)</td>
<td>36%</td>
<td>24%</td>
<td>58%</td>
<td>40%</td>
<td>39%</td>
<td>45%</td>
<td>45%</td>
<td>32%</td>
<td>22%</td>
</tr>
<tr>
<td>Second (high performance)</td>
<td>38%</td>
<td>26%</td>
<td>49%</td>
<td>53%</td>
<td>49%</td>
<td>59%</td>
<td>36%</td>
<td>42%</td>
<td>38%</td>
</tr>
<tr>
<td>Top (highest)</td>
<td>78%</td>
<td>41%</td>
<td>70%</td>
<td>71%</td>
<td>69%</td>
<td>78%</td>
<td>68%</td>
<td>56%</td>
<td>52%</td>
</tr>
</tbody>
</table>

A strong advantage in services among the top performers.
Difference between respondents rating services “high” or “very high” and those rating infrastructure “high” or “very high,” by WB region

<table>
<thead>
<tr>
<th>World Bank Region</th>
<th>Maritime transport and ports</th>
<th>Air transport</th>
<th>Road transport</th>
<th>Rail transport</th>
<th>Warehousing, transloading, and distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia &amp; Pacific</td>
<td>9%</td>
<td>9%</td>
<td>3%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>9%</td>
<td>18%</td>
<td>16%</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>21%</td>
<td>18%</td>
<td>12%</td>
<td>5%</td>
<td>11%</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>0%</td>
<td>-9%</td>
<td>8%</td>
<td>3%</td>
<td>-7%</td>
</tr>
<tr>
<td>South Asia</td>
<td>6%</td>
<td>10%</td>
<td>1%</td>
<td>-8%</td>
<td>4%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>5%</td>
<td>12%</td>
<td>16%</td>
<td>14%</td>
<td>16%</td>
</tr>
</tbody>
</table>

A ratings gap between services and infrastructure appears across World Bank regions. It is particularly stark for air transport in Europe and Central Asia and Latin America and the Caribbean (LAC), for road transport in LAC and Sub-Saharan Africa (SSA), and for warehousing in SSA. These data suggest a need to develop transport-related infrastructure, so that service markets reforms can bring maximum benefits to users.
Red tape affecting import and export transactions, by LPI quintile

Border process efficiency still affects lowest performers: The lowest performers tend to experience more red tape.
New question in 2018 LPI: Supply chain resilience and cyber threats in logistics

The perceived magnitude of cyber threats (left figure) and preparedness to mitigate their effects (right figure) go hand in hand. Developing countries lag far behind high-income countries in both.
4. LPI 2018 key messages and policy recommendations
LPI 2018: Key messages

• The logistics performance gap between countries persists between the bottom and top performers.

• Supply chain reliability and service quality are strongly associated with logistics performance.

• Infrastructure and trade facilitation remain at the core of assuring basic connectivity and access to gateways for most developing countries.

• Middle- and high-income countries are increasingly concerned with domestic connectivity.

• The logistics policy agenda continues to broaden, with growing focus on supply chain resilience, cyber security, environmental sustainability, and skills shortages.

Logistics performance is not primarily about speed or costs, but about the reliability of supply chains and service delivery, which depends on many factors: infrastructure, competition, skills, etc.
8 megatrends likely to drive the future of logistics

1. Logistics skills shortages
2. Restructuring global value chains
3. Supply chain risk and recovery (resilience)
4. Digital transformation of supply chains
5. Sustainability of supply chains
6. E-commerce driving demand chains
7. Logistics property and infrastructure
8. Collaborative business models


Most of these trends are directly relevant to the logistics policy agenda.
LPI 2018: Policy recommendations

• An effective logistics sector is one of the core enablers of trade and development.

• Implementing better policies leads to better logistics performance.

• Focus of logistics policies 10 years ago: trade facilitation and removal of border bottlenecks

=> Still relevant for most developing countries, but focus in higher performing countries has shifted to domestic logistics

Policies to target:

• Providing transportation infrastructure
• Raising the level of skills and competencies in the logistics sector
• Making supply chains resilient in the face of natural and man-made disasters, including cyber threats
• Ensuring environmental and social sustainability of logistics
• Implementing controls, especially for international goods
• Raising the quality of public-private partnerships (PPP)
• Ensuring a sound regulatory and legal framework for logistics, e.g. competition policy in the trucking sector
  • Improve service delivery quality by building on market mechanisms and private sector participation in core logistics activities: trucking, brokerage, terminal or warehousing operations.

Most reforms in the logistics sector involve more than one agency and many stakeholders, slowing implementation, or even reversing it → Need for seamless interagency coordination and strong public-private dialogue, e.g. via national logistics bodies.
### Interaction of LPI performance quintile and logistics priorities

<table>
<thead>
<tr>
<th></th>
<th>Lowest performer (fifth quintile)</th>
<th>Fourth quintile</th>
<th>Third quintile</th>
<th>Second quintile</th>
<th>Best performer (first quintile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation infrastructure</td>
<td>□□□</td>
<td>□□□</td>
<td>□□</td>
<td>□□□</td>
<td>□□□</td>
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<tr>
<td>Trade and transport facilitation</td>
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<td>□□</td>
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<tr>
<td>Service markets and regulations</td>
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<td>Skills</td>
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<td>Green logistics</td>
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<td>Urban logistics</td>
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<td>Spatial planning</td>
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<tr>
<td>Resilience</td>
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<tr>
<td>Dedicated logistics body</td>
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<td>Specific legal framework</td>
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<td>National data system</td>
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Very important □□□ □□□ Important □□ □ Less important
The importance of good quality logistics services for lower performing countries

- Service quality drives logistics performance in all economies.
- Yet developing advanced services (third-party or fourth-party logistics) requires a complex policy agenda as those services cannot be created purely domestically.
- The more that advanced services are available (at reasonable cost), the more manufacturers and traders (= shippers) will outsource their logistics.
- Goes both ways: The less that reliable and comprehensive services are available, the more shippers will handle logistics in-house.
- Low-scoring countries should focus on the performance of road freight and warehousing and on logistics skills.

Logistics reform in low performing countries should focus on improving logistics services reliability, increasing clearance predictability and avoiding inland transit delays.
Positive reform examples

- Administrative reforms can be rapid when countries with a strong political will align their efforts.
- In some cases, soft reforms in trade facilitation were implemented with considerable impact even before hard infrastructure projects were completed.
- The soft reforms provided a higher and quicker return on investment than hard infrastructure.

**Examples in low-and middle-income countries:**
- India: Emphasizing logistics as a high priority economic reform to meet the challenges of the large country size, congested hubs, and internal barriers to trading goods and services (GST reform)
- Lao PDR: Introduction of trade portal
- Vietnam
- Southern African countries

**Example in high-income countries:** Oman (implementation of National Logistics Strategy with strong coordination mechanism)
What is the role of the LPI?

The LPI is a well-established benchmark, but it does not do everything.

The LPI:

• Is a measure of supply chain efficiency.

• Provides information of where a country stands and gives a crude indication of problems.

• Is not, on its own, a diagnostic tool and needs to be supported by specific tools designed to perform that function.

• Targets international supply chains, and may not fully reflect the quality of internal connectivity and logistics, especially in geographically large countries.
Dissemination and data availability

All data available at lpi.worldbank.org
Thank you

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