Logistics Performance Index 2018

Logistics comprises a network of services that supports the physical movement of goods within and across borders. It is a $4.3 trillion industry.
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About LPI

• LPI 2018 ranks countries on **six dimensions of trade**: 

  1. **Customs**: efficiency of customs and border management clearance
  2. **Infrastructure**: quality of trade and transport infrastructure
  3. **Ease of arranging shipments**: ease of arranging competitively priced shipments
  4. **Quality of logistics services**: competence and quality of logistics services - trucking, forwarding, and customs brokerage
  5. **Tracking and tracing**: ability to track and trace consignments
  6. **Timeliness**: frequency with which shipments reach consignees within scheduled or expected delivery times

• Data used in the ranking comes from a **survey of logistics professionals** who are asked questions about the foreign countries in which they operate
The six LPI indicators can be mapped onto two main categories:

1. **Areas for policy regulation**, indicating main inputs to the supply chain (customs, infrastructure, and services)

2. **Supply chain performance outcomes** (corresponding to LPI indicators of time, cost, and reliability - timeliness, international shipments, and tracking and tracing)
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LPI 2018: Key Findings

• **Top 10 performing countries have remained relatively unchanged** over the past few years and tend to include high-income countries in Europe

• Not surprising, since these countries traditionally have been **dominant in the supply chain industry**

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</table>
LPI 2018: Key Findings

- **Bottom 10 countries** in the ranking are composed of mostly low-income and lower-middle-income countries.

- These are either **fragile economies** affected by armed conflict, natural disasters, political unrest, or **landlocked countries** that are naturally challenged by geography or economies of scale in connecting to global supply chains.

### Bottom 10 LPI economies, 2018

<table>
<thead>
<tr>
<th>Economy</th>
<th>Rank</th>
<th>Score</th>
<th>Rank</th>
<th>Score</th>
<th>Rank</th>
<th>Score</th>
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<td>134</td>
<td>2.36</td>
<td>98</td>
<td>2.57</td>
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</table>
LPI 2018: Key Findings

- The overall group composition among the top-performing upper-middle-income economies has changed marginally, with China, Thailand, and South Africa leading the group, and Croatia and Bulgaria improving in their LPI ranking.
LPI 2018: Key Findings

• Among the lower-middle-income group countries, large economies such as India and Indonesia and emerging economies such as Vietnam and Cote d’Ivoire stand out as top performers.

• Most of these countries either have access to the sea or are located close to major transportation hubs.
“Logistics performance is strongly correlated with the quality of service”

- **Timeliness** component seems to outperform the other LPI components and is generally viewed as the least problematic.

- On the other hand, 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.
LPI 2018: Key Findings

“Logistics performance is more than income”

LPI overperformers and underperformers

Source: Logistics Performance Index 2018.
Note: Fitted values are based on an ordinary least squares regression using data for all countries. Underperformers (black diamonds) are the non-high-income countries with the 10 smallest residuals. Overperformers (black circles) are the non-high-income countries with the 10 largest residuals.
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### Thailand – International LPI Ranking and Scores

#### LPI components score, by economy, 2018

<table>
<thead>
<tr>
<th>Economy</th>
<th>LPI Rank</th>
<th>LPI Score</th>
<th>Customs</th>
<th>Infrastructure</th>
<th>International shipments</th>
<th>Logistics competence</th>
<th>Tracking &amp; tracing</th>
<th>Timeliness</th>
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<td></td>
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<td>Rank</td>
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<td>Score</td>
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</tbody>
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Unbundling Logistics Performance

Infrastructure: A shared concern across performance groups

- The quality of information and communications technology (ICT) is consistently rated higher than physical transportation infrastructure.

- The difference between the top and bottom is smallest in ICT, suggesting that developing countries may have been investing heavily in modern technologies.

- Though still a constraint in developing countries, infrastructure seems to be improving. The perception of improvement is higher in the bottom quintile than in the top one.

- Disaggregated by World Bank region, satisfaction with road and rail infrastructure is especially low in Latin America and the Caribbean, and also in South Asia.

- Satisfaction with rail infrastructure is low in all regions, as was the case for all LPI quintiles.

![Respondents rating the quality of each infrastructure type “high” or “very high,” by LPI quintile](image)
Developing logistics services markets

- Respondents in all LPI quintiles are nearly always more satisfied with service providers than with infrastructure quality.
- Freight forwarders are rated highly, typically at or close to the strongest scores among service providers.
- A ratings gap between services and infrastructure appears generally across World Bank regions.
- These data suggest a need to develop transport-related infrastructure, so that service markets reforms can bring maximum benefits to users.
- Even in challenging environments, governments and the private sector can move toward higher performance in a fairly short time.

<table>
<thead>
<tr>
<th>Respondents rating the quality and competence of each service provider type “high” or “very high,” by LPI quintile</th>
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</thead>
<tbody>
<tr>
<td>Percent of respondents</td>
</tr>
<tr>
<td>LPI quintile</td>
</tr>
<tr>
<td>Bottom quintile</td>
</tr>
<tr>
<td>Fourth quintile</td>
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<tr>
<td>Third quintile</td>
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<td>Second quintile</td>
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<tr>
<td>Top quintile</td>
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</table>
Streamlining border procedures and facilitating trade

The bottom three quintiles clearance times are three times as much and paperwork twice as much as for the top two performance tiers

• Import and Export Time
  • The time to clear goods through customs rises sharply if goods are physically inspected, even in high-performing countries
  • Countries with low logistics performance need to cut red tape, physical inspections, and excessive and opaque procedural requirements

• Red Tape
  • Countries in the top quintile typically require two supporting documents for trade transactions, and those in the bottom, four to five
  • Simplifying documentation for imports and exports has long been high on the trade facilitation agenda
Supply chain reliability: A key concern for all countries

- The contrast is striking between the top and bottom LPI quintiles, especially in three areas: informal (corrupt) payments, compulsory warehousing, and preshipment inspection.

- Indeed, highly uncertain lead times can disrupt production and exporting, forcing firms to adopt costly strategies such as express shipping or sharply higher inventories, eroding competitiveness within global and regional value chains that use just-in-time production.

- Causes of unexpected delays - including unpredictability in clearance, inland transit delays, and low service reliability - should be an important part of logistics reform in low-performing countries.

- The most important quality criterion in freight forwarding is delivery within the promised time window. Almost as important is the absence of errors in cargo composition or documentation.

<table>
<thead>
<tr>
<th>LPI quintile</th>
<th>Compulsory warehousing</th>
<th>Preshipment inspection</th>
<th>Maritime transshipment</th>
<th>Theft</th>
<th>Informal payments</th>
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<tr>
<td>Bottom quintile</td>
<td>26</td>
<td>20</td>
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<td>Fourth quintile</td>
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<td>27</td>
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<td>5</td>
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</table>
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Logistics Trends – The importance of skill development for logistics

• Developed countries need more blue-collar workers, such as truck drivers while developing countries seek more managerial-level workers
  
  • Reasons for the shortages include the low prestige and status of operational logistics workers
  • Logistics developments, particularly in information technology, demand new competencies that the workforce does not possess
  • Developing countries lag behind developed ones in training budgets, course content, and the quality of the educational experience and training provider

• Public interventions promoting logistics competence include the following:
  
  • Education and training by public institutions, or financial support to training
  • Education policy and curricula development
  • Advocacy, public–private dialogue, and multi-stakeholder collaboration
  • Regulation of freight and logistics services, including customs brokerage and trucking
  • Setting and harmonizing competency standards for different jobs
  • Raising skill levels in state-owned logistics enterprises (typically ports and railways)
  • Investing in human capital as a component of the development of logistics and freight infrastructure.
Logistics Trends – Supply chain resilience

• **Local events create disturbances much beyond the area directly affected** when supply chains are interrupted with no backup
  - In 2011, the tsunami in Japan and the floods in Thailand disrupted trade by striking key nodes of global value chains
  - In such severe events, supply chain links can take a long time to rebuild and may even be permanently altered

• More countries perceive **cybersecurity threats a risk to logistics**
  - In mid-2017, cyberattacks on global providers created significant physical supply chain disruption for weeks
  - 78% of high-income countries have increased their preparedness.
  - Only **26% of low-income countries** have done so
Logistics Trends – Asking for green logistics?

• **Environmental sustainability of logistics is an important emerging trend** given that 23% of all energy-related CO2 emissions can be attributed to transport

  • **Strong performers in logistics are the most likely to seek eco-friendly shipping options**

  • In the top quintile of LPI performers, 28% of respondents indicated that shippers often or nearly always ask for environmentally friendly shipping options – in emission levels and choices of routes, vehicles and schedules

  • **Higher costs and fewer choices for shipping** are likely the chief culprits for the discrepancy between higher and lower performing countries, as are fears of adding transit time in an already long and unpredictable supply chain.
Supplementary Slides
Figure 1.1  Cumulative distribution of LPI scores, 2018

[Graph showing cumulative distribution of LPI scores with quintiles labeled: Bottom quintile, Fourth quintile, Third quintile, Second quintile, Top quintile.]

Source: Logistics Performance Index, 2018.