SNAPSHOT: WORLD BANK, 2018 LOGISTICS PERFORMANCE INDEX

The 2018 Logistics Performance Index Snapshot provides an overview of the World Bank’s Logistics Performance Index (LPI) and its methodology, highlights global 2018 trends, and provides a spotlight examination of LPI in sub-Saharan Africa (SSA). Logistics performance encompasses an array of activities beyond transportation, including warehousing, brokerage, express delivery, and critical infrastructure services such as terminals. Logistics is a precondition of competitiveness in the global economy, and the LPI serves as a benchmark for logistics performance around the world.

WHAT IS THE LOGISTICS PERFORMANCE INDEX?

The LPI, published biannually, analyzes countries through six different indicators. Three of these indicators are areas for policy regulations (inputs) and the other three indicators assess service delivery performance outcomes. The three input indicators are 1) the efficiency of customs and border management clearance, 2) the quality of trade- and transport-related infrastructure, and 3) the competence and quality of logistics services. The three indicators that assess outcome are 1) the ease of arranging competitively priced international shipments 2) the ability to track and trace consignments, and 3) the frequency with which shipments reach consignees within the scheduled or expected delivery time. Each of these indicators are ranked on a scale of 1-5 where higher is better, and the weighted average of these scores is the final LPI score.

What is the Logistics Performance Index?

- **Inputs**
  - Logistics Competence and Quality
  - Customs
  - Infrastructure

- **Outcomes**
  - Supply Chain Service Delivery
  - Ease of Shipment
  - Tracking and Tracing
  - Timeliness

Source: World Bank Logistics Performance Index (LPI)

The World Bank also publishes Domestic LPI (DLPI) data. This is data that survey respondents provide about the logistics environments within their own countries (as opposed to the survey questions about foreign markets which are used to calculate LPI). There is no DLPI score, but the qualitative and quantitative data it provides can be useful. DLPI asks respondents for detailed data on average Lead Times, distances to and from ports for imports and exports, the number of agencies that logistics professionals need to deal with when importing or exporting goods, number of forms needed for imports and exports, and percentages of shipments inspected.

METHODOLOGY

The LPI data are gathered through a worldwide survey of logistics professionals on their trade logistics experiences along the six dimensions outlined above. Thus while the LPI measures logistical performance; it also measures perceptions of logistical performance. In 2018, almost 6,000 country assessments were made covering 160 countries in the LPI and 100 countries in the DLPI. Each respondent is asked to rate eight overseas markets on six core components of logistics performance. Respondents were asked to rate 3 input and 3 output measures of logistics performance on a scale of 1-5 where higher is better.

This publication was produced for the United States Agency for International Development. Brought to you by USAID Data Services, Bureau for Management, Office of the Chief Information Officer.
The second part of the survey asks for the information used to construct the DLPI survey. Respondents are asked to rate aspects of their country’s logistics environment e.g., port charges on a scale of 1-5, where higher is better. Questions 24-35 ask for quantitative information on their countries’ international supply chains. These responses can be found in the appendix of the “Connecting to Compete” World Bank report.

LIMITATIONS

While the LPI is a very comprehensive logistics performance survey, five limitations should be kept in mind:

1) **Sampling error**, the diverging opinions of respondents, the types of goods respondents handle, and variation of the respondent base from one LPI report to the next can generate error.4

2) **As LPI scores are so close**, the LPI Score is a more accurate indicator than the LPI Rank. A country’s rank can decrease significantly even if its LPI slightly increases or remains unchanged depending on countries with similar scores.

3) The LPI **includes products labeled as “general merchandise,”** so the responses provide less information on the care that is required with products that involve specialized handling processes like food, chemicals, and pharmaceuticals.5

4) The **lack of traditional (i.e. non-international) operators** (which are more common in poor countries), excludes an important part of LPI.

5) The LPI scores for **landlocked countries** can reflect external logistics trends as they often must rely on the logistics of land-bridge countries for international shipments. To account for these errors, LPI scores are presented with approximate 80 percent confidence intervals which allow users to determine the statistical significance of changes in LPI score over time.

HOW CAN USAID USE THE LPI?

As there is a growing global consensus that efforts to reduce trade logistics costs have greater impact than further reductions than many tariff and non-tariff barriers, in 2016, “USAID shift[ed] its focus to trade facilitation, and in particular helping developing countries implement the World Trade Organization Trade Facilitation Agreement concluded in 2013.”6

The LPI can help USAID staff understand the particular logistics-related constraints that hamper their country or region’s ability to compete globally. This can be useful for directing TCB activities. The LPI offers a comprehensive data source for country-level logistics and trade facilitation environments. The final LPI score provides an overview of where a country stands on logistics, and it can serve as an entry point to a more comprehensive assessment of a country’s logistics performance.
LOGISTICS PERFORMANCE IN 2018

This Snapshot uses LPI data for countries that received over $2 million in support from USAID in 2016 (USAID-assisted countries). The regions in this Snapshot are USAID regions, and the income groups are those set by the World Bank in the fiscal year of 2019. The regions are Afghanistan and Pakistan (AfP), Sub-Saharan Africa (SSA), Asia, Europe and Eurasia (E&E), Latin America and the Caribbean (LAC), and the Middle East (ME). Every USAID region’s average LPI score is higher in 2018 than they were in 2006, but some regions have had significant variation in the 12 intermediary years.

The 2018 LPI data are marked by a divergence in LPI scores between low income countries (LIC) and lower-middle income countries (LMIC). This gap is most apparent in customs and border management clearance, trade- and transport- related infrastructure, and logistics competence and quality. This global trend was also apparent in USAID-assisted countries, and these trends are at least partially a result of Information and Communication Technology (ICT) infrastructure improvements in the past decade. For LIC, “streamlining border clearance procedures and ensuring access to physical trade and transport infrastructure will continue to be priority issues.”

These issues remain important in LMIC as well, as ICT improvements cannot substitute necessary physical infrastructure.

In 2018, seven of the ten lowest performing USAID-countries in terms of LPI score were located in SSA, and two of the top ten USAID-assisted countries were also in SSA. This variation in SSA will be explored more in depth at the end of this Snapshot. Asia’s LPI performance remained strong in 2018. In 2018, China overtook South Africa as the top logistics performer among USAID-assisted countries (ranked 26th globally). Thailand’s LPI score rose from 3.25 in 2016 to 3.41 (on a scale of 1-5, where higher is better) in 2018, making it the second strongest USAID-assisted country in logistics performance (ranked 32nd globally).

The 2018 DLPI data also suggest a divergence between LIC and LMIC in recent years, particularly in export lead times - i.e., the time between the
commencement and completion of an export. Average export lead times by terrestrial supply chains in LIC increased from under 14 days in 2016 to 18 days in 2018. By port or airport, average export lead times went from under 6 days in 2016 to over 10 in 2018. However, LIC saw a significant improvement in average import supply chain lead times. Average land supply chain import lead times dropped from 11 days in 2016 to under 6 days in 2018, and average port and airport lead times dropped from just under 8 days in 2016 to just under 7 days in 2018.

**SUB-SAHARAN AFRICA SPOTLIGHT**

USAID recognizes the logistics challenges SSA faces, and of the $231 million of trade-related infrastructure obligations made by USAID in the fiscal year of 2016, over $211 million (91 percent) was directed towards SSA. Trade-related infrastructure deficiencies can pose significant barriers to economic development and trade. The World Bank’s 2017 Enterprise Survey found that in SSA, 26 percent of firms identified transportation as a major constraint to the current operation of their establishments. Additionally, the 2017 survey found that 2 percent of products (the most of any region in the world) were lost to breakage or spoilage during shipping to domestic markets as a percentage of total product value. The color-scaled map of SSA country LPI scores in 2006 and 2018 contain many important insights into overall SSA logistics performance.

**LPI Scores in USAID-Assisted SSA Countries (1-5, higher is better)**

With a few exceptions, we can see that the highest LPI scores tend to be found in countries with access to the sea and the countries with the lowest LPI scores tend to be landlocked. This is expected, as the lack of access to the sea poses persistent challenges to the growth and development of landlocked developing countries and “has been the main factor hindering their ability to better integrate with the global trading system.” The transit of goods through neighboring states and frequent changes to modes of transport increase transaction costs, resulting in reduced international competitiveness.
This map also highlights the benefits of cooperation and subregional integration within USAID-assisted countries. Regional trade facilitation initiatives have shown great promise in reducing transport costs, non-tariff barriers, and export times. In the Northern Corridor between 2006 and 2011, the average time taken to import a container fell from 67 days to 34 days and the time taken to export a container fell from 42 days to 37 days. These increases to efficiency can be seen in the LPI score in the eastern countries of SSA, most notably in Rwanda, which had its LPI score jumped from 1.77 in 2006 to 2.97 in 2018 (on a scale 1-5, where higher is better). Additionally, the increase in LPI scores in the Western SSA countries have come alongside ECOWAS trade facilitation initiatives such as the Regional Road Transport and Transit Facilitation Program, Joint Border Posts programs, Axle Load Harmonization programs, and Air Transport Harmonization Plans. These logistics improvements are most striking in Cote d’Ivoire, which saw its LPI jump from 2.36 in 2006 to 3.08 in 2018.

For questions or more information on this Snapshot, please contact the author, Evan Williams, at ewilliams@devtechsys.com. To access the global database, visit the International Development and Economic Analysis (IDEA) website at https://idea.usaid.gov.

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RESOURCES
3 The scores are normalized and put through principal component analysis (PCA). The scores are then weighted each year using component loadings which gives the LPI a high degree of comparability across the various LPI editions.
9 Countries that are not color coded on the map are either missing data for that year or did not receive over $2 million of USAID funding in the fiscal year of 2016.