Mobility and Transport Connectivity Series

WORLD BANK GROUP

S&P Global Market Intelligence

The Container Port Performance Index 2020 to 2024

Trends and lessons learned

The Container Port Performance Index 2020 to 2024: Trends and Lessons Learned

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Table of Contents

Figures

Tables

Boxes

Foreword

The fifth edition of the Container Port Performance Index (CPPI) arrives at a time of increasing awareness of the importance of port performance for global supply chains. The disruptions caused by the COVID-19 pandemic, geopolitical instability, climate-driven constraints, and supply-demand imbalances, together, have underscored the need for reliable performance measurement across ports and over time.

This edition of the CPPI report builds on the strong foundation laid by its predecessors. Since its launch in 2020, the CPPI has become a widely referenced global benchmark for the performance of container ports. A collaboration between the Transport Global Practice of the World Bank and S&P Global Market Intelligence, the index remains focused on a key indicator of operational efficiency: vessel time in port and the number of containers moved. Over the years, port coverage has expanded, supported by improved data availability and quality. The methodology that combines administrative and statistical approaches has become firmly established, providing robust performance scores.

A novelty in this year's report is the incorporation of a multi-year trend analysis. For the first time, the CPPI examines changes in port performance over time, providing stakeholders with insights into whether a given port's CPPI has increased, declined, or remained stable. This marks a significant evolution from annual snapshots to a longitudinal perspective, enabling a deeper understanding of the structural patterns in container port efficiency.

In addition to presenting trends in CPPI scores, this report compares these developments with other global maritime and logistics indicators, including freight rates, congestion indices, and supply chain pressure metrics. The results show that regional and national port performance trends mirror broader shifts in maritime logistics, with clear differences in resilience and adaptability across locations and port types.

The CPPI is intended to serve as a diagnostic and planning tool. The aim is not to benchmark ports against one another but rather to help port authorities, governments, and private stakeholders identify where and how improvements are taking place, and under what conditions. It provides a starting point for constructive dialogue on investment, reform, and innovation in port infrastructure and operations.

The World Bank and S&P Global hope that this fifth edition of the CPPI will support continued efforts toward greater efficiency, resilience, and sustainability in the global maritime sector.

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Abbreviations

AIS	Automatic Identification System
CI	Crane Intensity
COVID-19	Coronavirus Disease 2019
CPPI	Container Port Performance Index
EEZ	Exclusive Economic Zone
EM	Emerging Market
ETA	Estimated Time of Arrival
FA	Factor Analysis
FAL	Facilitation of International Maritime Traffic
GDP	Gross Domestic Product
GRT	Gross Registered Tonnage
GSCSI	Global Supply Chain Stress Index
GSCPI	Global Supply Chain Pressure Index
IMO	International Maritime Organization
LLDC	Landlocked Developing Country
LPI	Logistics Performance Indicators
OCR	Optical character recognition
PCI	Port Congestion Index
PMI	Purchasing Managers' Index
RFID	Radio Frequency Identification
SCFI	Shanghai Containerized Freight Index
SIDS	Small Island Developing States
SOLAS	International Convention for the Safety of Life at Sea
TEU	Twenty-foot Equivalent Unit
TOS	Terminal Operating System
UNCTAD	UN Trade and Development
UNVIM	United Nations Vessel Inspection Mechanism for Yemen
US	United States
VTL	Vertical Tandem Lifts

Glossary

All fast: The point when the vessel is fully secured at berth and all mooring lines are fast.

Arrival time/hours: The total elapsed time between the vessel's AIS-recorded arrival at the actual port limit or anchorage (whichever is earlier) and its all lines fast at the berth.

Berth hours: The time between all lines fast and all lines released.

Berth idle: The time spent on berth without ongoing cargo operations. Includes time between all fast to first move and last move to all lines released.

Call size: The number of container moves per port call, inclusive of discharge, load, and restowage.

Cargo operations: The time between first and last container moves during which cargo is actively exchanged.

Ceteris paribus: All other things being equal.

Clarksons Port Congestion Index (PCI): An index tracking the percentage of the global containership fleet capacity that is in port at any given time.

Crane Intensity (CI): The quantity of cranes deployed to a ship's berth call, calculated as total gross crane hours divided by operating hours.

Factor Analysis (FA): A statistical method used to describe variability among observed, correlated variables in terms of fewer unobserved variables called factors.

Finish: Total elapsed time between the last container move and all lines released.

Global Supply Chain Pressure Index (GSCPI): A composite index developed by the Federal Reserve Bank of New York to capture global supply chain conditions using transportation costs and delivery times.

Global Supply Chain Stress Index (GSCSI): An index compiled by the World Bank measuring global logistics and shipping disruptions, including congestion.

Gross crane hours: Total working time for all cranes deployed to a vessel call without deductions.

Gross crane productivity: Call size or total moves divided by total gross crane hours.

Hub port: A port used by deep-sea mainline ships as a transshipment point for smaller feeder ports in its region.

Moves: Total container moves: discharge + restowage + load. Excludes hatch covers and non-container work.

Moves per crane: Total moves for a call divided by the crane intensity.

Port call: A call to a container port/terminal by a container vessel where at least one container was discharged or loaded.

Port hours: The number of hours a ship spends at/in port, from arrival at port limits to sailing from the berth.

Port limits: The anchorage zone or location of pilot embarkation/disembarkation, whichever is earliest.

Port to berth hours: The time from port limits or anchorage to the moment the vessel is all fast alongside the berth.

Shanghai Containerized Freight Index (SCFI): A weekly measure of spot freight rates for container shipments from Shanghai to major global markets.

Shipchandling: The provisioning of ships with supplies required for their operation while in port, including food, water, fuel, spare parts, cleaning agents, and other consumables. Shipchandling services are typically provided by specialized suppliers known as ship chandlers.

Ship size: Nominal capacity in twenty-foot equivalent units (TEU).

Start: The time elapsed from berthing (all lines fast) to first container move.

Steam-in time: The time required to steam-in from the port limits to berth all fast.

Transshipment: Containers transferred between ocean-going container ships or from mainline to feeder vessels.

Time in port: For CPPI calculations, this includes the time between arrival at anchorage or pilot station and departure from berth. The time in port between departure from berth and exit from port limits is not included in the CPPI calculations.

Waiting time: Total time from when a vessel enters anchorage until it departs, excluding movement under 0.5 knots for at least 15 minutes.

Executive Summary

Container ports are critical nodes in globally connected supply chains, handling merchandise and semi-finished products. The Container Port Performance Index (CPPI) measures the time container ships spend in port, making it an important point of reference for stakeholders in the global economy and for the sustainable development of ports.

A timely turnaround of container ships is crucial to keep logistics costs low and supply chains efficient, ensuring that ports remain resilient catalysts for development. Time-efficient container ports enable ships to achieve fuel and emissions savings, making the index a key contributor to shipping decarbonization efforts.

The aim of the CPPI is to provide an objective measure of container port performance, identify global or local trends in maritime container trade efficiency, and highlight where vessel time in port could be improved. Since its first edition in 2021, the World Bank has partnered with S&P Global Market Intelligence to publish the CPPI annually.

The fifth edition of the CPPI, jointly developed by the World Bank and S&P Global Market Intelligence, provides a comparative global assessment of container port performance. As usual, it covers new data from the previous calendar year, 2024, and also discusses trends over the five years from 2020 to 2024. By focusing on vessel time in port as the core metric of performance, the CPPI highlights significant changes in ports' operational efficiency and aids in identifying emerging patterns in global maritime logistics. It employs the same methodology as in previous editions, combining two complementary approaches (referred to as "administrative" and "statistical") to produce a robust and normalized score.

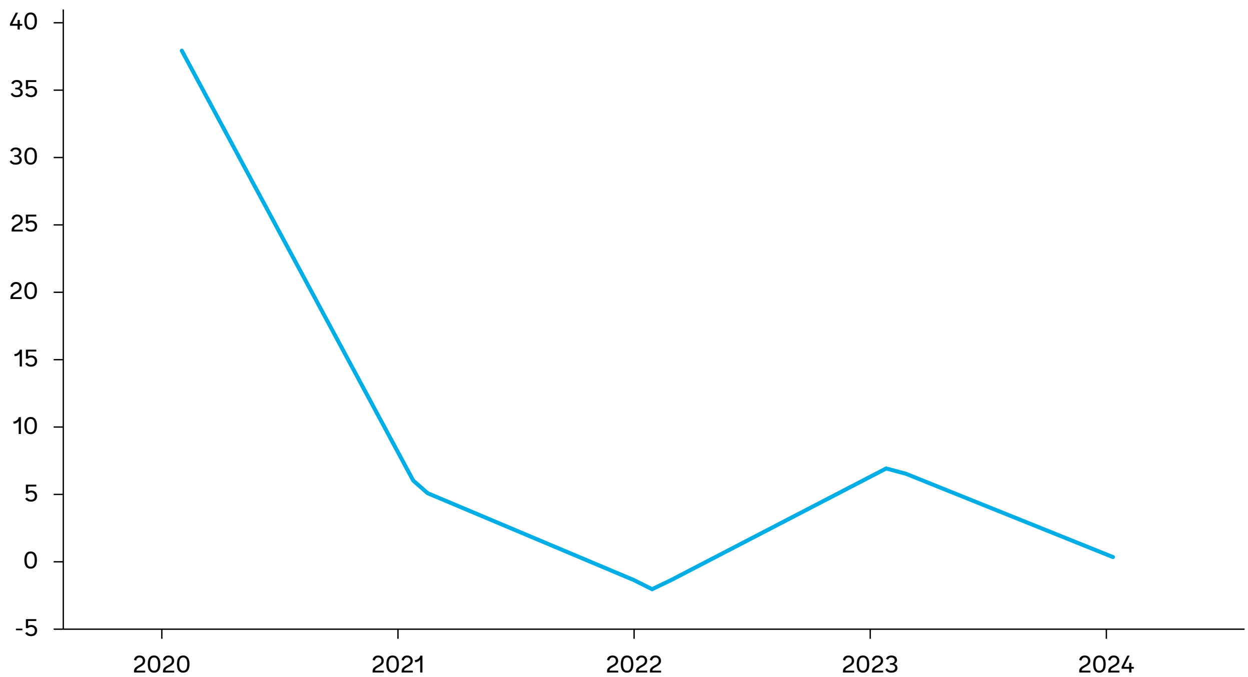
CPPI trends reflect global supply chain disruptions and recoveries

Over the five-year horizon, the CPPI has proven to be a reliable mirror of the broader stresses and recoveries observed across global supply chains (Figure E.1). Several global indices, including the Global Supply Chain Pressure Index (GSCPI), the Global Supply Chain Stress Index (GSCSI), the Port Congestion Index (PCI), and the Shanghai Containerized Freight Index (SCFI), show clear and synchronous patterns with CPPI developments. Thus, the CPPI score and the year-on-year changes (see Annex) are influenced by factors beyond the control of an individual terminal.

In 2020, port performance began relatively strongly, despite initial disruptions from COVID-19. CPPI values were high, reflecting limited systemic delays and relatively stable global shipping networks. North American and European ports, however, already began to show early signs of congestion by the middle of 2020.

The situation deteriorated markedly in 2021 and 2022. CPPI scores declined sharply due to global port congestion, vessel delays, and equipment shortages, reaching a peak in stress during late 2021. North American ports were among the hardest hit, particularly on the West Coast, where operational inefficiencies and labor constraints resulted in record dwell times. Freight rates soared, and ship turnaround times worsened, dragging down performance metrics. The lowest global average CPPI of the past five years was observed in 2022, consistent with the highest levels of port congestion and stress recorded in global supply chain indices.

Figure E.1 The global average CPPI, 2020 to 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.
Note: The average is the unweighted arithmetic average of all 403 ports.

A notable recovery began in 2023. CPPI scores rebounded in parallel with a sharp drop in port congestion and a return to more stable freight markets. Ports in South Asia, in particular, showed significant improvements and even exceeded their 2020 performance scores. Meanwhile, ports in high-income economies regained much of their pre-pandemic operational efficiency, benefiting from more stable volumes and catch-up investment in technology and coordination.

However, this recovery was partially reversed in 2024. The resurgence of stress in global maritime supply chains, stemming from the Red Sea crisis and ongoing climate-related disruptions at the Panama Canal, triggered new operational inefficiencies. Rerouted shipping via the Cape of Good Hope and reduced transits through the Panama Canal led to schedule unreliability and increased port congestion. CPPI scores declined modestly, though less dramatically than during the COVID-19 era. The disruptions in 2024 were primarily geopolitical and climatic rather than demand-driven, underscoring the evolving nature of global supply chain vulnerabilities.

Regional trends and impacts

The CPPI trends reveal strong regional variation in both shock exposure and crisis recovery:

- **North America and Europe** suffered the most during the COVID-19 pandemic, with North American ports recording the lowest CPPI scores globally in 2022. However, by 2024, they had largely stabilized and maintained performance levels comparable to those in 2023.
- **South Asia** demonstrated exceptional recovery capacity. It was the only region whose average CPPI score in 2023 exceeded that of 2020, though the Red Sea disruptions again weighed on performance in 2024.

- **Middle East and North Africa** ports initially led the rankings in 2020, but their average performance declined notably in 2023 and 2024, largely due to the repercussions from the Red Sea crisis.
- **Sub-Saharan Africa** continues to face persistent structural challenges, including limited automation and weaker hinterland connectivity. The Red Sea crisis added further strain in 2024, notably reducing performance in ports such as Durban and Cape Town, already under pressure from longer vessel waiting times. The CPPI of Durban and Cape Town is significantly affected by longer arrival times, i.e., waiting times at anchor, while the time at berth has not changed substantially between 2023 and 2024.

The CPPI as a diagnostic tool for industry and policymakers

Rather than being a static ranking exercise, the CPPI provides actionable insights into operational performance, capacity bottlenecks, and resilience across ports of varying sizes, types of traffic, ownership, and geographic locations. It enables stakeholders to identify structural inefficiencies, benchmark their performance against regional or global peers, and track the impact of external shocks or policy interventions over time.

Ports with rising CPPI scores over the 2020-2024 period have often combined investments in digitalization, 24/7 operations, and streamlined coordination with customs and logistics partners. Their improvements can offer replicable lessons for other ports aiming to boost turnaround efficiency. Moreover, the CPPI confirms that good port performance is not simply a function of scale. Ports of all sizes can achieve high performance when well-managed, with optimal crane deployment and process efficiency.

Conclusion

Over five editions covering the years 2020-2024, the CPPI has matured into a valuable global public good for benchmarking and analyzing port performance in the context of volatile and steadily evolving supply chains. By linking time-in-port data to broader disruptions such as pandemic shocks and geopolitical crises, this year's CPPI report can help identify where container ports exhibit potential weaknesses in resilience and where reforms or additional investments may be warranted.

The 2020–2024 trend analysis confirms that the CPPI can capture and monitor dynamic shifts in operational capacity, sector vulnerabilities, and responsiveness to disruption. This makes it especially valuable to governments, port authorities, shipping lines, and development partners seeking to improve port infrastructure and logistics chains in an increasingly uncertain world.

Introduction

Maritime transport moves over 80% of global trade by volume. Container ports form the backbone of this system. Their performance shapes trade costs, reliability, and resilience; disruptions at ports can quickly spill over into supply chains and then national economies (Arvis, Rastogi, Rodrigue, & Ulzbina, 2024; Arvis, Shepherd, Duval, & Utoktham, 2013; UNCTAD, 2024b). More generally, differences in port performance have a direct bearing on the attractiveness of ports to shipping lines and traders, and thus on countries' maritime transport connectivity, shipping costs, and ultimately trade competitiveness and development (Fugazza & Hoffmann, 2017; Herrera Dappe, Lebrand, & Stokenberga, 2024; and Hoffmann, Saeed, & Sødal, 2019).

The Container Port Performance Index (CPPI), produced by the World Bank and S&P Global Market Intelligence, offers a global benchmark for container port efficiency. Based on vessel time in port, here defined as arrival and berth hours, the CPPI is generated for over 400 ports, utilizing consistent, verified, and empirical data. The CPPI is grounded in comprehensive Port Performance Data that provides critical insights into operational efficiency and global supply chain dynamics.

Now in its fifth edition, the CPPI covers trends over five years, from 2020 through 2024, a period marked by shocks and instability linked to the global pandemic, geopolitics, and climate change.

The report is structured as follows:

- **Chapter 1** sets the scene with a review of global trends in container port performance between 2020 and 2024. It draws comparisons with freight rate indices, congestion metrics, and broader supply chain stress indicators to illustrate how the CPPI reflects major global disruptions and recoveries.
- **Chapter 2** disaggregates the CPPI results by region and by country income group. It highlights differences in performance trajectories across various maritime regions and discusses the resilience and adaptability of ports in the face of challenges such as the COVID-19 pandemic, climate shocks, and the Red Sea crisis.
- **Chapter 3** presents an analysis of the core variables used to calculate CPPI scores, discusses their distribution, and identifies their respective contributions to the variation in the index.
- **Chapter 4** examines common features of ports that score well on the CPPI. The chapter provides a qualitative assessment of good practices that can help improve a port's performance, focusing on reducing time spent at the berth and at anchor, as well as upon arrival.
- **Chapter 5** builds on the previous editions of the CPPI reports. It summarizes the rationale for the CPPI, its relevance for trade and development, and the need for reliable port performance data. It outlines the Port Performance Program and explains key operational concepts such as time in port, time at berth, and crane intensity. It further presents the methodology used to construct the index, including both administrative and statistical approaches, and explains how they are combined. The chapter also explains how this year's report modifies the CPPI methodology to ensure comparability across the five years from 2020 to 2024. It concludes with an outline of the strengths and limitations of the CPPI. It clarifies what the index measures and what it does not.

The CPPI helps to identify and track global trends, benchmark progress, and guide reforms. Port performance is central to supply chain reliability and trade competitiveness. It can and should be measured.

Global Trends

1

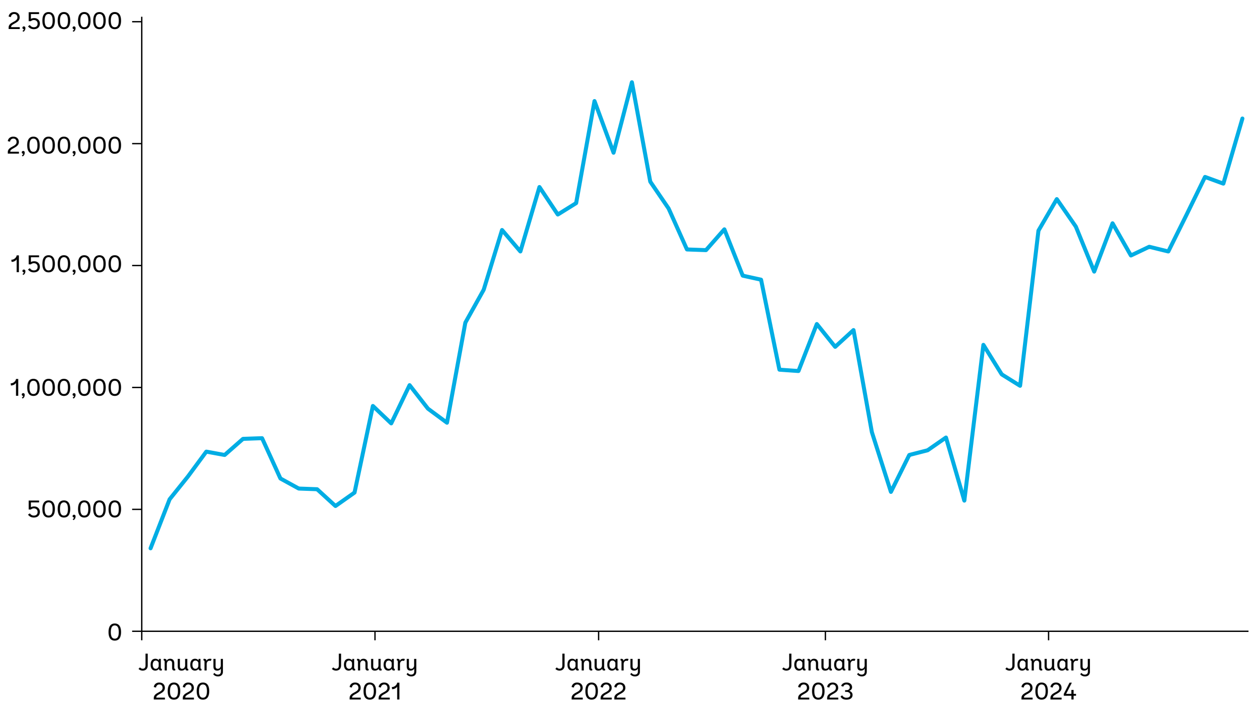
To put trends in port performance into perspective, this report begins with a discussion of several key global maritime transport and supply chain indicators. Over the five-year horizon from 2020 to 2024, the CPPI has reflected broader stresses and recoveries observed across global supply chains, both globally and in various regions.

1.1 Global indices and benchmarks, 2020 to 2024

Global Supply Chain Stress Index

The World Bank's Global Supply Chain Stress Index (GSCSI) (World Bank, 2025) tracks logistics disruptions by measuring the twenty-foot equivalent unit (TEUs) containers stalled or delayed en route, based on global vessel location data and port congestion indicators. It captures systemic inefficiencies in maritime trade, offering a high-frequency signal of global supply chain pressure. The chart from 2020 to 2024 (Figure 1.1) shows sharp increases in stress during late 2021 and early 2022, coinciding with pandemic-related disruptions, followed by a marked decline in 2023. However, from late 2023 onward, stress levels rise again, reaching a new peak by the end of 2024.

Figure 1.1 Global Supply Chain Stress Index (GSCSI), January 2020 to December 2024, TEU

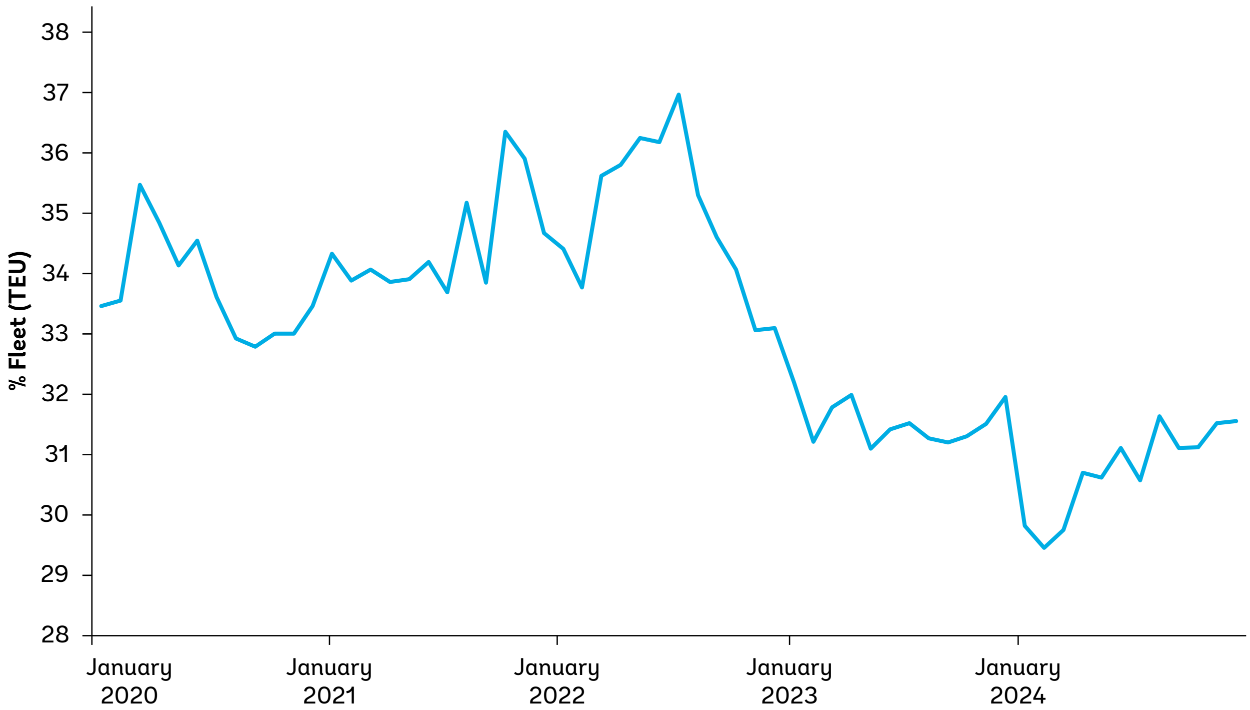


Source: World Bank (2025a).

Port Congestion Index

Clarksons' Port Congestion Index (Clarksons, 2025a) tracks the percentage of TEU of container ships that are held up in ports (Figure 1.2). The chart from 2020 to 2025 shows an increase in congestion between 2020 and mid-2022, coinciding with pandemic-related disruptions, followed by a marked decline in 2023. From early 2024 onward, stress levels rise again.

Figure 1.2 Clarksons' Port Congestion Index (PCI), Containerships in Port, percent of fleet capacity, January 2020 to December 2024



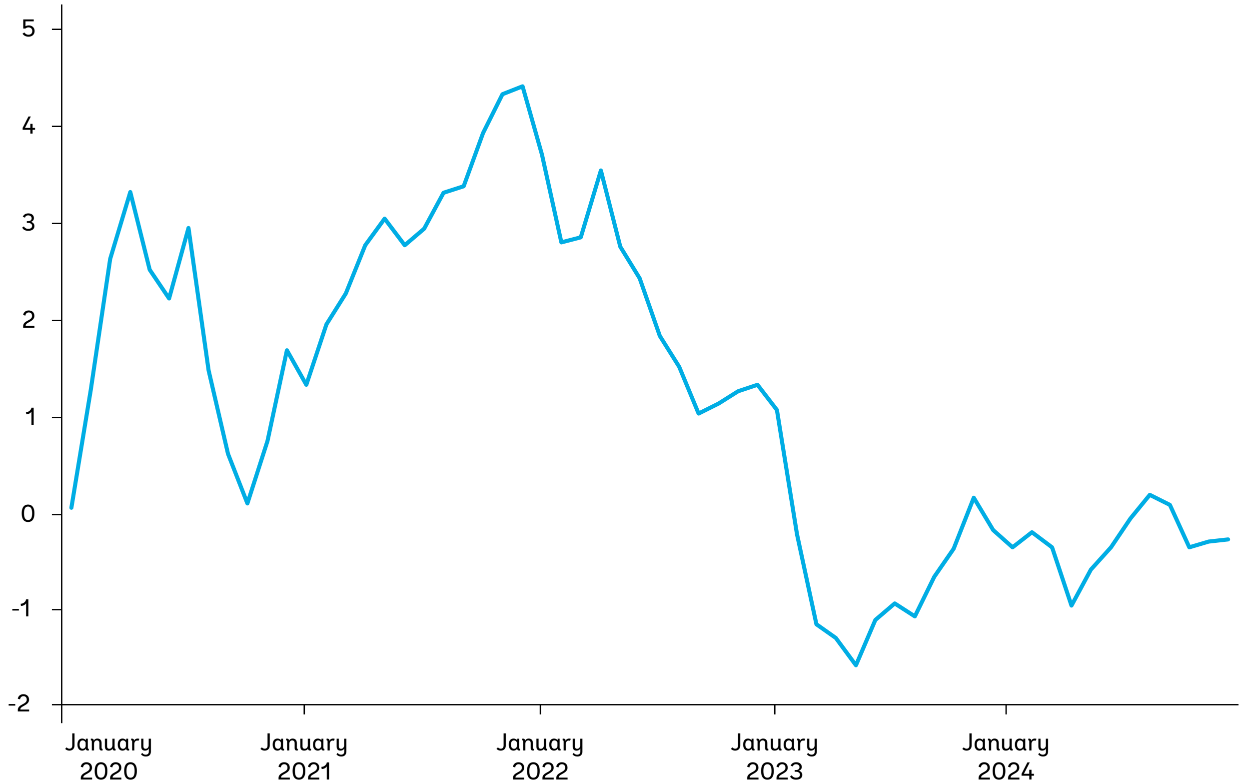
Source: Clarksons (2025a).

Global Supply Chain Pressure Index

The Global Supply Chain Pressure Index (GSCPI), developed by the Federal Reserve Bank of New York, measures global supply chain disruptions by aggregating data on shipping costs, delivery times, backlogs, and inventory levels across key economies. It uses a principal component analysis on variables from transportation (e.g., Baltic Dry Index, air freight costs), manufacturing surveys (e.g., PMI delivery times), and trade data, normalized to show how far pressures deviate from the historical average (set to zero) (Federal Reserve Bank of New York, 2025).

From 2020 to 2024, the GSCPI exhibits a pronounced surge in supply chain pressures, starting in early 2020 due to COVID-19 lockdowns and transport disruptions, which peaked at historic highs in late 2021 amid global port congestion and demand-supply mismatches (Figure 1.3). The index gradually declined through 2022 and into 2023 as conditions normalized, inventories recovered, and shipping costs fell. By 2024, the GSCPI dipped below its long-term average, indicating that global supply chain pressures had largely eased, though fluctuations persisted due to geopolitical tensions and localized disruptions.

Figure 1.3 Global Supply Chain Pressure Index (GSCPI), 2020 to 2024



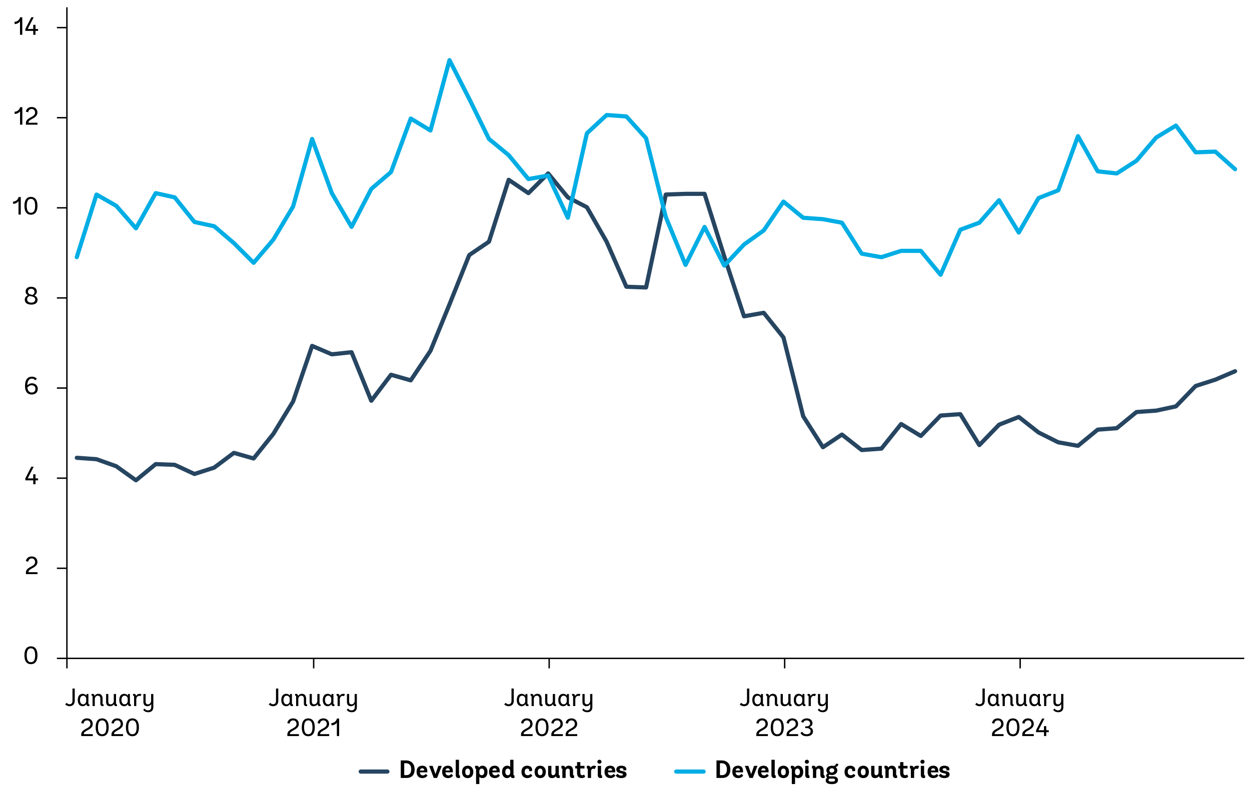
Source: Federal Reserve Bank of New York (2025).

Average time in port

The average time in port of container ships, as reported by UNCTAD (2025), shows that in most months, container vessels spend more time in port in developing countries than in developed countries. An exception happened during the COVID-19 pandemic, when congestion in North American and European ports led to a higher spike in time compared to ports in developed countries.

The trends in Figure 1.4 closely mirror the disruptions and subsequent recovery from the COVID-19 pandemic and its effects on global supply chains. The sharp increase in port time during 2021–2022 reflects the peak of port congestion caused by pandemic-related labor shortages, surging trade volumes, equipment imbalances, and restrictions on vessel and crew movements. Developed countries experienced a sharper initial increase, driven by their demand boom for consumer goods, but also a faster decline once the pandemic was over. In contrast, many developing countries are still confronted with prolonged constraints, such as limited port automation, slower vaccination rollouts, and financial limitations, which kept turnaround times relatively high and volatile over a longer period.

Figure 1.4 Time in port in hours, container ships, 2020 to 2024



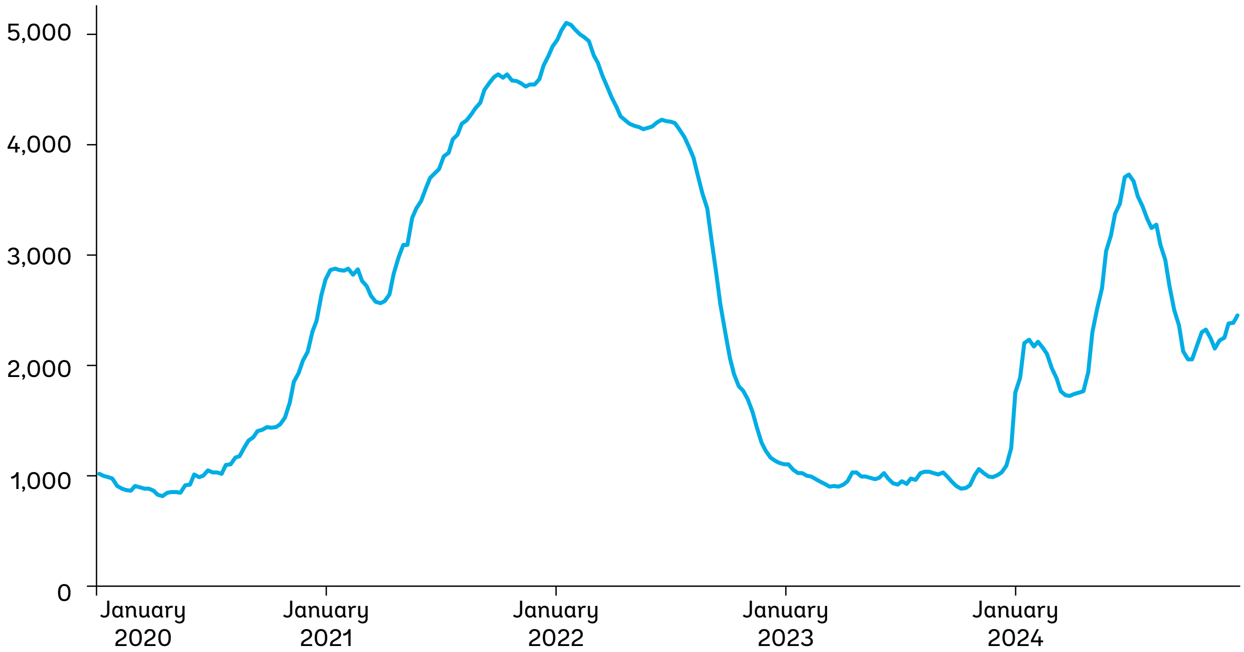
Source: UNCTAD (2025).

Shanghai Containerized Freight Index

The Shanghai Containerized Freight Index (SCFI) measures the spot rates for container transport from Shanghai to major global trade routes. It reflects the cost paid by freight forwarders for shipping containers, covering routes to Europe, the Mediterranean, the US West and East Coasts, South America, Africa, and Southeast Asia. Published by the Shanghai Shipping Exchange, the SCFI serves as a key barometer of short-term market conditions in container shipping, excluding terminal handling charges.

Between 2020 and 2024, the SCFI experienced unprecedented volatility. It rose sharply from mid-2020, driven by pandemic-related supply shocks, surging consumer demand, and global container imbalances, reaching record highs by late 2021. Spot rates on major routes (e.g., Shanghai–Los Angeles, Shanghai–Rotterdam) have multiplied several times over. Starting in 2022, the index began a steep decline as congestion eased, capacity constraints loosened, and demand softened amid inflation and inventory corrections. By 2023 and 2024, the SCFI returned closer to pre-pandemic levels, with occasional spikes resulting from events such as the Red Sea crisis. Still, the overall trend reflected a rebalancing of supply and demand in global container shipping (Figure 1.5).

Figure 1.5 Shanghai Containerized Freight Index (SCFI), 2020 to 2024



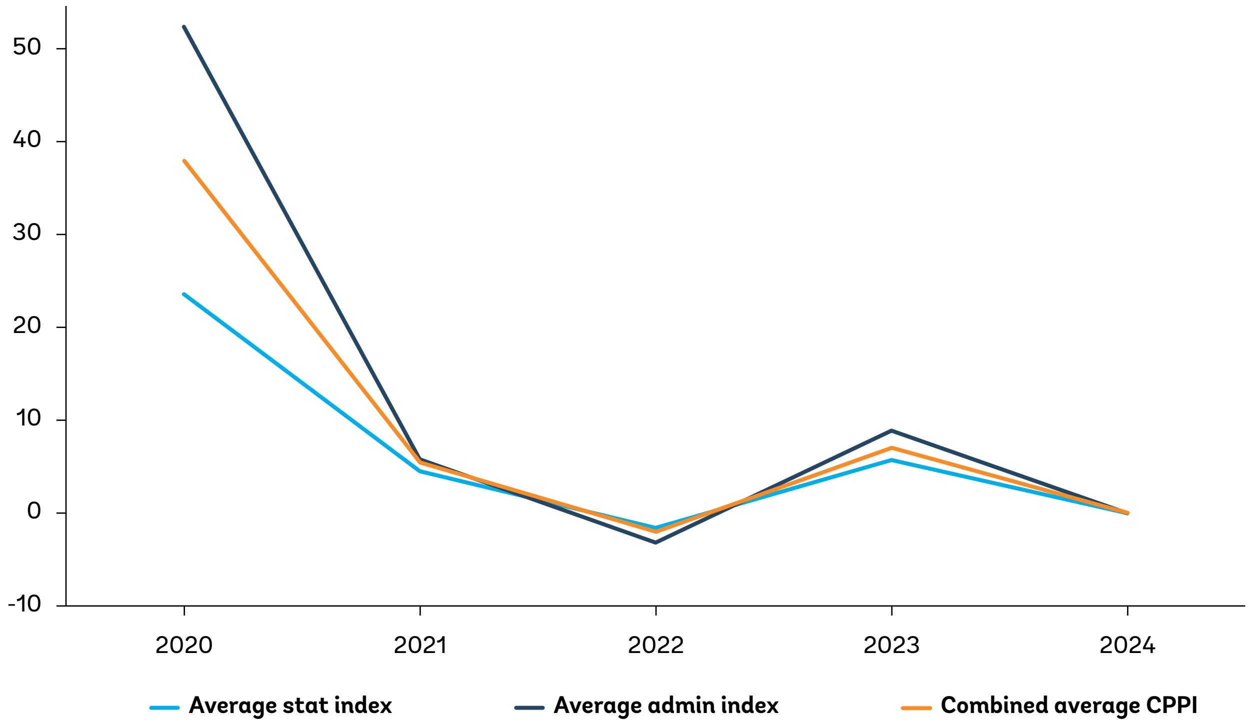
Source: Clarksons (2025b).

1.2 CPPI developments, 2020 to 2024

Figure 1.6 depicts the developments of the global average CPPI, including the administrative index (Box 5.1), the statistical index (Box 5.2), and the combined CPPI (the arithmetic average of the administrative and statistical indices. The methodology is explained below in Chapter 5).

The development of the CPPI closely follows the development of the various indices presented above. The strongest negative statistical correlation, taking annual averages, is between the CPPI and the Global Supply Chain Stress Index (Figure 1.1).

Figure 1.6 The Container Port Performance Index (CPPI), 2020 to 2024



Source: World Bank, based on data provided by S&P Global.
Notes: Average CPPI is set to zero in 2024. A higher CPPI means better performance. See Chapter 5.

In **2020**, global container port performance was relatively strong, with CPPI scores starting from a high baseline. This reflected a period of low freight rates (SCFI remained under 1,000), moderate congestion (Clarksons PCI at around 33–34% of fleet capacity), and minimal systemic delays. Both the GSCPI and GSCSI indicated limited disruption early in the year. However, the COVID-19 outbreak introduced shockwaves across maritime supply chains from the second quarter onward. While volumes dropped sharply in Q2, the second half of the year saw a rapid rebound in demand, particularly for consumer goods, driving port throughput back up. Despite operational stress, container dwell times remained fairly low, especially in developed countries, where time in port was around 4–5 hours, which helped sustain higher CPPI scores.

In **2021**, CPPI values declined significantly as the full impact of pandemic-induced dislocations became evident. The SCFI spiked above 4,000 as vessel capacity became scarce and freight rates surged. Port congestion intensified, Clarksons PCI rose above 36%, and the GSCSI showed that over 2 million TEU were stuck in transit by late 2021. The GSCPI peaked at around 4.5, indicating severe global supply chain stress. This was compounded by container shortages, labor constraints, and inland congestion, particularly in key ports such as Los Angeles, Rotterdam, and Durban. Time in port increased across the board, with developing country ports averaging over 12 hours and developed ones rising above 8 hours. The resulting drop in CPPI reflected these widespread operational inefficiencies, as ports struggled to maintain performance under extreme pressure.

In **2022**, the CPPI bottomed out, exhibiting the weakest performance over the five years. This was despite some initial easing of rates and congestion: The SCFI began falling from its peak, and the GSCPI gradually declined throughout the year. However, Clarksons PCI remained elevated during the first half of the year, and systemic stress persisted, as GSCSI volumes stayed near historic highs. The persistence of high time-in-port values, particularly for developing countries, underscores unresolved bottlenecks in yard management, hinterland connectivity, and berth availability. CPPI values were pulled down, reflecting overall delays, turnaround times, and congestion.

In **2023**, global conditions improved substantially, which was reflected in a strong rebound in CPPI scores. Port congestion declined significantly: The Clarksons PCI dropped to its lowest level (below 30%), and the GSCPI moved into negative territory, indicating stress levels below average. The GSCSI also improved to under 1 million TEU delayed. Freight rates stabilized near pre-pandemic levels, and vessel schedules became more predictable. The time in port fell sharply, particularly in developed countries, reaching a low of approximately 3.5 hours in mid-2023. Ports benefited from improved process stability, allowing them to clear backlogs and optimize crane productivity. These operational gains translated into the highest CPPI scores since the pre-COVID baseline, though not yet matching the highs of 2020.

In **2024**, CPPI scores declined again, reflecting a new set of global disruptions that were mostly geopolitical and climatic, rather than pandemic-driven. The Red Sea crisis led to widespread rerouting of Asia-Europe trade via the Cape of Good Hope, lengthening transit times and disrupting port rotations. In parallel, continued Panama Canal water shortages limited daily transits, affecting routes to the US East Coast and Latin America. These shocks pushed the GSCSI back above 2 million TEU delayed and contributed to a modest rise in the GSCPI. The SCFI also surged temporarily, indicating a tight supply of slots. Congestion (as measured by Clarksons PCI) rose slightly again, and time in port began to increase, especially in developing countries where inefficiencies persisted. The decline in CPPI in 2024 was less dramatic than during the pandemic but marked a setback in the recovery trajectory, driven largely by external pressures and uneven resilience across ports.

2

Developments in the CPPI in Different Regions and Countries

2.1 Trends in different regions and income groups

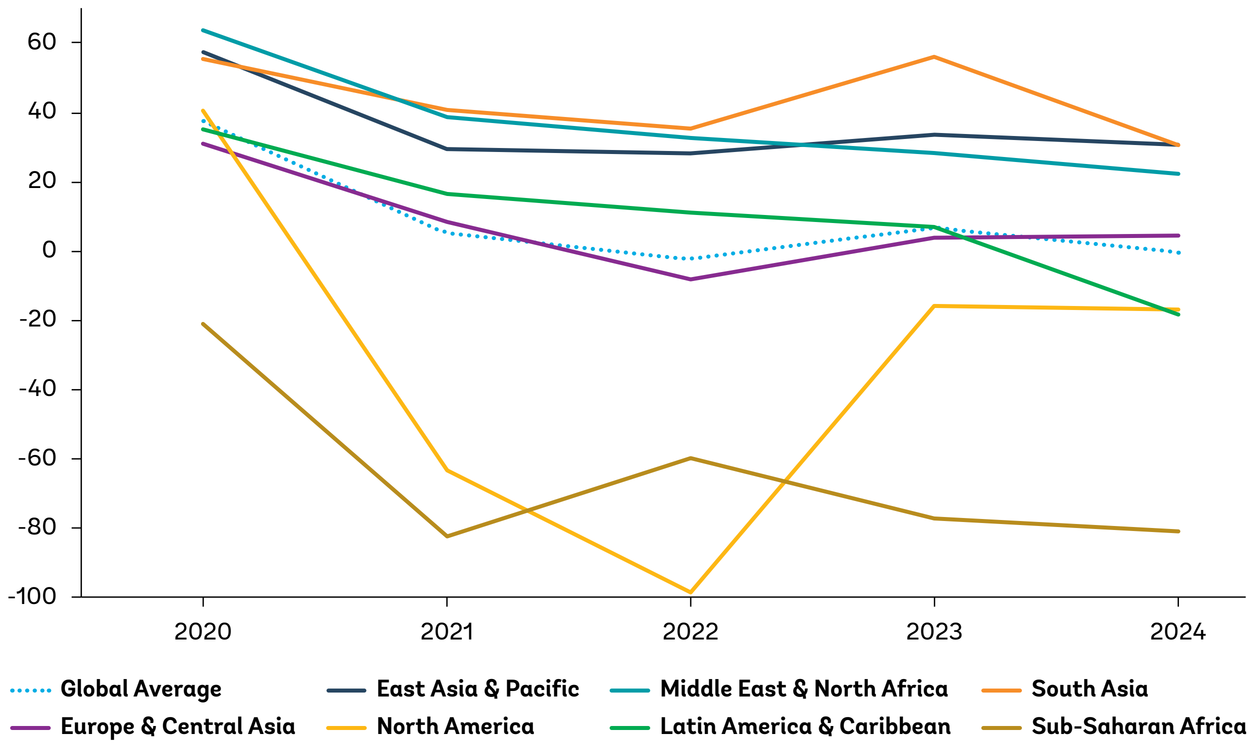
The global developments presented above had different repercussions in different regions and income groups. Figures 2.1 to 2.5 depict the development of the CPPI for different regions and income groups.

Ports in South Asia saw a strong recovery in 2023. South Asia is the only World Bank region with a higher average CPPI in 2023 than in 2020. But the region was also affected by the Red Sea crisis. Between 2023 and 2024, most regions experienced another decline in their average CPPI; only Europe and North America maintained roughly the same port performance in 2024 as in the previous year.

The Middle East and North Africa region started 2020 with the highest CPPI averages, but was then, in 2023 and especially 2024, more strongly affected by the Red Sea crisis.

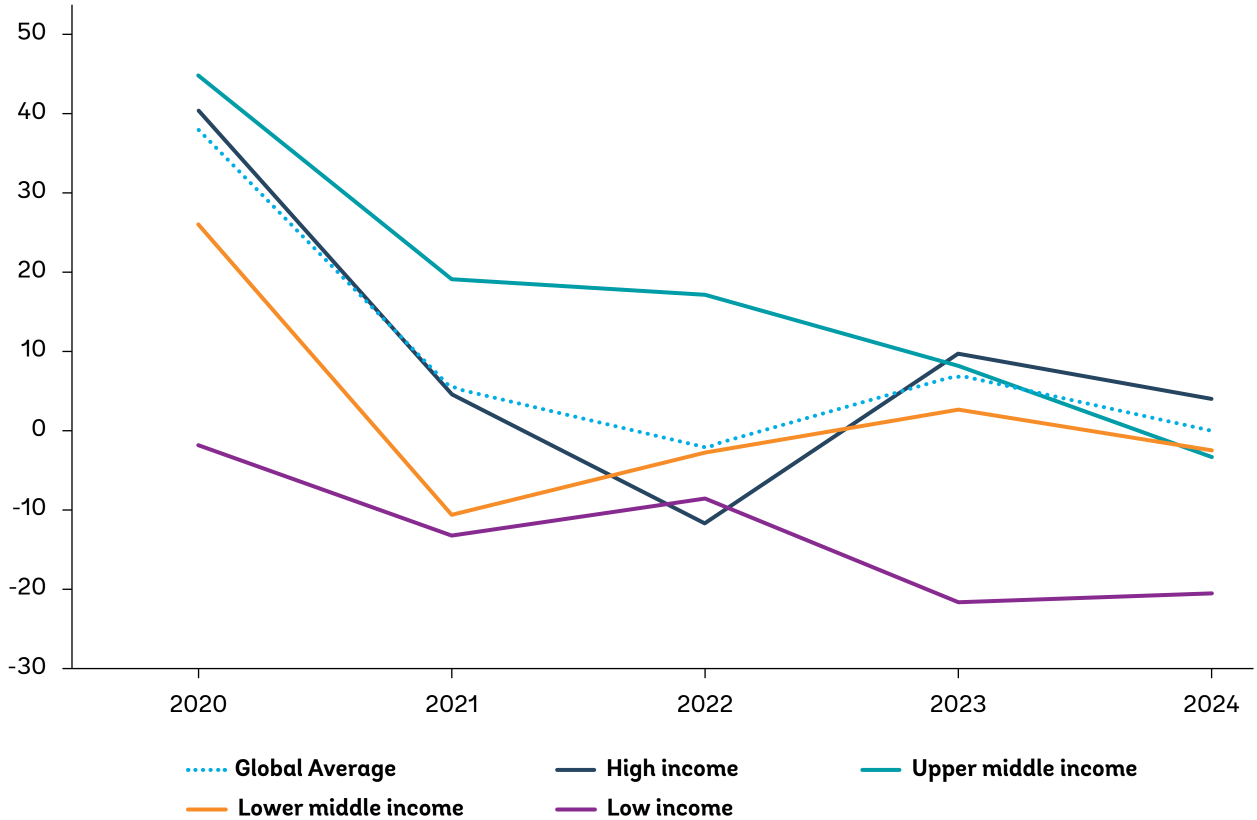
During the COVID-19 pandemic, the port performance of ports in Europe and North America, i.e., many high-income countries, saw the strongest decline. In 2022, North American ports, particularly on the West Coast, had the lowest average CPPI.

Figure 2.1 CPPI averages by World Bank region, 2020 to 2024



Source: World Bank calculations, based on data provided by S&P Global.

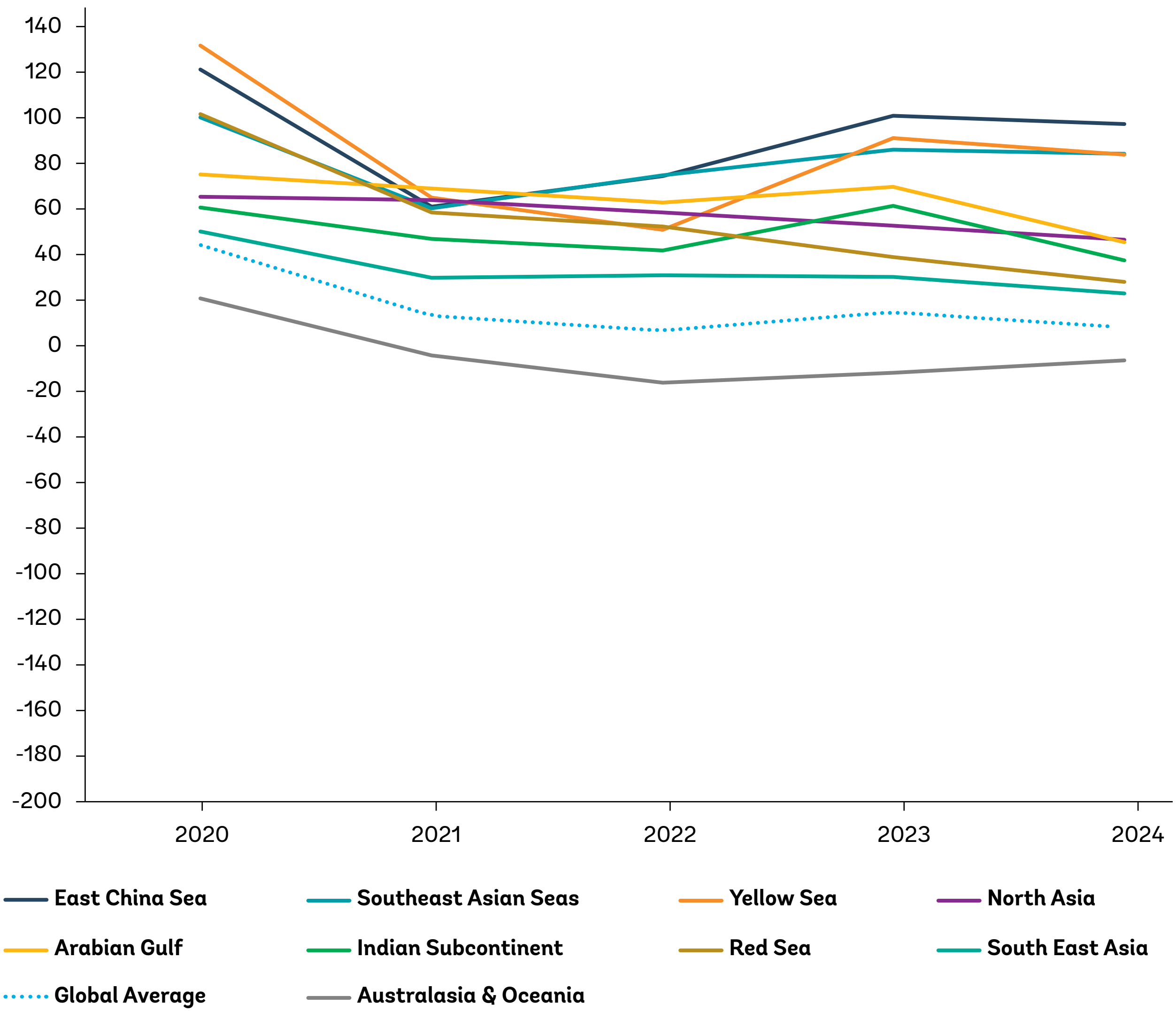
Figure 2.2 CPPI averages by World Bank income group, 2020 to 2024



Source: World Bank calculations, based on data provided by S&P Global Market Intelligence.

Independent of developments over time, ports in low-income countries, including most ports in Africa, are more likely to show lower port performance. This can be partly due to lower technological, human, and institutional capacities. Still, it can also be an economic decision by port operators and carriers, as slower operations may be less costly if traded goods, port infrastructure, or vessels have lower value.

Figure 2.3 CPPI averages by maritime region, Asia and the Pacific, 2020 to 2024



Source: World Bank calculations, based on data provided by S&P Global Market Intelligence.

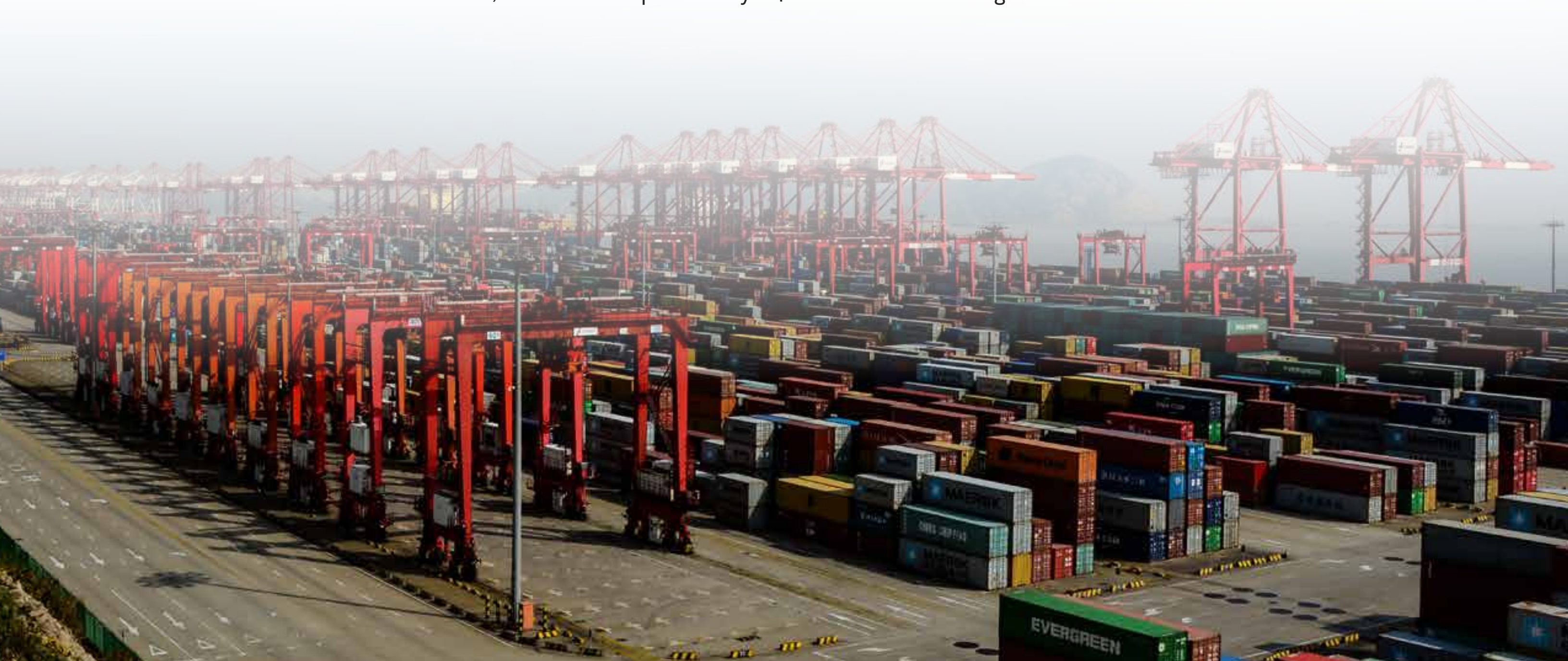
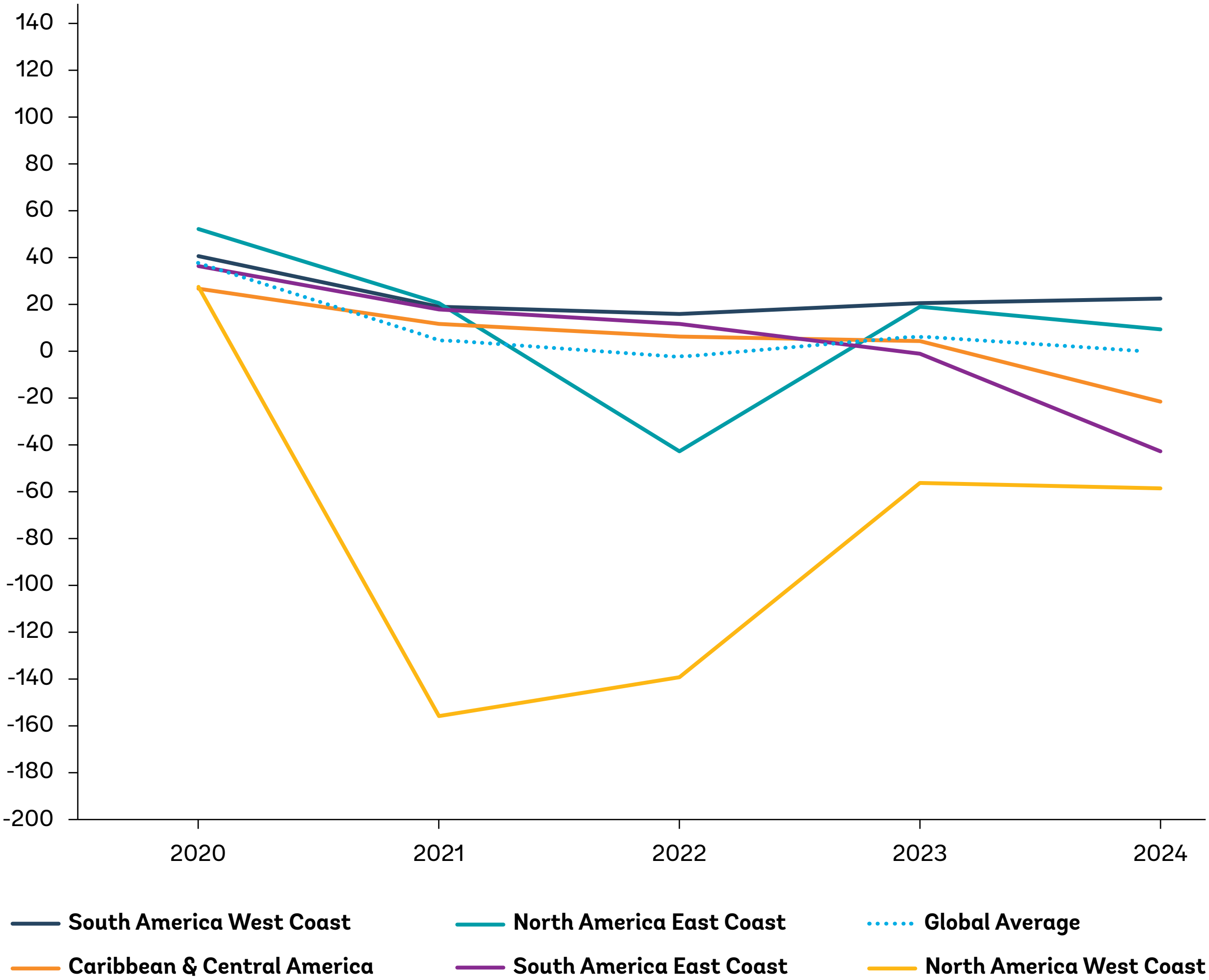


Figure 2.4 CPPI averages by maritime region, Americas, 2020 to 2024



Source: World Bank calculations, based on data provided by S&P Global Market Intelligence.

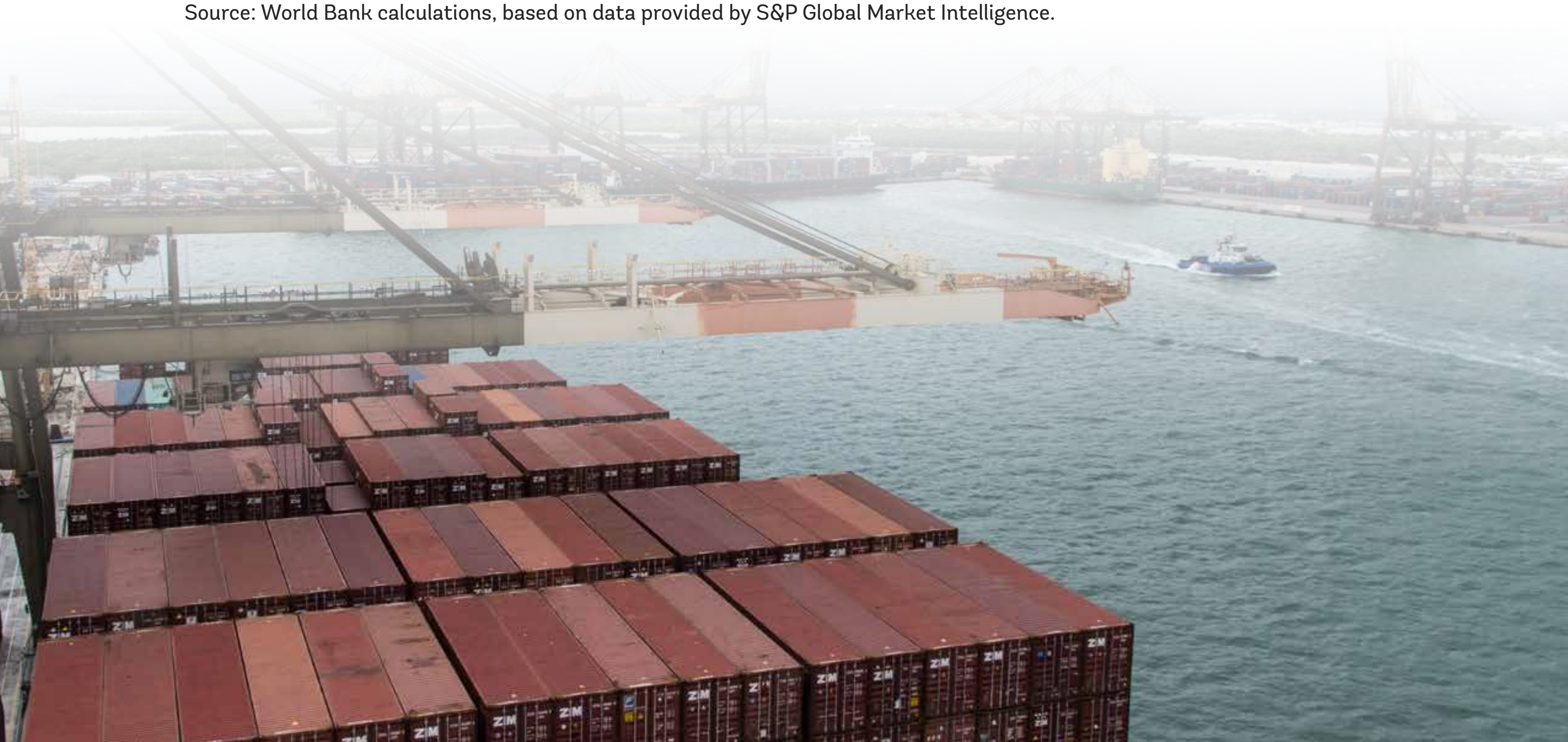
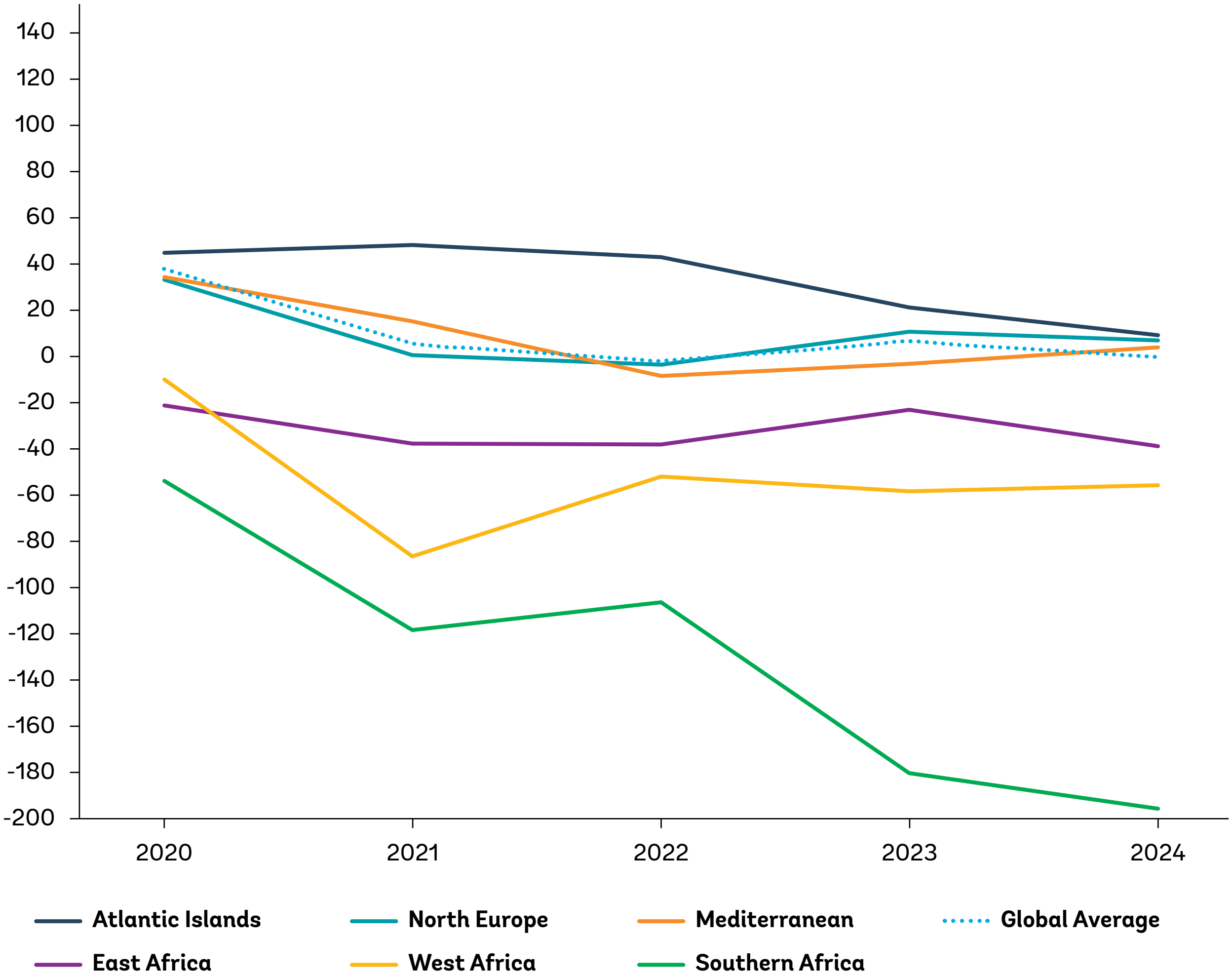


Figure 2.5 CPPI averages by maritime region, Africa and Europe, 2020 to 2024



Source: World Bank calculations, based on data provided by S&P Global Market Intelligence.

Ports in regions with more exports than imports tend to have higher CPPIs than importing regions. Preparing loadings for export enables the terminal operator to have containers lined up in the sequence required by the ship. At the same time, importing ports are more likely to face the need to receive containers and find space for them in the yard. Transshipment ports experience similar challenges to importing ports during the leg when containers are unloaded from vessels. Transshipment ports also face the challenge of matching main-line vessels with the arrivals of other vessels, including feeder vessels. They must manage complex cargo operations involving the sequential lifting of containers from unloading vessels, where containers may be stacked unevenly across the cargo hold, before loading fresh containers onto the same vessel.

2.2 Selected Top Performers

Summary tables

The twenty ports with the highest CPPI in 2024 are depicted in Table 2.1. A high ranking reflects above-average fast turnaround times for all vessel and port call categories. Most ports among the top-ranked are leading export and transshipment hubs. Table 2.2 presents the top 20 ports in terms of improved CPPI between 2020 and 2024. Table 2.3 presents the top 20 ports in terms of improved CPPI between 2023 and 2024.

Table 2.1 Top 20 CPPI in 2024

Rank	Port	Economy	CPPI
1	Yangshan	China	146.3
2	Fuzhou	China	139.2
3	Port Said	Egypt, Arab Rep.	137.4
4	Dalian	China	136.5
5	Tanger-Med	Morocco	135.8
6	Mawan	China	133.0
7	Cai Mep	Viet Nam	132.5
8	Guangzhou	China	130.2
9	Chiwan	China	129.5
10	Ningbo	China	127.9
11	Hamad Port	Qatar	124.8
12	Hong Kong	Hong Kong SAR, China	122.5
13	Tanjung Pelepas	Malaysia	118.3
14	Tianjin	China	117.8
15	Salalah	Oman	116.9
16	Yokohama	Japan	115.2
17	Xiamen	China	115.1
18	Kaohsiung	Taiwan, China	112.9
19	Yantian	China	111.3
20	Algeciras	Spain	109.0

Source: World Bank, based on data provided by S&P Global Market Intelligence.

Table 2.2 Top 20 ports improvement in CPPI 2024/2020

Port	Economy	CPPI 2024	Change 2024/2020
Posorja	Ecuador	107.0	72.8
Gothenburg	Sweden	50.8	71.2
Marseille	France	-36.9	59.3
Philadelphia	United States	92.4	51.7
Mawan	China	133.0	48.8
Tin Can Island	Nigeria	-21.4	46.3
Port Said	Egypt, Arab Rep.	137.4	41.5
Lagos (Nigeria)	Nigeria	-24.2	36.4
Muhammad Bin Qasim	Pakistan	42.8	35.2
Jawaharlal Nehru Port	India	99.7	33.3
Paita	Peru	65.8	28.2
Nantes-St Nazaire	France	30.3	27.1
Buenaventura	Colombia	90.8	26.8
Aarhus	Denmark	99.5	26.1
Savona-Vado	Italy	36.5	23.5
Mundra	India	97.3	21.6
Fuzhou	China	139.2	21.4
Haiphong	Viet Nam	86.8	16.7
Penang	Malaysia	35.1	16.1
Khalifa Bin Salman	Bahrain	45.9	15.2

Source: World Bank, based on data provided by S&P Global Market Intelligence.

Table 2.3 Top 20 ports improvement in CPPI 2024/2023

Port	Economy	CPPI 2024	Change 2024/2023
Cape Town	South Africa	-280.7	237.9
Cotonou	Benin	-16.5	226.7
Mersin	Türkiye	42.3	226.7
Coega (Ngqura) Port	South Africa	-283.5	160.4
Prince Rupert	Canada	-54.4	134.0
Iskenderun	Türkiye	21.0	133.9
Imbituba	Brazil	52.5	124.1
Trieste	Italy	-34.1	118.3
Dakar	Senegal	22.8	104.7
Damietta	Egypt, Arab Rep.	-4.1	86.7
Gdansk	Poland	61.7	85.4
Lyttelton	New Zealand	-9.4	85.1
Le Havre	France	3.9	71.6
Oakland	United States	-86.9	71.5
Qasr Ahmed	Libya	-12.0	67.9
Ashdod	Israel	-31.3	61.7
Paita	Peru	65.8	59.5
Montevideo	Uruguay	-12.5	57.0
Jawaharlal Nehru Port	India	99.7	52.0
Koper	Slovenia	11.2	50.8

Source: World Bank, based on data provided by S&P Global Market Intelligence.

Selected ports that improved their CPPI

In this section, we highlight developments in selected ports in lower- and middle-income countries that have seen particularly strong CPPI improvements over the last few years, achieving above-average CPPI scores in 2024.

Dakar (Senegal) has recorded one of the largest efficiency gains in Sub-Saharan Africa. Its CPPI value rose from -82 in 2023 to 23 in 2024, while the number of port calls also increased. With this improvement, Dakar is the highest-ranked port in Sub-Saharan Africa in 2024. The port, operated by DP World since 2008, has undergone significant investment, including the installation of new cranes, expansion of its yards, and the development of a port community system. Dakar's performance also reflects improvements in hinterland connectivity and trade facilitation. Road links have been upgraded, rail rehabilitation towards Mali is underway, and a single-window customs system is reducing dwell times. Liner shipping connectivity has increased, with Dakar now receiving direct services from Asia (World Bank, 2010; Seatrade, 2024; and DP World, 2024).

Jawaharlal Nehru Port (India) experienced significant improvements from 2020 to 2024. The port's CPPI values were 66 (2020), 62 (2021), 35 (2022), 48 (2023), and 100 (2024). This upward trend reflects the addition of terminal capacity and process reforms that have reduced turnaround and dwell times. In terms of capacity and operations, Bharat Mumbai Container Terminals Pvt. Ltd. (BMCT), a subsidiary of PSA, offers a deep-water capability (berth depth of approximately 16.5 meters and a 1000-meter quay) and modern equipment and gates that support higher productivity. Moves per hour per ship and per crane are reported to have improved, as are truck-side and rail process improvements (Port Today, 2018; India Seatrade News, 2025; and PSA International, 2025).

Mersin (Türkiye) exhibited a volatile performance profile over 2020–2024. The CPPI values declined from 94 (2020) to 76 (2021), then 3 (2022), deteriorating sharply to –184 (2023), and recovering to 42.3 in 2024. The 2023 collapse coincided with the Türkiye–Syria earthquake, closure of Iskenderun, and large-scale diversion of cargo to Mersin, which created severe congestion. In 2024, Mersin recorded one of the largest year-on-year CPPI rebounds globally (about +226.7 points), reflecting normalization and operational adjustments. Capacity expansion is underpinning the recovery. Phase I of the "East Med Hub 2" project with PSA International has been completed, extending the quay to 880 meters with a 17.5-meter draft and enabling the simultaneous berthing of two Ultra-Large Container Vessels. Mersin International Port (MIP) is a joint venture including PSA International, with support from the International Finance Corporation (IFC) (International Finance Corporation, 2020; Port Technology International, 2023; and PSA International, 2025).

Port Said (Egypt, Arab Rep.) is among the most improved container ports between 2020 and 2024, now ranked 3rd globally, and 1st among its regional peers. Egypt's overall trade logistics have also improved, with the country ranked 57th of 139 in the World Bank's 2023 Logistics Performance Index, highlighting broader progress in port operations and hinterland connectivity that benefited Port Said. Fewer port calls resulting from the Red Sea crisis helped alleviate pressure, while several strategic investments and reforms underlie Port Said's performance improvement. A major expansion of the Suez Canal Container Terminal (SCCT) at East Port Said is underway, supported by a loan from the International Finance Corporation (IFC). The expansion aims to increase the terminal's capacity by an additional 2.1 million TEU, resulting in a total installed capacity of 6.6 million TEU. Operationally, the port authority and terminal operator (a consortium led by APM Terminals and Cosco) have implemented digital port-community systems and optimization of vessel scheduling, reducing time in port (International Finance Corporation, 2023; and World Bank, 2025).

Posorja (Ecuador) has demonstrated a sustained improvement in port efficiency over the past five years. Its CPPI values were 34 in 2020, 95 in 2023, and 107 in 2024. With this improvement, Posorja achieved the highest CPPI in Latin America and the Caribbean, combined with an increase in port calls. The trajectory reflects purpose-built infrastructure and ongoing investment in a new deep-sea port to alleviate pressure on Guayaquil. Guayaquil is traditionally Ecuador's main port, but as a river port, it is confronted with draft limitations. The initial greenfield development of Posorja includes a 16-meter channel, a 21-kilometer access road, and super post-Panamax equipment. DP World is currently investing in extending the berth to 700 meters and increasing crane capacity, which will enable two large ships to work simultaneously. The port operates under a 50-year public-private partnership concession and is complemented by an adjacent logistics zone, which supports value-added services and smoother hinterland flows (Inter-American Development Bank, 2017; and DP World, 2025).

Common features in these cases include partnerships with global terminal operators, political will to improve trade procedures, and, in some cases, investments from international financial institutions.

3

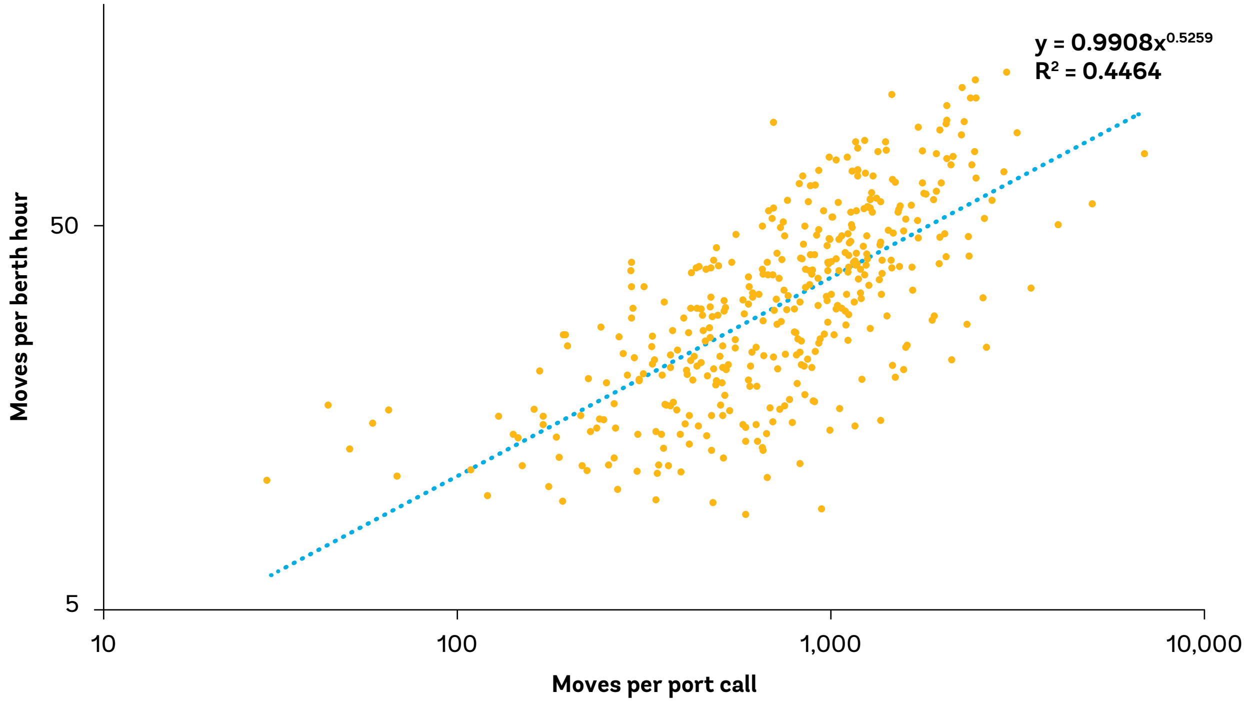
Components of Port Performance

This chapter examines how core operational variables, including call sizes, total moves per year, and time spent in port, relate to one another. While many of these correlations may appear intuitive, the variation between ports is at the core of explaining differences in port performance as captured by the CPPI.

The visualizations aim at demonstrating how economies of scale, arrival times, and vessel turnaround times impact port performance. External factors, such as geopolitical shocks or shifts in trade routes, can distort performance indicators that rely on time spent in port. Two case studies illustrate how broader disruptions, beyond a terminal operator's control, can affect CPPI scores.

Ports with more container moves per port call tend to be larger ships, and the port can assign more cranes per call to larger ships, thus also achieving more moves per berth hour (Figure 3.1).

Figure 3.1 Correlation between moves per port call and moves per berth hour, 2024

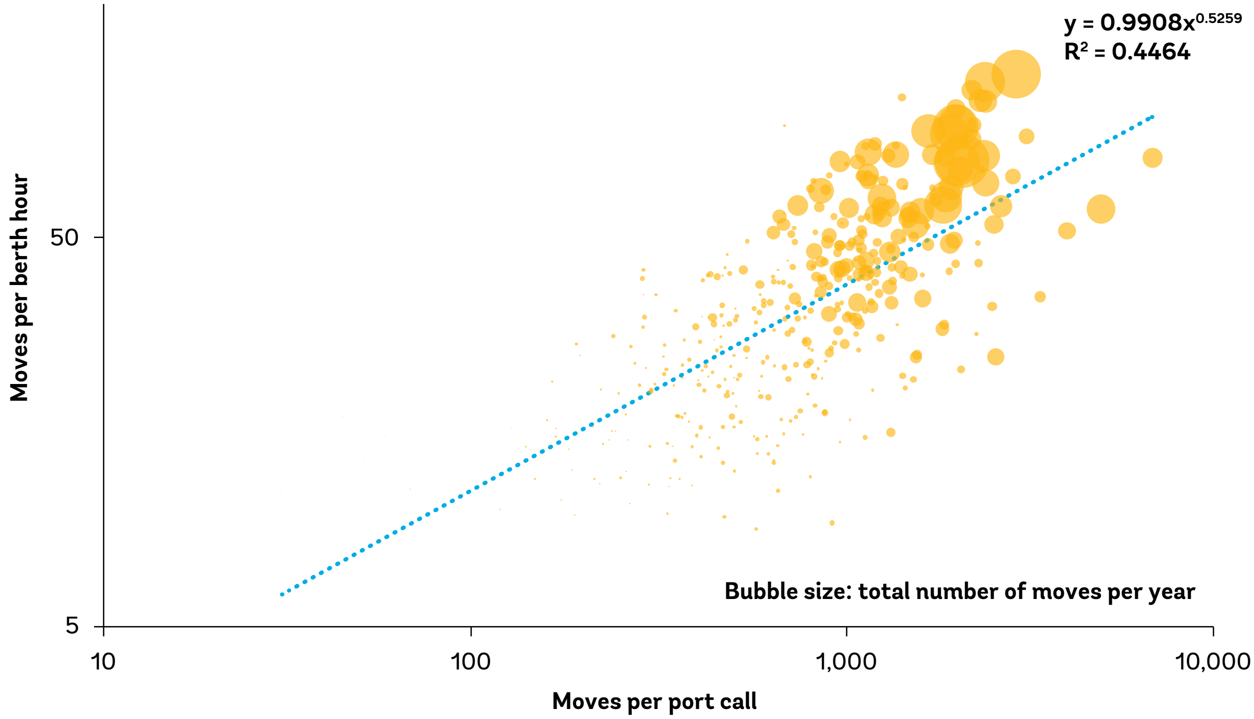


Source: World Bank, based on data provided by S&P Global Market Intelligence.

Figure 3.2 presents the same data as Figure 3.1, adding the information on total moves per year. The correlation between all three variables is visualized: ports with more moves per port call also tend to have more total moves per year, and these ports will have more moves per berth hour.

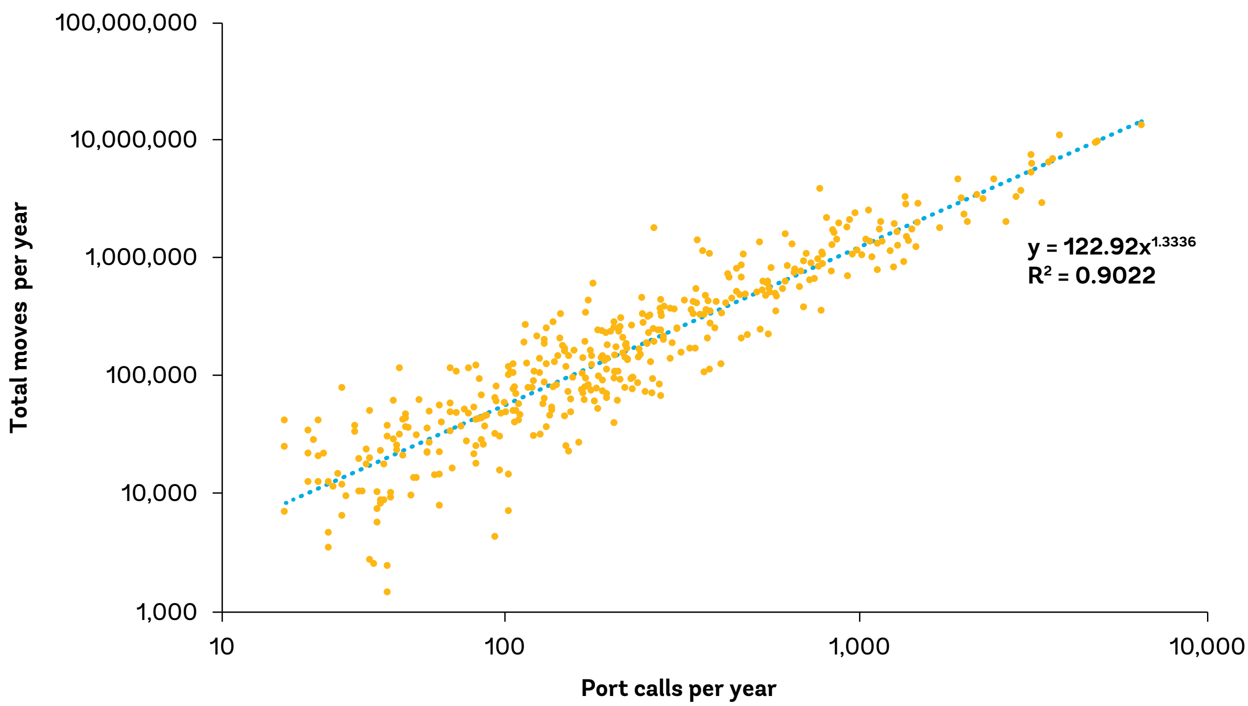
By the same token, ports with more port calls will normally also have more port moves (Figure 3.3). While some of these correlations may appear almost tautological, the correlation is not perfect, and differences between ports in these three variables are among the explanations of differences in the CPPI. Ultimately, it is the containers moved per berth hour that count, subject to minimizing the difference between time in port and time at berth.

Figure 3.2 Correlation between moves per port call, moves per berth hour, and total moves per year, 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.

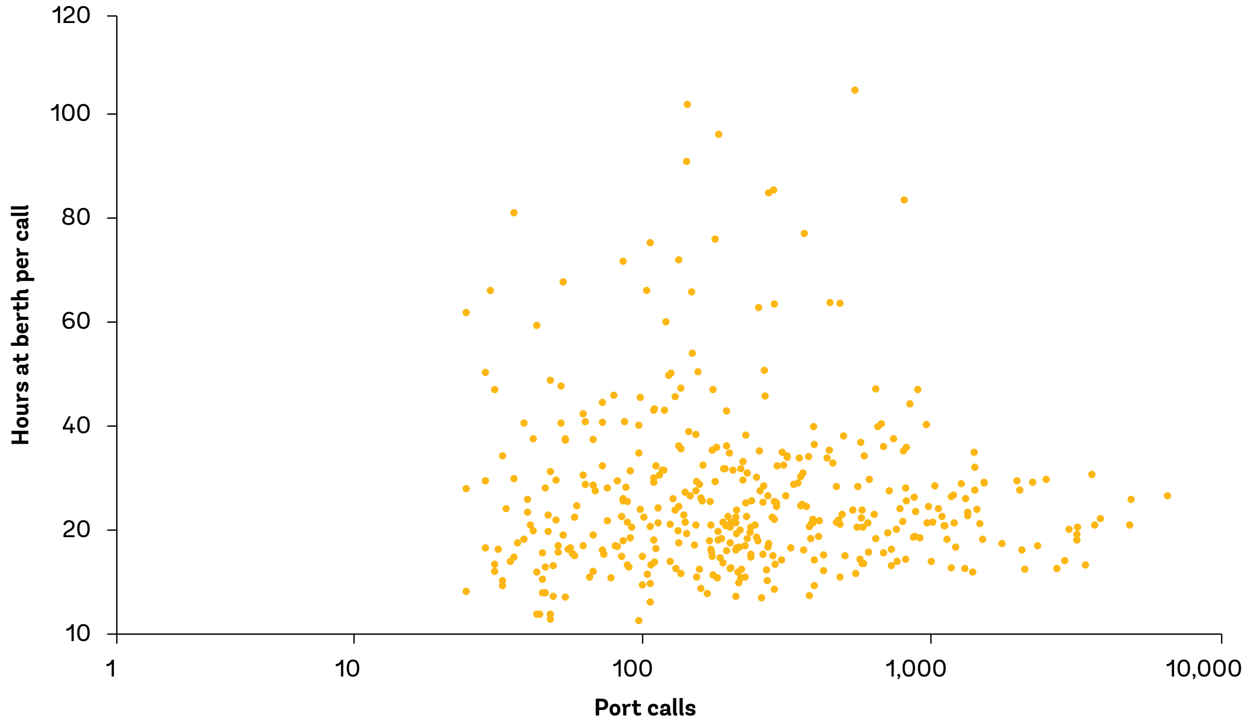
Figure 3.3 Correlation between port calls and total moves per year, 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.

Figure 3.4 shows that not only ports with many port calls achieve fast turnaround times, i.e., a few hours at berth per call. Even without economies of scale, some of the smallest ports measured by the number of port calls also achieve short times at berth. In these cases, the causality is different: not the number of cranes per ship, but the efficient handling of ships with low volumes allows for short stopovers.

Figure 3.4 Correlation between total port calls and average hours at berth per call, 2024



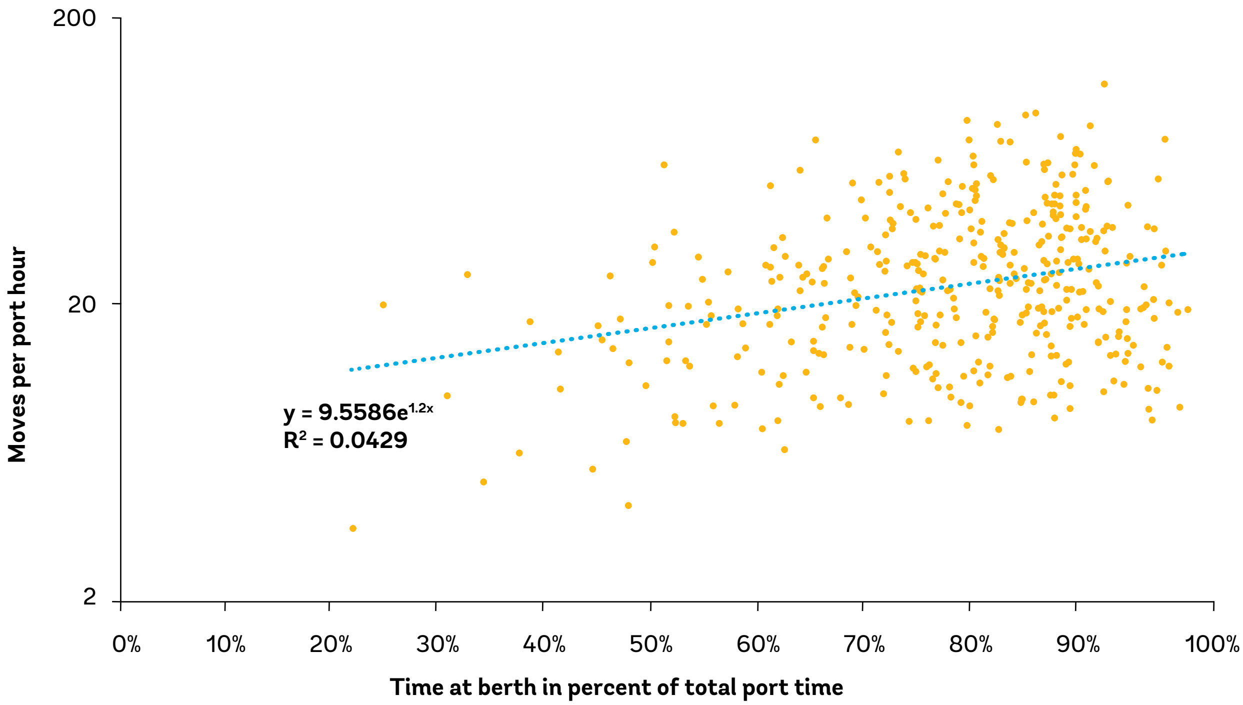
Source: World Bank, based on data provided by S&P Global Market Intelligence.

The CPPI is based on vessel time in port, which includes time at berth, as well as time spent waiting at other berths or at anchor.

Ships may stay in the port for reasons other than container terminal operations. Ports offer bunkering, repairs, or shipchandling services. Ships may also prefer to stay at anchor or berth in a safe port during periods of heightened risk, such as those caused by bad weather or piracy warnings. On some occasions, container ships must arrive in convoys, accompanied by military vessels, and often need to wait for favorable tides to pass under bridges or navigate shallow rivers. To reiterate, a longer time in port is not necessarily a negative indicator for the operations that take place at the berth.

At the same time, ceteris paribus, ships and cargo incur waiting and inventory holding costs if they have to wait without obtaining any desired additional services. And the latter needs to be included in an indicator of port performance. It is for this reason that when the CPPI was developed and conceptualized in 2020, the decision was made to measure the time in port, rather than only the time at berth. It is clearly understood that it may not be a terminal operator's fault that ships spend more time in port. Still, the purpose of generating and publishing the CPPI is to provide an index of port performance, not of berth performance. And a port can improve its performance if waiting times before berthing are minimized. Section 4 below will discuss port call optimization and other options that can help reduce time in port.

Figure 3.5 Correlation between share of time at berth and moves per port hour, 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.

Figure 3.5 illustrates the correlation between the number of moves per port hour, which is the core component from which the CPPI is generated. Not surprisingly, the more time spent in port at the berth, the higher the number of moves per port hour. However, wide variations exist, and there are ports with only 50% of port time spent at berth that still achieve among the highest moves per port hour.

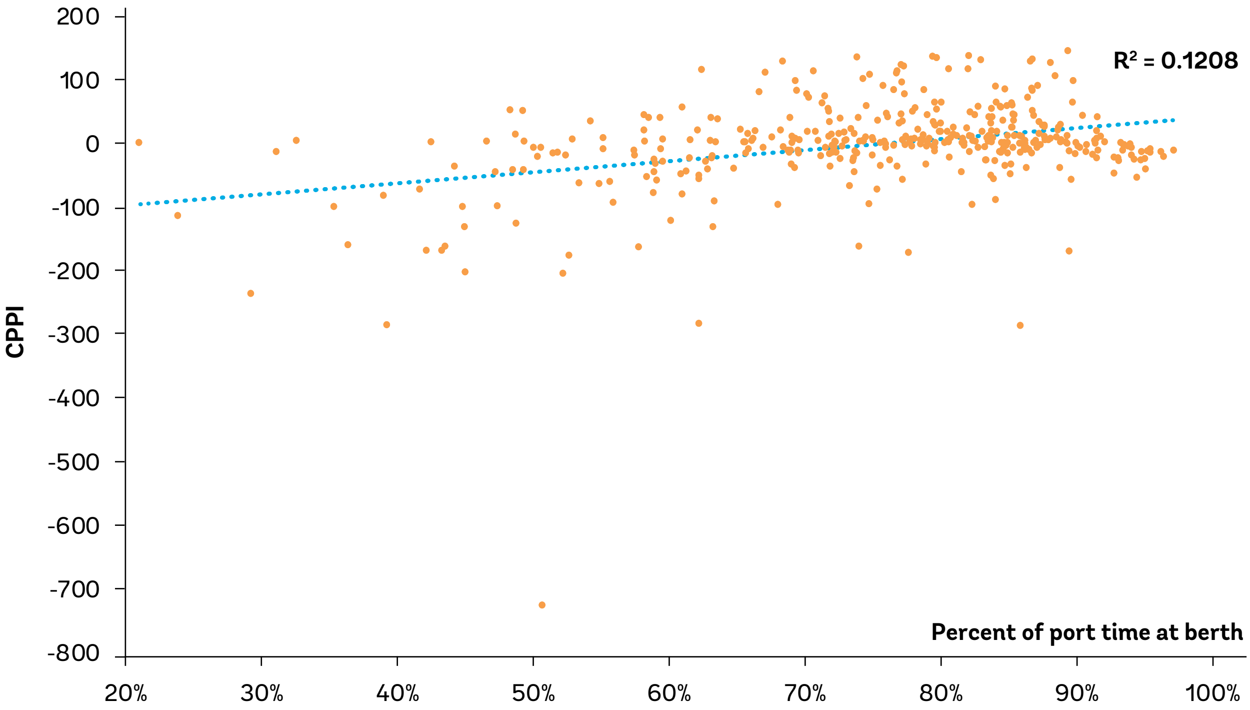
Figure 3.6 shows the share of port time ships spend at berth. The global average is 75%, meaning a container ship typically spends about three-quarters of its time in port at berth. The remaining quarter of its time is spent at anchor and in arrival operations.

As expected, ports where ships spend less time waiting at anchor and have shorter arrival times tend to record a better CPPI. The CPPI reflects total time in port, adjusted for vessel and call size. As containers can only be loaded and unloaded during the productive time at berth, ceteris paribus, time at anchor worsens the CPPI.

Still, it is noteworthy that ports with close to 100% time at berth are not the top CPPI performers. The top performers are found in the range of 70 to 90% time at berth. Ports with over 90% of vessel time at berth are typically ports with smaller ships and fewer port calls.

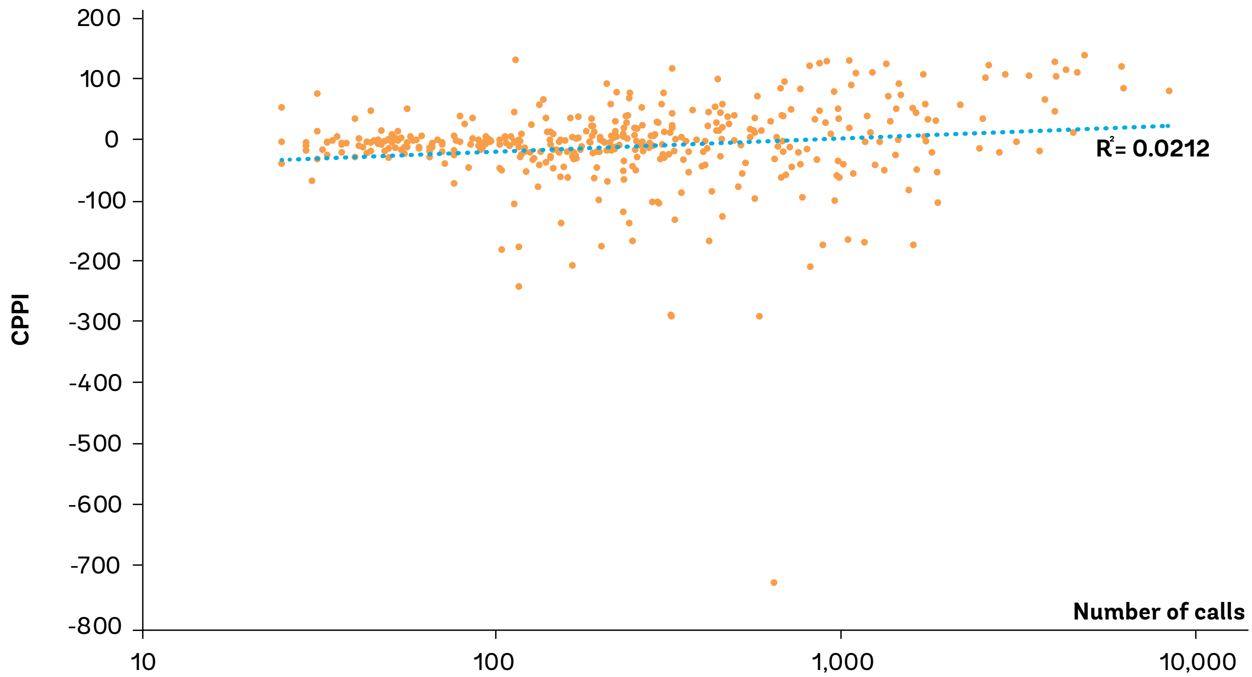
For example, Berbera in Somalia ranked 243 in 2024, with a CPPI slightly below the average. It is a very small port, with about one port call per week, and no gantry ship-to-shore cranes installed. However, those ships that arrive do not have to wait. Ships are handled as quickly as is average for these ship and port call sizes, which explains an about-average CPPI.

Figure 3.6 Correlation between the percentage of vessel time at berth and CPPI, 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.
Note: Not including departure time.

Figure 3.7 Correlation between number of calls and CPPI, 2024



Source: World Bank, based on data provided by S&P Global Market Intelligence.

Having discussed and explained economies of scale in port operations, it is important to remind the reader that the CPPI is generated in a way that only compares matching ship sizes and port call sizes (See Figure 5.1, Box 5.1, and Box 5.2).

Figure 3.7 nicely illustrates that the objective is achieved: There is no systematic correlation between the CPPI and the size of a port, as measured, for example, by the number of port calls.

It is true that more of the major ports also have above-average CPPI values. Here, it can safely be assumed that causality runs in the following direction: good performance makes the ports attractive to carriers, resulting in a large number of port calls. Overall, ports with above-average and high CPPIs can be found among both smaller and larger ports.

Improving Port Performance

4

Port performance depends on numerous factors. Some factors are beyond the port's control, such as its geographical conditions, the demand for trade generated by its hinterland, or the scheduling of vessels disrupted by global factors. Energy costs and the global geography of maritime trade change over time. Other factors can be influenced by port authorities and terminal operators and will be discussed below. Stakeholders have the possibility to leverage further insights derived from Port Performance Data to implement targeted operational improvements.

There are fundamental aspects that empirically have a bearing on a port's performance, which can be influenced by the port or national port policies, such as the involvement of the private sector, investments in infrastructure, or the permission or prohibition of foreign competition in port services. Early work on the determinants of port performance and transport costs includes Sanchez et al. (2003) and Wilmsmeier, Hoffmann, & Sanchez (2006), who, among other factors, suggested that private sector participation and shorter customs release times are associated with lower maritime transport costs. Comprehensive overviews of research on the topic are included in Wilmsmeier (2014) and UNCTAD (2015). For South Asia's ports, the World Bank report by Herrera Dappe & Suárez-Alemán (2016) identifies three key elements that help improve port performance: private participation, governance of port authorities, and fostering competition between and within ports. Different specific aspects of port performance are also discussed in Greaney & Gyawali (2025), Alessandria et al. (2023), Rodriguez et al. (2025), and Tovar & Wall (2022).

The World Bank report by Herrera Dappe, Lebrand, & Stokenberga (2024) on "shrinking the economic distance" assesses the main determinants of the costs of international freight transport. Improving port performance is among the policy recommendations that aim at reducing the economic costs of transport and deepening the economic integration of developing countries. The World Bank's Port Reform Toolkit (World Bank, 2025c) offers comprehensive guidance on how ports can manage change, enhance performance, and progress in areas such as digitalization, governance, economic regulation, environmental protection, and the port-city interface. SSATP Africa Transport Program (2025) examines the need for digitalization and maritime Single Windows for Africa's ports.

4.1 What is difficult to change

Port performance as measured by the CPPI is influenced by numerous elements that the terminal cannot directly influence or manage. Thus, the CPPI score and the year-on-year changes in each port's CPPI over the last five years (see Annex) are influenced by factors beyond the terminal's control.

Volatility of vessel traffic, in other words which ships, with how much cargo to load, unload, or transship, is often beyond the control of the terminal operator. Ports, especially river ports, will be affected by tides. The geographical position of a port will determine how much it is affected by conflicts in the Red Sea, water shortages in the Panama Canal, or changes in trade flows and imbalances resulting from shifts in trade policies.

The scale of a port matters too. Vessels may have to spend more time at large ports, which have high volumes of cargo and traffic, as well as highly utilized infrastructure. Additionally, vessels require time for essential services while in port, such as bunkering and crew change. Operations become more complex when the terminal must plan and coordinate with a larger number of shipping lines and service providers.

An important determinant of port performance is also the type of operations a port handles, notably whether it caters to imports, exports, or transshipment, and how balanced the import-export flows are.

For exports and transshipment loadings, the terminal planner has a clear idea of when and how containers will depart. In contrast, for import containers, the yard departure is more unpredictable and challenging to plan. Unlike import containers, transshipment containers are generally not under the purview of customs and tend to only experience shut-outs upon the carrier's request. At the same time, transshipment terminals face the additional challenge of managing the different arrival schedules of main-line vessels and feeder vessels to connect the cargoes optimally.

Assuming that you have decked containers into consolidated yard stows, whether export or transshipment, ideally, you have a clean yard from which to arrange the best sequence and flow of containers to the ship for the highest productivity. Planning for the stowage of import containers tends to be more complex.

As a general rule of thumb, feeders tend to wait longer than larger vessels at transshipment ports, not because they cannot be berthed, but because they wait for cargo to achieve maximum utilization. Transshipment ports, therefore, have some disadvantages in this respect compared to smaller ports, where smaller vessels are the core business.

Import and export ports are more likely to be confronted with trade imbalances, whereas transshipment ports, by default, load and unload the same number of full and empty containers. Empty handling is generally faster than laden handling, due to easier sequencing. It might, therefore, be argued that a port with a heavy imbalance between laden and empty containers has an advantage.

Revenue from transshipment is generally lower than for import and export operations. It could thus be argued that a port with higher revenue per container could afford to invest more in equipment and technology. On the other hand, the transshipment business is more competitive than import and export moves, which also explains the lower revenue and margins. Thus, transshipment ports are under more pressure to deliver high port performance.

4.2 Terminal performance – the berth side of the CPPI

Higher terminal performance is really what the CPPI is about. 24/7 operations, the latest technologies, optimal yard planning, sufficient infrastructure to assign the maximum number of cranes per ship, and collaboration with customs and other authorities to enable the immediate start of operations after berthing are all among the determinants that can help improve the CPPI.

Container port performance hinges critically on how efficiently ships are handled at berth. The World Bank's CPPI underscores this by measuring port efficiency largely in terms of the total elapsed hours from a ship's arrival to its departure after completing cargo exchange. Reducing the time that vessels spend alongside (both waiting and working) is thus a direct lever for improving a port's CPPI score and overall competitiveness. Concerted efforts in planning, operations, and technology can dramatically cut berth times. The challenge, and opportunity, lies in implementing strategies that range from smarter berth scheduling and crane productivity boosts to streamlined yard handling and advanced automation.

Speed and efficiency in cargo operations

While planning sets the stage, reducing berth time also demands speed and efficiency in cargo operations, especially through improvements in crane productivity. The ship-to-shore gantry cranes are the workhorses of container exchange, and their performance directly determines how long a vessel stays at the quay.

To start with, ports typically deploy multiple cranes per vessel, increasing the "crane intensity," to work different sections of the ship simultaneously, provided the stowage layout allows. A crucial aspect is avoiding a "long crane" situation, where one crane has significantly more work than the others, by smart planning of crane splits across the ship's length. This might involve starting some cranes on later bays or adjusting the work distribution so that all cranes finish around the same time, thereby preventing one slow section from prolonging the entire call.

Regarding individual cranes, terminals have introduced various innovations to enhance crane productivity. One prominent technique is twin-lifting, which involves handling two containers in a single lift. In practice, lifting two boxes at once does not fully double a crane's throughput, as the cycle is slightly slower and places higher strain on yard transport; however, it does yield substantial gains.

Another tactic is dual-cycling: instead of purely unloading first and then loading, the crane intermixes the two, transferring an import container to the truck and then immediately loading an export container in the empty slot before moving on. By eliminating needless empty moves, dual cycles can improve crane productivity.

These are incremental gains, but in a large call, they add up to the hours saved. Every effort should be made to maximize such opportunities in each call, which often means better planning and operator training to execute these complex cycles smoothly. For instance, vessel stowage plans can be coordinated to place more twin-liftable pairs of 20-foot containers within reach, and yard teams can ensure paired boxes are available together.

Some cutting-edge terminals have even experimented with vertical tandem lifts (VTL), essentially pre-connecting one container on top of another so that a crane can hoist two in one move from the ship's cell. When conditions allow, VTL can drive high throughput. Safety and equipment constraints make VTL a special case, underlining the upper limits of productivity that ports can strive for.

Yard management

Efficiency at the quay must be matched by efficiency in the yard behind it. Optimized yard management is crucial to ensure that containers flow smoothly to and from the ship, as any delay in fetching or positioning a box can halt a crane.

One key principle is aligning yard planning with vessel planning. Before a ship arrives, export containers should be strategically pre-staged in the yard (sorted into blocks by destination and ideally positioned to minimize shuttle distance to the vessel's berthing position), and import containers should have designated spots that consider how they'll leave the port.

During operations, a well-organized yard ensures that every time a crane needs to drop off or pick up a container, a yard vehicle is readily available and the target slot is clear. High-performing terminals achieve this through careful yard allocation and real-time coordination.

In transshipment hubs, planners often berth ships that exchange large volumes with each other at adjacent berths, and place the transshipment containers in yard blocks directly behind or between those berths, so that inter-port transfers are as short and swift as possible. By minimizing the distance and time required for horizontal transport (through the use of trucks or automated guided vehicles to shuttle containers), the cranes can be kept busy with minimal waiting.

Equally important is yard organization: practices like segregating import, export, and transshipment boxes logically, enforcing container stack discipline (to avoid unproductive re-handling), and performing "housekeeping" moves during lulls all help maintain a fluid operation when a ship is working.

Terminals may also employ surge resources during a big call, such as extra internal trucks, to ensure peak workloads can be handled without congestion. In essence, an optimized yard ensures that the quay cranes are never starved of containers to load and unload. By keeping the land-side flow smooth, seaside operations can proceed at full speed, thereby reducing the total hours a vessel remains at berth.

Yard crane deployment

Large terminals typically assign multiple yard gantry cranes or reach-stackers per quay crane so that loading/unloading at the stack can keep up with the ship's pace. In fact, rubber-tyred gantry (RTG) terminals often have around 2.5 to 4 yard cranes for each ship-to-shore crane, depending on how intense the vessel operation is and what other activities (like gate traffic or on-dock rail) are occurring simultaneously.

If these equipment ratios slip, containers start backing up, forcing the ship crane to slow down or pause. Therefore, investing in sufficient and reliable horizontal transport and yard equipment is directly linked to reducing berth time.

Technology and real-time data systems

Leveraging technology and real-time data systems amplifies the above-discussed improvements. In the modern "smart port," digital platforms connect the planning room, the cranes, the vehicles, and even the ship in a seamless information loop.

Terminals that invest in robust Terminal Operating Systems (TOS) and data analytics can coordinate complex operations with higher precision. For instance, a TOS can automatically sequence container moves and dispatch vehicles in an optimal order, or flag potential clashes (such as two cranes reaching for adjacent bays) in advance, allowing operators to make adjustments.

Real-time location systems, using, for example, Radio Frequency Identification (RFID), track the movement of trucks, chassis, and containers through the yard, enabling dynamic routing and quick recovery when something is out of place. Optical character recognition (OCR) at gates and cranes speeds up the identification of containers and reduces manual data entry, shaving minutes off each transaction.

The greatest benefits of such automation are often seen in consistency and predictability: machines do not tire or take breaks, and computerized decisions occur in milliseconds.

Notably, fully automated terminals (where yard cranes, horizontal transport, and even quay cranes may operate with minimal human intervention) have achieved impressive reliability. Even though automation alone does not magically double productivity, it significantly reduces variability and human error, making overall vessel handling times more predictable.

Technology also aids in strategic decision-making: simulation and modeling tools enable ports to test different operational setups or forecast the impact of, for example, a surge in volume, allowing for proactive adjustments. At the management level, real-time dashboards and KPI monitors help decision-makers to identify emerging bottlenecks (such as a slowdown in one crane or a traffic jam at the gate) and react swiftly. In summary, embracing digital systems and automation creates a platform for continuous improvement, where every element of a vessel's call, from mooring to paperwork, can be sped up or streamlined, collectively reducing the time a ship spends in port (SSATP Africa Transport Program, 2025).

Labor and management practices

Amidst hardware and high-tech solutions, the human element remains a decisive factor in turnaround time. A skilled, well-managed workforce can dramatically increase productivity and reduce delays. This begins with training: crane operators, signalers, planners, and equipment drivers all benefit from regular upskilling in the latest techniques and safety practices (see also Module 7 of the 2025 Port Reform Toolkit on labor issues in World Bank (2025c)).

Many terminals report significant improvements after investing in simulator training for crane drivers or exchange programs to learn best practices from top ports. Experienced operators can achieve faster cycle times and recover more quickly from disruptions; therefore, retaining talent in these critical roles is vital.

Beyond skills, labor management must align with the fluctuating nature of ship calls. In container terminals, work intensity comes in waves: a busy few hours for a big ship, then a lull, then another spike. Rigid staffing can lead to either shortages at peak times or idle gangs at others. To address this, some ports have adopted flexible labor arrangements, thereby employing staff during troughs and outsourcing for peaks, or using part-time and overtime schemes to scale the workforce up or down as needed. This might involve cross-training workers so they can shift between yard and quay duties, or maintaining a roster of on-call labor for sudden surges.

Additionally, shift scheduling should take into account shipping schedules: for example, if a ship is arriving at 2 AM, the terminal might stagger shifts so that fresh workers come on just in time, avoiding a situation where a fatigued crew extends a shift or, worse, a gap occurs because a new shift hasn't started.

Another best practice in many top terminals is thorough pre-planning and briefing for the workforce before a ship call. Supervisors outline the plan, including which bays each crane will work, where the difficult cargo is located, and what the expected timelines are, so that everyone, from crane drivers to truckers, shares the same mental model of the operation. They also emphasize communication protocols: if a hitch occurs (say a twist-lock jam or a container not found in the expected yard slot), how to swiftly escalate and resolve it.

Effective labor management also involves avoiding disruptions, such as labor disputes, by maintaining a cooperative relationship with unions and offering incentives tied to performance and safety. In an industry where even a few minutes' delay can impact hours at berth, the collective focus and professionalism of the workforce can be as crucial as any piece of machinery in speeding up vessel handling.

Labor practices also matter for fully or semi-automated terminals. A small disruption, such as a misaligned crane sensor, a misread RFID tag, or an unexpected cargo exception, can ripple through the system and halt operations. The staff on site must be capable of interpreting real-time data, coordinating complex diagnostics, and reacting decisively. There is little margin for trial-and-error. Hence, the skills bar rises. Operators, engineers, and supervisors require ongoing technical training, while managers must understand the orchestration of digital and physical processes.

Capacity building and communication: skilled labor and management

In tandem, skilled labor and management on the quay can make a marked difference. Terminals often assign their most experienced operators to tasks of the greatest impact (for example, to the crane working in the deepest bay or handling awkward cargo). During a vessel operation, supervisors with strong situational awareness can make rapid decisions to resolve small delays before they escalate.

Constant communication, where every team knows the day's priorities and the scheduled deployment of cranes, ensures that everyone concentrates effort on maintaining the overall pace. The combined effect of these operational improvements is a higher sustained gross crane productivity, allowing the vessel to be processed and sailed out in less time.

Challenges for low-income economies

Implementing these enhancements is easier at some terminals than others. Ports in low-income countries often face unique challenges that make reducing berth times more difficult for them than for ports in technologically more advanced economies. These differences are at the core of the lower average CPPI values in low-income economies (see Figure 2.2).

Infrastructure may be dated. For instance, an older terminal might have only a few cranes of limited outreach or no ability to perform twin lifts. Equipment fleets in such ports are frequently stretched thin and suffer maintenance issues, leading to breakdowns that halt operations. Insufficient yard space or outdated yard layouts can lead to chronic congestion during large calls. Moreover, capital for modernization (be it purchasing new cranes, deploying a TOS, or automating processes) can be scarce.

Low-income terminals might also face institutional and labor challenges. For example, highly rigid labor practices, lower skill levels due to limited training opportunities, and sometimes bureaucratic or customs delays that eat into overall port time (though not strictly part of berth time, such inefficiencies can indirectly slow berth operations as well).

Investing in improvements

Overcoming these challenges requires a tailored, resource-conscious approach. On the physical side, targeted investments can yield outsized benefits: adding even one or two modern cranes, or a fleet of new terminal trucks, can substantially improve throughput.

Even smaller-scale technology upgrades, such as implementing basic terminal management software or utilizing mobile apps for coordinating truck drivers, can begin to introduce the advantages of real-time data without requiring a multimillion-dollar system.

On the human side, capacity building is often the linchpin. Training local staff in efficient planning and maintenance, possibly through partnerships with global port operators or development agencies, can significantly reduce downtime and errors.

Process improvements often cost little: for instance, enforcing stricter maintenance schedules can improve equipment availability, and rearranging the yard periodically can prevent bottlenecks when big ships arrive.

Above all, strong governance and incentives can drive change. If port authorities and terminal operators set clear performance targets (like reducing average berth hours by a certain percentage) and empower managers to innovate, progress will follow even under constraints.

There is growing recognition that port efficiency is not a luxury but a development necessity. Improving port efficiency is crucial for unlocking a region's growth potential, as ports serve as vital gateways that significantly influence economic outcomes. With that perspective, even low-income country terminals are increasingly seeking to adopt best practices incrementally.

Each hour saved at berth not only boosts their CPPI index values but also signals to shipping lines and investors that the port is becoming a more reliable node in global trade. In turn, this can attract more business and justify further improvements. The aim is to initiate a virtuous cycle of efficiency leading to growth.

4.3 Time at anchor and arrival – the seaside of the CPPI

Ships often remain in port longer than strictly needed to load and discharge containers. Time is used for bunkering, inspections by port state control, crew changes, maintenance or repairs, provisioning, and waiting for customs clearance or paperwork to be processed. Although these are not part of cargo handling, they prolong the overall port call and may result in a lower CPPI if undertaken before arrival at berth. While in some cases, the extra time spent in port is desired, in other cases, there is potential to reduce unnecessary extra time.

Berth planning and allocation

As an upstream process, berth scheduling decisions set the stage for everything that follows. A poorly planned berthing sequence can ripple through terminal operations, causing delays for multiple ships and disrupting shipping line networks for days. Conversely, a well-structured berth plan aligned with vessel arrival patterns can minimize waiting and idle time. Many high-performing terminals use pro forma berthing windows, agreed-upon time slots each week for regular services, as a baseline.

These fixed windows serve as a contract between the terminal and the carrier, where the port guarantees a berth and resources at a specified time, and the shipping line commits to arrive punctually (often within a tolerance of a few hours) with a predictable workload. Sticking to such schedules yields predictability: cranes, labor, and yard space are prepared in advance, and the ship can start work without delay.

Just as importantly, the shipping line's compliance (arriving on time, with the expected number of containers, and timely cargo information) is enforced as part of the bargain. In practice, not every service can adhere perfectly to a fixed window. The development of the CPPI over the last years has shown the negative impact of supply chain interruptions. The key is to optimize the berth lineup as a whole, treating the terminal as an entire system and selling any unused berth capacity to ad-hoc callers or overflow from late arrivals.

Flexibility and discipline go hand in hand: for example, if one vessel is delayed, a dynamic plan might bring another ship forward to avoid an idle gap. Some ports also implement priority policies or pricing incentives, rewarding ships that arrive as scheduled and penalizing those that arrive excessively late.

Ultimately, a well-calibrated berth allocation policy reduces the time ships spend waiting and ensures that once alongside, operations can commence and conclude as quickly as possible.

Port call optimization

A specific way to reduce unnecessary extra time in port is port call optimization, sometimes framed around Just-In-Time (JIT) arrival or virtual arrival systems. When carriers agree to adjust their speed based on real-time port readiness, rather than arriving early and anchoring, both fuel and time spent in port are saved. Port call optimization, therefore, helps the CPPI not only by increasing berth productivity but also by reducing idle hours before the working window.

Currently, global averages for total arrival time, from arrival in the port area to all fast at berth, remain around eleven hours, meaning many ships rush to port and then wait, wasting fuel and creating emissions before even mooring. That pattern reflects poor coordination more than operational capacity. JIT arrival addresses it by enabling ships to slow their approach so that they arrive only when the berth, pilot, tug, and stevedoring services are ready.

This requires clear, interoperable communication between the shipping line, agent, port authority, terminal operator, and nautical services. The Digital Container Shipping Association's JIT standard, built on the IMO's Estimated-Requested-Planned negotiation framework, allows just that: standardized, open-source messaging that gives all parties timely visibility and aligns expectations. With better planning and shared data, a vessel approaching a port can adjust its speed and angle of arrival to dock immediately, significantly reducing the time spent at anchor or waiting before cargo operations begin.

Optimizing ancillary maritime services

Once a ship is moored, minimizing delays from ancillary services makes a big difference. If bunkering requires one or more tugs or fuel barges that are not booked or timed properly, operations pause. If port state inspection is scheduled after berth arrival, it can hold up stevedoring. Any delay in customs processing or shore delivery can cascade into idle hours. Optimizing the overall port call involves orchestrating these events in parallel, where safe, to ensure that inspections, provisioning, and cargo handling overlap wherever possible.

Major ports have adopted port community systems and shared operation platforms that schedule pilotage, tugs, bunkering, and quay cranes in tandem. In some ports, vessels transmit their estimated time of arrival (ETA) in advance and adjust their speed en route so that pilot arrival, tug services, customs clearance, and quay operations all align. Such systems reduce pre-berth waiting by several hours per call, resulting in a corresponding marginal gain in berth productivity.

Digital platforms

A functioning port call optimization system in low-income countries would require affordable and interoperable digital platforms. Installing a port community system that integrates shipping agents, customs, terminal operators, and service providers would help reduce uncertainty. Agents and vessels would share ETAs, cargo manifest updates, and service requests in a standardized format. That would enable authorities to plan inspection windows, coordinate tugs and bunkering providers, and prepare the berth takeover tightly. Even without full port community systems, simple messaging protocols or mobile coordination apps can reduce friction significantly (SSATP Africa Transport Program, 2025).

Challenges include the initial cost of deployment, variable data quality, limited digital literacy, and a lack of harmonized industry standards. Many ports still rely on email or phone calls for coordination, which are error-prone and slow. Transitioning to a digital system requires training and trust. Cargo owners or shipping lines must also adopt the practice of sharing accurate ETAs and voyage intentions. Pushback may arise if commercial actors fear regulatory scrutiny or misuse of data.

Nonetheless, scaled pilots in emerging economies show promise. Ports that establish early-warning coordination boards or basic digital hubs to collect ETA information and align key services have reduced idling time by an average of two to three hours. In some cases, vessels opt for slow steaming en route to lower bunker costs and avoid anchoring fees. That reduction of non-productive time may seem modest per call, but it amounts to significant aggregate gains across multiple vessel rotations.

Optimizing port calls improves CPPI by shrinking the total time a ship spends in port. With smart scheduling, the duration in port before cargo work is curtailed. The result is a more predictable and compact window for the terminal to plan around, which increases berth turnover, reduces variability, and improves service reliability. Container ports that adopt port call optimization become more integrated with shipping networks, serving as partners who enable just-in-time logistics rather than reactive hubs.

4.4 Responding to external developments that affect port performance

The CPPI offers a comprehensive combined indicator of port performance by measuring the time vessels spend in port. However, identifying the exact reasons for extended port stays is not always straightforward.

Prolonged time in port may result from internal issues, external influences, or a combination of both. External factors often fall beyond the control of terminal operators or port authorities. In certain situations, extraordinary external circumstances can disrupt a port's operations, leaving limited opportunities for immediate response and, consequently, impacting the CPPI score.

The cases of Singapore (Box 4.1), Dijibouti (Box 4.2), and South Africa (Box 4.3) illustrate how performance can be positively impacted by port authorities and terminal operators, in spite of adverse external developments and challenges that are beyond the port's control.

Box 4.1

Managing port performance under disruption: Singapore

The Red Sea crisis in 2023–24 created severe global schedule disruptions that cascaded into ports worldwide. In Singapore, one of the busiest transshipment hubs, the proportion of vessels arriving off-proforma rose from about 77 percent in 2023 to 85 percent in 2024, reflecting the extent of disruption to service schedules. Ships often arrived much earlier or much later than planned, producing unpredictable surges and gaps in traffic flows. The result was frequent vessel bunching, with several large ships calling simultaneously, followed by lulls. This placed strain on berth allocation, created waiting times for vessels when berths were fully occupied, and generated sharp daily fluctuations in handling demand. The variation in container volumes was greater than in the previous year, stretching resources across the port.

Shipping lines also changed their network behaviour in response to the crisis, increasingly using Singapore as a critical recovery node to reconsolidate and reroute cargo. This increased the number of short-notice calls, required additional internal re-handling of containers, and prolonged dwell times in the yard. Longer container stays, combined with heightened vessel bunching, further tightened available capacity and pressured yard space.

Despite these operational challenges, Singapore's port maintained resilience through close coordination between the port authority and PSA, the terminal operator. Measures included flexible deployment of manpower and equipment, temporary reactivation of older terminal capacity, and the addition of berths at the new Tuas Port. Enhanced planning tools, including systems that provided carriers with agreed berthing times, enabled shipping lines to adjust sailing speeds and reduce unnecessary congestion. Communication with stakeholders—shipping lines, logistics providers, and cargo owners—was used proactively to mitigate the ripple effects of congestion elsewhere in the region.

These responses enabled Singapore to maintain a high level of performance. In 2024 the port handled a record 40 million TEUs, surpassing its previous annual throughput, while retaining a global CPPI ranking of 29th out of 403 ports, with a score of 88. This outcome underscores how effective collaboration between public authorities and terminal operators can help sustain efficient vessel turnaround times, even when global supply chains are severely disrupted.

Box 4.2

Managing port performance under disruption: Djibouti

An illustrative case of how extraordinary circumstances can impact time spent in port is found in East Africa. Situated at the Bab el-Mandeb Strait, the southern gateway to the Red Sea, Djibouti's main container port, the Doraleh Container Terminal, plays a vital role as the principal maritime gateway for landlocked Ethiopia and as a transshipment port. Since its opening in 2009, this modern deepwater facility has evolved into a major hub, handling approximately 100,000 TEU each month.

The Doraleh Container Terminal, SGTD in Djibouti improved its CPPI by 8 points in 2024. It is worth highlighting this improvement in the face of a range of challenges the port confronted in 2024. The 2024 improvement occurred despite Red Sea disruptions that reshaped service patterns and increased feedering. Djibouti's government and the terminal operator (Société de Gestion du Terminal à conteneurs de Doraleh – SGTD) implemented capacity and process measures that helped stabilize vessel time in port under pressure.

Specifically in 2024, SGTD: (i) commissioned four cranes and extended the seaside stacking area, raising capability to handle Ultra-Large Container Vessels and accelerating ship-to-shore productivity; (ii) set out a sequenced yard-capacity expansion plan; and (iii) reached record volumes indicating throughput growth without a deterioration in time in port. Operationally, SGTD paired these investments with rule and process adjustments: a terminal system update; dwell-time policy updates gateway & transshipment boxes; vessel-requirements and late-arrival cut-off notices; security-level increases; and tariff adjustments for transshipment storage.

Contextually, the Red Sea crisis had shifted long-haul routings and raised reliance on regional feeder services, rebalancing calls across the region. Djibouti's role also includes facilitating Yemen-bound cargo inspections under United Nations Verification and Inspection Mechanism for Yemen (UNVIM), and acting as a harbor of refuge for distressed vessels. Because UNVIM runs out of Djibouti, ships and cargo transiting the Yemen corridor often stage at Djibouti for clearances and occasional inspections. This adds coordination steps outside the terminal's direct control and can lengthen anchorage or port stays for affected calls, even when quay productivity is steady. The effect became more visible during the late-2023 to 2024 Red Sea security crisis, when threat-exposed vessels diverted to Djibouti for refuge or checks, and regional networks shifted toward feedering.

The security situation in the Red Sea has been volatile for decades, but attacks on commercial ships in 2023 caused major disruptions to maritime trade. As a result, the port of Djibouti experienced a surge in transshipment cargo, i.e. for containers that are offloaded from large vessels and then distributed regionally on smaller ships. Transshipment has grown fivefold in 2023 over 2022, ultimately making transshipment around half of Djibouti's container volume. This shift is mainly due to changes in the main shipping routes, which now rely more on regional feeder services because of security risks in the Red Sea.

Box 4.2

Managing port performance under disruption: Djibouti (cont.)

Djibouti also serves as a vital link for shipping to Yemen, including the Djibouti-Hodeida corridor, which operates under the United Nations Vessel Inspection Mechanism for Yemen (UNVIM) in support of UN Security Council Resolution 2216. Additionally, Djibouti has become a safe refuge for ships damaged by missile attacks.

While Djibouti's strategic position offers long-term growth as a key transshipment hub, the port had to quickly adapt to a sudden increase in container traffic and ship arrivals. To address these challenges, the port implemented new operational strategies to ensure the smooth flow of imports and gateway cargo destined for Ethiopia, while also expanding storage capacity to manage the increased transshipment volumes. This case study also demonstrates that the CPPI reveals broader regional and global challenges.

Box 4.3

Managing port performance under disruption: South Africa

The disruptions of 2024, particularly the Red Sea crisis, posed a challenge to ports across the African continent. South African ports, situated along the alternative Cape of Good Hope route, were directly affected as large volumes of diverted Asia–Europe trade transited past their shores. This placed new demands on capacity and operational efficiency at a time when many ports worldwide experienced deteriorating performance.

While overall CPPI scores in Sub-Saharan Africa remain constrained by structural issues and congestion, several South African ports recorded noteworthy improvements. Cape Town improved its CPPI score by nearly 240 points between 2023 and 2024, one of the strongest gains globally. Cape Town has invested in new cranes and equipment, upgraded warehousing capacity, and introduced innovative measures such as hydraulic shore-tension units and a predictive wind model, developed with the Council for Scientific and Industrial Research, to mitigate weather-related disruptions. A helicopter piloting service has also been launched to improve ship access during periods of high swells.

Coega (Ngqura) Port also improved by more than 160 index points, even as more than half of all ports worldwide saw their performance worsen during the same period. These improvements reflect targeted investments, operational reforms, and adaptive measures to handle rerouted traffic.

Durban, South Africa's principal gateway, has benefited from modernization initiatives, including the acquisition of new tugboats, ship-to-shore cranes, haulers, and trailers. Daily operational meetings and a container management system have enhanced cargo handling and turnaround efficiency. A request for proposals to bring in private sector participation at Durban Container Terminal further signals an ambition to align with global best practices.

The establishment of a National Logistics Crisis Committee and, more recently, a dedicated unit to accelerate private sector participation in the sector, further underlines South Africa's commitment to long-term reform. The corporatization of Transnet National Ports Authority and the transition toward a regulated landlord port model are part of this broader transformation agenda.

Early data available for 2025 confirms that the investments and improvements have already had measurable positive impacts on performance. Based on latest data provided by Transnet, between mid-2024 and August 2025, vessel anchorage in South African ports went down by about 75%, gross crane moves per hour improved by 13%, and ship working moves went up by 25%.

Taken together, these reforms and targeted investments have helped South African ports weather the Red Sea shock of 2024. The resilience demonstrated by Coega and Cape Town highlights that structural reforms and operational improvements can translate quickly into measurable performance gains, even under challenging global conditions.

5

Rationale and Methodology of the Container Port Performance Index

The Container Port Performance Index (CPPI) provides a globally consistent and comparable assessment of container port performance. It is based on empirical measurements of vessel time in port, focusing on how efficiently container ports serve ships from the perspective of shipping lines and their customers. It is grounded in objective data and a robust two-pronged methodology.[1]

5.1 Objective and rationale

Port performance has a direct impact on shipping efficiency, trade costs, supply chain resilience, and environmental sustainability. Ultimately, port performance is key for trade-driven development. The causality between development on the one hand, and trade and transport facilitation, including port performance, on the other, goes both ways: countries with better trade facilitation tend to develop faster, while more developed countries will also find it easier to invest in trade facilitating measures such as port infrastructure and automation (UNCTAD, 2016).

One of the most critical indicators of port performance, particularly from a vessel operator's perspective, is the total time a ship spends in port. This affects vessel utilization, fuel consumption, schedule reliability, and ultimately transport cost and emissions.

The CPPI addresses the longstanding gap in the availability of consistent and comparable port performance indicators. Unlike earlier port benchmarking initiatives that relied on voluntary surveys or selective data disclosure, the CPPI is based on granular, globally available Automatic Identification System (AIS) data, combined with operational information on port calls and vessel characteristics from shipping lines.

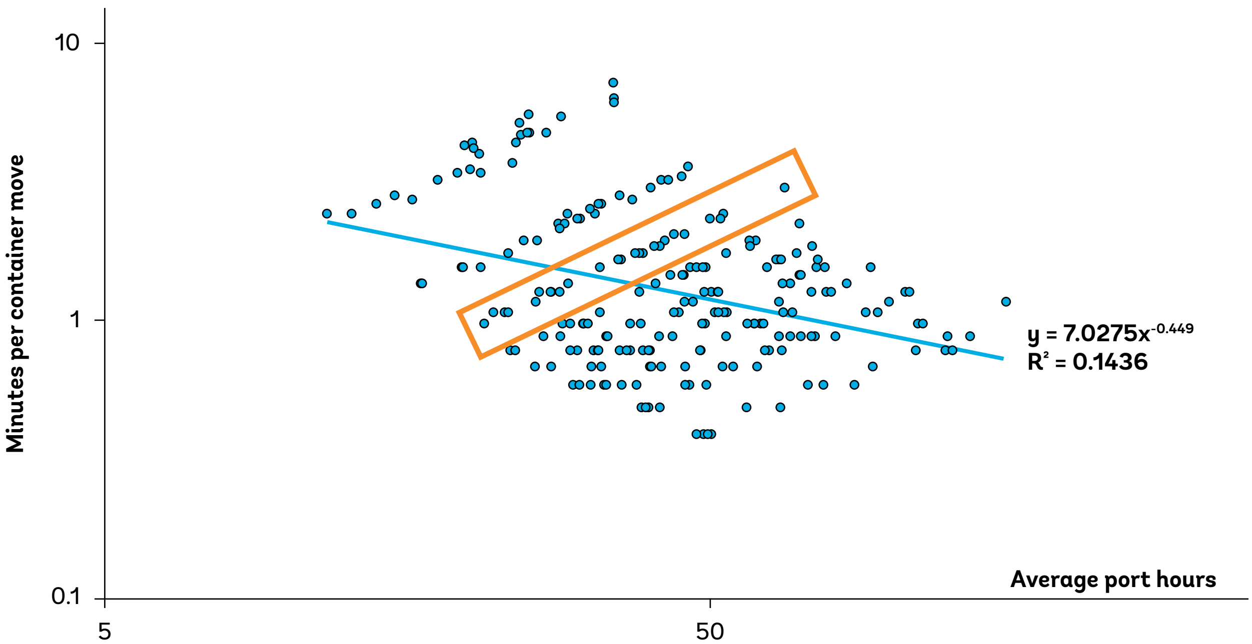
The same methodology has been applied since 2023, following refinements in earlier editions. The current version continues to apply both the administrative and the statistical approaches in parallel, with results compared and cross-validated to ensure robustness.

The need to generate an index, rather than simply tracking vessel time in port or time per container moved, arises from the requirement to compare port performance across different ship and call sizes. A small ship can only be served by one or a few ship-to-shore cranes, while larger ships will normally accommodate up to eight cranes (exceptionally up to ten) during one port call. Thus, for the large ship, the loading or unloading time per container is, ceteris paribus, shorter. By the same token, each port call includes some fixed time to moor the ship. Call size is far less significant when it comes to arrival time, which is more likely to be influenced by ship size. The more containers are subsequently loaded and unloaded per call, i.e., the larger the "call size," the less time will be required per move.

There is a close correlation between ship sizes and call sizes, as larger ships will normally load and unload more cargo per call. For a given call size, there is thus an almost tautological positive correlation between the minutes per move and the total time in port: the longer it takes to move each container (Table 5.2), the longer the ship will stay in port (Table 5.1). Figure 5.1 illustrates this correlation.

[1] For a more detailed explanation of the methodology see previous CPPI reports, notably World Bank (2023) and World Bank (2024).

Figure 5.1 Correlation between minutes per move and total time ships spend in port, 2024



Source: World Bank, based on the data in Table 5.1 and Table 5.2.
Notes: Each data point represents one combination of average port hours and minutes per container move for a specific port call size in a single country. The data points within the orange box represent port call sizes of 1,001-1,500 moves.

- Examining data for a single port call size reveals that more minutes per move are associated with a longer total stay in port. This correlation is illustrated by the 25 data points within the orange box in Figure 5.1, which correspond to the port call size of 1,001 to 1,500 moves. This box shows that in those countries where ships spend longer in port, the time per container is also longer, representing a positive statistical correlation.
- However, when examining all call sizes in one chart, the correlation becomes negative: as port hours increase, the time per container move decreases. This may initially appear counterintuitive, but it is explained by economies of scale in port operations: larger call sizes are normally associated with larger ships, which in turn allows for more cranes to be deployed for a single port call. As more cranes are deployed, the time per move decreases.

To compare ports with larger and smaller port call sizes, the CPPI is generated by examining only the arrival and berth times for similar call and ship sizes at each port.

Table 5.1 Average time in port, hours, by port call size, top 25 economies, 2024

	<500	501-1,000	1,001-1,500	1,501-2,000	2,001-2,500	2,501-3,000	3,001-4,000	4,001-6,000	>6,000
China	18.7	24.0	27.4	27.5	29.3	30.9	32.4	38.2	47.0
United States of America	20.3	29.6	40.6	51.1	59.6	67.2	74.3	86.2	116.0
Singapore	19.6	22.6	26.6	30.0	32.6	35.7	38.4	44.5	48.3
Korea, Rep.	15.8	20.4	25.1	27.7	31.1	34.3	38.6	47.5	62.6
Brazil	27.6	38.5	50.6	57.1	62.2	73.9	87.8	99.8	
Malaysia	17.4	25.2	28.3	31.9	31.6	35.2	36.6	39.9	45.7
Spain	19.8	29.3	31.9	29.9	37.1	37.4	46.5	67.6	119.0
Japan	11.5	16.3	22.3	30.0	35.7	41.8	62.3		
Germany	24.4	31.3	37.4	44.7	45.2	51.2	58.1	71.3	116.9
Belgium	24.5	32.0	36.9	39.3	42.8	47.2	56.8	70.3	127.3
Hong Kong SAR, China	12.6	16.4	20.7	22.8	25.0	28.8	30.8	37.2	55.1
United Kingdom	23.7	31.7	36.4	43.6	48.4	49.0	63.3	77.0	103.9
United Arab Emirates	26.1	36.0	39.9	45.7	43.7	38.4	43.8	52.4	82.6
Taiwan, China	14.8	19.0	21.4	23.2	28.5	32.0	34.6	43.9	73.6
Panama	33.6	43.3	50.0	55.8	70.5	64.9	58.7	90.0	145.4
Türkiye	19.9	27.3	34.5	41.5	47.1	50.7	56.8	64.9	
Netherlands	33.5	40.1	42.0	47.3	49.5	49.6	55.3	63.0	88.5
India	20.4	27.9	26.5	28.5	31.7	38.2	46.3	50.4	
Viet Nam	13.8	19.1	22.6	25.8	26.6	29.5	32.6	37.8	47.7
Australia	33.6	41.2	48.1	55.9	61.7	67.5	75.6	101.5	104.6
Italy	23.6	34.3	43.7	46.9	62.8	71.7	80.3	94.0	106.7
France	23.3	30.7	39.0	43.4	49.7	63.1	65.5	60.0	
Thailand	23.0	28.2	25.4	30.5	32.8	39.8	40.1	57.4	69.3
Indonesia	19.2	27.4	34.1	36.9	42.0	46.7	51.1	62.2	
Philippines	24.3	44.3	63.6	67.3	66.5	72.0	70.3	59.1	
Average	**21.8**	**29.4**	**35.0**	**39.4**	**43.8**	**47.9**	**53.5**	**63.2**	**86.7**

Source: S&P Global Market Intelligence.
Notes: Ranked by total number of port calls. The average is the unweighted average of the countries listed in the table.

Table 5.2 Time per container move, minutes, by port call size, top 25 economies, 2024

	<500	501-1,000	1,001-1,500	1,501-2,000	2,001-2,500	2,501-3,000	3,001-4,000	4,001-6,000	>6,000
China	3.5	2.0	1.3	0.9	0.8	0.7	0.6	0.5	0.4
United States of America	4.1	2.4	2.0	1.8	1.6	1.5	1.3	1.1	0.8
Singapore	3.6	1.8	1.3	1.0	0.9	0.8	0.7	0.6	0.4
Korea, Rep.	2.8	1.6	1.2	1.0	0.8	0.8	0.7	0.6	0.5
Brazil	5.6	3.1	2.5	2.0	1.7	1.6	1.6	1.3	-
Malaysia	3.3	2.0	1.4	1.1	0.8	0.8	0.6	0.5	0.4
Spain	4.5	2.4	1.6	1.0	1.0	0.8	0.8	0.9	0.8
Japan	2.5	1.4	1.1	1.0	1.0	0.9	1.2	-	-
Germany	5.7	2.5	1.8	1.6	1.2	1.1	1.0	0.9	0.9
Belgium	4.9	2.7	1.8	1.4	1.1	1.0	1.0	0.9	0.9
Hong Kong SAR, China	2.5	1.4	1.0	0.8	0.7	0.6	0.6	0.5	0.5
United Kingdom	4.8	2.7	1.8	1.5	1.3	1.1	1.1	0.9	0.8
United Arab Emirates	4.9	2.8	1.9	1.6	1.2	0.8	0.7	0.7	0.6
Taiwan, China	2.9	1.6	1.1	0.8	0.8	0.7	0.6	0.6	0.6
Panama	6.5	3.4	2.4	2.0	1.9	1.4	1.0	1.1	1.2
Türkiye	4.3	2.3	1.7	1.5	1.3	1.1	1.0	0.9	-
Netherlands	7.4	3.3	2.1	1.6	1.3	1.1	1.0	0.8	0.7
India	3.5	2.3	1.3	1.0	0.8	0.8	0.8	0.7	-
Viet Nam	2.7	1.6	1.1	0.9	0.7	0.6	0.6	0.5	0.4
Australia	6.3	3.3	2.4	1.9	1.7	1.5	1.3	1.3	1.0
Italy	5.3	2.9	2.1	1.6	1.7	1.6	1.4	1.2	1.0
France	4.5	2.6	1.9	1.5	1.3	1.4	1.1	0.8	-
Thailand	3.8	2.5	1.3	1.0	0.9	0.9	0.7	0.7	0.6
Indonesia	4.4	2.2	1.7	1.3	1.1	1.0	0.9	0.9	-
Philippines	4.9	3.7	3.1	2.3	1.8	1.7	1.3	0.8	-
Average	**4.4**	**2.4**	**1.7**	**1.4**	**1.2**	**1.1**	**0.9**	**0.8**	**0.7**

Source: S&P Global Market Intelligence.
Notes: Ranked by total number of port calls. The average is the unweighted average of the countries listed in the table.

5.2 Data sources

The CPPI relies on a unique operational dataset provided by major shipping lines through S&P Global's Port Performance Program, which is integrated with AIS-derived vessel movement records.

Shipping line participation

S&P Global's Port Performance Program started in 2009. It now includes 10 of the largest global liner shipping companies, representing approximately 75–80% of the global container fleet capacity. The liner shipping companies provide the program with a series of data points, including operational time stamps and other information, such as move counts for each port call undertaken globally. These carriers provide monthly time-stamped data for container vessel port calls, covering their entire operational networks and subsidiaries.

Data transmission and mapping

Shipping lines transmit data directly to S&P Global's Port Performance Program, which then performs validation and standardization, verifying call data with AIS tracks using terminal geofences. These are digital perimeters set around port terminals to determine exactly when and where a vessel enters, berths, or departs. Only verified port-call records (with matching AIS and timeliness data) are included, with a reported 95% match rate.

Coverage improvement over time

Coverage has steadily improved over the last five years: the number of ports covered increased from 350 in 2020 to 403 in 2024, representing a 15% growth. Port calls increased from 157,405 to 175,152, a 11% rise. Container moves grew from 218 million to 247 million, a 13% increase.

5.3 Preparation and calculation of the CPPI

The CPPI relies on detailed port call-level data for container vessels, derived from AIS signals matched with structured vessel and port call information. Each port call includes timestamps for six key events:

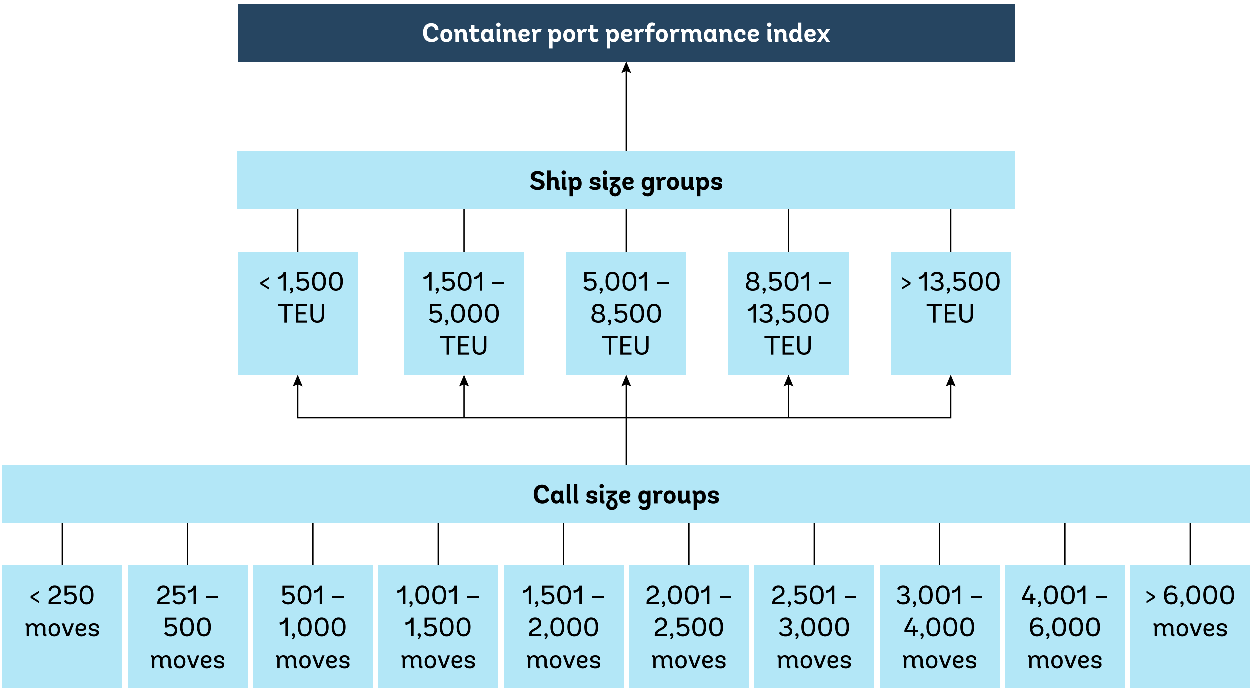
- Key event 1: arrival at anchorage or pilot station,
- Key event 2: ship movement to berthing place,
- Key event 3: start of cargo operations,
- Key event 4: end of cargo operations,
- Key event 5: departure from berth,
- Key event 6: exit from port limits.

Each port call also includes vessel characteristics (TEU capacity) and data on the call size, number of cranes deployed, and other relevant details. The data undergo rigorous cleaning to remove incomplete, inconsistent, or duplicated records.

Key event 6 (the time spent from berth departure to the exit from the port limits) is excluded from the CPPI calculations. This is because any port performance loss that pertains to departure delays, such as pilot or tug availability, readiness of the mooring gang, channel access and water depths, forecasting completion time, communication, and ship readiness, will be incurred while the ship is still alongside the berth and will already be included in the CPPI. Operations carried out in a port, but after departing from a berth, such as bunkering, repairs, or simply waiting in a safe area, are excluded from the CPPI, as they are not influenced by the operational performance of the terminal or port.

The structure of the CPPI is shown in Figure 5.2. Port calls are grouped into five standardized ship size categories: feeders: <1,500 TEUs, intra-regional: 1,501 TEUs–5,000 TEUs, intermediate: 5,001 TEUs–8,500 TEUs, neo-panamax: 8,501 TEUs–13,500 TEUs, and ultra-large container carriers: >13,500 TEUs. The five ship size groups were based on where ships might be deployed and the similarities of ships within each group. For each category, there are ten different bands for call size. The ten call size groups were selected to ensure a similar level of crane intensity within each group.

Figure 5.2 Structure of the CPPI



Source: World Bank.

Several exclusion criteria were applied to the port call data. As Table 5.3 shows, there were insufficient port calls in the larger five-call size groups for the less than 1,500 TEU ship size group, and similarly for the two larger call size groups for the 1,501 TEU-5,000 TEU ship size group.
In addition, ports with fewer than 24 container calls per year in the dataset are excluded from the calculations. Of the 529 ports for which S&P Global Market Intelligence received port call information, 403 have been included in the main index of CPPI 2024.

Table 5.3 Port calls distribution, percent, 2024

	Call Size Group										
Ship Size Group	**<250**	**251-500**	**501-1,000**	**1,001-1,500**	**1,501-2,000**	**2,001-2,500**	**2,501-3,000**	**3,001-4,000**	**4,001-6,000**	**>6,000**	**Percent of calls per ship size group**
<1,500	29.8	36.7	28.9	3.3	0.5	0.3	0.2	0.1	0.1	0.1	11.3
1,501-5,000	9.2	21.6	35.3	17.9	8.6	4.1	1.7	1.3	0.3	0.0	48.3
5,001-8,500	2.0	7.5	24.0	22.3	16.4	11.3	6.8	6.1	3.2	0.5	16.1
8,501-13,500	0.8	3.9	14.1	17.1	16.6	13.5	9.9	12.4	8.5	3.3	14.8
>13,500	0.2	1.4	5.6	9.1	10.4	11.1	11.1	18.1	20.6	12.5	9.5
Percent of calls per call size group	8.3	16.5	26.8	16.0	10.3	6.9	4.4	5.2	3.9	1.8	100.0

Source: World Bank calculations, based on data provided by S&P Global Market Intelligence.

There were 175,152 distinct port calls recorded in the data over the period at those 403 main ports. More than 48% of all ship port calls in 2024 were from the Panamax (1,501-5,000 TEU) size of ships. A relatively small proportion of calls were in the smallest and largest ship size groups, 11.3% and 9.5%, respectively. For ports with missing data, imputation techniques are applied (see below).

Two complementary approaches

The index is constructed using two approaches: the administrative approach and the statistical approach. Both are applied to the same underlying dataset, and their results are compared and used complementarily. The final, combined CPPI is the average of these two indices.

Box 5.1

The administrative approach: construction and calculation

The administrative approach provides a direct measure of port performance using vessel time in port, adjusted for operational variables.

Step 1: Define port time

Port time includes all time from a vessel's AIS-detected arrival at the port limit or anchorage zone to the time it leaves the berth (arrival to departure).

These six time stamps are aggregated into:

- Arrival hours (time elapsed between key events 1 and 3), which consist of waiting time (if applicable), and steam-in time
- Berth hours (time elapsed between key events 3 and 5), which consist of cargo operation time and idle time at berth without cargo loading
- Departure hours (time elapsed between key events 5 and 6), which consist of time spent in the port after leaving the berth (while this period is recorded, it is not included in the CPPI calculations)

The administrative approach uses aggregated arrival and berth hours.

Step 2: Mean-center by ship size and call size

To ensure fair comparisons, the raw port time is adjusted using two main operational controls:

- Ship size: categorized into five predefined groups by TEU capacity
- Call size: categorized into ten predefined groups by number of container moves per port call (load + discharge + restow)

Within each call size group, the port's average port hours are compared with the group's average port hours as a negative or positive quantity of hours. The result of that comparison is weighted by the ratio of port calls in each call size group for the entire group of ports. This is then summed, and the results are port-level scores per ship size category.

Step 3: Aggregate port-level scores

Aggregate port-level scores are weighted by the Fuel Consumption Index, explained below (Table 5.4), and summed across the different ship size categories, where data is available.

This yields a single numerical performance score per port.

Box 5.2

The statistical approach: factor analysis and latent scoring

The statistical approach applies multivariate factor analysis to derive latent performance dimensions from a set of correlated indicators. The aim is to reduce noise, avoid over-weighting collinear variables, and produce a statistically rigorous composite index.

Step 1: Select performance indicators

Input variables include:

- Total port hours
- Ship size
- Call size

Total port hours are centered around the mean and grouped by call size and ship size category. As in the administrative approach, total port hours are weighted by the ratio of port calls in each call size group for the entire group of ports. This results in a scaled port time matrix.

Step 2: Perform factor analysis

A factor model is fitted separately for each ship size group. The method extracts the latent variables (factors) via a non-negative matrix factorization of the scaled port time matrix. Typically, three factors are retained, based on an analysis of how well the factors explain the original data. The three factors are added to produce a score for each port.

Step 3: Aggregate port-level scores

Similar to the administrative approach, port-level scores for different ship size groups are aggregated using weights derived from a Fuel Consumption Index.

The scores of the statistical index are compared with the administrative scores to identify outliers and confirm consistency. Both methods complement each other.

Imputation of missing data

To handle missing values (where port time for a call size category is unavailable), the following methods are applied:

- Administrative approach: imputes missing values using mean values within the same ship size group and port for arrival hours, and the same ship size and call size group for berth hours.
- Statistical approach: imputes missing values using the expectation-maximization algorithm, where missing values are estimated based on their conditional mean given the available data.

No port is included in the CPPI unless a minimum threshold of data coverage is met. More details on the exact method of imputation of missing data can be found in the CPPI 2022 and 2023 reports (World Bank, 2023; World Bank, 2024).

Aggregation across ship size categories

As performance may vary significantly by vessel size, separate indices are calculated per ship size group. The final CPPI score is a weighted average of the port's performance across all relevant ship size groups. The ship size groups are weighted using a Fuel Consumption Index (see Table 5.4) to differentiate the importance and significance of improved performance on larger ships compared to smaller ones, based on the relative fuel consumption between different ship sizes.

For each ship size group, a typical midrange example ship was selected. Based on the expected deployment of such ships, the index defines and weights a range of sea legs, using a typical pro forma service speed, and considers the impact on fuel consumption that one hour longer (or shorter) in port would likely yield. The index weight then suggests that, for example, it is 2.57 times more costly to recover an additional hour of port time at sea for a ship with a capacity of over 13,500 TEUs than it would be for a ship in the 1,501–5,000 TEU capacity range (Table 5.4).

Table 5.4 Assumptions to determine fuel consumption index

Nominal TEU capacity range	Expected deployment	Sea leg	Weight (percent)	Index weight
Less than 1,500 TEUs	Feeders Intra-regional	Singapore–Surabaya Rotterdam–Dublin Kingston–Port-au-Prince Busan–Qingdao	25 25 25 25	0.46
1,501 to 5,000 TEUs	Intra-regional Africa Latin America Oceania Transatlantic	Shanghai–Manila Rotterdam–Genoa Algeciras–Tema Charleston–Santos Xiamen–Brisbane Felixstowe–New York	30 30 10 10 10 10	1.00
5,001 to 8,500 TEUs	Africa Latin America Oceania Transatlantic Asia–Middle East	Hong Kong–Tema Charleston–Santos Xiamen–Brisbane Felixstowe–New York Shanghai–Dubai	20 20 20 20 20	1.54
8,501 to 13,500 TEUs	Transpacific Asia–Middle East Asia–Mediterranean	Busan–Charleston (via Panama) Hong Kong–Los Angeles Shanghai–Dubai Singapore–Piraeus	25 25 25 25	1.97
Greater than 13,500 TEUs	Asia–Mediterranean Asia–North Europe Transpacific	Singapore–Piraeus Singapore–Rotterdam Hong Kong–Los Angeles	40 40 20	2.57

Source: World Bank, based on data provided by S&P Global Market Intelligence.

Methodological evolution

The core CPPI methodology has remained unchanged since its 2023 edition, following several refinements introduced progressively between the 2020 and 2022 editions. These include:

- Improved imputation procedures and consistency checks
- Use of matrix factorization and latent scoring from the 2021 edition onward
- Provision of a combined CPPI score based on ports' scores in both the statistical and administrative approaches.

No methodological changes were made in 2024. The emphasis of the current report is on analyzing five-year trends, rather than revising the methodology.

5.4 Interpreting the CPPI

The objective of the CPPI is to provide an objective measure of container port performance based on vessel time in port at a global level to identify performance gaps and spot opportunities for improvement. Factors that can influence the time vessels spend in ports can be location-specific and under the port's control (endogenous) or external and beyond the port's control (exogenous).

The CPPI measures time spent in container ports, strictly based on quantitative data only, which do not reveal the underlying factors or root causes of extended port times. The underlying data, however, can indicate through benchmarking which aspect of the port call process performance is relatively better or worse. The CPPI thus helps identify container ports in which vessel time in port is objectively lower or higher.

5.5 Trends: Comparing Five Years of CPPIs

This year's Container Port Performance Index (CPPI) report focuses on comparing ports' performance over time. Comparing rankings over time, though, would not serve this purpose, as a port's rank also depends on the performance of other ports and how external shocks impact them.

Previous CPPI index scores could not be compared across years

The CPPI, both in its administrative and statistical versions, is constructed using a methodology that emphasizes comparability between ports within a single year, rather than across years. Each year's index is internally normalized, with each year's average set to equal zero, to allow for ranking ports against one another in that specific year's global operating environment. While this approach serves the purpose of benchmarking relative performance in a given year, it introduces a methodological limitation: the scores cannot be used to assess performance evolution over time.

For both the administrative and statistical indices, the underlying methodology involves a normalization process that rescales the index values each year around the mean. This typically includes re-centering the data so that the average score across all ports in that year is zero. However, it also means that the index values are relative positions within the cohort of that specific year, and not anchored to any fixed or consistent baseline over time.

Furthermore, in the statistical index, additional year-specific effects arise from the use of factor analysis. The statistical relationships between the input variables (for example, port hours, call size) are recalculated independently for each year, and the factor loadings (the weights assigned to each input) are derived from the specific distribution and correlation of data in that year. As a result, even if a port's operational profile remained unchanged over several years, its statistical index value could shift due to changes in the global structure of performance variation.

In summary, under the current methodology, a score of 10 in 2020 and a score of 11 in 2023 do not necessarily signify performance improvement, deterioration, or stasis, as these scores are calculated on different scales. The only way to make valid temporal comparisons would be to work with the raw operational data, not the normalized indices.

Creating year-on-year comparable indices

To enable time series analysis of CPPI scores and track the performance of individual ports over multiple years, for this year's report, we applied a single reference distribution based on 2024 data and used it as the basis for mean centering all years' data.

Using the raw operational variables, we compute the mean for each ship size group and each relevant variable based on the 2024 dataset.

We then recalculate administrative and statistical scores for previous years using these 2024-based parameters:

- For the administrative index: instead of normalizing 2020–2023 port scores based on the distribution of that year, we apply the 2024 mean to those scores. This effectively expresses all past performance scores in terms of their distance from the 2024 benchmark.
- For the statistical index: we use the 2024 mean and weighting scheme to mean-center the data. The standard methodology is then applied to calculate the 2020-2023 statistical index, using a 2024 weighting.
- The combined CPPI is the arithmetic average of the two indices: the statistical and the administrative index.

To maintain consistency in ship size groups and port inclusion criteria, we apply the 2024 group definitions retrospectively to earlier years. This ensures that changes in composition do not affect comparability.

This enables us to calculate changes over time by comparing the 2024 CPPI values with the newly calculated values for the previous four years.

Adopting this rebasing approach allows for time series analysis, trend lines, and policy-relevant performance tracking. For example, stakeholders could observe whether a port has converged toward or diverged from the 2024 baseline, and whether global or regional average performances have improved or declined relative to the same 2024 baseline.

Generating comparable CPPI scores based on a single base year also implies that even in a situation where a port's "ranking" remains stable, its CPPI score can vary over the years. At the same time, a port with a stable CPPI score can have different rankings in different years, as the rank also depends on the CPPI scores of other ports.

5.6 Outlook and options for further development of the CPPI and other indicators of port performance

Building on the analysis and feedback received over five years of generating and publishing the CPPI, some potential for further development and expansion can be discerned. Some of these considerations may be incorporated into future CPPI reports, while others may merit separate streams of work.

Additional dimensions of port performance

When interpreting the CPPI scores of a port, it is essential to understand what is being measured and what is not. The CPPI focuses on the time spent in port as a proxy of performance. Alongside arrival time, the container loading and unloading at the berth is a core component of the CPPI. Here, higher crane productivity helps improve the CPPI.

From a shipper's perspective, the point of view of the importer or exporter, the performance of a port goes beyond the time it takes to load or unload the vessel. Additional aspects relevant to a shipper that the CPPI does not capture include maritime connectivity, cargo dwell time, and intermodal transport to the hinterland. The forthcoming Logistics Performance Indicators (LPI.2.0), which underwent a major methodological update in 2025, capture these aspects at the country level (World Bank, 2025b).

Maritime connectivity: A port can be considered to perform better from a shipper's perspective if it offers a larger number of options for connecting to overseas markets. A higher frequency of services, a larger number of direct connections to other ports, and increased competition among carriers can help make a port more attractive to shippers. UNCTAD's Liner Shipping Connectivity Index (LSCI) covers this aspect (UNCTAD, 2024a).

Cargo dwell time: While the performance at berth is measured in minutes per move, once a container is in the port, it can take days or, at times, weeks to clear customs. A port's performance could include this dimension. Cargo dwell time is mostly beyond the control of the terminal operator and depends more on trade facilitation measures implemented by customs authorities and border agencies.

Intermodal hinterland connectivity: Similar to maritime connectivity, which can be referred to as foreland connectivity, a port's connections to the hinterland through intermodal transport are considered an aspect of the port's performance from the shipper's perspective. More frequent options for delivering containers to and from the port through rail, truck, and waterway transport make a port more attractive for importers and exporters.

The current CPPI has a clear, yet limited, focus on the performance of a port in terms of the time it takes to load and unload containers during a vessel's stay in port. Expanding the CPPI to include additional dimensions, such as those discussed, would broaden the concept of port performance, albeit at the risk of diluting the index's focus.

Distinguishing between berth hours and arrival hours

Currently, the CPPI comprises steps that include time spent waiting at anchor or arriving before reaching the berth, as well as time spent at the berth itself. The time at anchor can be influenced by customs formalities, availability of pilotage and tugging services, tides, the need for convoys, and port call planning by the carriers. The time spent at berth is primarily influenced by terminal operations, the assigned cranes, and their speed. In the Annex in this year's report, the percentage of time spent at berth is reported for each port.

In future assessments, the time at berth and time at anchor could be evaluated separately, including a more detailed analysis of operating times at berth compared to total time at berth, and time at anchor compared to total arrival time.

Methodological Considerations

The CPPI combines data on a vessel's time in port with data on the number of containers loaded and unloaded. To allow comparison across ports of different sizes, the CPPI groups ship calls into ship sizes and call sizes (the number of containers loaded and discharged per ship port call), and each port call is only compared to port calls that are comparable as regards the ship's size and the number of boxes loaded and unloaded. To accommodate this, assumptions must be made about how a port would perform in port call sizes where there is insufficient or no data available.

The CPPI employs two indices, the statistical and administrative index, in which the approaches to addressing data gaps differ slightly. For future editions of the CPPI report, additional assessments or sub-indices could be considered, including the calculation of time per container move for individual port calls.

Data Coverage

The data coverage for calculating the CPPI has significantly expanded since its inception. However, the CPPI is generated with partial information about port calls for each port. Most of the time, it can be safely assumed that the time spent in port and at berth, as well as changes over time, are accurately reflected on average, without systematic bias. However, to avoid the possibility of bias, the World Bank and S&P Global aim to expand the data coverage further.

Annex

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI 2020	CPPI 2021	CPPI 2022	CPPI 2023	CPPI 2024	Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
Aarhus	DKAAR	Denmark	ECA	4.7	HI	4.0	North Europe	7.1	73	38	22	60	99	24	90%	56	143
Abidjan	CIABJ	Côte d'Ivoire	SSA	-81.0	LMI	-2.5	West Africa	-55.5	19	-153	-144	-38	-51	358	60%	-27	-74
Acajutla	SVAQJ	El Salvador	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	0	-7	-30	-89	-98	382	46%	-65	-130
Adelaide	AUADL	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	-20	-2	-24	-39	-8	266	87%	-2	-14
Aden	YEADE	Yemen, Rep.	MENA	22.6	LI	-20.5	Red Sea	20.9		-21	-13	4	-24	323	95%	-14	-35
Agadir	MAAGA	Morocco	MENA	22.6	LMI	-2.5	Mediterranean	4.1	-1	-4	-8	-10	-14	297	75%	-9	-18
Alexandria	EGALY	Egypt, Arab Rep.	MENA	22.6	LMI	-2.5	Mediterranean	4.1	8	-6	-16	21	-4	247	52%	-2	-7
Algeciras	ESALG	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1	116	113	104	126	109	20	76%	63	155
Alicante	ESALC	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1		4	0	-1	-5	249	95%	0	-9
Altamira	MXATM	Mexico	LAC	-18.2	UMI	-3.4	North America East Coast	9.6	40	42	50	41	41	81	75%	23	60
Ambarli	TRAMR	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	102	75	43	7	17	124	73%	8	26
Ancona	ITAOI	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	14	13	11	2	-10	274	59%	-6	-13
Antofagasta	CLANF	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1		3	-29		1	224	87%	1	2
Antwerp	BEANR	Belgium	ECA	4.7	HI	4.0	North Europe	7.1	101	40	34	57	19	123	74%	9	29
Apra Harbor	GUAPR	Guam	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	6	9	4	2	9	158	92%	2	17
Aqaba	JOAQB	Jordan	MENA	22.6	LMI	-2.5	Red Sea	20.9	106	79	44	54	66	43	90%	40	92
Arica	CLARI	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	18	-15	-3	-20	7	172	81%	2	12
Arrecife De Lanzarote	ESACE	Canary Islands	ECA	4.7	HI	4.0	Atlantic Islands	9.5				7	8	168	76%	6	9
Ashdod	ILASH	Israel	MENA	22.6	HI	4.0	Mediterranean	4.1	26	-42	-56	-93	-31	332	86%	-13	-50
Auckland	NZAKL	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	31	-93	-82	-42	-12	286	73%	-7	-17

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Augusta	ITAUG	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1					4	198	67%	3	5
Balboa	PABLB	Panama	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	96	58	36	-3	-46	354	62%	-24	-69
Baltimore	USBAL	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	51	45	-52	15	5	191	77%	2	8
Bangkok	THBKK	Thailand	EAP	31.0	UMI	-3.4	South East Asia	15.7	1	-19	-6	-8	-7	261	61%	-5	-9
Bar	MEBAR	Montenegro	ECA	4.7	UMI	-3.4	Mediterranean	4.1		12	11	9	10	152	84%	7	13
Barcelona	ESBCN	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1	109	90	67	93	52	62	73%	29	74
Bari	ITBRI	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	11	10	6	-2	-6	259	87%	0	-11
Barranquilla	COBAQ	Colombia	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	15	15	10	12	1	223	92%	2	1
Basseterre	KNBAS	St Kitts & Nevis	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1				8	8	162	61%	6	10
Bata	GQBSG	Equatorial Guinea	SSA	-81.0	UMI	-3.4	West Africa	-55.5				-6	-6	260	85%	-5	-7
Batangas	PHBTG	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	14		15	18	-12	287	70%	-7	-17
Batumi	GEBUS	Georgia	ECA	4.7	UMI	-3.4	Mediterranean	4.1	1	2	-3	-2	4	206	84%	4	3
Beira	MZBEW	Mozambique	SSA	-81.0	LI	-20.5	Southern Africa	-195.7	-8	-6	-1	-38	-13	292	96%	-8	-17
Beirut	LBBEY	Lebanon	MENA	22.6	LMI	-2.5	Mediterranean	4.1	97	-106	-79	58	57	54	79%	31	84
Bejaia	DZBJA	Algeria	MENA	22.6	UMI	-3.4	Mediterranean	4.1	-38	-12	-10	-91	-129	386	46%	-77	-181
Belawan	IDBLW	Indonesia	EAP	31.0	UMI	-3.4	South East Asia	15.7	11	0	1	-13	-4	244	73%	-3	-5
Belfast	GBBEL	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1					-2	237	77%	-2	-2
Bell Bay	AUBEL	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	17	4	3	3	4	196	90%	4	4
Berbera	SOBBO	Somalia	SSA	-81.0	LI	-20.5	East Africa	-38.6	2	12	13	31	-3	243	91%	-1	-4
Big Creek	BZBGK	Belize	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1				0	6	178	87%	4	8
Bilbao	ESBIO	Spain	ECA	4.7	HI	4.0	North Europe	7.1	4	11	3	3	-36	341	89%	-17	-56
Bintulu	MYBTU	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7				-77	-60	366	55%	-44	-77

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Bluff	NZBLU	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	2	3	6	-3	-21	315	94%	-14	-29
Bordeaux	FRBOD	France	ECA	4.7	HI	4.0	North Europe	7.1		3	1	1	-1	231	94%	0	-1
Borusan	TRBRU	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	7	17	9	16	13	140	83%	9	17
Boston	USBOS	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	62	28	43	52	20	119	81%	8	32
Bremerhaven	DEBRV	Germany	ECA	4.7	HI	4.0	North Europe	7.1	94	57	39	44	7	173	71%	5	9
Brest	FRBES	France	ECA	4.7	HI	4.0	North Europe	7.1			8	4	2	222	90%	2	2
Bridgetown	BBBGI	Barbados	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1				1	3	212	81%	2	3
Brisbane	AUBNE	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	39	-10	-32	-35	-93	377	76%	-48	-137
Bristol	GBBRS	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	-3	-71		-65	-45	353	93%	-27	-64
Buenaventura	COBUN	Colombia	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	64	101	94	89	91	28	85%	55	127
Buenos Aires	ARBUE	Argentina	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	16	22	4	11	8	164	79%	2	14
Burgas	BGBOJ	Bulgaria	ECA	4.7	HI	4.0	Mediterranean	4.1	20	9	8	11	5	186	64%	3	8
Busan	KRPUS	Republic of Korea	EAP	31.0	HI	4.0	North Asia	40.6	112	85	94	97	92	27	88%	55	129
Cadiz	ESCAD	Spain	ECA	4.7	HI	4.0	North Europe	7.1		3	11	3	13	141	73%	7	19
Cagayan De Oro	PHCGY	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	20	6	11	13	9	159	67%	7	12
Cai Mep	VNTOT	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	122	110	106	132	132	7	84%	79	186
Caldera	CRCAL	Costa Rica	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	15	-6	1	-1	-9	268	70%	-6	-12
Callao	PECLL	Peru	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	101	-4	62	108	79	37	78%	54	104
Cape Town	ZACPT	South Africa	SSA	-81.0	UMI	-3.4	Southern Africa	-195.7	-96	-277	-288	-519	-281	400	63%	-156	-406
Cartagena	COCTG	Colombia	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	86	110	124	137	64	46	72%	30	99

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Casablanca	MACAS	Morocco	MENA	22.6	LMI	-2.5	Mediterranean	4.1	14	-4	10	-27	-12	288	73%	-8	-16
Castellon	ESCAS	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1	31			4	-5	254	87%	-4	-6
Castries	LCCAS	St Lucia	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1				1	3	209	85%	2	4
Cat Lai	VNCLI	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	24	17	23	25	20	122	72%	14	26
Caucedo	DOCAU	Dominican Republic	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	68	37	7	17	-26	328	74%	-16	-35
Cebu	PHCEB	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	19	14	13	16	12	144	92%	10	15
Charleston	USCHS	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	101	35	-196	68	-43	350	49%	-14	-72
Chattogram	BDCGP	Bangladesh	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9	-12	-80	-59	-36	-48	356	63%	-35	-61
Chennai	INMAA	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		42	23	47	10	154	82%	1	19
Chiwan	CNCWN	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	126	98	92	137	130	9	87%	77	182
Chu Lai	VNC8Q	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7		4	11	15	9	157	80%	6	12
Cochin	INCOK	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		35	37	62	56	56	73%	30	81
Coega (Ngqura) Port	ZAZBA	South Africa	SSA	-81.0	UMI	-3.4	Southern Africa	-195.7	-63	-226	-191	-444	-284	402	87%	-171	-396
Colombo	LKCMB	Sri Lanka	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9	114	87	83	95	42	80	61%	26	57
Colon	PAONX	Panama	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	91	41	23	46	-42	348	62%	-8	-76
Conakry	GNCKY	Guinea	SSA	-81.0	LMI	-2.5	West Africa	-55.5	3	2	5	4	-2	235	73%	-1	-2
Constantza	ROCND	Romania	ECA	4.7	HI	4.0	Mediterranean	4.1	28	-1	-43	-51	-80	373	40%	-58	-102
Copenhagen	DKCPH	Denmark	ECA	4.7	HI	4.0	North Europe	7.1	19	6	4	4	7	171	88%	6	8
Corinto	NICIO	Nicaragua	LAC	-18.2	LMI	-2.5	Caribbean & Central America	-21.1		-12	-11	-29	-70	370	43%	-45	-96
Coronel	CLCNL	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	80	74	75	41	73	40	87%	44	103

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Cotonou	BJCOO	Benin	SSA	-81.0	LMI	-2.5	West Africa	-55.5	22	-92	-105	-243	-17	303	54%	-7	-26
Cristobal	PACTB	Panama	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	28	23	-51	4	-202	398	54%	-126	-278
Da Chan Bay Terminal One	CNDCB	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	82	22	46	67	86	31	80%	52	119
Dakar	SNDKR	Senegal	SSA	-81.0	LMI	-2.5	West Africa	-55.5	35	-19	3	-82	23	108	66%	15	30
Dalian	CNDAG	China	EAP	31.0	UMI	-3.4	Yellow Sea	80.3	122	38	54	123	137	4	75%	83	190
Damietta	EGDAM	Egypt, Arab Rep.	MENA	22.6	LMI	-2.5	Mediterranean	4.1	58	58	-3	-91	-4	245	69%	-2	-6
Dammam	SADMM	Saudi Arabia	MENA	22.6	HI	4.0	Arabian Gulf	39.6	89	104	70	97	9	161	70%	9	9
Danang	VNDAD	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	22	14	19	23	16	128	50%	10	21
Dar Es Salaam	TZDAR	Tanzania	SSA	-81.0	LMI	-2.5	East Africa	-38.6	-19	-176	-72	-80	-53	360	63%	-34	-73
Davao	PHDVO	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	31	-5	-9	-10	-25	326	85%	-14	-37
Deendayal	INIXY	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9					10	153	85%	6	14
Derince	TRDRC	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1					65	45	86%	41	89
Diliskelesi	TRDIL	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	48	47	40	51	20	117	85%	17	23
Djibouti	DJJIB	Djibouti	MENA	22.6	LMI	-2.5	Red Sea	20.9	92	95	91	-64	-56	364	60%	-36	-75
Douala	CMDLA	Cameroon	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-13	-75	-41	-80	-97	381	36%	-73	-122
Dublin	IEDUB	Irish Republic	ECA	4.7	HI	4.0	North Europe	7.1	3	-18	-11	-16	-13	290	85%	-9	-16
Dunkirk	FRDKK	France	ECA	4.7	HI	4.0	North Europe	7.1	53	-74	-58	26	27	104	89%	16	37
Durban	ZADUR	South Africa	SSA	-81.0	UMI	-3.4	Southern Africa	-195.7	-108	-246	-220	-206	-721	403	52%	-454	-989
Durres	ALDRZ	Albania	ECA	4.7	UMI	-3.4	Mediterranean	4.1	5	-26	-11	-36	-10	275	70%	-7	-12
El Dekheila	EGEDK	Egypt, Arab Rep.	MENA	22.6	LMI	-2.5	Mediterranean	4.1	14	22	11	-25	5	190	48%	3	7
Ensenada	MXESE	Mexico	LAC	-18.2	UMI	-3.4	North America West Coast	-58.1	50	38	19	-7	11	149	75%	3	19
Felixstowe	GBFXT	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	40	-48	-18	23	-33	336	85%	-20	-46

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Ferrol	ESFRO	Spain	ECA	4.7	HI	4.0	North Europe	7.1				3	5	185	74%	4	7
Fortaleza	BRFOR	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5		-9			-16	302	92%	-11	-21
Fort-De-France	MQFDF	Martinique	ECA	4.7	HI	4.0	Caribbean & Central America	-21.1	38	26	30	31	30	98	80%	18	42
Fredericia	DKFRC	Denmark	ECA	4.7	HI	4.0	North Europe	7.1	19	12	12	15	14	131	80%	10	19
Freeport (Bahamas)	BSFPO	Bahamas	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	37	-100	-80	-45	-234	399	30%	-133	-334
Freetown	SLFNA	Sierra Leone	SSA	-81.0	LI	-20.5	West Africa	-55.5	9	-5	0	0	2	216	76%	2	3
Fremantle	AUFRE	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	1	-50	-67	-89	-95	379	83%	-58	-131
Fuzhou	CNFZG	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	118	27	63	95	139	2	83%	78	200
Gavle	SEGVX	Sweden	ECA	4.7	HI	4.0	North Europe	7.1	9	-2	-7	6	7	176	89%	5	8
Gdansk	PLGDN	Poland	ECA	4.7	HI	4.0	North Europe	7.1	48	-7	-42	-24	62	47	86%	35	88
Gdynia	PLGDY	Poland	ECA	4.7	HI	4.0	North Europe	7.1	39	2	-12	13	5	187	84%	1	10
Gemlik	TRGEM	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	46	34	13	101	55	57	80%	31	78
General San Martin	PEGSM	Peru	LAC	-18.2	UMI	-3.4	South America West Coast	23.1				8	7	175	79%	5	9
General Santos	PHGES	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	-8			-4	-2	234	82%	-1	-2
Genoa	ITGOA	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	25	-52	-82	-9	-55	363	78%	-33	-77
Georgetown	GYGEO	Guyana	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1		1		-12	-9	270	70%	-6	-12
Gijon	ESGIJ	Spain	ECA	4.7	HI	4.0	North Europe	7.1	11	5	15	6	-13	291	85%	-7	-18
Gioia Tauro	ITGIT	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	60	46	8	13	60	49	86%	30	90
Gothenburg	SEGOT	Sweden	ECA	4.7	HI	4.0	North Europe	7.1	-20	23	10	16	51	63	83%	29	73
Grangemouth	GBGRG	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	-1	-24		-4	-5	255	77%	-4	-6
Greenock	GBGRK	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1				-37	-34	337	78%	-22	-46

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									2020	2021	2022	2023	2024				
Guangzhou	CNGGZ	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	146	119	116	133	130	8	69%	77	183
Guayaquil	ECGYE	Ecuador	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	12	-12	-33	-6	-54	361	85%	-27	-81
Gustavia	BLSBH	St-Barthelemy	ECA	4.7	HI	4.0	Caribbean & Central America	-21.1	8	8	8	8	8	165	54%	6	10
Haifa	ILHFA	Israel	MENA	22.6	HI	4.0	Mediterranean	4.1	77	6	40	44	36	89	80%	23	48
Haiphong	VNHPH	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	70	52	14	55	87	30	85%	51	122
Hakata	JPHKT	Japan	EAP	31.0	HI	4.0	North Asia	40.6	22	23	23	22	22	111	63%	15	29
Halifax	CAHAL	Canada	NAM	-16.7	HI	4.0	North America East Coast	9.6	118	78	-34	41	56	55	84%	31	80
Halmstad	SEHAD	Sweden	ECA	4.7	HI	4.0	North Europe	7.1					6	183	83%	4	8
Hamad Port	QAHMD	Qatar	MENA	22.6	HI	4.0	Arabian Gulf	39.6	110	138	117	128	125	11	78%	69	181
Hamburg	DEHAM	Germany	ECA	4.7	HI	4.0	North Europe	7.1	80	8	-90	39	-13	295	71%	-8	-19
Hazira	INHZA	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		45	37	54	43	76	85%	25	60
Helsingborg	SEHEL	Sweden	ECA	4.7	HI	4.0	North Europe	7.1	15	13	12	11	14	134	83%	9	18
Helsinki	FIHEL	Finland	ECA	4.7	HI	4.0	North Europe	7.1		12	-1	3	4	202	89%	3	5
Heraklion	GRHER	Greece	ECA	4.7	HI	4.0	Mediterranean	4.1	4	4	3	1	-5	253	91%	-3	-7
Hibikinada	JPHBK	Japan	EAP	31.0	HI	4.0	North Asia	40.6				13	5	193	51%	3	7
Hong Kong	HKHKG	Hong Kong SAR, China	EAP	31.0	HI	4.0	Southeast Asian Seas	80.9	142	68	112	119	123	12	78%	73	172
Honolulu	USHNL	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1				4	-7	263	96%	-6	-8
Houston	USHOU	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	36	31	-178	-15	-33	335	76%	-21	-45
Huelva	ESHUV	Spain	ECA	4.7	HI	4.0	North Europe	7.1				6	4	204	79%	3	5
Hueneme	USNTD	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	-8	-8	-6	-8	-9	272	92%	-5	-13
Iloilo	PHILO	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7					3	210	82%	2	4

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Imbituba	BRIBB	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5		55	20	-72	53	60	87%	30	75
Incheon	KRINC	Republic of Korea	EAP	31.0	HI	4.0	North Asia	40.6	84	65	75	67	85	33	87%	48	122
Iquique	CLIQQ	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	-6	-26	-29	-48	-43	349	82%	-27	-59
Iskenderun	TRISK	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	31	48	-29	-113	21	115	67%	11	31
Itajai	BRITJ	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	45	13	-11	-123	-111	383	24%	-53	-170
Itapoa	BRIOA	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	58	51	45	48	47	65	86%	28	67
Izmir	TRIZM	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	14	2	13	26	25	105	83%	16	34
Jacksonville	USJAX	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	46	38	35	43	43	73	84%	27	60
Jawaharlal Nehru Port	INNSA	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9	66	62	35	48	100	23	70%	57	143
Jebel Ali	AEJEA	United Arab Emirates	MENA	22.6	HI	4.0	Arabian Gulf	39.6	102	72	61	73	-7	262	67%	-10	-5
Jeddah	SAJED	Saudi Arabia	MENA	22.6	HI	4.0	Red Sea	20.9	113	118	81	68	79	36	71%	44	113
Johor	MYPGU	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7	39	42	34	37	42	78	70%	20	64
Jubail	SAJUB	Saudi Arabia	MENA	22.6	HI	4.0	Arabian Gulf	39.6	90	13	34	68	48	64	77%	28	68
Kalundborg	DKKAL	Denmark	ECA	4.7	HI	4.0	North Europe	7.1					22	114	92%	14	29
Kamarajar	INENR	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		40	40	71	33	94	84%	16	49
Kaohsiung	TWKHH	Taiwan, China	EAP	31.0	HI	4.0	Southeast Asian Seas	80.9	146	94	89	110	113	18	68%	67	159
Karachi	PKKHI	Pakistan	MENA	22.6	LMI	-2.5	Indian Subcontinent	30.9	61	39	36	69	30	99	88%	14	46
Kattupalli	INKAT	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		35	40	62	-14	299	87%	-9	-18
Keelung	TWKEL	Taiwan, China	EAP	31.0	HI	4.0	Southeast Asian Seas	80.9	66	48	42	60	59	51	85%	33	85

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Khalifa Bin Salman	BHKBS	Bahrain	MENA	22.6	HI	4.0	Arabian Gulf	39.6	31	53	41	78	46	69	80%	28	64
Khalifa Port	AEKHL	United Arab Emirates	MENA	22.6	HI	4.0	Arabian Gulf	39.6	117	131	128	105	46	68	59%	27	66
Khoms	LYKHO	Libya	MENA	22.6	UMI	-3.4	Mediterranean	4.1				-26	-24	321	95%	-13	-35
King Abdullah Port	SAKAC	Saudi Arabia	MENA	22.6	HI	4.0	Red Sea	20.9	155	152	105	102	58	53	62%	36	80
Kingston	JMKIN	Jamaica	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	62	26	-17	-48	-76	371	60%	-25	-126
Klaipeda	LTKLJ	Lithuania	ECA	4.7	HI	4.0	North Europe	7.1	1	12	3	17	14	133	86%	10	17
Kobe	JPUKB	Japan	EAP	31.0	HI	4.0	North Asia	40.6	75	77	63	55	59	50	83%	37	82
Kompong Som	KHKOS	Cambodia	EAP	31.0	LMI	-2.5	South East Asia	15.7		3		12	5	189	75%	3	7
Koper	SIKOP	Slovenia	ECA	4.7	HI	4.0	Mediterranean	4.1	66	15	-282	-40	11	148	69%	3	19
Kota Kinabalu	MYBKI	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7				-12	-31	333	70%	-17	-46
Kotka	FIKTK	Finland	ECA	4.7	HI	4.0	North Europe	7.1	5	3	-1	-3	-9	269	98%	-4	-13
Kribi Deep Sea Port	CMKBI	Cameroon	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-5	-118	-84	-62	-199	397	47%	-132	-267
Krishnapatnam	INKRI	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		39	46	49	-9	267	87%	-6	-11
Kristiansand	NOKRS	Norway	ECA	4.7	HI	4.0	North Europe	7.1	3	3	2	2	2	220	87%	2	3
Kuantan	MYKUA	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7				2	0	229	78%	-1	1
Kuching	MYKCH	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7				-12	-22	319	74%	-17	-27
La Guaira	VELAG	Venezuela	LAC	-18.2	LMI	-2.5	Caribbean & Central America	-21.1	-9	-4	2	5	3	213	91%	3	3
La Spezia	ITSPE	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	58	-20	-136	-14	-129	387	64%	-81	-178
Lae	PGLAE	Papua New Guinea	EAP	31.0	LMI	-2.5	Australasia & Oceania	-15.9	-2	-20	-19	-25	-7	264	56%	-6	-9
Laem Chabang	THLCH	Thailand	EAP	31.0	UMI	-3.4	South East Asia	15.7	107	57	87	81	66	41	85%	39	94
Lagos	NGLOS	Nigeria	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-61	-128	-11	-16	-24	322	84%	-14	-34
Larvik	NOLAR	Norway	ECA	4.7	HI	4.0	North Europe	7.1	4	5	5	5	3	214	86%	2	3

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Las Palmas	ESLPA	Canary Islands	ECA	4.7	HI	4.0	Atlantic Islands	9.5				18	22	113	84%	15	28
Latakia	SYLTK	Syrian Arab Republic	MENA	22.6	LI	-20.5	Mediterranean	4.1	12	13	7	8	2	219	88%	2	3
Lazaro Cardenas	MXLZC	Mexico	LAC	-18.2	UMI	-3.4	North America West Coast	-58.1	120	50	60	76	-27	330	61%	-14	-40
Le Havre	FRLEH	France	ECA	4.7	HI	4.0	North Europe	7.1	53	-12	-96	-68	4	203	73%	5	3
Leixoes	PTLEI	Portugal	ECA	4.7	HI	4.0	North Europe	7.1	9	7	9	-12	-3	242	74%	-2	-4
Lekki	NGLKK	Nigeria	SSA	-81.0	LMI	-2.5	West Africa	-55.5					-17	306	95%	-12	-23
Lianyungang	CNLYG	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	112	46	37	109	75	38	72%	40	110
Limassol	CYLMS	Cyprus	ECA	4.7	HI	4.0	Mediterranean	4.1	28	19	26	12	17	127	75%	12	22
Lirquen	CLLQN	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	31	27	14	18	43	75	92%	26	59
Lisbon	PTLIS	Portugal	ECA	4.7	HI	4.0	North Europe	7.1		5	0	22	-20	311	81%	-14	-27
Liverpool	GBLIV	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1		-35		-8	-5	250	72%	-3	-7
Livorno	ITLIV	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	8	-58	-55	-13	-12	282	83%	-4	-19
Lome	TGLFW	Togo	SSA	-81.0	LI	-20.5	West Africa	-55.5	-37	-92	-75	-22	-23	320	60%	-14	-32
London	GBLON	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	77	-63	-36	60	39	83	65%	26	53
Long Beach	USLGB	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	6	-665	-363	-65	-22	318	96%	-21	-23
Los Angeles	USLAX	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	12	-598	-189	-66	-52	359	95%	-59	-44
Luanda	AOLAD	Angola	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-42	-296	-176	-123	-119	384	61%	-70	-168
Lyttelton	NZLYT	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	23	-28	-67	-94	-9	273	73%	-4	-14
Malabo	GQSSG	Equatorial Guinea	SSA	-81.0	UMI	-3.4	West Africa	-55.5	-2			1	-12	285	85%	-9	-15
Malaga	ESAGP	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1	34	29	14	39	27	102	82%	20	34

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Manaus	BRMAO	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	-5	-5	-5	-4	-20	312	93%	-15	-26
Manila	PHMNL	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7	11	-51	-107	-15	-34	339	46%	-27	-41
Manzanillo (Mexico)	MXZLO	Mexico	LAC	-18.2	UMI	-3.4	North America West Coast	-58.1	81	39	-23	-12	-161	391	59%	-105	-216
Maputo	MZMPM	Mozambique	SSA	-81.0	LI	-20.5	Southern Africa	-195.7	-2	-33	-9	-27	-40	347	51%	-27	-52
Mariel	CUMAR	Cuba	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	3	3	1	0	-11	281	97%	-7	-15
Marsaxlokk	MTMAR	Malta	MENA	22.6	HI	4.0	Mediterranean	4.1	87	47	60	48	6	184	67%	7	4
Marseille	FRMRS	France	ECA	4.7	HI	4.0	Mediterranean	4.1	-96	-18	-10	-40	-37	342	87%	-15	-59
Matadi	CDMAT	Congo, Dem. Rep.	SSA	-81.0	LI	-20.5	West Africa	-55.5	2	13	6	-105	-61	367	56%	-45	-78
Mawan	CNMWN	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	84	73	106	125	133	6	87%	79	187
Mayotte	YTLON	Comoros	SSA	-81.0	LMI	-2.5	East Africa	-38.6		-17	-16	-16	-39	345	64%	-25	-52
Mazatlan	MXMZT	Mexico	LAC	-18.2	UMI	-3.4	North America West Coast	-58.1		4		-26	-12	283	95%	-4	-19
Mejillones	CLMJS	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	41	5	-21	-28	-13	293	87%	-12	-13
Melbourne	AUMEL	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	15	-19	-21	-11	-8	265	85%	-4	-11
Mersin	TRMER	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	94	76	3	-184	42	77	64%	24	60
Miami	USMIA	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	56	81	-3	49	33	93	78%	22	44
Mobile	USMOB	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	47	17	-6	13	23	109	69%	17	29
Mogadiscio	SOMGQ	Somalia	SSA	-81.0	LI	-20.5	East Africa	-38.6	1	-3	-1	9	8	163	88%	5	10
Moji	JPMOJ	Japan	EAP	31.0	HI	4.0	North Asia	40.6	17	22	14	21	17	125	67%	12	22
Mombasa	KEMBA	Kenya	SSA	-81.0	LMI	-2.5	East Africa	-38.6	-31	-11	-81	-32	-89	375	64%	-57	-121
Mongla	BDMGL	Bangladesh	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9					6	179	92%	3	9

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI 2020	CPPI 2021	CPPI 2022	CPPI 2023	CPPI 2024	Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
Monrovia	LRMLW	Liberia	SSA	-81.0	LI	-20.5	West Africa	-55.5			-19	-40	-37	343	66%	-27	-48
Montevideo	UYMVD	Uruguay	LAC	-18.2	HI	4.0	South America East Coast	-42.5	-4	-6	-55	-69	-12	289	53%	-16	-9
Montreal	CAMTR	Canada	NAM	-16.7	HI	4.0	North America East Coast	9.6	-7	-26	-35	-42	-39	344	96%	-30	-48
Muara	BNMUA	Brunei	EAP	31.0	HI	4.0	South East Asia	15.7				7	3	215	70%	3	3
Muhammad Bin Qasim	PKQCT	Pakistan	MENA	22.6	LMI	-2.5	Indian Subcontinent	30.9	8	43	31	22	43	74	77%	22	64
Mundra	INMUN	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9	76	67	53	108	97	25	78%	57	138
Nacala	MZMNC	Mozambique	SSA	-81.0	LI	-20.5	Southern Africa	-195.7				-68	-64	368	74%	-41	-88
Nagoya	JPNGO	Japan	EAP	31.0	HI	4.0	North Asia	40.6	77	67	59	63	59	52	85%	38	79
Naha	JPNAH	Japan	EAP	31.0	HI	4.0	North Asia	40.6	25	23	23	24	23	107	79%	12	34
Namibe	AOMSZ	Angola	SSA	-81.0	LMI	-2.5	West Africa	-55.5				-16	-11	277	96%	-7	-15
Nantes-St Nazaire	FRNTE	France	ECA	4.7	HI	4.0	North Europe	7.1	3	34	12	5	30	97	88%	17	44
Napier	NZNPE	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	12	-16	-79	-31	-27	329	64%	-19	-35
Naples	ITNAP	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	24	-4	-18	-32	-3	240	80%	0	-5
Nassau	BSNAS	Bahamas	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	4	5	-1	-3	-25	325	77%	-15	-34
Nelson	NZNSN	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	7	10	4	-5	0	227	77%	-1	1
Nemrut Bay	TRNEM	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	16	13	17	2	4	199	81%	5	4
New Orleans	USMSY	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	35	33	13	25	36	88	78%	23	49
New York & New Jersey	USNYC	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	89	-2	-63	45	13	139	78%	11	15
Nghi Son	VNNGH	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7				2	2	221	86%	1	3
Ningbo	CNNBO	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	139	125	118	128	128	10	89%	77	179

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Norrkoping	SENRK	Sweden	ECA	4.7	HI	4.0	North Europe	7.1	20	10	6	9	1	225	80%	1	1
Nouakchott	MRNKC	Mauritania	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-8	-130	-106	-53	-21	314	63%	-13	-29
Noumea	NCNOU	New Caledonia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	20	39	16	-8	20	118	84%	14	27
Novorossiysk	RUNVS	Russian Federation	ECA	4.7	HI	4.0	Mediterranean	4.1	3	16	4	0	0	228	94%	1	-1
Oakland	USOAK	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	18	-128	-252	-158	-87	374	85%	-41	-133
Oita	JPOIT	Japan	EAP	31.0	HI	4.0	North Asia	40.6	4			3	6	182	33%	4	7
Omaezaki	JPOMZ	Japan	EAP	31.0	HI	4.0	North Asia	40.6	17	22	15	18	15	129	73%	10	21
Onne	NGONN	Nigeria	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-12	-72	-45	-16	-25	327	94%	-14	-36
Osaka	JPOSA	Japan	EAP	31.0	HI	4.0	North Asia	40.6	43	77	41	43	-25	324	84%	6	-56
Oslo	NOOSL	Norway	ECA	4.7	HI	4.0	North Europe	7.1	28	18	11	27	6	181	88%	5	7
Otago Harbour	NZORR	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	5	-15	-23	-9	-36	340	70%	-22	-51
Owendo	GAOWE	Gabon	SSA	-81.0	UMI	-3.4	West Africa	-55.5	-4	-20	-21	-50	-30	331	60%	-20	-40
Paita	PEPAI	Peru	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	38	43	27	6	66	44	81%	38	94
Palermo	ITPMO	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	4	5	3	1	1	226	79%	0	1
Panjang	IDPNJ	Indonesia	EAP	31.0	UMI	-3.4	South East Asia	15.7	7	1	-2	7	-31	334	80%	-20	-43
Papeete	PFPPT	French Polynesia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	15	14	13	13	22	112	89%	12	31
Paranagua	BRPNG	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	53	13	41	39	-157	388	37%	-67	-248
Pecem	BRPEC	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	58	28	16	15	-58	365	57%	-34	-82
Penang	MYPEN	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7	19	30	32	-9	35	91	88%	18	52
Philadelphia	USPHL	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	41	57	22	66	92	26	77%	52	133
Philipsburg	SXPHI	Sint Maarten	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	12	13	10	5	9	156	82%	7	12

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Pipavav	INPAV	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9	78	82	80	86	85	32	77%	51	119
Piraeus	GRPIR	Greece	ECA	4.7	HI	4.0	Mediterranean	4.1	93	41	45	35	40	82	74%	23	58
Ploce	HRPLE	Croatia	ECA	4.7	HI	4.0	Mediterranean	4.1		12		4	7	169	78%	5	10
Point Lisas Ports	TTPTS	Trinidad & Tobago	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	5	-18	-8	3	-21	313	64%	-16	-25
Pointe-A-Pitre	GPPTP	Guadeloupe	ECA	4.7	HI	4.0	Caribbean & Central America	-21.1	38	34	29	36	31	95	89%	20	42
Pointe-Noire	CGPNR	Congo, Rep.	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-50	-225	-74	-145	-283	401	40%	-145	-420
Port Akdeniz	TRAYT	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	16	17	16	18	13	136	86%	9	18
Port Botany	AUPBT	Australia	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	0	-36	-44	-38	-48	357	84%	-27	-70
Port Elizabeth	ZAPLZ	South Africa	SSA	-81.0	UMI	-3.4	Southern Africa	-195.7	-103	-29	-31	-128	-169	395	78%	-104	-234
Port Everglades	USPEF	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	33	32	30	60	47	67	83%	25	69
Port Klang	MYPKG	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7	135	44	65	106	74	39	71%	45	102
Port Louis	MUPLU	Mauritius	SSA	-81.0	UMI	-3.4	East Africa	-38.6	-60	-38	-95	-59	-70	369	76%	-38	-102
Port Moresby	PGPOM	Papua New Guinea	EAP	31.0	LMI	-2.5	Australasia & Oceania	-15.9	9			-9	-5	248	51%	-4	-5
Port Of Spain	TTPOS	Trinidad & Tobago	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	4	0	-4	-6	-17	305	59%	-11	-22
Port Of Virginia	USNFF	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	87	90	51	-2	-14	298	53%	-5	-22
Port Reunion	RELPT	Reunion	ECA	4.7	HI	4.0	East Africa	-38.6	-26	-49	-43	-21	-46	355	86%	-27	-66
Port Said	EGPSD	Egypt, Arab Rep.	MENA	22.6	LMI	-2.5	Mediterranean	4.1	96	101	111	118	137	3	80%	80	195
Port Tampa Bay	USTPA	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6		53	11	9	-22	317	75%	-10	-34
Port Victoria	SCPOV	Seychelles	SSA	-81.0	HI	4.0	East Africa	-38.6	-15	-18	-9	-15	-17	304	76%	-11	-22
Posorja	ECPSJ	Ecuador	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	34	47	103	95	107	21	89%	66	148

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Poti	GEPTI	Georgia	ECA	4.7	UMI	-3.4	Mediterranean	4.1	2	3	-32	-39	-40	346	50%	-29	-50
Pozzallo	ITPZL	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1					4	200	44%	3	5
Prince Rupert	CAPRR	Canada	NAM	-16.7	HI	4.0	North America West Coast	-58.1	-10	-85	-248	-188	-54	362	90%	-26	-83
Puerto Barrios	GTPBR	Guatemala	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	21	13	19	21	12	145	87%	9	16
Puerto Bolivar	ECPBO	Ecuador	LAC	-18.2	UMI	-3.4	South America West Coast	23.1	13	14	12	13	13	138	86%	8	18
Puerto Cabello	VEPBL	Venezuela	LAC	-18.2	LMI	-2.5	Caribbean & Central America	-21.1	-17	-13	-10	-15	-10	276	90%	-6	-14
Puerto Cortes	HNPCR	Honduras	LAC	-18.2	LMI	-2.5	Caribbean & Central America	-21.1	18	19	31	9	22	110	59%	12	32
Puerto Limon	CRLIO	Costa Rica	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	35	39	35	46	47	66	78%	29	65
Puerto Progreso	MXPGO	Mexico	LAC	-18.2	UMI	-3.4	North America East Coast	9.6	6	8	11	10	7	174	74%	5	9
Puerto Quetzal	GTPRQ	Guatemala	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	42	30	15	7	-124	385	50%	-63	-185
Pyeong Taek	KRPTK	Korea, Rep.	EAP	31.0	HI	4.0	North Asia	40.6				8	17	126	88%	12	22
Qasr Ahmed	LYMRA	Libya	MENA	22.6	UMI	-3.4	Mediterranean	4.1		-11	-46	-80	-12	284	91%	-10	-14
Qingdao	CNQIN	China	EAP	31.0	UMI	-3.4	Yellow Sea	80.3	148	68	-7	34	54	58	50%	33	75
Qinzhou	CNQZH	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	18	2		62	13	143	70%	9	16
Quanzhou	CNQZL	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9				16	33	92	81%	20	47
Quy Nhon	VNUIH	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	25	15	13	9	11	150	56%	7	14
Rades	TNRDS	Tunisia	MENA	22.6	LMI	-2.5	Mediterranean	4.1		1	1	-1	-5	251	86%	-4	-6
Rauma	FIRAU	Finland	ECA	4.7	HI	4.0	North Europe	7.1	11	9	5	6	4	201	93%	3	5
Ravenna	ITRAN	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	14	10	10	6	4	205	67%	2	6
Riga	LVRIX	Latvia	ECA	4.7	HI	4.0	North Europe	7.1	7	5	-7	-6	11	151	76%	7	15

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Rijeka	HRRJK	Croatia	ECA	4.7	HI	4.0	Mediterranean	4.1	43	17	-173	-203	-159	390	45%	-78	-240
Rio De Janeiro	BRRIO	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	11	41	44	82	-13	296	67%	-14	-13
Rio Grande	BRRIG	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	72	38	55	33	-78	372	62%	-54	-102
Rio Haina	DOHAI	Dominican Republic	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	16	15	11	14	8	167	89%	6	9
Rizhao	CNRZH	China	EAP	31.0	UMI	-3.4	Yellow Sea	80.3					13	137	82%	8	18
Rosario	ARROS	Argentina	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5					5	188	83%	4	7
Rotterdam	NLRTM	Netherlands	ECA	4.7	HI	4.0	North Europe	7.1	93	-10	-25	47	4	197	65%	-3	12
Sagunto	ESSAG	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1				13	8	166	80%	5	10
Saigon	VNSGN	Viet Nam	EAP	31.0	LMI	-2.5	South East Asia	15.7	14	19	17	16	20	116	81%	14	27
Saint John	CASJB	Canada	NAM	-16.7	HI	4.0	North America East Coast	9.6	17	2	-3	-2	-43	352	75%	-21	-66
Salalah	OMSLL	Oman	MENA	22.6	HI	4.0	Arabian Gulf	39.6	141	143	136	141	117	15	64%	62	172
Salerno	ITSAL	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	15	10	10	7	20	120	71%	9	30
Salvador	BRSSA	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	68	30	14	58	-5	257	80%	-21	10
Samsun	TRSSX	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	-3	-1		-11	-15	301	90%	-5	-25
San Antonio	CLSAI	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	74	-23	-16	41	-2	236	86%	4	-8
San Juan	PRSJU	Puerto Rico	LAC	-18.2	HI	4.0	Caribbean & Central America	-21.1	16	16	16	17	27	101	86%	16	38
San Pedro	CISPY	Côte d'Ivoire	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-10	-33	-41	-26	-43	351	60%	-29	-57
San Vicente	CLSVE	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	18	18	-14	-21	-14	300	73%	-8	-21
Santa Cruz De Tenerife	ESSCT	Canary Islands	ECA	4.7	HI	4.0	Atlantic Islands	9.5	45	48	43	38	-1	232	88%	2	-4
Santa Marta	COSMR	Colombia	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	15	17	15	16	15	130	82%	10	21

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Santo Tomas De Castilla	GTSTC	Guatemala	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1	7	-6	-11	8	3	208	82%	3	3
Santos	BRSSZ	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	64	15	9	-5	-166	392	45%	-81	-251
Savannah	USSAV	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	92	-305	-675	-147	-97	380	49%	-55	-138
Savona-Vado	ITSVN	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	13	39	45	93	37	87	56%	19	54
Seattle	USSEA	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	30	-49	-41	-44	-9	271	94%	-4	-14
Sepetiba	BRSPB	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	60	25	0	-5	-173	396	54%	-100	-247
Setubal	PTSET	Portugal	ECA	4.7	HI	4.0	North Europe	7.1				-33	-5	258	83%	-5	-6
Seville	ESSVQ	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1				-2	-1	233	94%	0	-1
Shanghai	CNSHG	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	110	-36	-1	31	-11	280	32%	-10	-13
Shantou	CNSTG	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	32	15	40	29	35	90	73%	22	49
Sharjah	AESHJ	United Arab Emirates	MENA	22.6	HI	4.0	Arabian Gulf	39.6		14	17	20	10	155	79%	8	12
Shekou	CNSHK	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	147	103	106	109	82	35	68%	45	118
Shibushi	JPSBS	Japan	EAP	31.0	HI	4.0	North Asia	40.6	7			6	3	211	21%	2	4
Shimizu	JPSMZ	Japan	EAP	31.0	HI	4.0	North Asia	40.6	90	74	60	76	66	42	80%	37	95
Shuaiba	KWSAA	Kuwait	MENA	22.6	HI	4.0	Arabian Gulf	39.6	2	10	18	13	11	146	89%	7	15
Shuwaikh	KWSWK	Kuwait	MENA	22.6	HI	4.0	Arabian Gulf	39.6	7	9	13	5	13	142	88%	8	17
Siam Seaport	THSRI	Thailand	EAP	31.0	UMI	-3.4	South East Asia	15.7	15	37	41	21	28	100	88%	18	37
Sines	PTSIE	Portugal	ECA	4.7	HI	4.0	North Europe	7.1	113	81	-7	34	42	79	60%	27	57
Singapore	SGSIN	Singapore	EAP	31.0	HI	4.0	South East Asia	15.7	139	76	100	115	88	29	87%	52	124
Sohar	OMSOH	Oman	MENA	22.6	HI	4.0	Arabian Gulf	39.6	94	69	56	64	61	48	75%	35	87
Sokhna	EGSOK	Egypt, Arab Rep.	MENA	22.6	LMI	-2.5	Red Sea	20.9	32	-103	-27	31	2	217	80%	-4	9

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Songkhla	THSGK	Thailand	EAP	31.0	UMI	-3.4	South East Asia	15.7				0	-1	230	91%	-1	0
Southampton	GBSOU	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	39	-67	-8	50	11	147	78%	12	10
Suape	BRSUA	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	46	-4	4	24	-94	378	69%	-55	-133
Subic Bay	PHSFS	Philippines	EAP	31.0	LMI	-2.5	South East Asia	15.7		12	6	2	4	195	75%	3	6
Syama Prasad Mookerjee Port	INCCU	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9				-4	-2	238	94%	-1	-4
Tacoma	USTIW	United States	NAM	-16.7	HI	4.0	North America West Coast	-58.1	-10	-74	-92	-198	-167	394	90%	-87	-248
Taichung	TWTXG	Taiwan, China	EAP	31.0	HI	4.0	Southeast Asian Seas	80.9	18	25	17	20	20	121	81%	14	25
Taipei	TWTPE	Taiwan, China	EAP	31.0	HI	4.0	Southeast Asian Seas	80.9	102				84	34	70%	42	126
Tallinn	EETLL	Estonia	ECA	4.7	HI	4.0	North Europe	7.1				30	13	135	84%	9	18
Tanger-Mediterranean	MAPTM	Morocco	MENA	22.6	LMI	-2.5	Mediterranean	4.1	133	128	125	139	136	5	80%	81	191
Tanjung Emas	IDSRG	Indonesia	EAP	31.0	UMI	-3.4	South East Asia	15.7	15	16	15	13	7	170	63%	6	8
Tanjung Pelepas	MYTPP	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7	140	93	118	137	118	13	81%	70	166
Tanjung Perak	IDSUB	Indonesia	EAP	31.0	UMI	-3.4	South East Asia	15.7	25	34	29	32	24	106	74%	17	32
Tanjung Priok	IDCTO	Indonesia	EAP	31.0	UMI	-3.4	South East Asia	15.7	96	25	-24	108	27	103	86%	17	36
Tauranga	NZTRG	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	57	-34	-90	-31	5	194	59%	3	7
Tawau	MYTWU	Malaysia	EAP	31.0	UMI	-3.4	South East Asia	15.7					-18	307	72%	-13	-23
Teesport	GBTEE	United Kingdom	ECA	4.7	HI	4.0	North Europe	7.1	5	-2	-5	3	-3	241	80%	0	-5
Tema	GHTEM	Ghana	SSA	-81.0	LMI	-2.5	West Africa	-55.5	44	-96	-10	-69	-166	393	44%	-108	-223
Thessaloniki	GRSKG	Greece	ECA	4.7	HI	4.0	Mediterranean	4.1	10	-50	-82	-27	-19	310	52%	-15	-24
Tianjin	CNTNJ	China	EAP	31.0	UMI	-3.4	Yellow Sea	80.3	124	75	89	109	118	14	83%	72	164

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Timaru	NZTIU	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	0	-25	-8	-7	-4	246	84%	-3	-6
Tin Can Island	NGTIN	Nigeria	SSA	-81.0	LMI	-2.5	West Africa	-55.5	-68	-57	-57	-60	-21	316	92%	-13	-30
Toamasina	MGTOA	Madagascar	SSA	-81.0	LI	-20.5	Southern Africa	-195.7	5	-10	-2	-12	6	177	72%	5	8
Tokyo	JPTYO	Japan	EAP	31.0	HI	4.0	North Asia	40.6	74	62	52	62	37	86	85%	27	48
Trieste	ITTRS	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	46	-34	-202	-152	-34	338	73%	-14	-54
Tripoli	LBKYE	Lebanon	MENA	22.6	LMI	-2.5	Mediterranean	4.1	66	39	-3	29	45	72	91%	26	64
Turbo	COTRB	Colombia	LAC	-18.2	UMI	-3.4	Caribbean & Central America	-21.1		-7		-32	-19	309	97%	-13	-26
Umm Qasr	IQUQR	Iraq	MENA	22.6	UMI	-3.4	Arabian Gulf	39.6	1	18	8	-6	-3	239	79%	-3	-2
Valencia	ESVLC	Spain	ECA	4.7	HI	4.0	Mediterranean	4.1	52	28	-53	27	-18	308	64%	-10	-27
Valparaiso	CLVAP	Chile	LAC	-18.2	HI	4.0	South America West Coast	23.1	55	38	1	17	9	160	89%	7	11
Vancouver	CAVAN	Canada	NAM	-16.7	HI	4.0	North America West Coast	-58.1	18	-394	-395	-35	-159	389	75%	-84	-234
Varna	BGVAR	Bulgaria	ECA	4.7	HI	4.0	Mediterranean	4.1	9	4	-5	0	5	192	73%	4	7
Venice	ITVCE	Italy	ECA	4.7	HI	4.0	Mediterranean	4.1	7	4	-8	-6	-11	278	75%	-8	-13
Veracruz	MXVER	Mexico	LAC	-18.2	UMI	-3.4	North America East Coast	9.6	42	36	27	26	38	84	86%	19	57
Vigo	ESVGO	Spain	ECA	4.7	HI	4.0	North Europe	7.1	16	17	14	20	6	180	75%	4	8
Vila Do Conde	BRVDC	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	1	1	5	-10	-5	256	68%	-2	-9
Visakhapatnam	INVTZ	India	SAR	30.9	LMI	-2.5	Indian Subcontinent	30.9		36	20	115	46	70	86%	25	67
Vitoria	BRVIX	Brazil	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5	5	4	8	-32	-13	294	86%	-8	-19
Vlissingen	NLVLI	Netherlands	ECA	4.7	HI	4.0	North Europe	7.1				-8	-11	279	80%	-10	-12
Walvis Bay	NAWVB	Namibia	SSA	-81.0	UMI	-3.4	West Africa	-55.5	-19	-47	-37	-86	-91	376	57%	-58	-125
Wellington	NZWLG	New Zealand	EAP	31.0	HI	4.0	Australasia & Oceania	-15.9	30	16	11	30	-5	252	88%	-3	-7
Wilhelmshaven	DEWVN	Germany	ECA	4.7	HI	4.0	North Europe	7.1	106	17	6	48	52	61	79%	33	71

Port Name	UN LOCODE	Territory	Region[a]	Average CPPI 2024	Income Group[b]	Average CPPI 2024	Maritime subregion	Average CPPI 2024	CPPI					Rank 2024	Berth hours[c]	Stat. index 2024	Admin. index 2024
									2020	2021	2022	2023	2024				
Wilmington	USILM	United States	NAM	-16.7	HI	4.0	North America East Coast	9.6	64	65	58	57	38	85	76%	25	51
Xiamen	CNXAM	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	114	70	72	103	115	17	72%	69	161
Yangon	MMRGN	Myanmar	EAP	31.0	LMI	-2.5	South East Asia	15.7		-23		1	2	218	85%	2	3
Yangshan	CNYSN	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	142	132	139	152	146	1	90%	88	205
Yantian	CNYTN	China	EAP	31.0	UMI	-3.4	Southeast Asian Seas	80.9	131	4	47	112	111	19	78%	68	155
Yarimca	TRYAR	Türkiye	ECA	4.7	UMI	-3.4	Mediterranean	4.1	98	84	62	38	45	71	88%	30	61
Yeosu	KRYOS	Korea, Rep.	EAP	31.0	HI	4.0	North Asia	40.6	111	79	95	113	103	22	75%	64	141
Yokkaichi	JPYKK	Japan	EAP	31.0	HI	4.0	North Asia	40.6	42	36	28	38	31	96	80%	18	44
Yokohama	JPYOK	Japan	EAP	31.0	HI	4.0	North Asia	40.6	170	117	106	125	115	16	78%	58	173
Zarate	ARZAE	Argentina	LAC	-18.2	UMI	-3.4	South America East Coast	-42.5				-4	3	207	94%	1	5
Zeebrugge	BEZEE	Belgium	ECA	4.7	HI	4.0	North Europe	7.1	57	1	41	94	14	132	90%	7	21
Zhoushan	CNZOS	China	EAP	31.0	UMI	-3.4	East China Sea	94.8	136	26	29	52	53	59	51%	34	73

Source: World Bank, based on data provided by S&P Global Market Intelligence.
For further details to gain deeper insights into the Container Port Performance Index, readers can explore the underlying data that informs this index. By accessing S&P Global's Port Performance dataset, readers can benchmark global container port and terminal performance. For more information about the underlying data and our Port Performance Program, see https://www.spglobal.com/market-intelligence/en/solutions/products/port-performance.

Notes:

a World Bank Region: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MENA = Middle East and North Africa, NAM = North America, SAR = South Asia Region, SSA = Sub-Saharan Africa.

b World Bank Income Groups: HI = High Income, LI = Low-Income, LMI = Lower Middle-Income, UMI = Upper Middle Income.

c The share of time in at berth in percent of total time in port used for CPPI calculation. Total time in port does not include the vessel's departure time. See also Figure 3.6 for a visual presentation.

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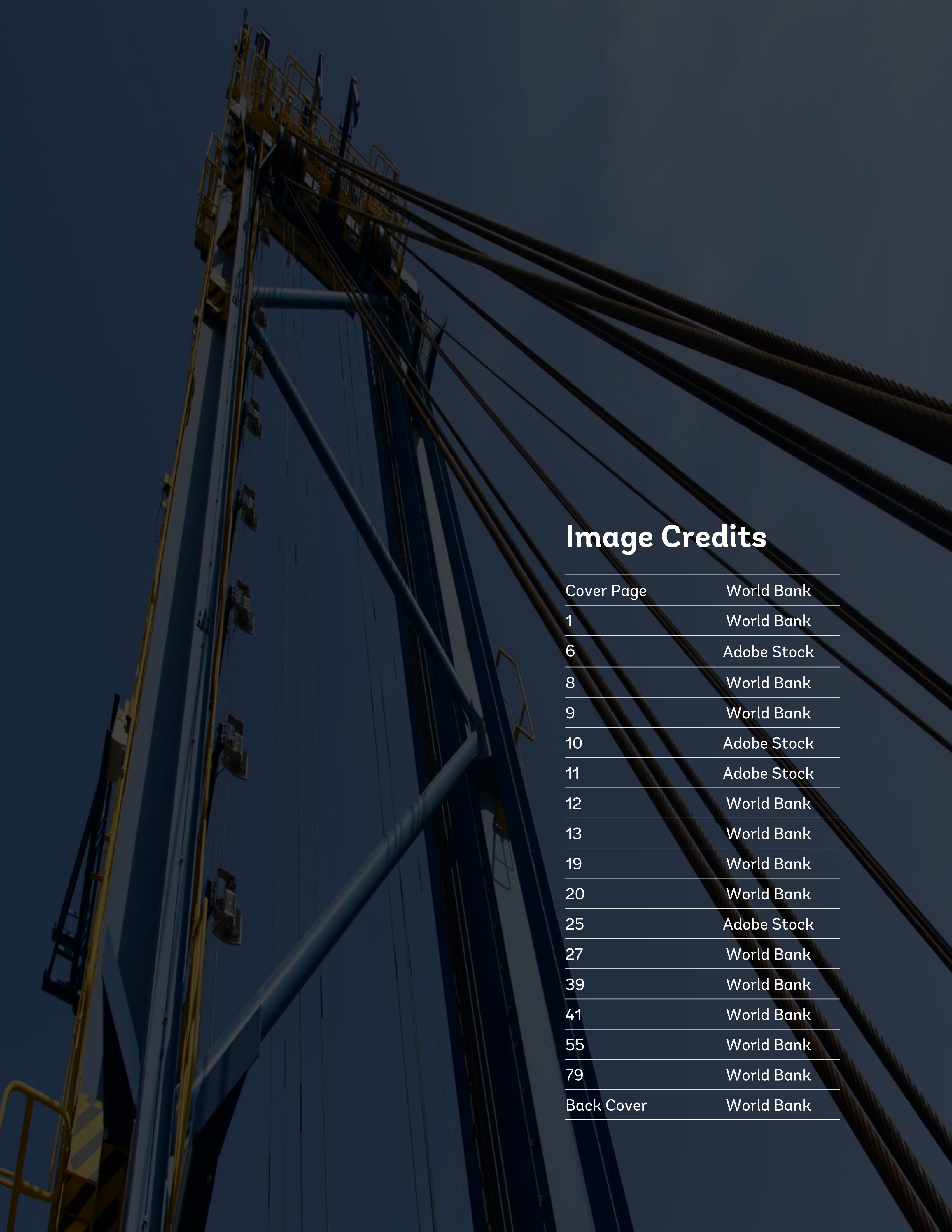

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