

# CONNECTING TO COMPETE

## THE 2018 LOGISTICS PERFORMANCE INDEX (LPI)

UNCC, Bangkok, Thailand



**WORLD BANK GROUP**  
Macroeconomics, Trade & Investment

8 August 2018

Macroeconomics, Trade and Investment Global Practice  
Global Trade and Regional Integration Team

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# 1. Introduction and LPI methodology

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# 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.

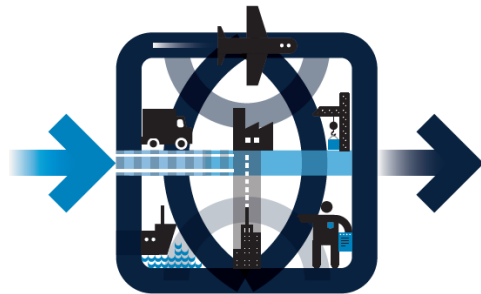
International LPI	Domestic LPI
<ul style="list-style-type: none"><li>• Provides qualitative evaluations of a country in six areas by its trading partners (i.e. professionals working <u>outside</u> the country)</li><li>• Areas of evaluation:<ol style="list-style-type: none"><li>1. Customs and border management</li><li>2. Infrastructure</li><li>3. Logistics competence and quality</li><li>4. International shipments</li><li>5. Tracking &amp; tracing</li><li>6. Timeliness of shipments</li></ol></li></ul>	<ul style="list-style-type: none"><li>• Provides qualitative and quantitative evaluations of a country by logistics professionals working <u>inside</u> it.</li><li>• Includes detailed information on the logistics environment, core logistics processes, institutions, and performance time &amp; cost data</li></ul>

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

# LPI Methodology

Connecting  
to  
Compete

Trade Logistics in the  
Global Economy

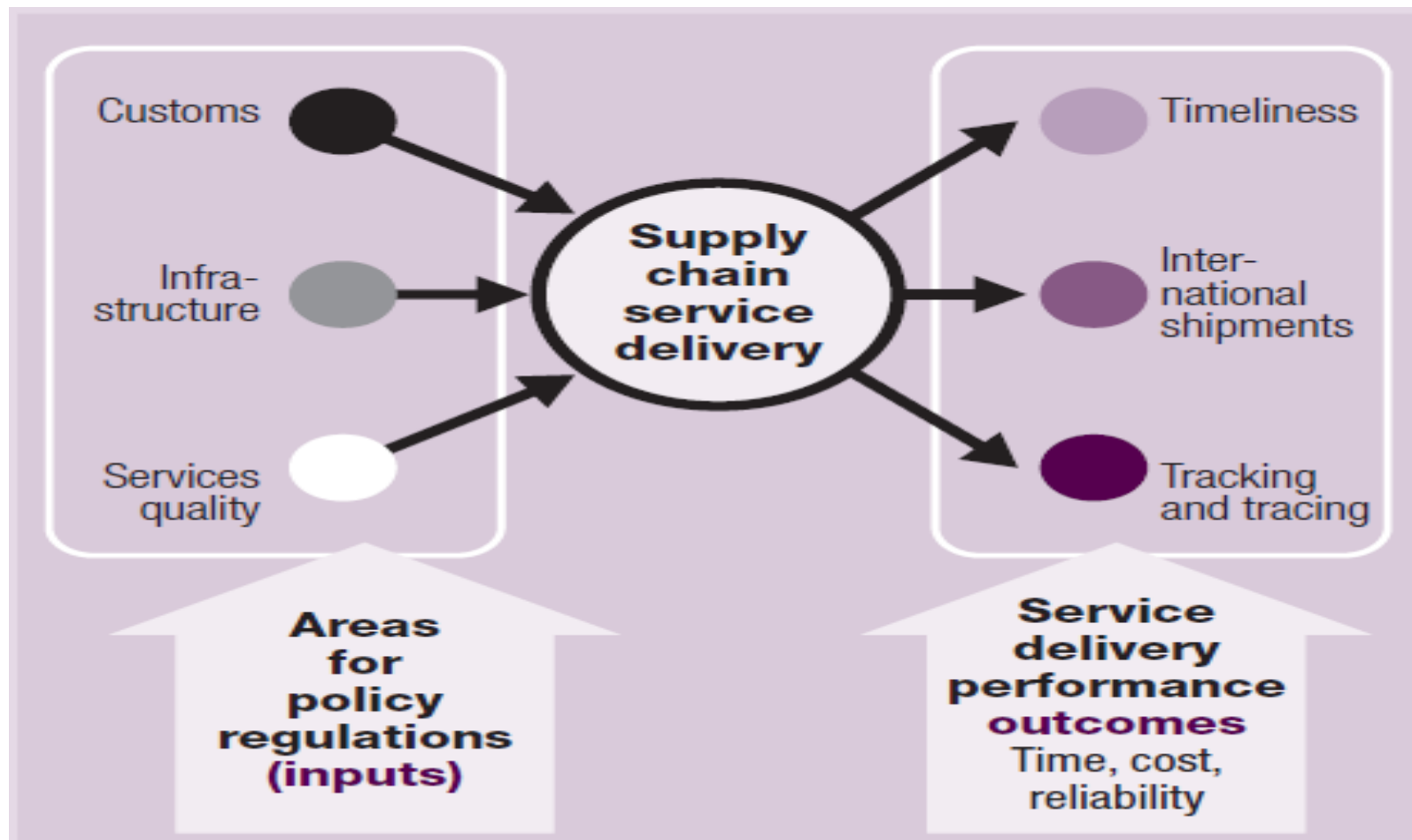


The Logistics Performance Index and Its Indicators

2018

- 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



# What do we measure?

Here is a sample question from the LPI survey:

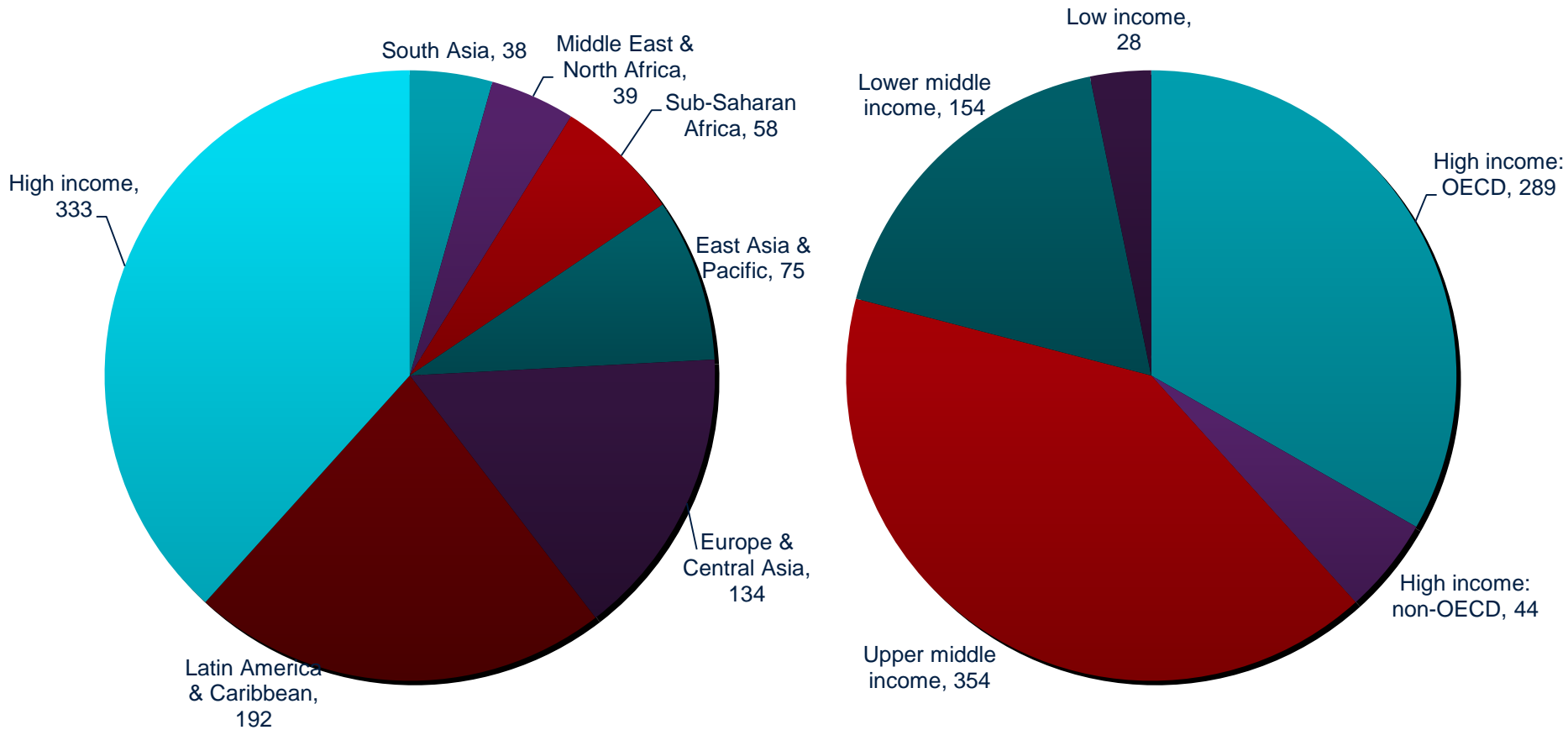
11/34 Evaluate the quality of trade and transport related infrastructure (e.g. ports, railroads, roads, information technology) in...

	Very low	Low	Average	High	Very high
Korea, Rep.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taiwan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Georgia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El Salvador	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Denmark	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sudan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Libya	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Source: 2017/2018 LPI Survey

The LPI is mostly perception-based.

# LPI 2018 respondent base by region and income group



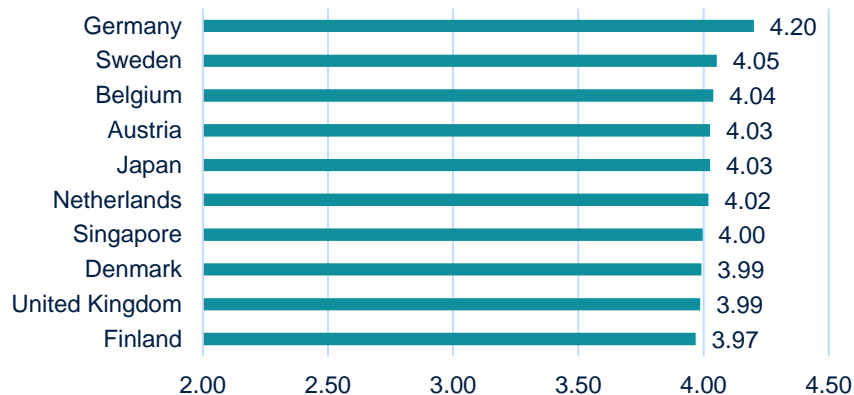


## 2. LPI 2018 results: International section

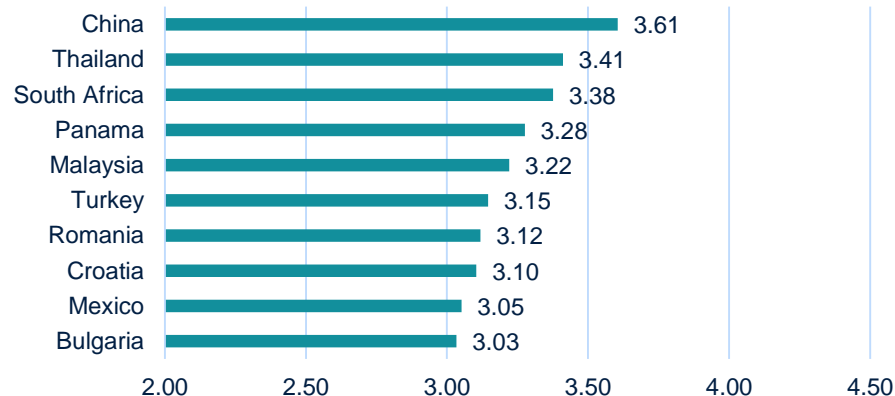
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# LPI 2018 results: Top 10 by country groups

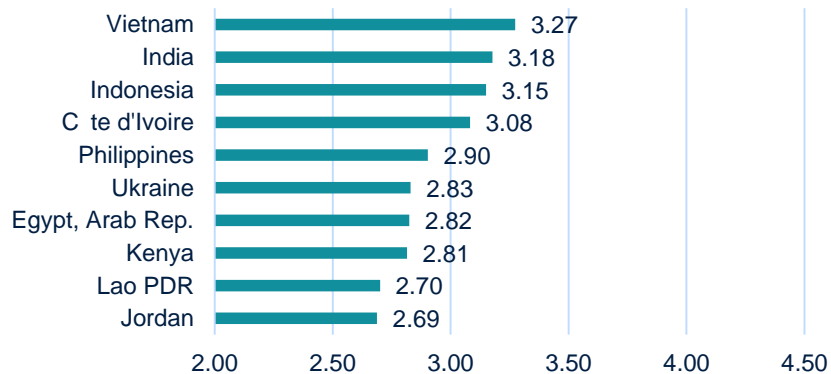
## TOP 10 OVERALL



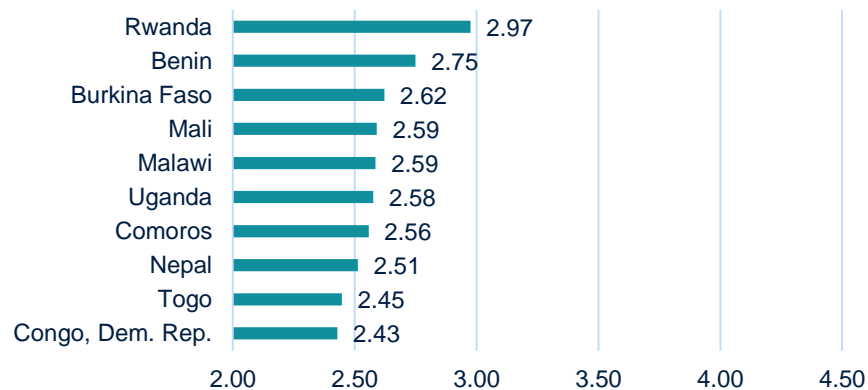
## TOP 10 UPPER MIDDLE INCOME



## TOP 10 LOWER MIDDLE INCOME

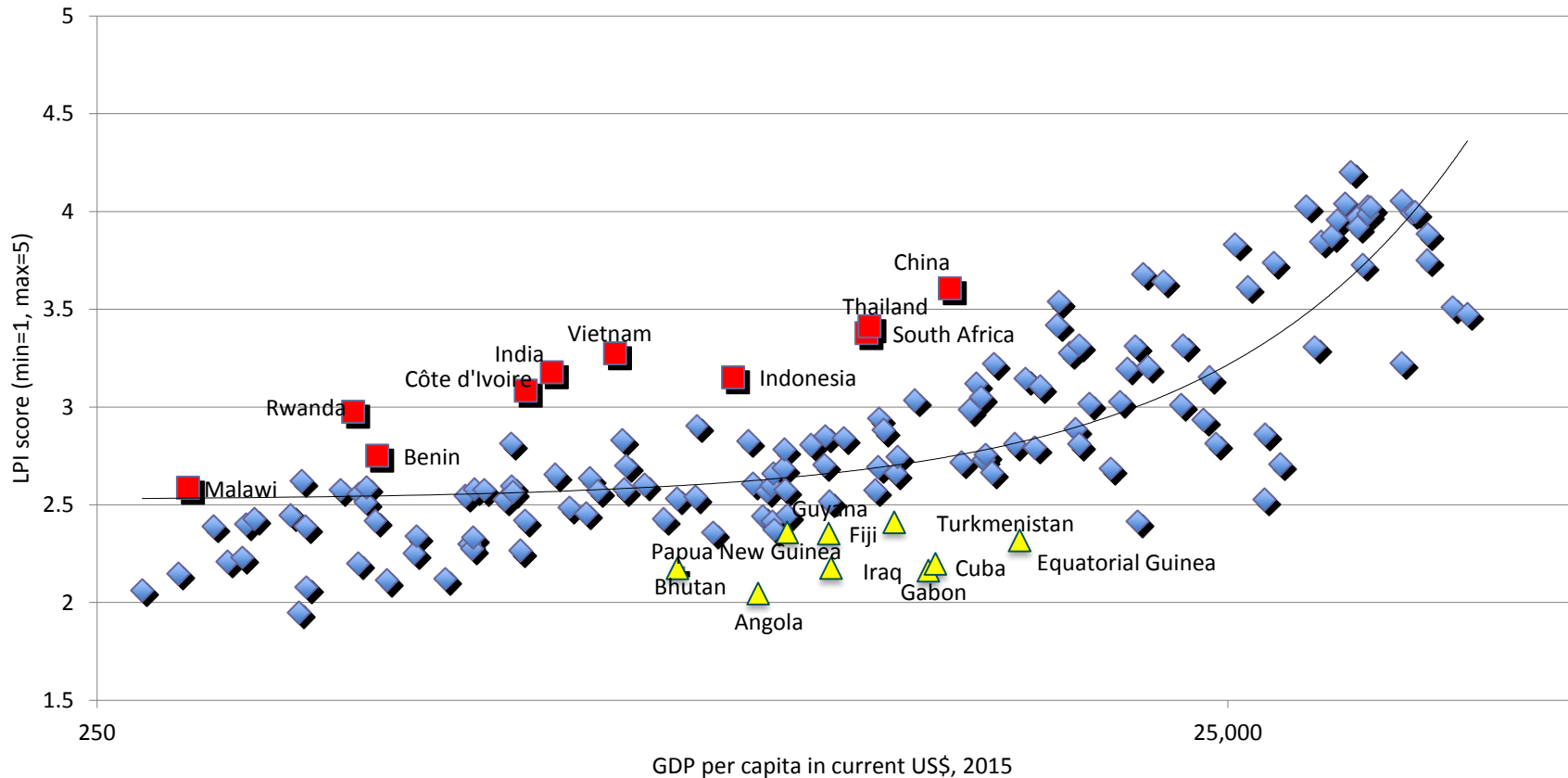


## TOP 10 LOW INCOME



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

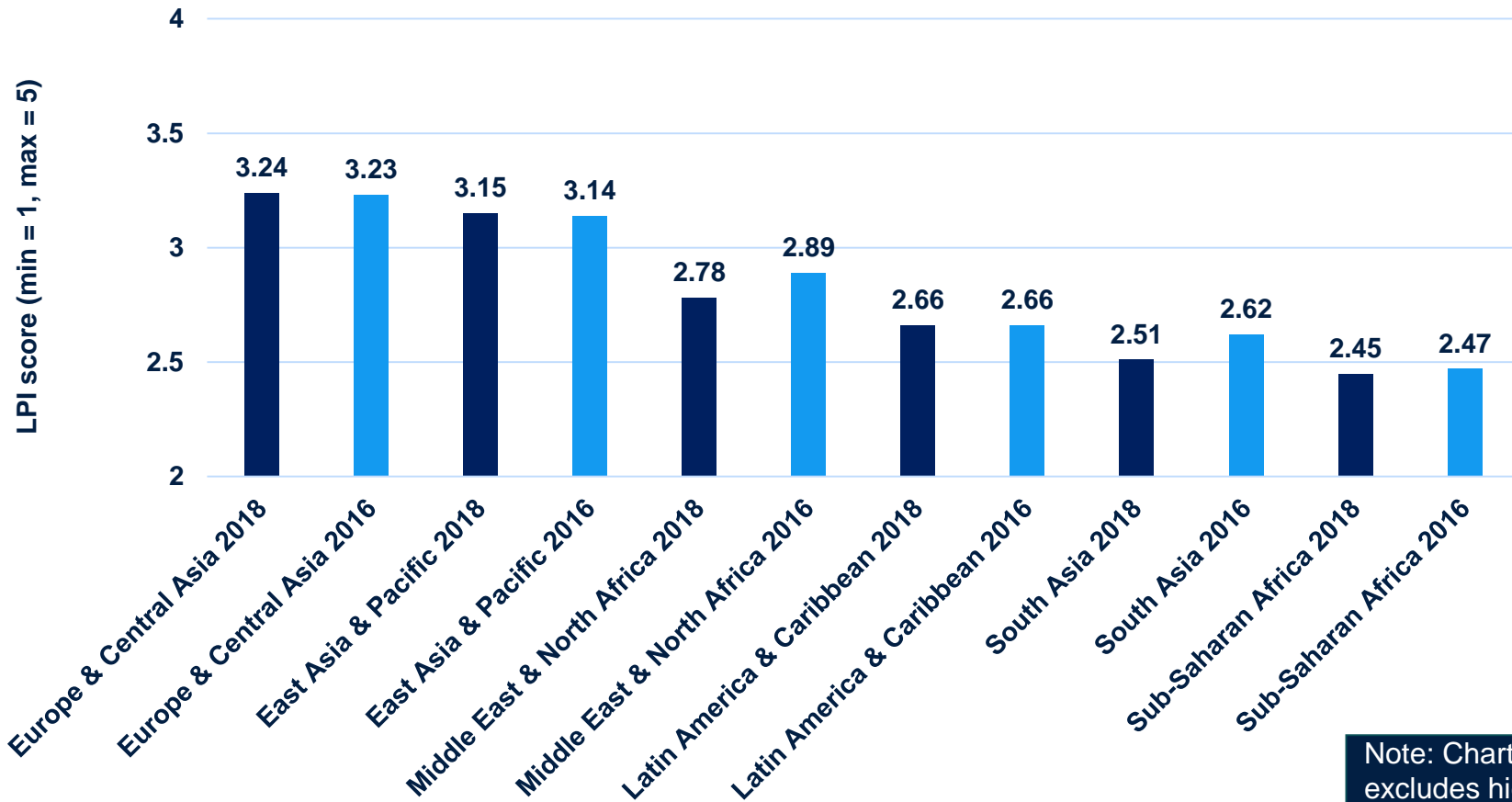
# LPI 2018 overperformers and underperformers



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.

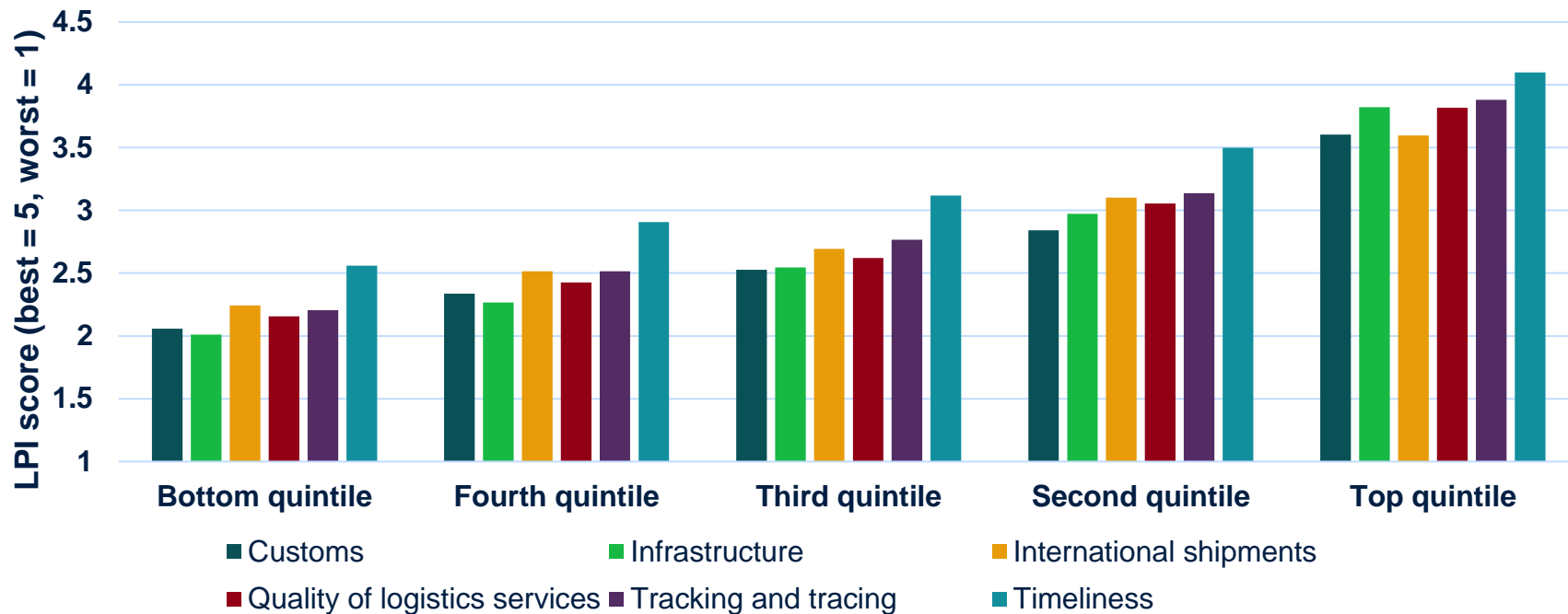
Source: Logistics Performance Index 2018

# LPI 2018 score by world region, 2018 vs. 2016



Note: Chart excludes high-income economies

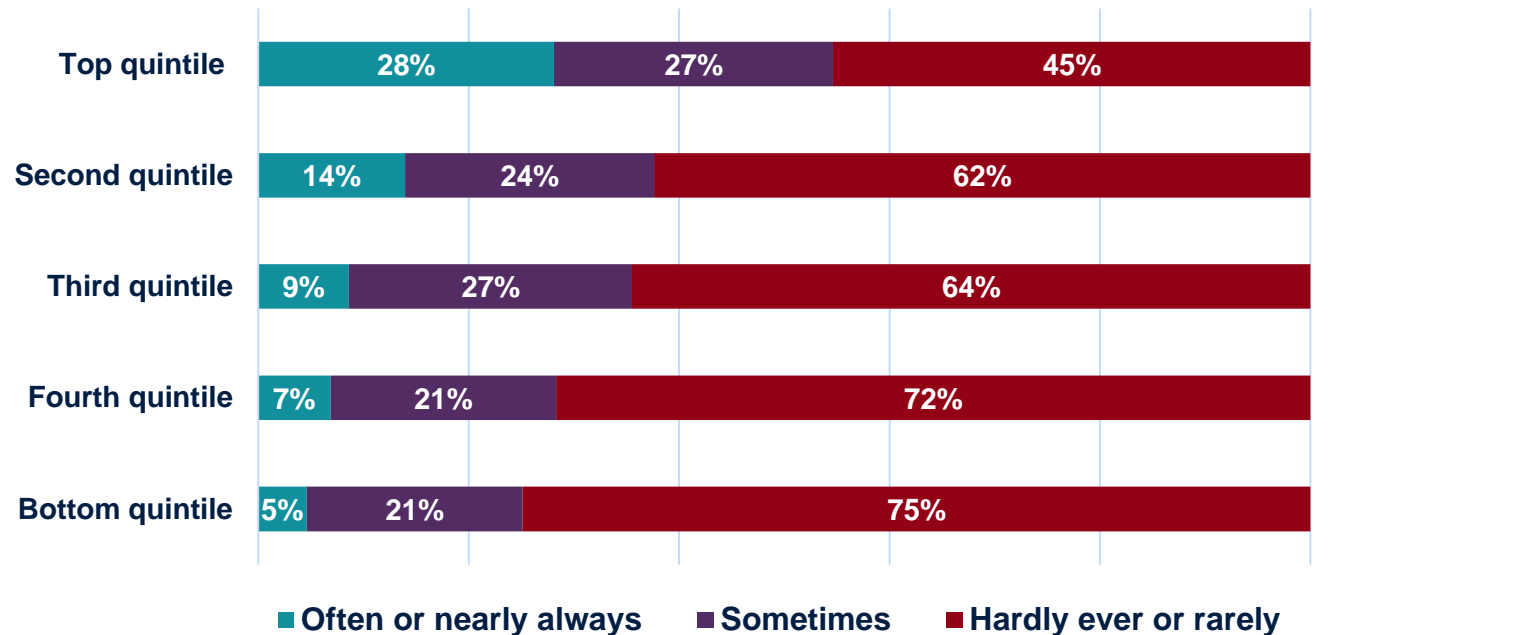
## LPI components scores, by LPI quintile



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.

# Demand for Sustainable or 'Green' Logistics

How often do shippers ask for environmentally friendly options?



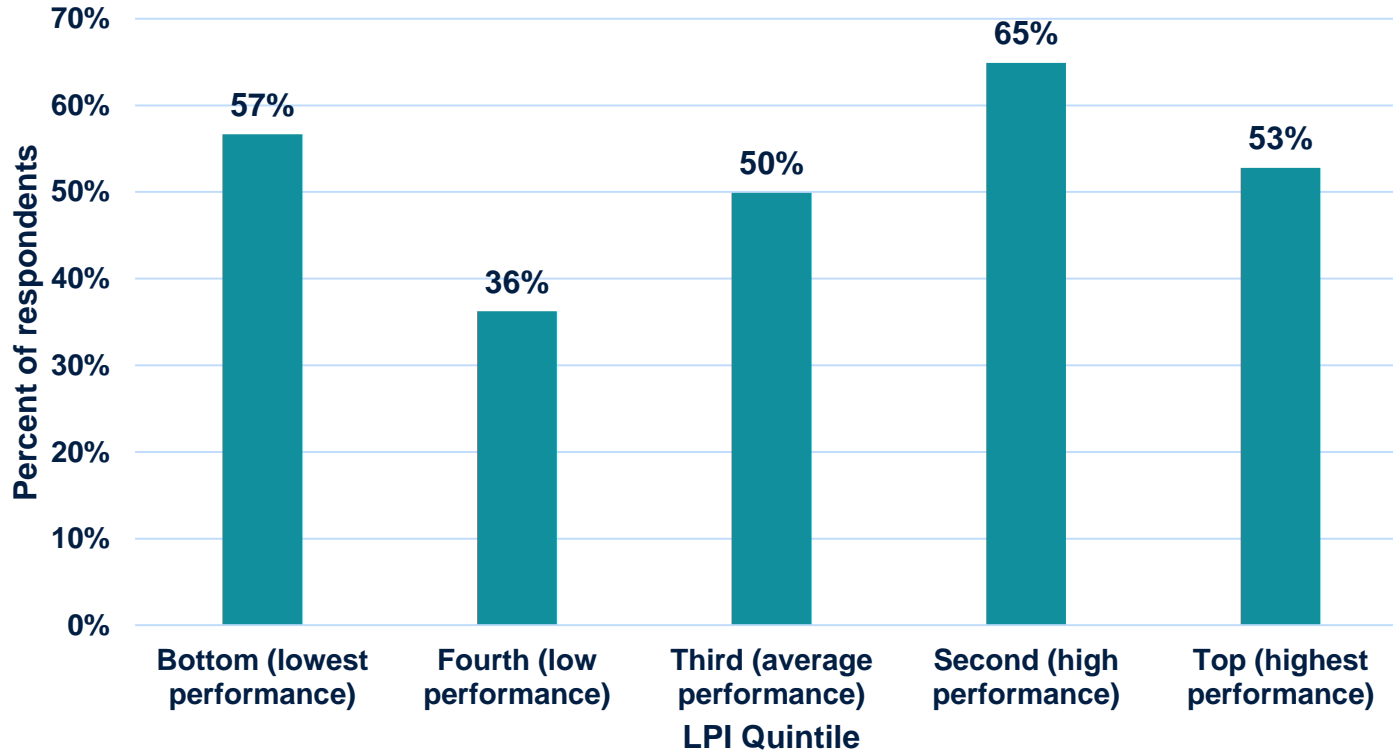
The demand for environmentally friendly solution is strongly and positively associated with logistics performance.

# 3. LPI 2018 results: Domestic section

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# 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

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

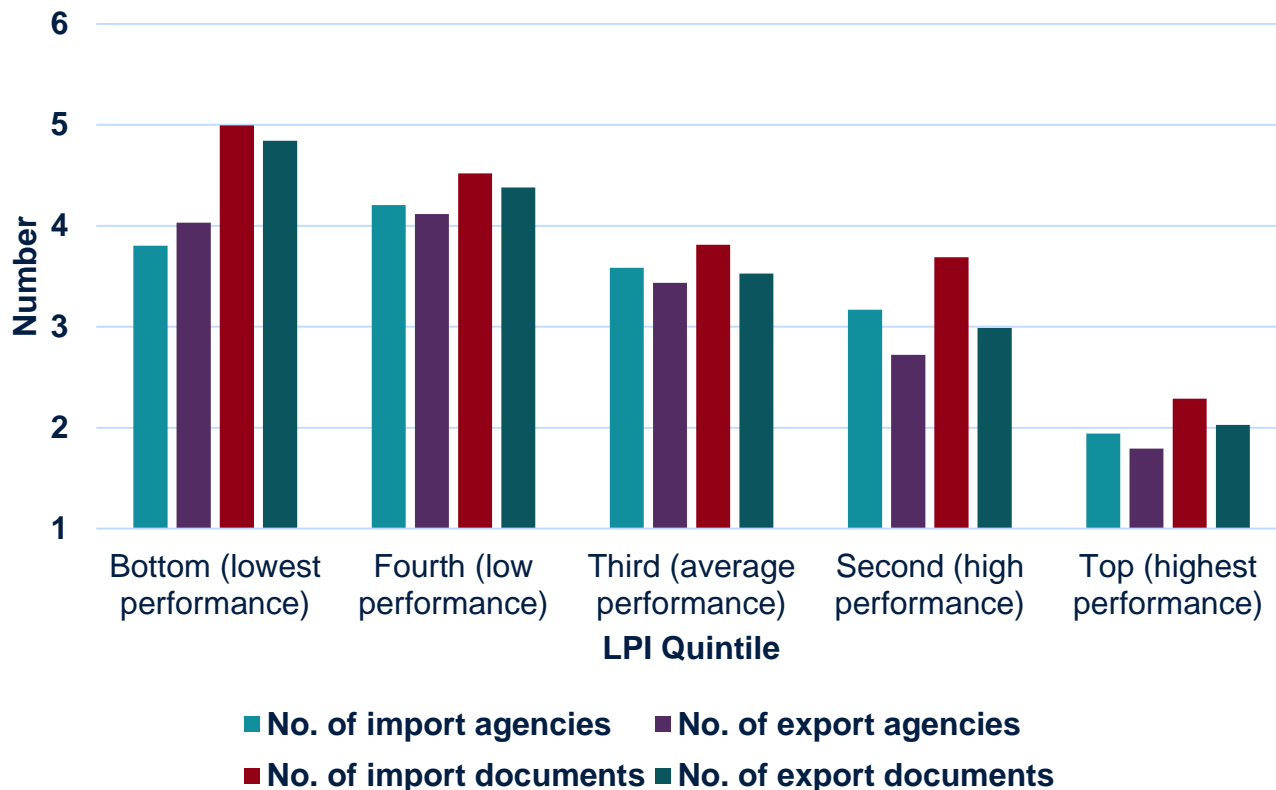
A strong advantage in services among the top performers.

## Difference between respondents rating services “high” or “very high” and those rating infrastructure “high” or “very high,” by WB region

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

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.

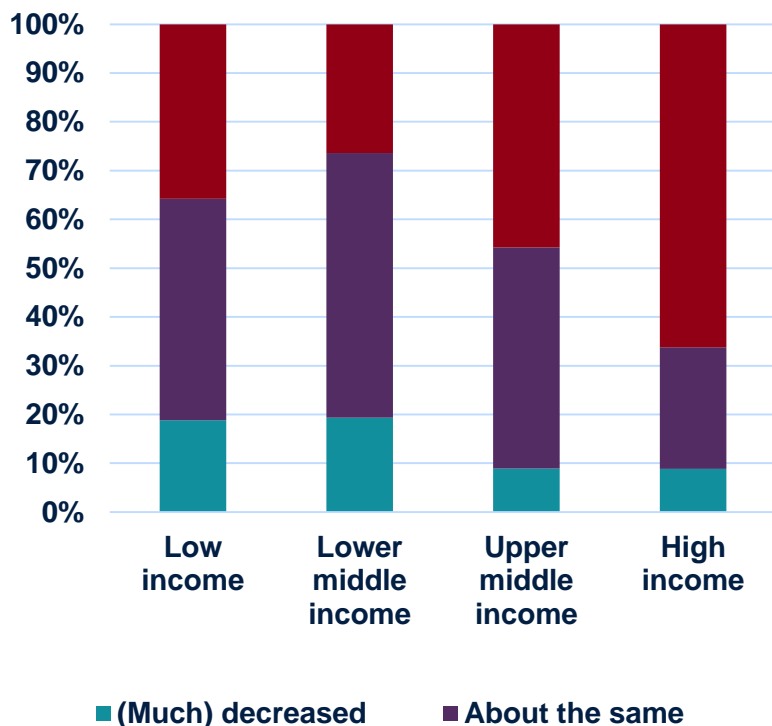
# Red tape affecting import and export transactions, by LPI quintile



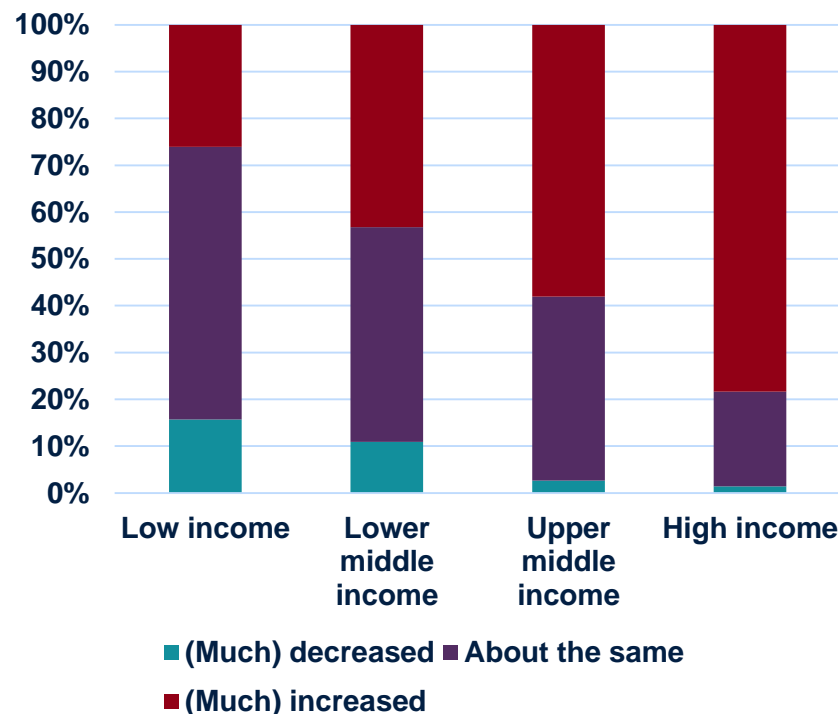
Border process efficiency still affects lowest performers: The lowest performers tend to experience more red tape.

# New question in 2018 LPI: Supply chain resilience and cyber threats in logistics

Cybersecurity threats in logistics have...



Our firm's preparedness for cyber threats has...



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

Source: World Economic Forum 2017: Supply Chain and Transport Briefing. Geneva: World Economic Forum.

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

√√√ Very important √√ Important √ Less important

	Lowest performer (fifth quintile)	Fourth quintile	Third quintile	Second quintile	Best performer (first quintile)
Transportation infrastructure	√√√	√√√	√√	√√	√√
Trade and transport facilitation	√√√	√√√	√√	√	√
Service markets and regulations	√√	√√√	√√√	√	√
Skills	√√	√√√	√√√	√√√	√
Green logistics	√	√	√√	√√	√√√
Urban logistics	√	√√	√√√	√√√	√√√
Spatial planning	√	√	√√	√√	√√
Resilience	√√	√√	√√	√√	√√
Dedicated logistics body	√	√	√√√	√√√	√√
Specific legal framework	√	√	√√	√√	√
National data system	√√	√√	√√√	√√√	√√√

# 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?

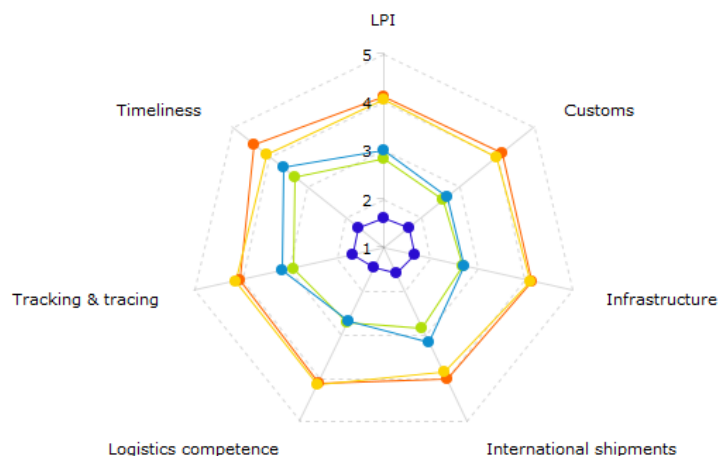
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The LPI is a well-established benchmark, but it does not do everything.

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](http://lpi.worldbank.org)

■ Singapore 2012  
■ Region: East Asia & Pacific 2012  
■ Burundi 2012

■ Finland 2012  
■ Vietnam 2012

**COUNTRY**

2007 2010 **2012**

- Singapore
- Slovak Republic
- Slovenia
- Solomon Islands
- South Africa
- Spain
- Sri Lanka
- Sudan
- Sweden
- Switzerland

**COMPARE AND CONTRAST DATA**

Instructions

Quick compare Singapore 2012

Compare countries and regions

Country Finland 2012

Region East Asia & Pacific 2012

Country Vietnam 2012

Country Burundi 2012

+ Compare up to 20 countries, regions or income groups

Show Results

**INDICATORS**

Quick links:

- ▶ All indicators
- ▶ Only Overall LPI

- Overall
- Customs
- Infrastructure
- International shipments
- Logistics competence
- Tracking & tracing
- Timeliness

Refresh

# Thank you

For questions:  
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