STEVEN A. ALTMAN AND CAROLINE R. BASTIAN

DHL TRADE ATLAS 2025

MAPPING THE SHIFTING LANDSCAPE OF GLOBAL TRADE

In partnership with

NYU|STERN

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DEAR READER,

How will trade flows evolve in the coming years? What impact will geopolitical tensions have? Which countries and regions will lead in trade growth? And which trends should decision-makers monitor to optimize supply chains?

This latest edition of the DHL Trade Atlas arrives at a pivotal time. It provides a comprehensive analysis of trade patterns for nearly 200 countries and territories around the world. The report offers a clear overview of the latest trends, challenges, and opportunities in global trade, serving as a convenient reference for public discourse.

Encouragingly, the 2025 edition underscores that global trade is projected to continue growing despite unprecedented uncertainty regarding potential new tariffs. Countries such as India, Viet Nam, Indonesia, and the Philippines are forecast to experience rapid trade growth over the next five years. Regionally, South Asia, Sub-Saharan Africa, and Southeast Asia are set to stand out. Significant trade growth opportunities exist across advanced and emerging economies, and the world remains far from a division into disconnected geopolitical blocs. This has great relevance for DHL and its customers, who are aiming to set up resilient and efficient supply chains – and counteract or mitigate the impact of new tariffs and trade barriers. Especially in high tech, consumer electronics and automotive, we see customers reconfiguring their supply chains – and strong interest for value added services such as assembly and product localization.

Predicting future trade policies and estimating the likelihood of new tariffs have never been more challenging. However, history demonstrates that global trade has maintained remarkable resilience in the face of various stress tests, including the 2008 financial crisis, the U.S.-China trade conflict, the COVID-19 pandemic, and wars in Ukraine and Gaza. While these events caused temporary trade disruptions, none resulted in a sustained decline in global trade volumes.

This resilience stems from the fact that trade has historically been a transformative force, fostering prosperity and progress. It plays a crucial role in poverty reduction, enabling producers to focus on their strengths and scale their advantages. Trade provides consumers access to a broader array of affordable products, enriching lives in ways often taken for granted. Protectionism, on the other hand, carries significant costs, and countries that isolate themselves risk falling behind.

In line with this, the EU and Mercosur countries took a significant step toward establishing a major free trade zone in December 2024. Shortly thereafter, the UK joined the CPTPP trans-Pacific free trade agreement. Most countries continue to embrace international trade, which is positive news.

With the 2025 edition of the DHL Trade Atlas, we are excited to introduce free interactive content at **dhl.com/tradeatlas**. This new feature allows you to customize analyses and explore additional trade patterns and trends effortlessly. Additionally, the website offers convenient options for downloading data and images.

Wishing you valuable insights.

Yours sincerely,

Tobias Meyer
CEO, DHL Group

DEAR READER,

While trade conflicts dominate the headlines and there is an unprecedented level of uncertainty about future trade policies, actual trade continues to advance. The volume of goods crossing national borders continues to grow, countries continue negotiating trade agreements, and companies still look far and wide for the best opportunities to source and sell around the world.

The complex landscape of global trade is always evolving, and our aim for the DHL Trade Atlas (now in its second edition) is to provide an up-to-date, accessible guide for business and policy leaders, educators and students, as well as media and the interested public. We have sought to distill here the most important data on the state and trajectory of global trade, using maps, graphs, and other types of visual content to bring the data to life. To help pinpoint promising opportunities, we rank 170 countries and territories according to the speed and the scale of their trade growth.

We are also pleased to introduce interactive content – available free at **dhl.com/tradeatlas** – as a new feature of this report. Many of the analyses presented in the following pages can be customized online, enabling readers to dive deeper into the data to examine trade patterns and trends for specific categories of goods, and in specific countries and regions. The interactive graphs also provide convenient data and image download features.

The DHL Trade Atlas complements our established DHL Global Connectedness Report series, which has been published regularly since 2011. The DHL Trade Atlas provides a deep dive on trade in goods, while the DHL Global Connectedness Report analyzes the broader phenomenon of globalization based on trade in goods and services, as well as international flows of capital, information, and people.

As this report goes to print in February 2025, substantial uncertainty remains about trade policy changes following the inauguration of Donald Trump for a second term as U.S. President. We have incorporated data and forecast updates through January 2025, taking into account Trump's election victory and post-election policy proposals. Given the fluid nature of U.S. negotiations with key trade partners as of this writing, we have not attempted to incorporate forecast updates based on policies proposed or enacted since President Trump's inauguration.

Steven A. Altman
Senior Research Scholar and Director of the
DHL Initiative on Globalization, NYU Stern

TEN KEY TAKEAWAYS

1 **Faster forecast growth, greater uncertainty:** Global trade is forecast to grow at a modestly faster pace over the next five years than during the preceding decade. However, record high uncertainty about future trade policies clouds the outlook.

2 **Trump tariff impact:** Even if all tariff increases proposed by the Trump administration are implemented and countries retaliate in turn, global trade is forecast to continue growing – but at a much slower pace.

3 **Made-in-China content finding new routes to U.S.:** The share of U.S. imports coming directly from China continues to fall, but U.S. reliance on made-in-China content has not declined substantially. U.S. imports from other countries contain more inputs from China, and U.S. direct imports from China may be underreported.

4 **Global geopolitical shifts limited:** Geopolitically driven shifts in global trade patterns remain limited and appear to have stalled in 2024. While trade between blocs of close allies declined relative to trade within these blocs in 2022 and 2023, there were no further declines over the first nine months of 2024.

5 **Recent growth leaders:** Three countries ranked among the top 30 worldwide on both the speed (growth rate) and the scale (absolute amount) of their goods trade volume growth over the past five years: the United Arab Emirates, Viet Nam, and Ireland.

6 **Forecast future growth leaders:** During the next five years, India, Viet Nam, Indonesia, and the Philippines are forecast to rank among the top 30 for both speed and scale of trade growth. India also stands out as the country with the third largest absolute amount of forecast trade growth (6% of additional global trade), behind only China (12%) and the United States (10%).

7 **Standout regions:** South Asia, Sub-Saharan Africa, and Southeast Asia are forecast to achieve much faster trade volume growth than all other regions from 2024 to 2029. However, slower-growing Europe is forecast to generate a larger share (30%) of the world's total trade growth. High income economies are forecast to generate 58% of trade growth, while low- and middle-income economies generate 42%.

8 **Long-distance trade going strong:** Contrary to predictions that recent disruptions would lead to more regionalized trade patterns, trade took place over the longest average distance on record during the first nine months of 2024 (5,000 km). The share taking place inside major geographic regions declined to a new low (51%).

9 **Trade leaders by sector:** Most trade is in manufactured goods, but price increases have boosted the value of trade in mineral fuels. From 2017 to 2022, the categories with the largest increases in the value of goods traded were mineral fuels, electrical machinery and equipment, industrial machinery, and pharmaceuticals.

10 **Large headroom for trade growth:** Even after decades of increases in the integration of the world economy via trade, only 21% of the value of all goods and services produced around the world ultimately ends up in a different country from where it was produced. There is still very large potential for future trade growth.

EXECUTIVE SUMMARY

Despite extremely high levels of trade policy uncertainty, trade continues to grow.[1] The trade landscape is always evolving, and potential policy shifts make it even more crucial for decision-makers to assess opportunities and challenges based on an accurate, up-to-date view of the trade flows that connect economies around the world.

This report covers six main topics:
1. Global trade growth (Section 1)
2. Trade growth by country and region (Section 2)
3. The shifting geography of world trade (Section 3)
4. Geopolitics and shifting trade patterns (Section 4)
5. The mix of goods traded (Section 5)
6. Trade in global economic context (Section 6)

Starting with prospects for **global trade growth**, Section 1 presents a five-year baseline forecast (aggregated from four respected forecast sources)[2] and discusses potential effects of U.S. tariff increases. Two encouraging messages emerge from this section. First, the baseline forecast (which assumes some but not all proposed U.S. tariff increases) calls for modestly faster global goods trade volume growth over the next five years than during the previous decade.

Trade growth is forecast to match or slightly outpace GDP growth. Second, President Trump's proposed tariff increases are not likely to reverse the growth of global trade. Even if all proposed U.S. tariff increases enter into force and other countries retaliate in turn, global trade is still expected to grow over the next five years – albeit at a much slower pace.

Delving into **trade growth by country and region**, Section 2 analyzes trade growth along two dimensions: speed (trade volume growth rate) and scale (absolute increase in trade volume). This spotlights attractive markets that combine fast growth with large enough scale to make a difference to a company's bottom line or to a trade partner's economic performance. Over the past five years, the United Arab Emirates, Viet Nam, and Ireland stood out as the only countries ranking among the top 30 for both speed and scale. Over the next five years, four countries are forecast to rank among the top 30 on both dimensions: India, Viet Nam, Indonesia, and the Philippines.

Zooming out to the regional level, South Asia, Sub-Saharan Africa, and Southeast Asia are forecast to achieve the fastest trade volume growth between 2024 and 2029 (with compound annual growth rates between 5% and 6%). All other regions are forecast to grow at 2 – 4% rates. The largest growth opportunities, however, are in wealthier but slower-growing regions. High income economies are forecast to generate 58% of the world's total trade growth (with Europe alone generating 30%), while all low- and middle-income economies combined generate 42%.[3]

Forecasts also predict a broadening of trade growth across a wider set of countries. Over the next five years, China and the U.S. are still predicted to generate the most absolute trade growth, but China's share of global trade growth is forecast to decline from 18% (2019–2024) to 12% (2024–2029), while the U.S. share dips from 14% to 10%. India is forecast to achieve the third largest amount of absolute trade growth (6% of the global total) over the next five years.

Turning to the **shifting geography of world trade**, Section 3 shows that trade flows continue to stretch out over longer distances. Over the first nine months of 2024, goods trade averaged the longest distance on record (5,000 km), with the lowest share taking place inside major geographic regions (51%).[4] Despite much interest in nearshoring and producing goods closer to a company's customers, there is not – at least yet – an ongoing global trend toward more regionalized trade patterns.

Shares of world trade by region and country income group have remained relatively stable in recent years – certainly compared to the early 2000s, when China's rise to become the largest trading nation caused large shifts in trade patterns. The regions with the largest shares of world trade are Europe (36%), East Asia & Pacific (33%), and North America (16%).[5] High-income countries conduct roughly two-thirds of world trade and middle-income economies one-third. Low-income economies conduct less than 0.5% of world trade.

Section 4 highlights the limited extent of recent **realignments of global trade along geopolitical lines**, even as countries at the center of current tensions do show larger shifts. Trade between blocs of close geopolitical allies relative to trade within these blocs declined modestly in 2022 and 2023, but there were no further declines over the first nine months of 2024.[6] The same pattern is also apparent in

the average geopolitical distance traversed by global goods trade (measured based on how countries vote in the UN General Assembly).[7] Global trade pattern shifts prompted by Russia's full-scale invasion of Ukraine in February 2022 may have largely played out by the end of 2023.

The most salient shift globally is the growing separation between the world's two largest economies, the U.S. and China. The share of U.S. imports coming directly from China continues to decline, from a peak of 22% in 2017 to only 13% over the first nine months of 2024. However, it would be a mistake to presume that the U.S. is meaningfully "decoupling" from China, for three reasons. First, the U.S. continues to bring in roughly as high a share of its imports from China as the rest of the world does – despite being on the opposite side of the world. Second, U.S. imports from China appear to be underreported, overstating the decline in the share coming from China.[8] Third, U.S. imports from other countries contain rising amounts of made-in-China content, resulting in no meaningful decline in the estimated share of foreign "value added" from China that is consumed in the U.S.[9]

For a balanced view of geopolitically driven shifts in trade patterns, it is essential to keep in mind that trade between geopolitically distant countries has always been far smaller than trade between friendly countries. Direct trade between the U.S. and China comprised only 2.6% of world trade over

the first nine months of 2024 (down from 3.5% in 2016), and all other trade between U.S.- and China-aligned blocs of close allies was only 10.6% of world trade in 2024 (down from 12.6% in 2016). Roughly four times more trade happens within blocs of close allies than between them (36% of world trade was within the U.S.-aligned bloc in 2024, and 4% was within the China-aligned bloc).

Meanwhile, the share of world trade involving countries that are close allies of neither superpower is rising (up from 42% in 2016 to 47% in 2024) as these countries grow their trade with both blocs. The United Arab Emirates, India, Viet Nam, Brazil, and Mexico exemplify this trend, ranking among the countries with the largest recent increases in their shares of world trade.[10] All in all, the world remains very far away from a split into separate and disconnected geopolitical blocs.

Shifting focus to the **mix of goods traded**, Section 5 shows that the composition of world trade across broad categories of goods remains relatively stable. The largest category of goods traded is machinery and electrical equipment (25% of the value of world trade) followed by mineral products (18%).[11] The vast majority of trade involves various types of manufactured goods. Animal and vegetable products, along with prepared foods, account for only 9% of world trade. Most recent shifts in the mix of goods traded have been driven by price changes for heavily traded commodities, especially mineral fuels. While mineral fuels comprised a rising share of world trade in value terms in 2021 and 2022, the quantity of these goods traded declined slightly in both years.

To conclude with a broader perspective on **trade in global economic context**, Section 6 examines the share of the value created in the world economy that serves foreign markets. Globally, 21% of all value added is traded across one or more national borders and ultimately ends up in a different country from where it was produced.[12] There is, however, wide variation across industries. Goods are traded more intensively than services, and value from the service sector is often exported indirectly via goods exports. Trade intensity also varies widely across countries. Smaller countries trade much more intensively than larger countries do.

By considering trade within a wider economic context, we see that most business remains domestic (not international), indicating large headroom for future trade growth. This also helps to calibrate public policy debates. Major challenges such as income inequality and labor market insecurity are often blamed on trade, but in countries where domestic activity is far larger than international trade, only domestic policy can truly tackle major economy-wide problems. Trade policy can, at best, play a supporting role.

A common thread across all of the sections of this report is the resilience of trade in a turbulent global business environment. This is apparent in the growth trends and forecasts across countries and regions, in the data on trade over long geographic distances and between geopolitical blocs, and in the patterns of trade by product category and the analysis highlighting the headroom for future trade growth. While history shows that trade integration can indeed go into reverse, the results highlighted in this report suggest that decision-makers should approach simple narratives about decoupling, derisking, and deglobalization with caution. Instead, they should prepare to seize opportunities and manage risks in an increasingly complex global trade environment.

Additional features of this report provide reference material for further examination of the global trade landscape. The country profiles at the back of this volume provide one-page summaries of each country's trade growth trends and prospects, along with maps showing each country's export destinations and import sources, and charts depicting the composition of each country's exports and imports by product category. There are also interactive versions of many charts available online at **dhl.com/tradeatlas**. Using the interactive charts, analyses can be customized to show results for specific countries/regions and categories of goods.

1. GLOBAL TRADE GROWTH

What are the prospects for global trade growth amid today's geopolitical conflicts and record high trade policy uncertainty? This section assesses the current outlook for trade growth, considers the effects of potential tariff increases, and places the current outlook into historical context. We also include short briefings on trade's contribution to rising prosperity and on the growth of cross-border e-commerce.

BASELINE TRADE GROWTH OUTLOOK

The current outlook for global trade growth is a reflection of two opposing forces: generally favorable economic fundamentals on the one hand, and the prospect of substantial new trade barriers on the other. We start with a baseline forecast of expected trade growth over the medium term, followed by downside scenarios on how much global trade growth could potentially be reduced by a major escalation of trade barriers.

Figure 1.1 presents a baseline forecast for the growth of global merchandise (goods) trade based on the most recent available forecast updates as of mid-January 2025 from four sources: the Economist Intelligence Unit, the International Monetary Fund, Oxford Economics, and S&P Global Market Intelligence.[1] Despite the threat of substantial tariff increases by the incoming Trump Administration in the U.S. (which prompted some post-election forecast downgrades), this baseline forecast calls for global trade volumes to grow from 2024 to 2029 at a compound annual rate of 3.1%. That would represent trade growth roughly in line with GDP growth and modestly faster trade growth than during both the previous 5-year period and the last full decade.[2]

FIGURE 1.1: WORLD GOODS TRADE VOLUME GROWTH RATE, 2012 – 2029 (COMPOSITE BASELINE FORECAST)

Interactive Chart Online:
dhl.com/tafig1-1

2014 – 19:
2.7%

2019 – 24:
2.0%

2024 – 29
Forecast:
3.1%
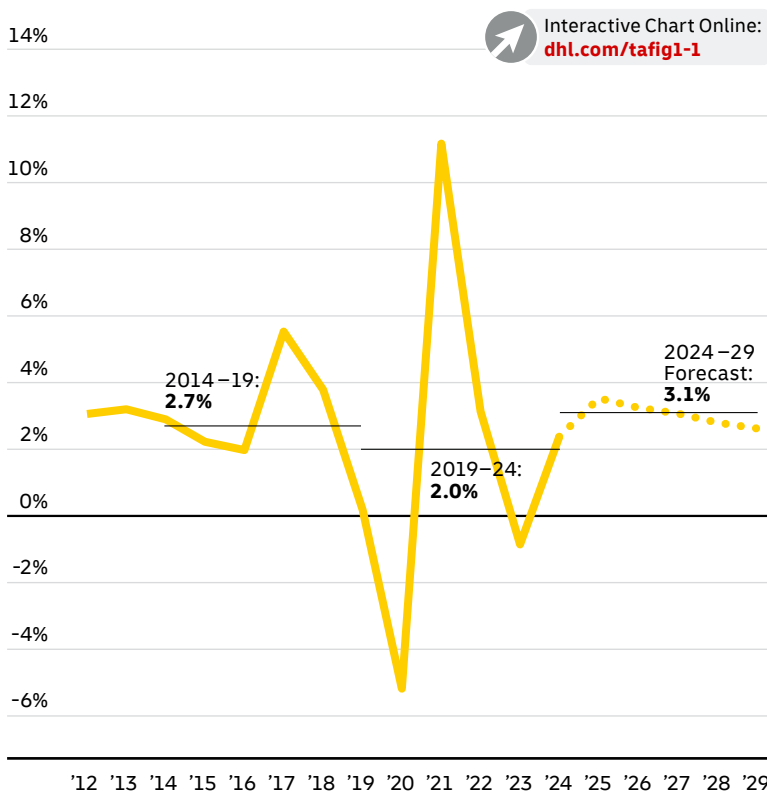
**Trade Growth Measures:
Volume vs. Value**

Figure 1.1 and most other parts of this report show trade growth in *volume* terms, which simply means that we hold price levels constant to show actual changes in the amount of goods traded (trade volume does not refer to the size or weight of the goods traded). Occasionally, we will also look at trade growth in *value* terms, i.e., in current prices, but we prefer to use trade volume statistics because fluctuations in the prices of traded goods (especially commodities) can often cause large swings in trade value even when no significant changes have occurred in the amount of goods traded.

An aggregation of projections by four respected forecasters calls for goods trade growth to accelerate modestly in 2025 and continue at a faster pace through 2029 than during the previous decade. Data Sources: Historical data through 2024 based on IMF World Economic Outlook, October 2024. Forecast period (2025 – 2029) based on Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence.
Note: Growth over selected periods shown as compound annual growth rate (CAGR).

The recent trends and baseline forecast shown in Figure 1.1 highlight the resilience of global trade through successive shocks. While the U.S.–China trade war, the Covid-19 pandemic, and the wars in Ukraine and Gaza all caused substantial disruptions to international trade, none of these led to a sustained decline in global trade volumes. A key factor underpinning this resilience was the limited extent of recent increases in trade barriers. While new trade policy restrictions did outpace liberalizing policy changes globally over the past decade, trade sanctions spiked after Russia's full-scale invasion of Ukraine, and new restrictions on U.S.–China trade continue to proliferate, most markets around the world maintain historically high levels of openness.[3] In 2022, trade-weighted applied tariffs averaged only 2% (down from 6.9% in 1996) and 60% of world trade was conducted tariff-free.[4]

By 2024, the post-pandemic surge of inflation was receding, and macroeconomic fundamentals were improving in most major economies (although the property sector continued to weigh on growth in China and conditions remained weak in much of Europe). These improvements in macroeconomic conditions contributed to a return to positive trade growth in 2024 after a modest decline in global trade volumes in 2023.[5] In 2025, forecasts call for a small additional acceleration in global trade growth. The medium-term outlook, while more uncertain, calls for trade growth to continue at a similar rate through the end of our forecast period in 2029.

While the U.S.–China trade war, the Covid-19 pandemic, and the wars in Ukraine and Gaza all caused substantial disruptions to international trade, none of these led to a sustained decline in global trade volumes.

TARIFF THREATS AND DOWNSIDE SCENARIOS

The current trade growth outlook is clouded by an unusually high level of uncertainty. On November 5, 2024, Donald Trump was elected as U.S. President on a platform calling for large tariff increases. Since his victory, he has doubled down, proposing even more tariff increases and threatening additional countries. If these new tariffs on U.S. imports are enacted, many countries promise to retaliate by imposing steep tariffs on U.S. exports. However, the details, timing, and extent of these trade policy changes remains unclear and is subject to negotiations that are likely to take place between the U.S. and its trade partners. As a result, uncertainty about future trade policies soared to its highest level on record in late 2024 (see **Figure 1.2**).[6]

If all tariff increases proposed by President Trump during the election campaign are implemented and countries retaliate in turn, models developed by several sources predict substantial reductions to trade volume growth relative to baseline forecasts. A model constructed by Oxford Economics, for example, assesses three downside scenarios (to which we return on the next page).[7] In the most extreme scenario, the U.S. implements a 45% additional tariff on goods from China and 15% on the rest of the world, and other countries retaliate in kind (although China only adds a 30% tariff on U.S. goods). The result is a reduction in global trade volumes of 9 – 10% relative to the Oxford Economics baseline forecast by 2031.[8]

Other sources provide similar estimates of the effects of full implementation of tariffs proposed during the U.S. election campaign. A study by Bloomberg Economics warns of a 7.5% reduction in global trade volumes, with U.S. imports dropping by 50%, while trade among all countries except the U.S. increases by 5%.[9] Likewise, a study from the Kiel Institute for the World Economy predicts that full implementation of proposed tariffs could eventually reduce world trade by 7%.[10]

FIGURE 1.2: TRADE POLICY UNCERTAINTY, 2000 – 2024
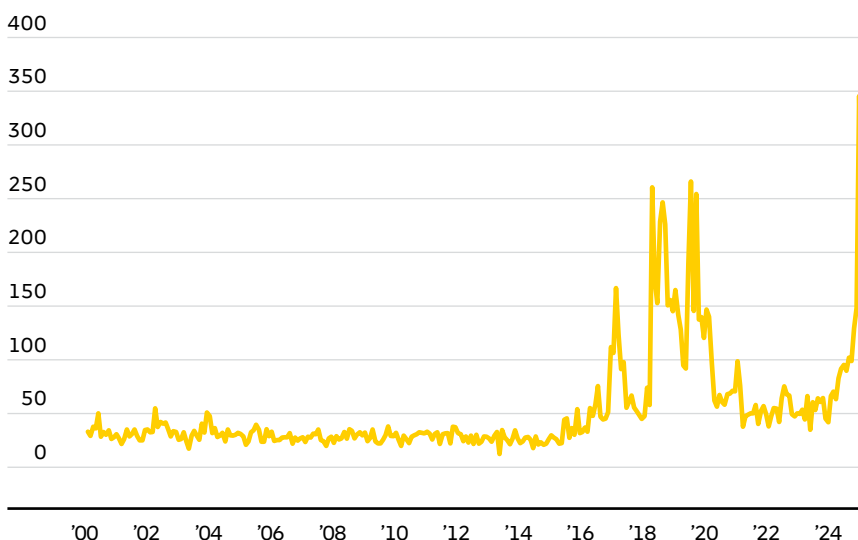
Trade Policy Uncertainty is measured based on the share of news articles discussing trade policy uncertainty in the Boston Globe, Chicago Tribune, Guardian, Los Angeles Times, New York Times, Wall Street Journal, and Washington Post. A value of 100 means that one percent of news articles discuss trade policy uncertainty.

Uncertainty about future trade policies spiked to an unprecedented level following the re-election of U.S. President Donald Trump in November 2024.
Source: Dario Caldara, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo (2020), "The Economic Effects of Trade Policy Uncertainty," *Journal of Monetary Economics*, 109, pp.38-59. Monthly data through December 2024 downloaded from https://www.matteoiacoviello.com/tpu.htm on January 7, 2025.

FIGURE 1.3: WORLD TRADE VOLUME GROWTH RATE (GOODS AND SERVICES) UNDER ALTERNATIVE TARIFF SCENARIOS (OXFORD ECONOMICS NOVEMBER 2024 FORECAST)
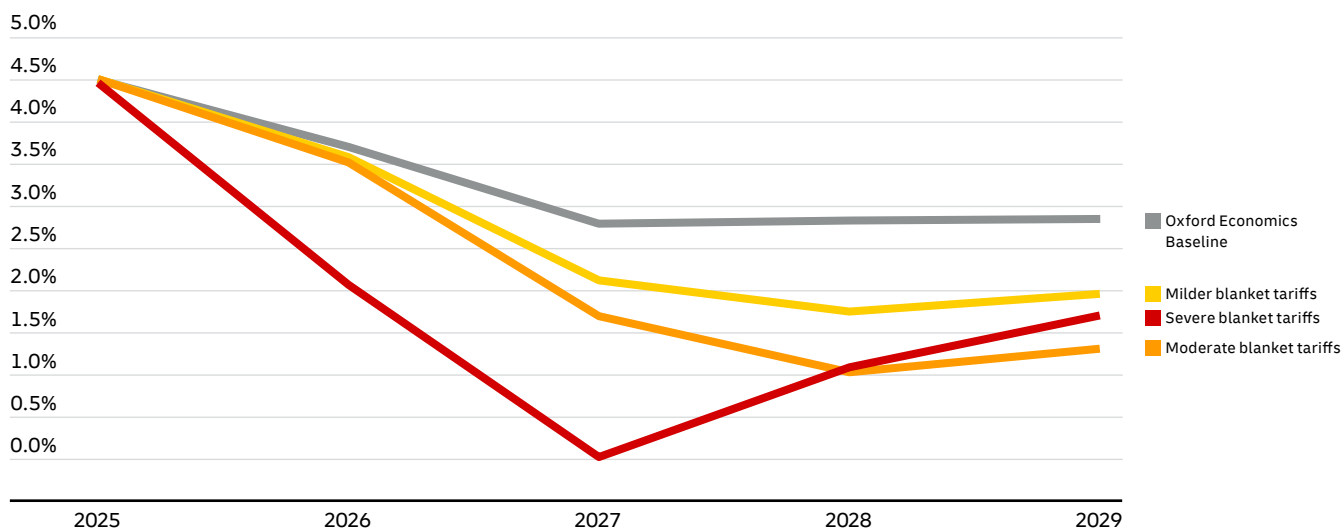
Estimates from Oxford Economics highlight the potential for the Trump administration's proposed tariff increases to lead to substantial reductions in global trade volume growth relative to baseline predictions. Nonetheless, trade volumes are still forecast to continue growing even under the most extreme tariff increase scenarios.

Source: Oxford Economics, "Research Briefing: The global implications of more extreme US tariffs," November 28, 2024.

Scenarios that exclude countries with a free trade agreement (FTA) with the U.S. (especially Mexico and Canada) from tariff increases imply smaller trade volume reductions. One study assuming 10% tariffs on all non-FTA partners and 60% on China predicts a 4% long-run reduction in global trade volumes.[11] Another study assuming the same tariffs and exempting only Canada and Mexico predicts a 3.4% reduction.[12] Tariffs on Canada and Mexico have especially large effects because 30% of U.S. imports came from those two countries alone in 2023.[13]

It is essential to keep in mind that these scenarios focus on reductions in trade volumes relative to a *growing* baseline. **Figure 1.3** shows that even under the most extreme tariff increase scenario analyzed by Oxford Economics, trade volumes are still forecast to grow over the next five years – but at a much slower pace than in the baseline scenario (which already includes some of President Trump's proposed tariffs). Larger U.S. tariff increases could substantially reduce trade growth and could cause meaningful declines in some countries' trade volumes, but they are not likely to result in a sustained reduction in global trade volumes.[14]

We emphasize here the more extreme downside scenarios not to imply that they are the most likely, but rather to provide a rough sense of how the most severe proposed tariff increases could reduce trade growth. As shown in Figure 1.3, more limited tariff increase scenarios would, of course, be expected to lead to smaller reductions in global trade growth.

In our view, the more extreme downside scenarios are much less likely than the baseline, for several reasons. First, Trump's original tariff proposals presumably reflect opening bids in what could become a series of negotiations that ultimately lead to smaller tariff increases. Second, full implementation would probably lead to a substantial increase in price levels in the U.S., and the recent election campaign highlighted the great importance that U.S. voters place on curbing inflation. Third, even when high headline-level tariffs are imposed, there are often exemptions, reducing effective tariff protection to below the headline levels.[15] For additional discussion, refer to **Six Reasons Why Globalization Can Survive Trump 2.0** on p. 18.

While one of the downside scenarios could become reality, it is also important to keep in mind the potential for an unexpected upswing to accelerate global trade growth. Technological advances are contributing to the rapid expansion of services trade, and they could potentially also boost trade in physical goods. Cross-border e-commerce exemplifies the linkages connecting these domains (see **The Rise of Cross-Border E-Commerce** on p. 17). Research also suggests the potential for artificial intelligence to contribute to trade growth.[16] Moreover, policy shifts could develop in ways that support international trade. The signing of the long-delayed EU-Mercosur trade agreement in December 2024 highlights how trade liberalization efforts continue to advance, and some might even move forward more quickly as countries seek to secure international market access amid current tensions.[17]

THE RISE OF CROSS-BORDER E-COMMERCE

Cross-border e-commerce sales have grown from roughly 1.9 trillion U.S. dollars in 2016 to 2.9 trillion in 2022, according to a 2024 analysis from the UN Conference on Trade and Development (UNCTAD) shown in **Figure 1.4**.[18] Data limitations place those values within a wide range of estimates, but the upward trend is clear.

The rapid growth of cross-border e-commerce is expected to continue, with forecasts predicting annual growth rates of 15 – 25% over the next 5 – 10 years.[19] Widely cited drivers of this growth include increases in shopping on mobile platforms and via social media applications, along with improvements in online payment systems. The growth of e-commerce imports into the U.S., however, could be curbed by new limits on customs duty exemptions for small shipments (multiple changes to U.S. "de minimis" policy are currently under consideration).[20]

Within the European Union, more granular data affirms the growth of cross-border e-commerce, while suggesting that recent growth has been driven by purchases from different EU member states rather than from the rest of the world. The share of individuals in the EU who reported online purchases from a seller in a different EU member state during the past three months rose from 16.6% in 2020 to 19.1% in 2023, while the share reporting purchases from sellers located outside of the EU remained basically unchanged (11.7% in 2020 and 11.6% in 2023).[21]

Globally, however, most e-commerce sales are still domestic. The UNCTAD analysis cited earlier indicates that cross-border e-commerce accounted for roughly 11% of total e-commerce sales in 2022 (implying that 89% of e-commerce is still domestic) and suggests that this ratio has not changed appreciably since 2016.[22]

According to DHL's 2024 "Online Shopper Trends" survey, the top consumer drivers for making cross-border e-commerce purchases are lower prices and a wider range of products. The most common barriers are the fear of fraud and longer delivery times. This survey finds that clothing and footwear is the most popular cross-border e-commerce product category. China, the United States, Germany, and the United Kingdom stand out as the top countries from which buyers report making purchases online.[23]

FIGURE 1.4 UNCTAD ESTIMATES OF GROWTH OF CROSS-BORDER E-COMMERCE SALES

Trillions of U.S. Dollars (Current Prices)
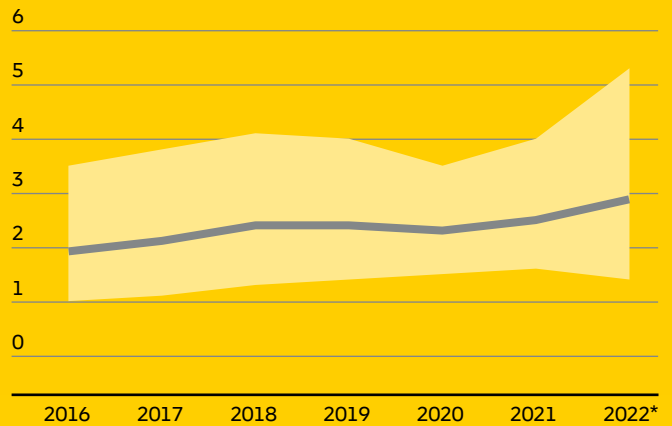
UNCTAD estimates indicate that cross-border e-commerce sales have grown from roughly 1.9 trillion U.S. dollars in 2016 to 2.9 trillion in 2022, although the precision of these estimates is affected by major data limitations.
Data Source: UNCTAD Digital Economy Report 2024
Notes: 2022 (*) data are estimates. Shaded area indicates range of estimates.

Continued cross-border e-commerce growth holds the promise to deliver substantial economic and societal benefits. The rise of cross-border e-commerce has been shown to accelerate trade growth and to broaden access to international markets, making trade more inclusive. Studies of both countries and companies show positive effects of e-commerce adoption on trade growth.[24] Moreover, cross-border e-commerce lowers barriers to trade for smaller companies, and there is extensive evidence of higher participation by women in trade via digital platforms.[25] The fact that e-commerce is currently estimated at only 13% of global trade in goods and services suggest substantial headroom for future growth to expand these benefits.[26]

SIX REASONS WHY GLOBALIZATION CAN SURVIVE TRUMP 2.0[27]

The re-election of President Donald Trump in the United States has reignited fears – and hopes in some quarters – about globalization ending and going into reverse. While prudent decision-makers must take the threat of deglobalization seriously, it would be a mistake to presume that a major reversal of globalization is the most likely scenario. Consider six reasons:

1. **International flows have proven highly resilient** through wave after wave of recent turbulence in the international environment. The global financial crisis, the UK's exit from the EU, the first election of Donald Trump, the U.S. – China trade war, the Covid-19 pandemic, and wars in Ukraine and Gaza have all prompted some commentators to declare the end of globalization. Yet despite all of these developments, there has been no general pattern of countries or companies retreating from international engagement and conducting more of their activity domestically.

    The DHL Global Connectedness Index (regularly updated at **dhl.com/globalconnectedness**) tracks international relative to domestic activity across the four broad domains of trade, capital, information, and people. It shows that the world reached a new high level of international relative to domestic activity in 2022 and remained near that high in 2024. None of the four domains shows evidence of an ongoing retreat from international to domestic activity.

2. **The U.S. is not leading a global movement away from trade.** President Trump promised during his campaign to raise tariffs – to varying degrees – on all U.S. trade partners. If those promises become policy, they imply a push by the U.S. to become more self-sufficient and to participate less in international trade. But during Trump's first term, U.S. trade continued to grow every year except 2020, when there was a decline due to the Covid-19 crisis. Moreover, other countries are not lining up to follow the U.S. on a march away from international trade. On the contrary, most other countries continue to pursue trade growth as a key economic development opportunity.

    The risk of a U.S. pullback from trade might actually push other countries to redouble efforts to secure their access to other international markets. But even if that does not occur, very few countries are likely to embrace general moves away from trade. Most countries around the world are relatively small. While the pursuit of self-sufficiency would come at a steep cost even for the U.S., smaller countries lack the resources and capacity to preserve anything close to their current living standards without trade.

3. **The U.S. does not trade enough to reverse globalization on its own.** The U.S. share of global goods imports currently stands at 13% (and the U.S. share of global goods exports is 9%). That means that U.S. trade policies can have large effects on the rest of the world – but probably not large enough to take down the global trading system.

    If the U.S. substantially reduces its imports, all trade involving the U.S. would not simply disappear.[28] Some – but not all – would be replaced by more trade among other countries. Furthermore, even without such redirection of trade flows, many countries could quickly replace lost sales to the U.S. with sales to other markets. A recent analysis by Simon Evenett of the IMD Business School shows that, even in the impossibly extreme scenario of the U.S. ceasing all imports, as long as countries maintain the current growth rates of their exports to other markets, 69 countries would fully make up their lost sales to the U.S. within one year, and 114 countries would do so within five years.[29]

    This fits with the forecasts discussed on pages 15–16, showing that tariff increases proposed by President Trump could lead to much slower global trade growth,

but they are not likely to cause a sustained decline in global trade volumes. These tariff increases could reduce global trade intensity (the share of economic output that is traded across national borders), but most of the large increases in global trade intensity over recent decades would remain intact.

4. **Globalization is about much more than only trade.** President Trump's opposition to globalization is focused on two areas: trade (especially imports) and immigration. But globalization is about much more than just trade and migration. It also encompasses international investment both by companies and by financial investors, international travel and education, scientific and cultural exchanges, and many other aspects.

For international business, it is especially notable how countries continue to court foreign companies, encouraging them to set up production in their territories, creating jobs and bringing in new technologies. Despite his anti-globalization stances in other areas, President Trump has even promised expedited approvals to attract international business investment in the U.S.[30] That is not surprising, because foreign companies building factories in a country is one of the aspects of globalization with the highest level of public support.[31]

5. **The U.S. is likely to negotiate away or delay its most costly threats.** Post-inauguration bargaining between President Trump and leaders from Mexico and Canada already demonstrates that President Trump is using tariffs to create bargaining opportunities with U.S. trade partners. Many of these negotiations will likely result in agreements that stall or shrink at least some proposed U.S. tariff increases – although they could still cause substantial disruptions. Uncertainty about future trade policies discourages trade, and opposition to U.S. tariff threats has already prompted some boycotts of U.S. exports.[32]

A major reason why many U.S. tariff threats could be bargained down or delayed is what could be called the Trump campaign's "Impossible Three I's". Trump campaigned on reducing imports, immigration, and inflation. But drastic cuts to imports and immigration would be expected to cause a spike in U.S. inflation, and U.S. voters have showed how much they detest high rates of inflation. At minimum, this suggests that President Trump will shape the timing and other details of his trade agenda to minimize the effects of tariffs on U.S. consumer prices.

6. **The world remains far away from "unfettered" globalization.** Much of the panic we often see about globalization going into reverse reflects a common misunderstanding of how globalized the world is today.[33] People tend to believe the world is much more globalized than it really is, leading them to see each new barrier to international exchange as a fundamental break from the norm of a world where most barriers to international trade and investment were removed long ago.

The truth is that globalization never reached such an advanced stage. Most business activity continues to take place within domestic economies, rather than between them. In 2023, only 21% of all goods and services produced around the world ended up in foreign markets, just shy of the all-time high of 22%.[34] And international flows are still constrained powerfully by distance and cross-country differences. International activity is three times more regionalized than it would be in a world where borders and distance did not matter. Moreover, international business already happens mainly between friendly countries. For example, there's already four times more trade within blocs of close allies than between rival geopolitical blocs.[35]

When one recognizes that globalization has always been constrained by policy, geography, culture, and myriad other factors, it is easier to see how new constraints on international flows are not likely to destroy globalization – they are far more likely to reshape it. Most new constraints cause incremental shifts in the growth rates of international flows and in patterns of which countries interact with each other, without causing a fundamental collapse of globalization.

History shows that globalization can indeed go into reverse, as happened during the last century between the two world wars. We also know that peace and security support globalization, while violent conflicts disrupt all kinds of mutually beneficial exchange. Nonetheless, a new round of deglobalization is far from assured. The U.S. could retreat from globalization – at a steep cost. But that would only spell the end of globalization if other countries follow the U.S. out the exit, and the costs to them from doing so would be far greater.

TRADE GROWTH IN HISTORICAL PERSPECTIVE

It is useful to consider recent trade growth – and current trade growth forecasts – in the context of the historical expansion of global trade. The baseline trade growth forecast presented in Figure 1.1 calls for merchandise trade volumes to grow at a compound annual rate of 3.1% over the next five years (through 2029). While this would represent an acceleration relative to the previous five years (a period when trade growth was affected by the U.S.–China trade war and the Covid-19 pandemic), it would mean slower growth than during the 1980s through the 2000s, periods when trade growth substantially outpaced GDP growth (see **Figure 1.5**).

It is important to recognize, however, that trade growth far in excess of GDP growth during prior decades was an unusual phenomenon. Many factors converged to produce this period of "hyperglobalization," including the fall of the Berlin Wall,

the growth and integration of China into the world economy, large reductions in transportation and telecommunications costs, and successive waves of trade policy liberalization and reductions in trade policy uncertainty.[36] Such a confluence of trade growth accelerators – particularly for trade in physical goods – is unlikely to be repeated. Trade growth roughly in line with or slightly faster than GDP growth represents a more normal pattern of economic activity, with trade continuing to deliver substantial economic benefits (see **How Globalization Contributes to Rising Prosperity** on p. 22).

If trade growth does indeed continue roughly in line with GDP growth, the importance of trade to the world economy (trade intensity) will remain at or close to a record high level. **Figure 1.6** tracks the simple ratio of the value of all reported goods exports to world GDP over nearly 200 years – the best

FIGURE 1.5: WORLD GOODS TRADE VOLUME GROWTH VS. REAL GDP GROWTH

Legend: Goods Trade Volume Growth | Real GDP Growth
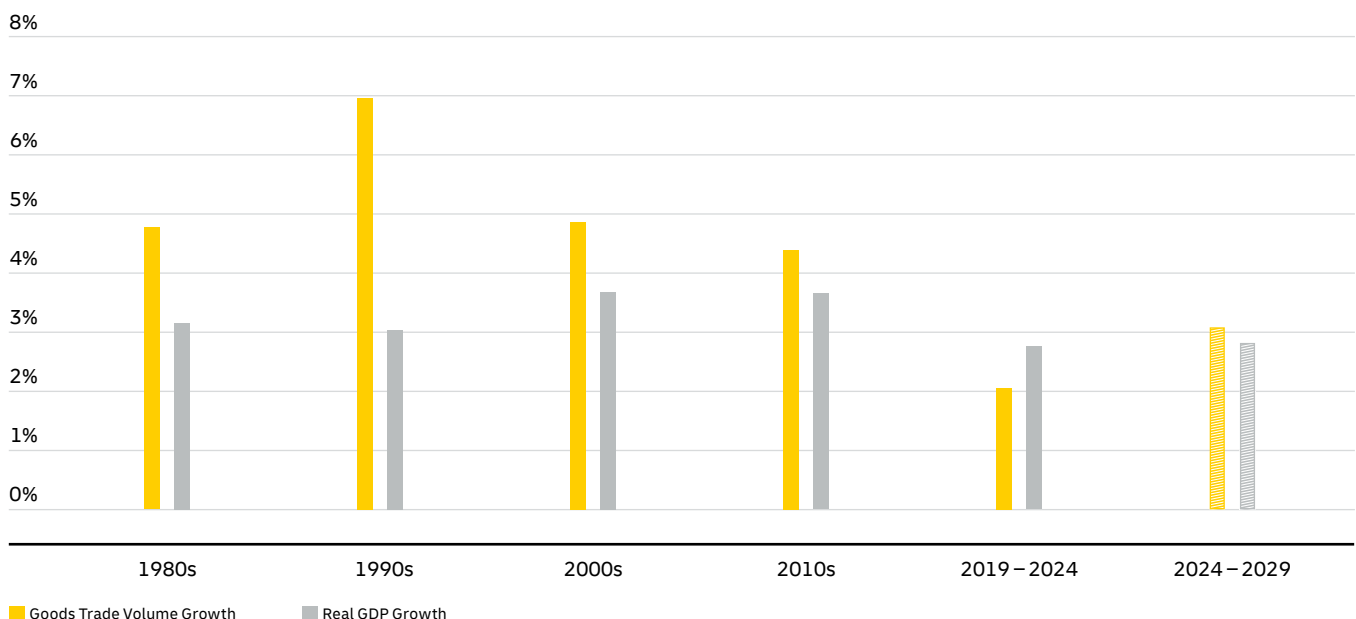
Current forecasts call for goods trade volumes to grow at roughly the same pace as global economic output between 2024 and 2029.

Data Sources: Historical periods through 2023 based on IMF World Economic Outlook, October 2024. Forecast period (2024 – 2029) based on Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence. Note: Compounded annual growth rates.

FIGURE 1.6: WORLD GOODS EXPORTS (% OF GDP), 1827 – 2023
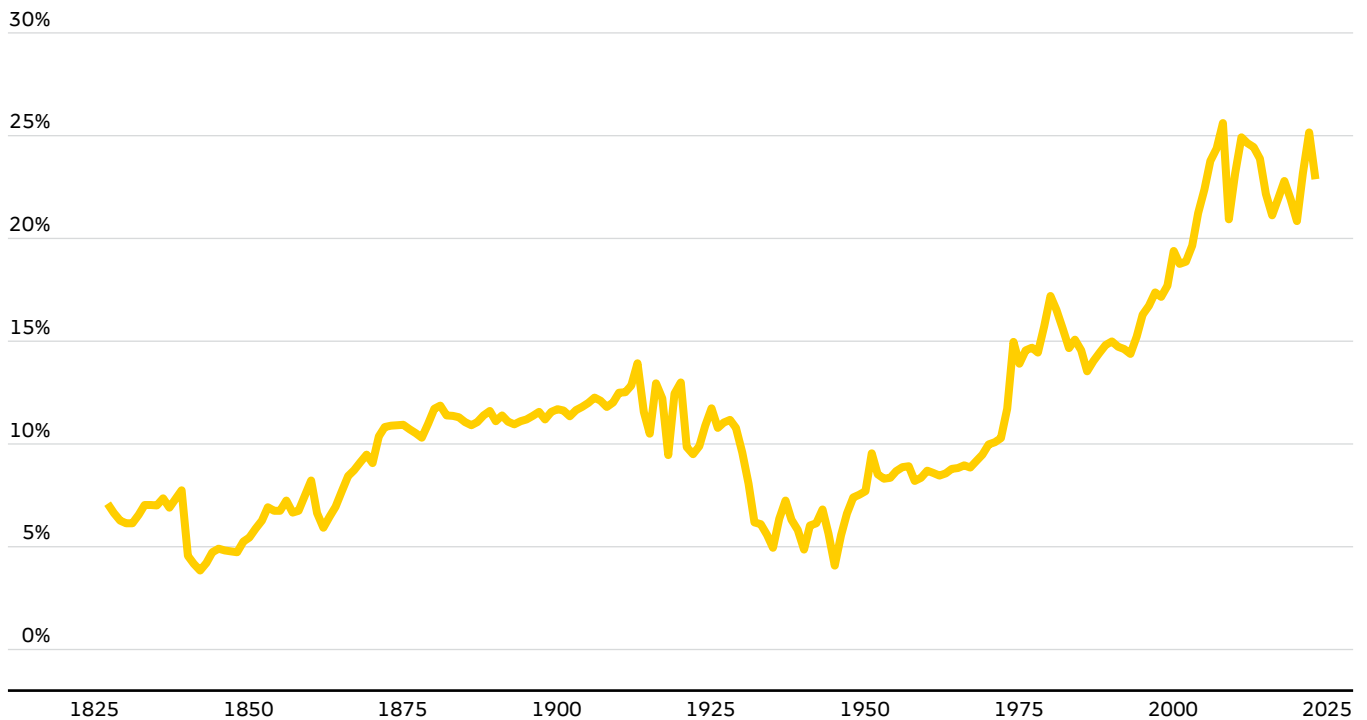
The value of global goods exports relative to world GDP soared during the second half of the 20th century and during the first decade of the 21st century. Since peaking in 2008, this ratio has fluctuated close to its all-time high

Data Sources: Fouquin, M. and Hugot, J. (2016) Two Centuries of Bilateral Trade and Gravity Data: 1827–2014. CEPII Working Paper, N°2016-14 and Our World in Data (1827–1959), World Bank World Development Indicators (1960 – 2023).

available long-run measure of goods trade intensity. It shows a dramatic rising trend from the end of World War II through the 2008 Global Financial Crisis, followed by a more recent period during which goods trade intensity has fluctuated modestly below the 2008 peak level. (Refer to **Section 6** for more sophisticated recent trade intensity measures, with breakdowns by industry and country.)

Figure 1.6 also reminds us that global trade intensity did fall sharply in the early 20th century and remained depressed between the two world wars. While current data and forecasts do not imply a repetition of this deglobalization period, history teaches us that threats to globalization must be taken seriously.

The magnitude of the increases in trade intensity shown on Figure 1.6 are also important, as they highlight how trade connects economies far more today than it did even a few decades ago. The goods exports to GDP ratio in 2023 was 40% higher than it was when the World Trade Organization (WTO) was established in 1995 and more than three times higher than in 1948, when the WTO's predecessor, the General Agreement on Tariffs and Trade (GATT), entered into force. As such – even under the most severe downside scenarios discussed in the previous subsection – most of the

long-run increases in globalization via international trade are expected to endure.

In summary, trade growth continues to show remarkable resilience in the face of geopolitical tensions and trade policy uncertainty. Current baseline forecasts – even after some downgrades in anticipation of tariff increases following the re-election of President Donald Trump in the United States – still call for trade to continue growing at roughly the same pace as global GDP over the next five years. The baseline forecasts, however, do not assume that all the tariff increases proposed by President Trump during his election campaign will ultimately be enacted. If all proposed tariff increases are implemented and other countries retaliate in turn, trade is still expected to continue growing – but at a much slower pace. Trade has become much more important to the world economy over the last seven decades, and current forecasts imply no substantial reversal of this long-run increase in globalization.

HOW GLOBALIZATION CONTRIBUTES TO RISING PROSPERITY[37]

The wealthiest countries are all among the most active in international exchange, while the poorest are all among the least connected to the rest of the world. But does trade actually contribute to greater prosperity? We cannot simply assume so, because the relationship between trade and prosperity is not a one-way street. There are also reasons to believe that prosperity boosts trade. Richer countries, for example, might trade more because they can afford larger investments in ports and other types of infrastructure.

Because trade and prosperity can be mutually reinforcing, it is challenging to demonstrate that one actually causes the other. A major advance in the development of causal evidence on trade's economic benefits came twenty-five years ago, when economists Jeffrey Frankel and David Romer applied established statistical tools in a novel way to demonstrate that trade does raise countries' per capita incomes.[38] A more recent study by economist James Feyrer built on this research to show that a 10% increase in trade raises a country's per capita income by more than 5%.[39]

How does globalization boost prosperity both for individual countries and for the world as a whole? John Stuart Mill's 1848 discussion of the direct and indirect economic benefits of trade, as well as its other more subjective benefits, provides a convenient framework for identifying the ways that trade contributes to prosperity.[40] There are several direct economic benefits of trade:

- *Specialization and scale economies:* Trade boosts economic efficiency by enabling producers to specialize in what they can do especially well and to do it on a larger scale.[41]

- *Competition boosting quality, lowering prices:* Trade increases business competition, pressing sellers to raise their quality or lower their prices.[42]

- *Greater variety of products and services:* Many products and services would simply be unavailable without international trade.[43]

The indirect economic benefits of trade – and globalization more generally – lie in its power to boost productivity over time. History has consistently shown that countries that cut themselves off from the world fall behind. International exchange boosts productivity growth in various ways:

- *Spreading ideas and technologies:* Trade, capital, information, and people flows can all propel ideas and technologies across national borders, accelerating productivity growth. As an example, manufacturers can boost their efficiency by importing state-of-the-art capital equipment.[44]

- *Fostering ongoing innovation:* All types of international exchange have the potential to accelerate innovation. Mechanisms for this range from trade and investment expanding potential returns to R&D expenditure to international scientific and educational exchanges directly boosting innovation.[45]

- *Competition pushing progress:* International competition can induce domestic firms to accelerate improvements in productivity. This can happen both within firms and through more productive firms gaining market share from less productive ones.

Of course, there is more to globalization than just its potential to raise incomes. However, globalization's other benefits are more subjective.[46] For many, life is enriched by connections to people, cultures, and ideas from around the world. Institutionally, there is evidence that more economic openness reduces corruption.[47] And scholars of international relations continue to debate the possibility that stronger business and personal linkages between countries might reduce the probability of armed conflict (a debate that has gained prominence again since Russia's invasion of Ukraine).[48]

2. TRADE GROWTH BY COUNTRY AND REGION

Which countries are leading the world in trade growth today? And which could emerge as new trade growth leaders moving forward? In this section, we rank countries based on the speed and the scale of their trade growth to identify the fastest growing traders and the countries that are making the largest contributions to global trade growth. We also summarize the results at the level of major world regions and provide a map depicting the trade growth outlook around the world from 2024 to 2029.

TRADE GROWTH SPEED AND SCALE

In this section, we look for the most attractive trade growth opportunities around the world by examining trade growth along two dimensions: speed and scale. The speed dimension simply captures how fast a country's trade volume is expanding (its annualized trade volume growth rate), while the scale dimension tracks the absolute change in the amount of goods traded by a country (the difference between its starting and ending trade volumes).[1]

This distinctive view of trade growth leaders helps to identify countries that are achieving rapid trade growth *and* have the scale to make a large contribution to global results, both for a trade partner's economic performance and for a company's bottom line. Countries that stand out on both dimensions can be especially attractive because of the size of the opportunity available in large markets and the greater potential for successful entry in fast-growing markets. Market shares tend to be more dynamic in fast-growing markets, where new entrants must capture a smaller proportion of their sales from entrenched competitors.[2]

To illustrate this way of looking at trade growth and to provide recent historical context, **Figure 2.1** plots the speed and the scale of trade growth by country over the past five years (from 2019 to 2024). The countries with the fastest trade growth are closest to the top of the chart, and the countries that generated the largest amount of trade growth are closest to the right side of the chart.[3] The top 30 countries for each dimension are labeled and marked yellow and red, respectively. A version of this chart with all countries labeled appears in the **Appendix** on p. 281, along with similar charts providing separate coverage of exports and imports.

The United Arab Emirates (UAE), Viet Nam, and Ireland (marked in both red and yellow) stand out as the only countries that were among the top 30 for both speed and scale during the period from 2019 to 2024. The UAE ranked fifth on the scale dimension and 19th on the speed dimension. While the UAE's share of global trade in 2024 was only 1.7%,

its rapid trade growth (6.9% compound average trade volume growth from 2019 to 2024) propelled its share of global trade growth over that period to 5.0%.

The UAE has long embraced trade – and globalization more generally – as a key pillar of its economic development and diversification strategy. Major aspects of this strategy have involved the growth of international shipping, air connections, tourism, and finance, with important support provided via the development of free zones, extensive employment of foreign labor and capital, and the negotiation of economic partnership agreements.[4]

Viet Nam ranked sixth on the scale dimension and 22nd on the speed dimension. Like the UAE, Viet Nam has embraced trade as a major driver of its economic development. In 1985, exports were less than 10% of Viet Nam's GDP, and the country ranked among the world's poorest (its GDP per capita was only about 600 U.S. dollars at 2024 price levels). By 2023, goods exports had soared to 82% of GDP and Viet Nam was a middle-income country with a GDP per capita of nearly 4,300 U.S. dollars.[5] Viet Nam's merchandise exports were nearly as large as its GDP because of its deep engagement with global value chains, importing inputs from abroad and exporting final products.[6]

Ireland ranked 13th on the scale dimension and 17th on the speed dimension. After a period of sluggish trade growth in the wake of the 2008 Global Financial Crisis, Ireland's goods trade began to accelerate again in 2015. Moreover, its robust trade growth has continued despite challenges posed by the exit of its second-largest trading partner, the UK, from the European Union (of which Ireland remains a member). Ireland's rapid macroeconomic growth supported the country's trade growth, with Ireland achieving real GDP growth more than four times faster than the EU as a whole from 2019 to 2024.[7] Ireland benefits from strong trade links with both Europe and North America.

FIGURE 2.1: TRADE GROWTH SPEED AND SCALE, 2019 – 2024

■ Speed Top 30   ■ Scale Top 30
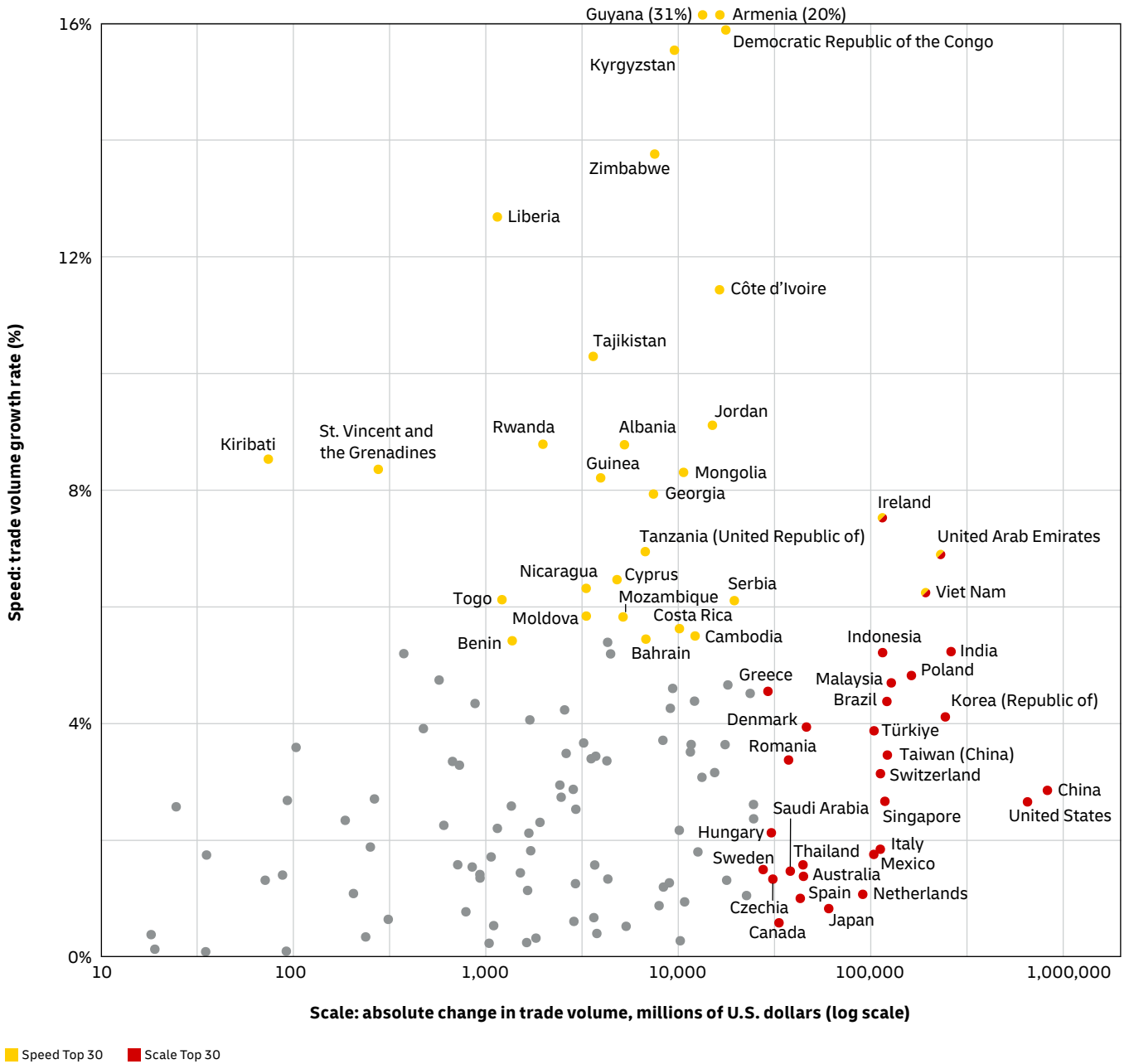
This chart plots countries according to both the speed (annual growth rate, vertical axis) and scale (absolute amount, horizontal axis) of their trade growth over the past five years. The countries with the fastest trade growth are closest to the top of the chart, and the countries that generated the largest amount of trade growth are closest to the right side of the chart. The top 30 countries on each dimension are labeled. Countries leading on both dimensions, which can be especially attractive markets, are closest to the top-right corner of the chart.

The United Arab Emirates, Viet Nam, and Ireland stand out as the only countries ranked among the top 30 for both speed and scale of trade growth over the past 5 years. China led on scale, contributing roughly 18% of the world's trade growth, while Guyana achieved the fastest growth rate.

SPEED RANKINGS

Table 2.1 provides a full ranking of countries according to their trade volume growth rates between 2019 and 2024. The countries with the fastest trade growth during this period were Guyana, Armenia, the Democratic Republic of the Congo, Kyrgyzstan, Zimbabwe, Liberia, Côte d'Ivoire, Tajikistan, Jordan, and Rwanda. High annual growth rates across these countries resulted in very large increases in their trade volumes. Guyana nearly quadrupled its trade volume over this period, and Armenia's trade volume more than doubled.

The top three countries exemplify how countries with the fastest trade growth are often smaller economies where new natural resource exports are coming online or other unusual circumstances are contributing to one-off increases in trade flows.

Guyana's extremely rapid recent trade growth has been driven by oil exports. Guyana began production of crude oil in 2019 after oil was discovered in its coastal waters in 2017.[8] As a result, Guyana's goods exports soared from 1.5 billion U.S. dollars in 2019 to 11.2 billion in 2022.[9] In 2022, mineral fuels accounted for 87% of Guyana's merchandise exports.[10] This has dwarfed the second-largest export, precious metals and stones (6.5% of the total), which was Guyana's top export in 2019. The economic growth created by this boom has propelled Guyana onto the World Bank's list of high-income countries, with the second highest GDP per capita in South America.[11]

Armenia's recent expansion of merchandise trade was driven by trade pattern shifts following Russia's full-scale invasion of Ukraine in February 2022 and sanctions imposed on Russia in response. With Russia's trade with many other countries restricted, Armenia's exports to Russia soared, with a substantial portion of this increase reflecting re-exports to Russia of goods imported from other countries (boosting Armenia's imports).[12] The share of Armenia's exports going to Russia jumped from 28% in 2021 to 45% in 2022 (and

remained elevated at 41% in 2023).[13] Armenia's top exports overall are ores, slag and ash (23%) and precious metals and stones, but its top exports to Russia are electrical machinery and equipment and vehicles.

For the Democratic Republic of the Congo (DRC), export growth has been spurred by rising demand for its largest export products – copper (54% of total exports in 2022) and cobalt (25%) – which are key commodities used in electronics manufacturing. The DRC is the world's largest producer of cobalt, a key input for electric vehicle batteries.[14] It is also the world's third largest producer of copper, which is used in the production of electric vehicles, solar panels, and wind turbines.[15] In response to surging demand, the DRC has boosted production and exports of both commodities. There have also been large increases in the DRC's imports of equipment used by the mining industry.

All three of these examples highlight the unusual circumstances that can propel a country to the top of the rankings for trade volume growth over a given period. However, it is important to keep in mind that the speed ranking is highly volatile; the top ranked countries seldom maintain their positions from one five-year period to the next. When pursuing opportunities in this set of countries, it is important to assess the sustainability of the underlying drivers of their rapid trade growth.

TABLE 2.1: SPEED RANKING: ANNUAL TRADE VOLUME GROWTH RATES, 2019 – 24 AND COMPOSITE FORECAST 2024 – 29

Rank 2019–24	Country	Growth Rate 2019–24	Rank 2024–29	Growth Rate 2024–29
1	Guyana	31%	5	10%
2	Armenia	20%	170	-9%
3	Democratic Republic of the Congo	16%	122	3%
4	Kyrgyzstan	16%	159	1%
5	Zimbabwe	14%	2	16%
6	Liberia	13%	57	5%
7	Côte d'Ivoire	11%	40	6%
8	Tajikistan	10%	12	8%
9	Jordan	9%	87	4%
10	Rwanda	9%	48	5%
11	Albania	9%	52	5%
12	Kiribati	9%	155	2%
13	St. Vincent and the Grenadines	8%	154	2%
14	Mongolia	8%	30	6%
15	Guinea	8%	26	7%
16	Georgia	8%	3	13%
17	Ireland	8%	111	3%
18	Tanzania (United Republic of)	7%	13	8%
19	United Arab Emirates	7%	69	4%
20	Cyprus	6%	74	4%
21	Nicaragua	6%	84	4%
22	Viet Nam	6%	29	6%
23	Togo	6%	21	7%
24	Serbia	6%	36	6%
25	Moldova	6%	11	9%
26	Mozambique	6%	23	7%
27	Costa Rica	6%	79	4%
28	Cambodia	6%	8	9%
29	Bahrain	5%	135	2%
30	Benin	5%	6	10%
31	Senegal	5%	10	9%
32	India	5%	17	7%
33	Indonesia	5%	25	7%
34	St. Lucia	5%	71	4%
35	Brunei Darussalam	5%	125	3%
36	Poland	5%	72	4%
37	Sierra Leone	5%	119	3%
38	Malaysia	5%	70	4%
39	Pakistan	5%	34	6%
40	Guatemala	5%	112	3%
41	Greece	5%	96	3%
42	Morocco	5%	58	5%
43	Ecuador	4%	143	2%
44	Brazil	4%	114	3%
45	Eswatini	4%	51	5%
46	Tunisia	4%	157	1%
47	Namibia	4%	35	6%
48	Korea (Republic of)	4%	107	3%
49	Mauritania	4%	110	3%
50	Denmark	4%	118	3%
51	Cabo Verde	4%	18	7%
52	Türkiye	4%	95	3%
53	Latvia	4%	139	2%
54	Uganda	4%	20	7%
55	Oman	4%	120	3%
56	Bangladesh	4%	28	6%
57	Dominica	4%	167	-2%
58	Croatia	4%	160	1%
59	Iceland	3%	156	2%
60	Taiwan (China)	3%	102	3%
61	Honduras	3%	148	2%
62	Uruguay	3%	149	2%
63	Romania	3%	64	4%
64	Kenya	3%	42	6%
65	Niger	3%	9	9%
66	Montenegro	3%	75	4%
67	Ukraine	3%	129	2%
68	Switzerland	3%	147	2%
69	Lithuania	3%	47	5%
70	Papua New Guinea	3%	55	5%
71	North Macedonia	3%	46	5%
72	China	3%	109	3%
73	Venezuela (Bolivarian Republic of)	3%	158	1%
74	Seychelles	3%	113	3%
75	Grenada	3%	104	3%
76	Singapore	3%	78	4%
77	United States	3%	108	3%
78	Portugal	3%	85	4%
79	Burkina Faso	3%	67	4%
80	São Tomé and Príncipe	3%	66	4%
81	Bosnia and Herzegovina	3%	27	7%
82	South Africa	2%	45	5%
83	Belize	2%	140	2%
84	Gabon	2%	145	2%
85	Chad	2%	162	1%
86	Djibouti	2%	76	4%
87	Bulgaria	2%	97	3%
88	Hungary	2%	60	5%
89	Trinidad and Tobago	2%	115	3%
90	Barbados	2%	61	5%
91	Italy	2%	152	2%
92	Ethiopia	2%	39	6%
93	Slovenia	2%	68	4%
94	Mexico	2%	99	3%
95	Comoros	2%	92	3%
96	Lao People's Democratic Republic	2%	169	-8%
97	Bahamas	2%	106	3%
98	Thailand	2%	91	3%
99	Dominican Republic	2%	77	4%
100	Malta	2%	126	2%
101	Sweden	1%	86	4%
102	Saudi Arabia	1%	89	3%
103	El Salvador	1%	123	3%
104	Congo	1%	93	3%
105	Burundi	1%	22	7%
106	Australia	1%	117	3%
107	Mali	1%	73	4%
108	Iran (Islamic Republic of)	1%	82	4%
109	Czechia	1%	53	5%
110	Antigua and Barbuda	1%	83	4%
111	Norway	1%	94	3%
112	Israel	1%	33	6%
113	Azerbaijan	1%	146	2%
114	Peru	1%	44	5%
115	Paraguay	1%	103	3%
116	Maldives	1%	37	6%
117	Netherlands	1%	138	2%
118	Austria	1%	134	2%
119	Spain	1%	131	2%
120	Slovakia	1%	81	4%
121	Chile	1%	59	5%
122	Japan	1%	141	2%
123	Zambia	1%	49	5%
124	Egypt	1%	24	7%
125	Jamaica	1%	38	6%
126	New Zealand	1%	101	3%
127	Canada	1%	150	2%
128	Estonia	1%	62	5%
129	Philippines	1%	15	7%
130	Iraq	0%	142	2%
131	Central African Republic	0%	14	8%
132	Cameroon	0%	31	6%
133	Colombia	0%	121	3%
134	Russian Federation	0%	90	3%
135	Kazakhstan	0%	65	4%
136	Belarus	0%	161	1%
137	Lesotho	0%	98	3%
138	Turkmenistan	0%	151	2%
139	Madagascar	0%	4	10%
140	Germany	0%	136	2%
141	France	0%	116	3%
142	Gambia	0%	7	10%
143	Algeria	0%	127	2%
144	Argentina	0%	144	2%
145	Belgium	0%	137	2%
146	Malawi	-1%	50	5%
147	Mauritius	-1%	80	4%
148	Libya	-1%	166	-1%
149	Hong Kong SAR (China)	-1%	100	3%
150	Finland	-1%	164	0%
151	Panama	-1%	133	2%
152	Kuwait	-1%	88	3%
153	Qatar	-1%	43	5%
154	Botswana	-1%	16	7%
155	Solomon Islands	-2%	54	5%
156	Uzbekistan	-2%	63	4%
157	United Kingdom	-2%	153	2%
158	Angola	-2%	130	2%
159	Luxembourg	-2%	163	1%
160	Equatorial Guinea	-3%	168	-5%
161	St. Kitts and Nevis	-3%	165	0%
162	Bolivia (Plurinational State of)	-3%	105	3%
163	Suriname	-4%	132	2%
164	Nigeria	-4%	124	3%
165	Ghana	-5%	128	2%
166	Myanmar	-6%	56	5%
167	Haiti	-6%	19	7%
168	Yemen	-8%	32	6%
169	Sri Lanka	-11%	41	6%
170	Sudan	-13%	1	16%

Legend:
- East Asia & Pacific
- Middle East & North Africa
- South & Central America & Caribbean
- Sub-Saharan Africa
- Europe
- North America
- South & Central Asia

Data Sources: 2019 – 2023: IMF World Economic Outlook; forecast 2024 – 2029 based on Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence. Note: Growth expressed as compound annual growth rate.

SCALE RANKINGS

Table 2.2 ranks countries by absolute trade volume growth for the period between 2019 and 2024. The leaders over this period were China, the United States, India, Korea (Republic of), the United Arab Emirates, Viet Nam, Poland, Malaysia, Taiwan (China), and Brazil.

The two countries where trade expanded by the largest amount over the last five years, China and the U.S., are also the largest current participants in international trade (and the world's largest economies). As a result, they can generate a substantial share of the world's total trade growth even when they are not among the countries with the fastest trade growth rates. Over the last five years, China's share of global trade growth was 18% and the U.S.'s share was 14%. This is despite the fact that China and the U.S. ranked only 72nd and 77th respectively on the speed dimension for the 2019 – 2024 period, with trade growth rates just modestly above the global growth rate.

India, on the other hand, achieved its third-place rank on the scale dimension because its trade growth was much faster than other large economies. India was only the 13th largest participant in international trade in 2024, but its trade volume grew at a 5.2% compound annual rate from 2019

to 2024, while global trade grew at only a 2.0% rate. India's rapid trade growth reflected both its swift macroeconomic growth and its increasing participation in international trade. While China is often viewed as a more trade-oriented economy than India, India's goods trade-to-GDP ratio was almost as high as China's in 2023, and India's trade intensity exceeded China's when considering trade in both goods and services.[16]

What is unusual about the scale rankings for the 2019 – 2024 period is the absence of European economies near the top of the list. Large European economies such as Germany and the Netherlands (the world's third and fourth largest participants in international trade) usually appear close to the top of the scale rankings. These economies experienced unusually slow trade growth (and GDP growth) over the last five years, as Europe faced the effects of Russia's invasion of Ukraine and a slow recovery from the Covid-19 pandemic.

> *India achieved its third-place rank on the scale dimension because its trade growth was much faster than other large economies.*

TABLE 2.2: SCALE RANKING: ABSOLUTE TRADE VOLUME GROWTH, 2019 – 24 AND COMPOSITE FORECAST 2024 – 29

Rank 2019–24	Country	Absolute Growth 2019–24	Rank 2024–29	Absolute Growth 2024–29
1	China	827.7B	1	939.4B
2	United States	652.3B	2	792.3B
3	India	261.4B	3	484.0B
4	Korea (Republic of)	244.1B	10	199.7B
5	United Arab Emirates	231.9B	13	191.7B
6	Viet Nam	192.8B	5	271.8B
7	Poland	162.6B	15	165.2B
8	Malaysia	127.9B	16	138.4B
9	Taiwan (China)	122.0B	20	122.1B
10	Brazil	121.3B	29	89.8B
11	Singapore	118.5B	11	195.3B
12	Indonesia	115.2B	12	195.0B
13	Ireland	114.9B	36	55.6B
14	Switzerland	112.3B	31	78.8B
15	Italy	112.1B	21	115.3B
16	Türkiye	104.0B	26	105.9B
17	Mexico	103.7B	7	206.7B
18	Netherlands	90.9B	8	202.1B
19	Japan	60.5B	14	168.3B
20	Denmark	46.3B	47	36.8B
21	Australia	44.7B	28	94.8B
22	Thailand	44.5B	25	106.1B
23	Spain	43.0B	22	110.9B
24	Saudi Arabia	38.2B	27	97.7B
25	Romania	37.4B	35	60.0B
26	Canada	33.4B	23	110.8B
27	Czechia	31.0B	18	129.6B
28	Hungary	30.4B	32	76.9B
29	Greece	29.2B	56	25.2B
30	Sweden	27.6B	33	73.0B
31	South Africa	24.6B	34	63.4B
32	Portugal	24.6B	45	38.7B
33	Morocco	23.6B	50	30.7B
34	Austria	22.6B	37	54.8B
35	Serbia	19.6B	55	25.5B
36	Pakistan	18.1B	51	30.6B
37	Norway	17.8B	39	49.8B
38	Democratic Republic of the Congo	17.7B	102	4.6B
39	Bangladesh	17.5B	44	39.4B
40	Armenia	16.5B	170	-10.0B
41	Côte d'Ivoire	16.4B	70	12.6B
42	Ukraine	15.5B	67	13.7B
43	Jordan	15.0B	83	8.0B
44	Guyana	13.4B	72	11.5B
45	Lithuania	13.3B	54	26.1B
46	Slovenia	12.6B	48	35.1B
47	Cambodia	12.2B	53	28.6B
48	Ecuador	12.1B	88	6.8B
49	Oman	11.7B	77	9.8B
50	Croatia	11.6B	95	5.4B
51	Slovakia	10.8B	41	45.8B
52	Mongolia	10.7B	71	11.8B
53	Russian Federation	10.2B	17	133.1B
54	Costa Rica	10.1B	81	8.6B
55	Bulgaria	10.1B	62	17.0B
56	Kyrgyzstan	9.5B	137	1.4B
57	Guatemala	9.4B	89	6.8B
58	Tunisia	9.1B	110	3.7B
59	Israel	9.0B	38	52.0B
60	Peru	8.4B	42	43.5B
61	Latvia	8.3B	93	5.8B
62	Chile	7.9B	40	47.6B
63	Zimbabwe	7.5B	61	17.6B
64	Georgia	7.4B	59	19.1B
65	Bahrain	6.8B	112	3.6B
66	Tanzania (United Republic of)	6.7B	74	10.7B
67	Germany	6.3B	4	375.3B
68	Philippines	5.4B	30	87.9B
69	Albania	5.3B	107	4.1B
70	Mozambique	5.2B	84	8.0B
71	Cyprus	4.8B	108	3.8B
72	Brunei Darussalam	4.5B	119	2.6B
73	Iran (Islamic Republic of)	4.3B	68	13.0B
74	Senegal	4.3B	78	9.8B
75	Kenya	4.3B	80	8.7B
76	Guinea	4.0B	103	4.6B
77	Iraq	3.8B	57	20.8B
78	Honduras	3.7B	123	2.4B
79	Dominican Republic	3.7B	76	10.0B
80	Egypt	3.6B	43	41.9B
81	Tajikistan	3.6B	105	4.3B
82	Uruguay	3.5B	126	2.2B
83	Moldova	3.3B	87	6.9B
84	Nicaragua	3.3B	121	2.4B
85	Uganda	3.2B	85	7.7B
86	Bosnia and Herzegovina	2.9B	79	9.4B
87	Azerbaijan	2.9B	98	4.9B
88	New Zealand	2.9B	64	15.5B
89	North Macedonia	2.8B	92	6.0B
90	Iceland	2.6B	139	1.3B
91	Namibia	2.6B	101	4.7B
92	Venezuela (Bolivarian Republic of)	2.5B	134	1.5B
93	Papua New Guinea	2.4B	100	4.8B
94	France	2.2B	9	201.1B
95	Rwanda	2.0B	132	1.6B
96	Gabon	1.9B	128	1.9B
97	Colombia	1.8B	63	15.5B
98	Ethiopia	1.7B	90	6.6B
99	Mauritania	1.7B	136	1.4B
100	Trinidad and Tobago	1.7B	122	2.4B
101	Paraguay	1.6B	104	4.6B
102	Kazakhstan	1.6B	49	32.2B
103	El Salvador	1.5B	116	3.0B
104	Benin	1.4B	111	3.6B
105	Burkina Faso	1.4B	118	2.7B
106	Togo	1.2B	129	1.8B
107	Djibouti	1.1B	125	2.3B
108	Liberia	1.1B	148	659.8M
109	Estonia	1.1B	75	10.3B
110	Lao People's Democratic Republic	1.1B	169	-4.3B
111	Belarus	1.0B	91	6.3B
112	Mali	933.3M	115	3.1B
113	Congo	931.6M	120	2.5B
114	Eswatini	879.1M	141	1.2B
115	Malta	849.8M	133	1.5B
116	Zambia	788.0M	94	5.7B
117	Montenegro	729.3M	146	1.0B
118	Bahamas	714.7M	135	1.4B
119	Niger	671.5M	124	2.3B
120	Chad	605.1M	154	361.5M
121	Sierra Leone	571.9M	152	385.7M
122	Cabo Verde	473.9M	142	1.1B
123	St. Lucia	374.8M	153	370.5M
124	Jamaica	311.3M	114	3.3B
125	St. Vincent and the Grenadines	276.2M	162	74.0M
126	Seychelles	263.8M	156	305.1M
127	Barbados	251.3M	147	704.1M
128	Cameroon	237.6M	97	5.0B
129	Maldives	205.2M	138	1.3B
130	Belize	186.0M	159	196.0M
131	Dominica	103.3M	166	-46.7M
132	Grenada	93.1M	160	114.2M
133	Turkmenistan	91.9M	131	1.7B
134	Burundi	87.9M	149	508.7M
135	Kiribati	74.1M	164	18.4M
136	Antigua and Barbuda	71.4M	158	218.0M
137	Comoros	35.4M	161	76.7M
138	Madagascar	35.0M	99	4.9B
139	São Tomé and Príncipe	24.6M	163	50.1M
140	Lesotho	19.1M	150	479.2M
141	Central African Republic	18.2M	151	425.3M
142	Gambia	-2.2M	113	3.6B
143	Solomon Islands	-80.4M	157	265.0M
144	St. Kitts and Nevis	-82.3M	165	596.9k
145	Malawi	-129.3M	143	1.1B
146	Mauritius	-228.3M	140	1.3B
147	Suriname	-592.5M	155	324.8M
148	Algeria	-679.2M	69	12.8B
149	Equatorial Guinea	-891.1M	167	-1.5B
150	Botswana	-898.7M	96	5.0B
151	Panama	-942.3M	127	1.9B
152	Haiti	-958.1M	145	1.1B
153	Argentina	-1.2B	65	15.0B
154	Yemen	-2.6B	130	1.8B
155	Bolivia (Plurinational State of)	-2.9B	117	2.8B
156	Libya	-3.1B	168	-3.3B
157	Luxembourg	-5.4B	144	1.1B
158	Uzbekistan	-5.7B	66	14.2B
159	Kuwait	-7.0B	58	20.7B
160	Angola	-7.1B	86	7.5B
161	Qatar	-8.4B	46	38.0B
162	Finland	-9.1B	109	3.8B
163	Ghana	-10.3B	106	4.2B
164	Myanmar	-10.6B	82	8.3B
165	Belgium	-19.1B	19	128.1B
166	Sri Lanka	-27.4B	73	11.1B
167	Sudan	-27.6B	52	29.2B
168	Nigeria	-31.3B	60	17.7B
169	Hong Kong SAR (China)	-75.0B	6	212.7B
170	United Kingdom	-140.1B	24	106.5B

Legend: ■ East Asia & Pacific ■ Middle East & North Africa ■ South & Central America & Caribbean ■ Sub-Saharan Africa ■ Europe ■ North America ■ South & Central Asia

Data Sources: Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence.
Note: Expressed using constant 2023 prices, in billions of U.S. dollars. Trade volume growth rates applied to 2023 trade values.

SPEED AND SCALE FORECASTS

Looking to trade growth prospects over the next five years, **Figure 2.2** plots speed and scale measures for the period 2024 – 2029 based on trade forecasts from the Economist Intelligence Unit, International Monetary Fund, Oxford Economics, and S&P Global Market Intelligence.[17] A version of this figure with all countries labeled can be found in the **Appendix** on page 281, along with similar figures showing exports and imports separately.

Four countries rank among the top 30 for both speed and scale in this composite forecast: India, Viet Nam, Indonesia, and the Philippines. The locations of these countries in Southeast and South Asia exemplify the regional trends we will discuss later in this section.

India is forecast to retain its third-place rank on the scale dimension from the previous five-year period and to boost its rank on the speed dimension from 32nd to 17th as its compound annual trade volume growth rate rises from 5.2% to 7.2%. If this forecast is realized, India will be the location of 6% of the world's trade growth, behind only China (12%) and the United States (10%). High expectations for India's future trade growth are reinforced by large new commitments by foreign companies to invest in India's manufacturing sector. In 2023, India ranked second worldwide (after the U.S.) as a destination for announced greenfield foreign direct investment, and manufacturing has become the most prominent business function for this investment in India.[18]

Viet Nam is forecast to rank fifth on the scale dimension over the next five years (up from sixth during the previous five-year period) and 29th on the speed dimension (down from 22nd), and to maintain a 6.5% compound annual trade volume growth rate over the 2024 – 2029 period (higher than its 6.2% rate from 2019 to 2024). One of the key drivers of Viet Nam's recent trade growth has been the country's emergence as a favored destination for electronics manufacturing, attracting many companies seeking an alternative location to China.[19]

Indonesia and the Philippines, like Viet Nam, have substantial potential to benefit from supply chain shifts and diversification strategies. Indonesia, which has emerged as a favored destination for the metals and chemicals industries,[20] is forecast to hold steady in 12th place on the scale rankings, while rising from 33rd to 25th in the speed rankings. The Philippines, with a manufacturing sector focused more on electronics, has seen more limited benefits from supply chain diversification thus far, but is forecast to see a substantial trade growth acceleration. While ranked only 129th on the speed dimension over the 2019 – 2024 period, the Philippines is forecast to rank 15th over 2024 – 2029. On the scale dimension, the Philippines is forecast to rise from 68th place to 30th.[21]

These encouraging forecasts for India, Viet Nam, Indonesia, and the Philippines suggest the importance of investments in physical infrastructure and supportive policy measures required for these countries to achieve their trade growth potential. While these countries all have especially favorable trade growth prospects, they have also faced infrastructure and other capacity-related constraints in the past.[22]

A final message to take away from the forecasts discussed in this section is the growing breadth of trade growth opportunities around the world. Whereas China and the U.S. alone accounted for 32% of global trade growth from 2019 to 2024, they are forecast to generate only 22% of the world's trade growth from 2024 to 2029. The top 10 countries on the scale dimension forecast include economies spread across Asia, Europe, and North America, while speed dimension leaders also include economies in Africa and Latin America.

FIGURE 2.2: FORECAST TRADE GROWTH SPEED AND SCALE, 2024 – 2029
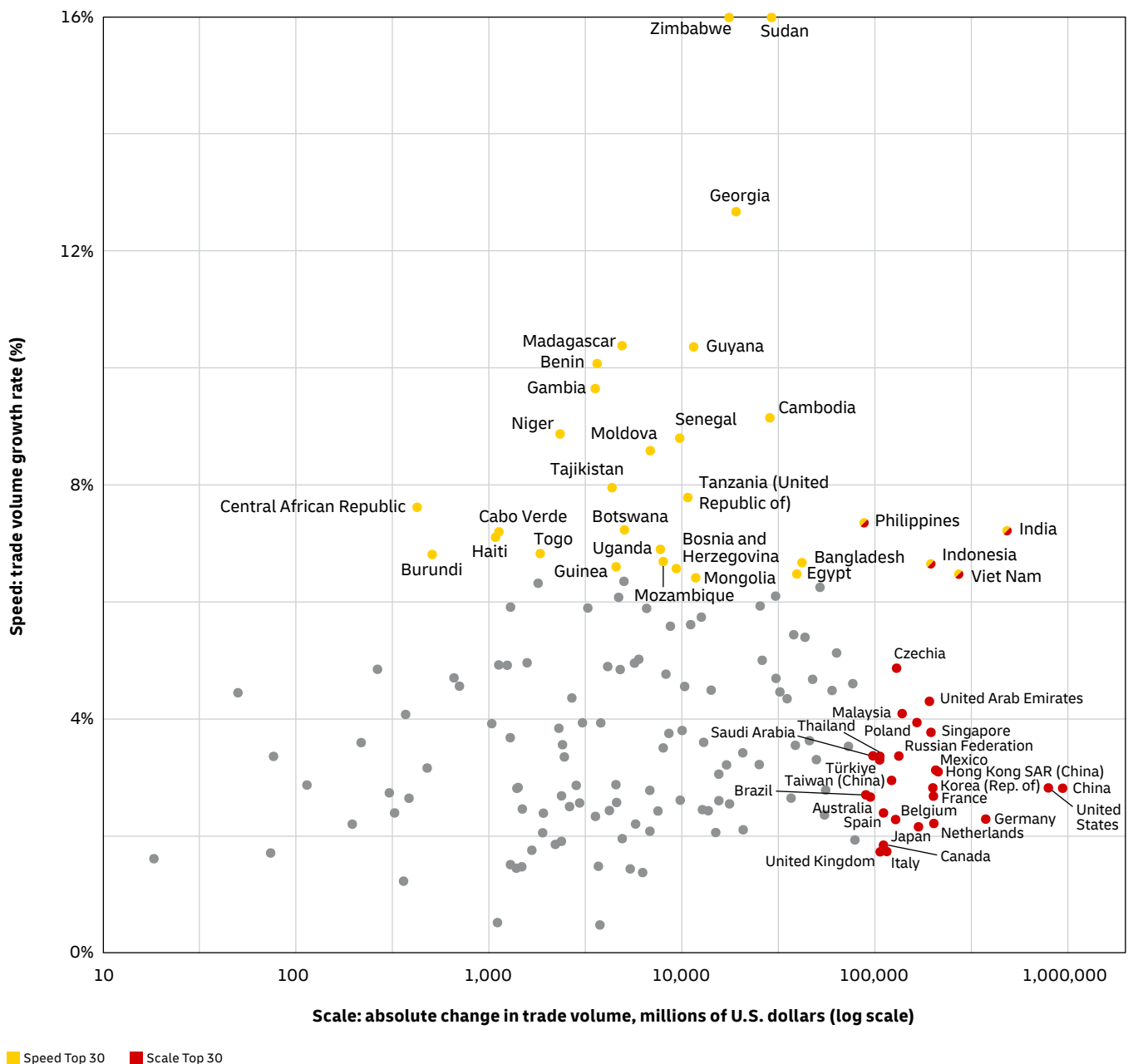
India, Viet Nam, Indonesia, and the Philippines are forecast to rank among the top 30 countries for both the speed and the scale of trade growth over the next five years.

Data Sources: Economist Intelligence Unit, IMF Direction of Trade Statistics, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence. Note: Countries with negative forecast growth are omitted from this figure.

TRADE GROWTH OPPORTUNITY MAP

To summarize trade growth opportunities over the next five years in a single image, **Figure 2.3** sizes countries according to how much their trade volumes are predicted to increase between 2024 and 2029, and colors them based on their forecast trade volume growth rates. Thus, the sizes of countries on this map represent the scale dimension of trade growth, and the colors represent the speed dimension. The top 30 countries on the scale dimension are labeled.

Two key messages stand out from this trade growth forecast map (Figure 2.3):

First, there are substantial trade growth opportunities available around the world. The largest absolute amount of trade growth is forecast to take place in the East Asia & Pacific region (34% of total growth, with 12% in China alone), but Europe is very close behind (30%) followed by North America (14%). By income level, high income countries (with gross national incomes above 14,005 U.S. dollars per capita) are expected to generate 58% of global trade growth, while middle- and low-income countries (with gross national incomes below 14,005 U.S. dollars per capita) deliver the remaining 42%. While high income countries tend to have slower

growth rates, they still present very substantial growth opportunities, due to their high current share of world trade (67% in 2024).[23]

Second, South Asia, Sub-Saharan Africa, and Southeast Asia stand out for their especially fast forecast trade growth. Most of the countries colored in the brightest yellow (indicating the fastest trade growth) are in these regions. These same regions are also areas where trade growth is forecast to accelerate substantially compared to the previous five-year period. **Figure 2.4** compares forecast growth rates over the next five years versus historical growth rates over the last five years. Between 2019 and 2024, South and Central Asia and the ASEAN (Association of Southeast Asian Nations) region only slightly surpassed Middle East & North Africa and China to take the top two spots in terms of trade volume growth rates, with Sub-Saharan Africa lagging far behind in last place. But between 2024 and 2029, South and Central Asia, Sub-Saharan Africa, and ASEAN are forecast to achieve much faster trade growth than any of the other regions.

Between 2024 and 2029, South and Central Asia, Sub-Saharan Africa, and ASEAN are forecast to achieve much faster trade growth than any of the other regions.

FIGURE 2.3: FORECAST TRADE VOLUME GROWTH MAP, 2024 – 2029

Trade Volume Growth Rate
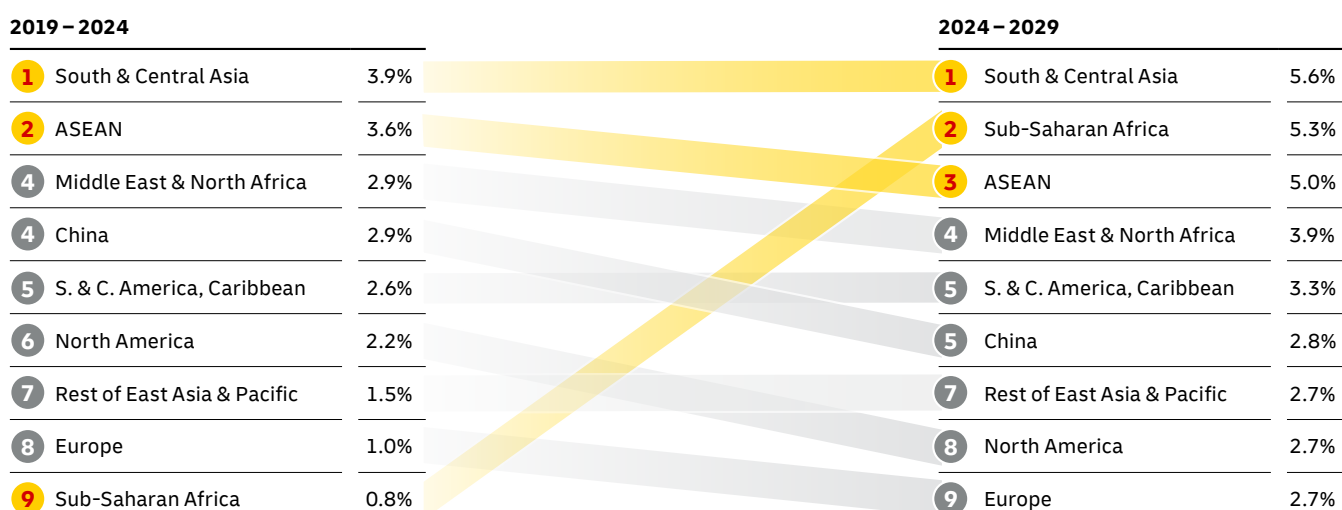
1%   2%   3%   4%   5%   6%
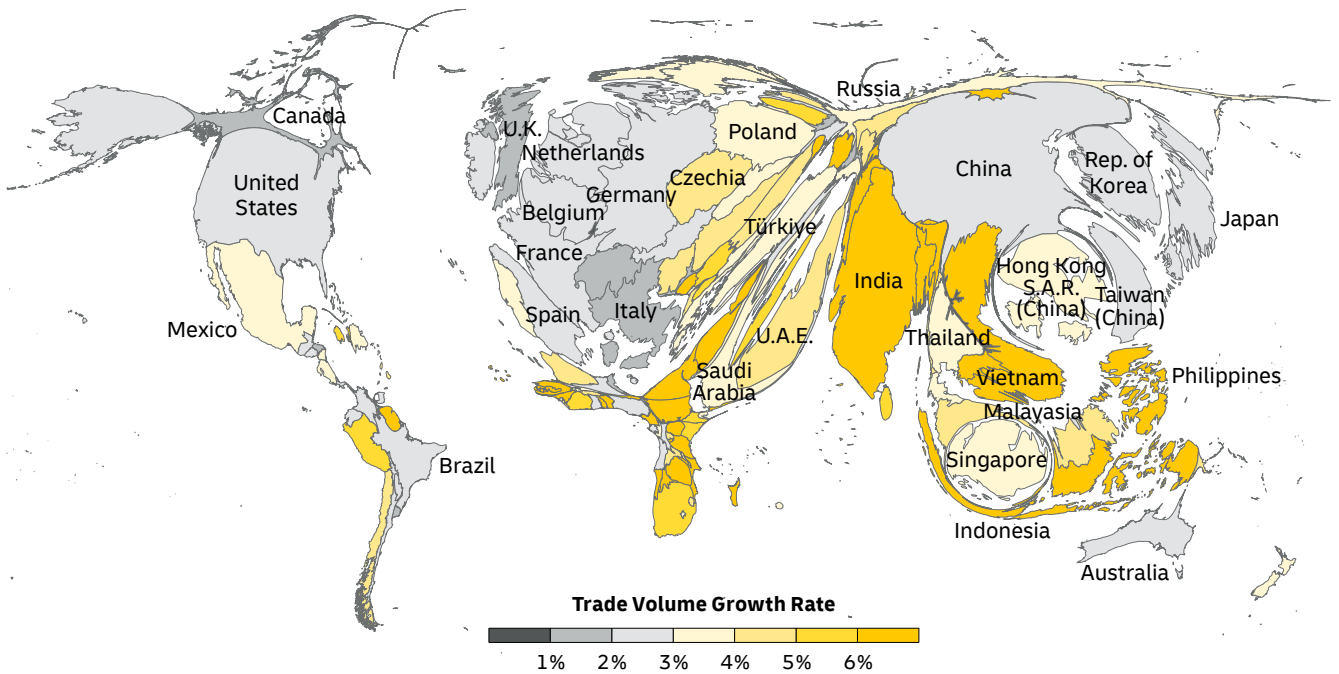
This map uses size and color to depict forecast trade growth over the next five years. Countries are sized in proportion to how much their total trade volumes are forecast to increase. The countries that appear largest on the map are the countries that are expected to contribute the most to global trade growth.

The colors on the map depict the forecast growth rates of countries' trade volumes. The countries shown in the brightest yellow are those where the fastest trade growth is predicted, while those in the darkest gray have the slowest forecast trade growth. Countries with negative forecast trade growth are not shown.

Substantial trade volume growth is forecast in all regions over the next five years. High-income countries are forecast to generate 58% of the world's trade growth, even as their forecast trade growth rates tend to be much lower than in low- and middle-income countries.

Data Sources: Economist Intelligence Unit, IMF Direction of Trade Statistics, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence.

FIGURE 2.4: TRADE VOLUME GROWTH RATE BY REGION, NEXT FIVE YEARS (COMPOSITE FORECAST) VS. LAST FIVE YEARS

| 2019 – 2024		2024 – 2029	
1 South & Central Asia	3.9%	**1** South & Central Asia	5.6%
2 ASEAN	3.6%	**2** Sub-Saharan Africa	5.3%
4 Middle East & North Africa	2.9%	**3** ASEAN	5.0%
4 China	2.9%	**4** Middle East & North Africa	3.9%
5 S. & C. America, Caribbean	2.6%	**5** S. & C. America, Caribbean	3.3%
6 North America	2.2%	**5** China	2.8%
7 Rest of East Asia & Pacific	1.5%	**7** Rest of East Asia & Pacific	2.7%
8 Europe	1.0%	**8** North America	2.7%
9 Sub-Saharan Africa	0.8%	**9** Europe	2.7%

The fastest trade volume growth from 2024 to 2029 is forecast in South Asia, Sub-Saharan Africa, and Southeast Asia.

Data Sources: Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence.

In summary, there are promising trade growth opportunities in countries and regions around the world. Over the last five years, the United Arab Emirates, Viet Nam, and Ireland ranked among the top 30 countries in terms of both the speed (growth rate) and scale (absolute amount) of their goods trade volume growth. Looking to the future, India, Viet Nam, Indonesia, and the Philippines are forecast to rank among the top 30 countries on both dimensions of trade growth between 2024 and 2029. At the level of major world regions, the fastest trade growth over the next five years is forecast for South & Central Asia, Sub-Saharan Africa, and the ASEAN (Association of Southeast Asian Nations) sub-region of the East Asia & Pacific region. The 2024 – 2029 forecast also calls for a broadening of trade growth across a wider variety of countries and regions. The countries forecast to deliver the most absolute trade growth are spread across Asia, Europe, and North America, while the countries with the fastest forecast trade growth also include several in Africa and Latin America.

3. THE SHIFTING GEOGRAPHY OF WORLD TRADE

As economies grow at different rates and change the ways they trade with different parts of the world, the geography of world trade continues to change. This section begins by tracking the center of gravity of exports and imports since 1950 and examining the shifting shares of world trade by region and country income group, both historically and over a five-year forecast horizon. We then turn to the distances over which countries trade to examine whether there is a shift underway toward more regionalized trade patterns.
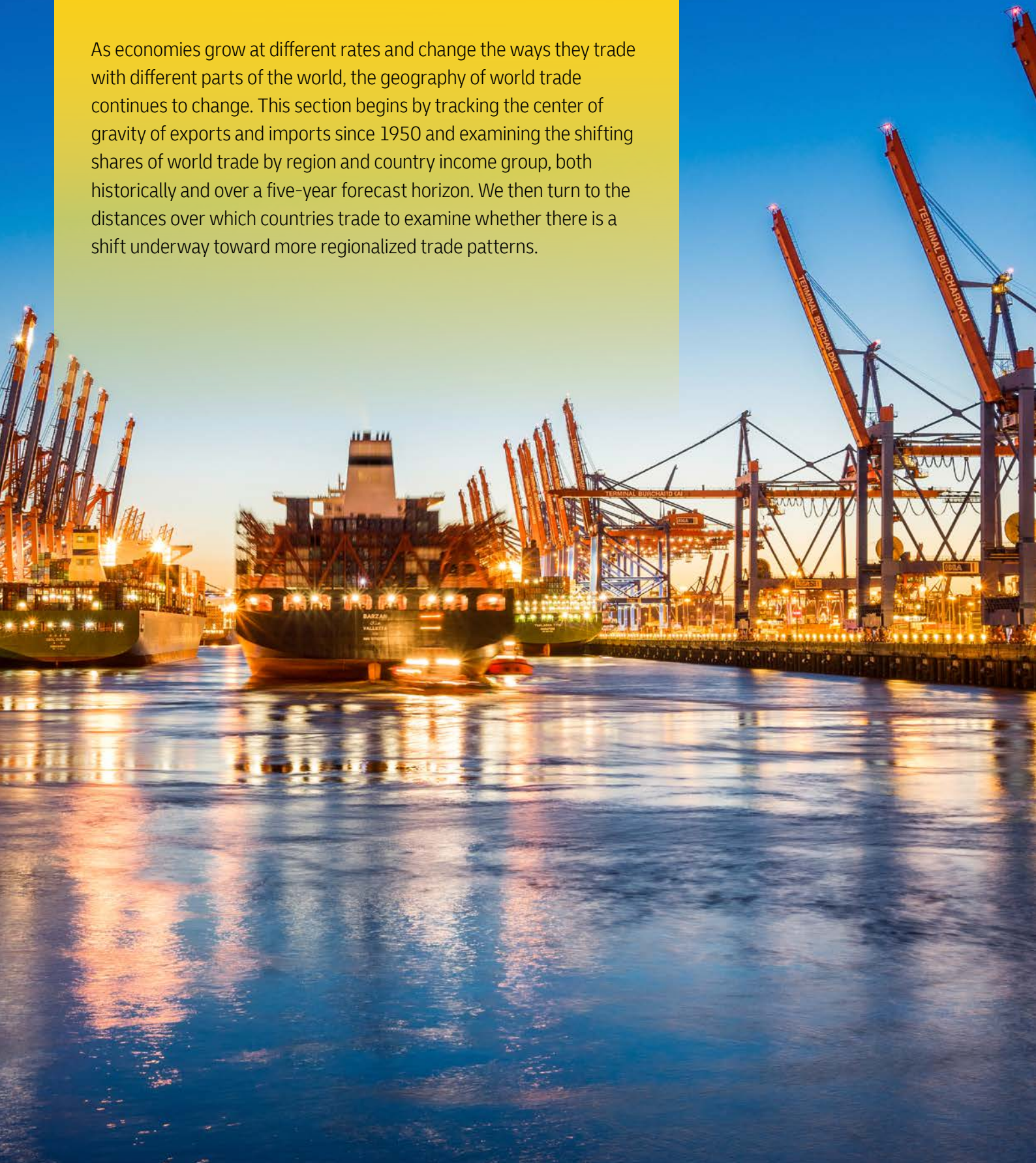
TRADE CENTER OF GRAVITY SINCE 1950

For a long-run view of the shifting geography of world trade, **Figure 3.1** tracks the center of gravity of global trade flows since 1950.[1] Both exports and imports have shifted dramatically from west to east over this period.[2]

In the aftermath of World War II, the recovery and integration of major European economies and the ascent of Japan pushed world trade toward the east – a trend that continued with the rise of the "Asian Tigers" (Hong Kong, Taiwan, South Korea,

FIGURE 3.1: SHIFTING CENTER OF GRAVITY OF GOODS EXPORTS AND IMPORTS, 1950 – 2029 (FORECAST)

Shifts in the center of gravity of world exports and imports provide a convenient summary of changes in the geography of world trade over time. The center of gravity is calculated using trade-weighted averages across the latitudes and longitudes of the countries where exports and imports were recorded in each year (based on reported trade values in current U.S. dollars). The center of gravity thus reflects all trade flows around the world, and it can pass through locations where little or even no trade takes place.[3]

The largest movement in the center of gravity of both exports and imports took place between 2000 and 2010, as China surged to become the world's largest trading nation. Since 2010, shifts in the geography of world trade have been more modest. From 2024 to 2029, forecasts imply a small shift toward the southeast. Data Sources: Historical data from IMF Direction of Trade Statistics and forecasts aggregated from Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence

Current forecasts imply a modest shift of the center of gravity of both exports and imports toward the southeast between 2024 and 2029.

and Singapore). That trend was turbocharged by China's surge to become the world's largest exporter in 2009 (up from seventh place in 2000, when China's exports were less than one-third as large as the U.S.'s and half as large as Germany's). As a result, the center of gravity of both exports and imports shifted more between 2000 and 2010 than during any other decade since 1950.

The long-term perspective shown in Figure 3.1 also reveals that the center of gravity for exports has been to the southeast of the center of gravity for imports since the two centers crossed paths during the 1970s. More goods flow from east to west (and south to north) than vice versa, and this gap peaked in 2000 before starting to narrow as the U.S. trade deficit and the Chinese trade surplus diminished (relative to these countries GDPs).[4] Additionally, while the most dramatic shifts in the center of gravity of world trade have been from west to east, there was also a notable shift to the north before 2000, followed by a southward shift between 2000 and 2010.[5] This southward movement was driven not only by the rise of China but also by increases in shares of world trade across regions as far flung as South Asia, South America, and Sub-Saharan Africa.
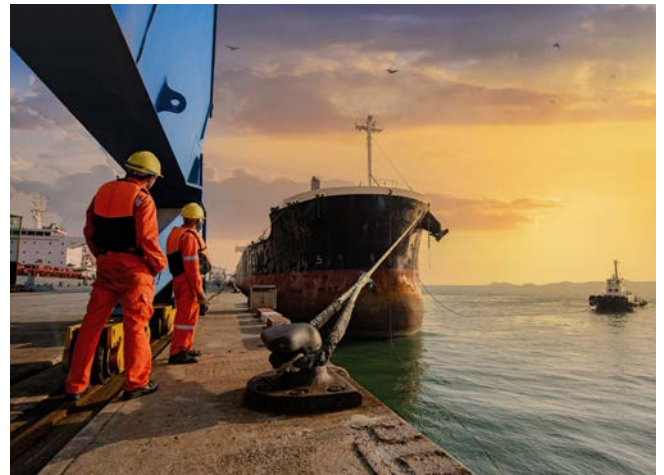
From 2010 to 2019, there was a very limited additional movement of the center of gravity of world trade toward the east. This was followed by a temporary movement further east during the Covid-19 pandemic (2020 and 2021) due to the greater resilience of production and trade in China and other parts of Asia during the early stages of the pandemic as compared to other parts of the world. This eastward movement then reversed as western economies recovered from the pandemic. The westward movement from 2021 to 2024 was larger for imports than for exports, due in part to the recent weakness of China's imports.

Looking to the future, current forecasts imply a modest shift of the center of gravity of both exports and imports toward the southeast between 2024 and 2029. Given its scale and geographic location, rising trade in Southeast Asia plays an especially large role in generating this predicted shift.[6]
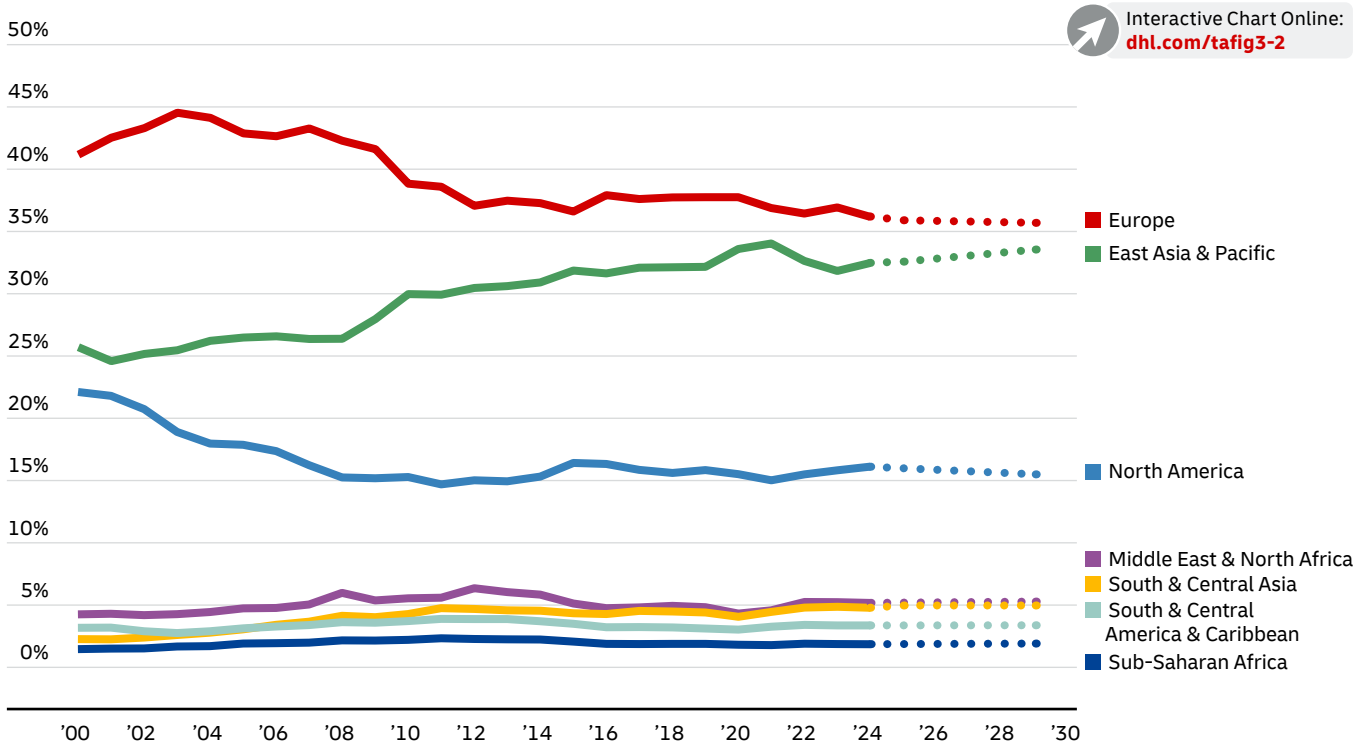
TRADE SHARES BY REGION

The shifts we saw in the center of gravity of world trade are also reflected in the changing shares of trade conducted by each of the world's major geographic regions. **Figure 3.2** tracks the shares of world trade conducted by major geographic regions since 2000. The most dramatic change has been a large increase in the share of world trade conducted by Asian economies. The East Asia & Pacific region's share of world trade rose from 26% in 2000 to 33% in 2024, while the share for South & Central Asia rose from 2% to 5%.[7]

Europe continues to trade more than any other region, but Europe's share of global trade has declined from 41% in 2000 to 36% in 2024. North America's share declined even more over that period, from 22% to 16%. Those declines, however, took place almost entirely before 2012, after which these regions' shares of world trade have remained fairly stable.

Current forecasts imply modest changes to region-wise shares of world trade between 2024 and 2029. The East Asia & Pacific region's share is forecast to rise from 33% to 34%, with Southeast Asia driving this growth. Meanwhile, North America's and Europe's shares are forecast to decline by roughly half a percentage point each. Forecast share changes for all other regions are even smaller (less than one tenth of a percentage point).

Figure 3.3 narrows the focus specifically to the European Union, China, and the United States. It spotlights China's rise from 4% of world trade in 2000 to a peak of 14% in 2021 (elevated due to the Covid-19 pandemic), after which it dipped back to 13% by 2024.[8] Following earlier declines, the EU and U.S. shares of world trade have not changed substantially since 2012. Looking forward, current forecasts imply no large changes to these three major economies' shares of world trade between 2024 and 2029.

FIGURE 3.2: REGION-WISE SHARES OF WORLD GOODS TRADE, 2000 – 2029 (FORECAST)

Interactive Chart Online:
dhl.com/tafig3-2

Legend:
- Europe
- East Asia & Pacific
- North America
- Middle East & North Africa
- South & Central Asia
- South & Central America & Caribbean
- Sub-Saharan Africa

Europe, East Asia & Pacific, and North America conduct nearly 85% of world trade. East Asia & Pacific's share of world trade has increased dramatically since 2000, while the other major regions' shares have declined.

Data Sources: Historical data from IMF Direction of Trade Statistics and forecasts aggregated from Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence

FIGURE 3.3: EUROPEAN UNION, CHINA, AND UNITED STATES SHARES OF WORLD GOODS TRADE, 2000 – 2029 (FORECAST)

Interactive Chart Online:
dhl.com/tafig3-3

Legend:
- European Union
- China
- United States
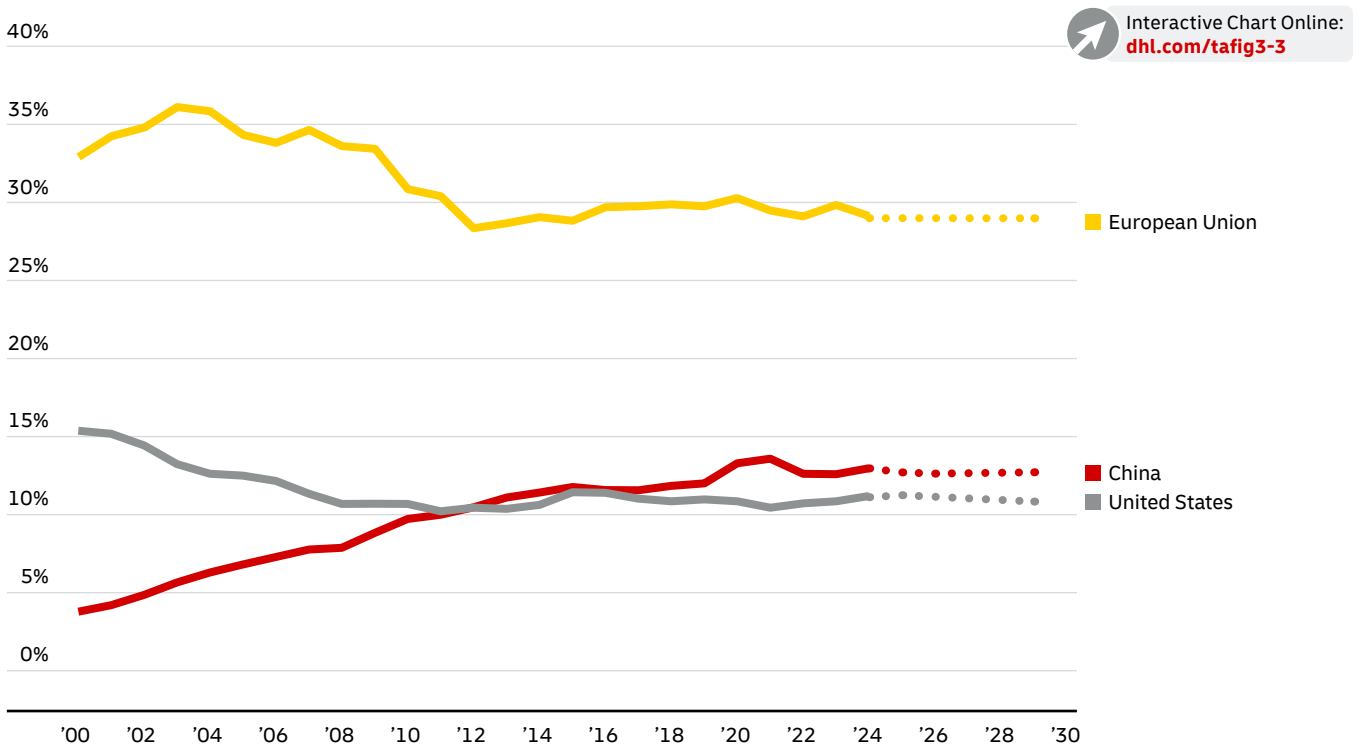
China's share of world trade rose from 4% in 2000 to a peak of 14% in 2021, before dipping back to 13% in 2024. The EU and U.S. shares of world trade have remained fairly stable since 2012.
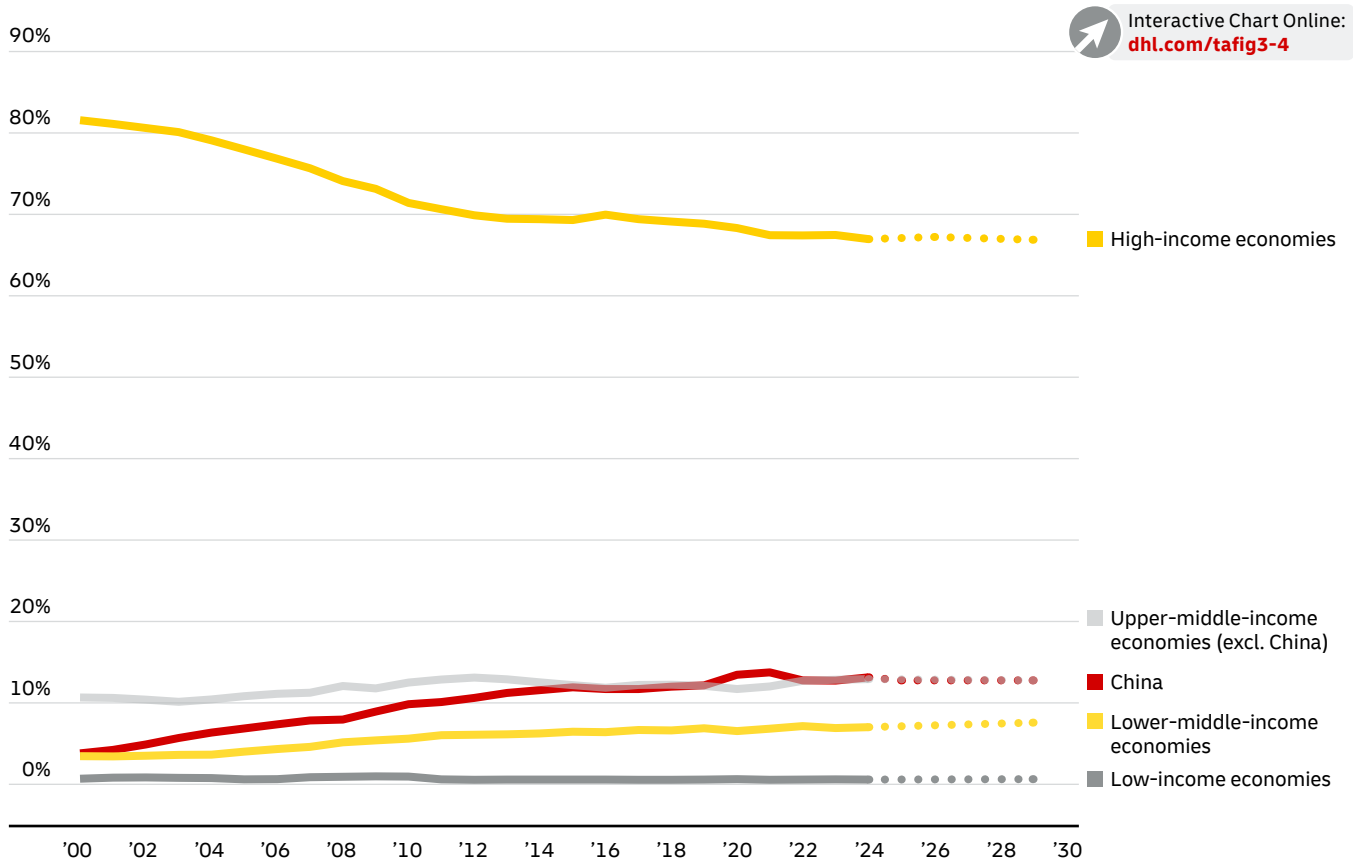
Data Sources: Historical data from IMF Direction of Trade Statistics and forecasts from Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence

TRADE SHARES BY COUNTRY INCOME LEVEL

The World Bank classifies economies into four groups by gross national income (GNI) per capita.[9] **Figure 3.4** shows how each of these groups and China (an upper-middle income country shown separately from the rest of its income group), contribute to world goods trade. The large majority is conducted by high-income economies, but their share has declined from 82% in 2000 to 67% in 2024. This is mostly due to China's rise from 4% to 13% of world trade (as mentioned previously) during the same period.

Other middle-income economies have also grown their shares of world trade since the beginning of the century. Upper-middle-income economies (excluding China) grew their share from 11% to 13%, while lower-middle-income economies grew their share from 3% to 7% (due in part to the rise of India's trade from 0.6% to 2.4%). Meanwhile, the share of trade conducted by low-income economies remains a small fraction of world goods trade (less than 0.5% in 2024).

FIGURE 3.4: INCOME LEVELS SHARES OF WORLD GOODS TRADE, 2000 – 2029 (FORECAST)

Interactive Chart Online:
dhl.com/tafig3-4

- High-income economies
- Upper-middle-income economies (excl. China)
- China
- Lower-middle-income economies
- Low-income economies

Most trade in goods is still conducted by high-income countries, but China and other middle-income countries have increased their shares of world trade.

Data Sources: Historical data from IMF Direction of Trade Statistics and forecasts aggregated from Economist Intelligence Unit, IMF World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence

## TRADE SHARE CHANGES VS. ABSOLUTE TRADE GROWTH

Trade volumes for South & Central Asia and East Asia & Pacific nearly quadrupled from 2000 to 2024. In most other regions, trade volumes roughly doubled.

It is important not to mistake a decline in any region's (relative) share of world trade with an actual decline in its (absolute) exports or imports. Over the past two decades, the amount of goods crossing national borders has increased in every region around the world. The pace of growth, however, varied widely. South & Central Asia's and East Asia & Pacific's trade volumes nearly quadrupled from 2000 to 2024, while trade volumes in most other regions roughly doubled.[10]

To visualize how trade flows have grown and shifted geographically, **Figure 3.5** displays a pair of maps in which countries are sized in proportion to their total trade flows (goods exports and imports) in 2000 (top map) and 2024 (bottom map). Over this period, the total amount of trade taking place around the world rose by 142% (more than doubling), so there is 142% more land area on the bottom map than on the top map. Meanwhile, the geographic shifts already discussed are clearly apparent. Every region has grown, but Asia has grown far more than other regions.

FIGURE 3.5: GOODS TRADE VOLUME GROWTH AND GEOGRAPHIC SHIFTS, 2000 VS. 2024

2000
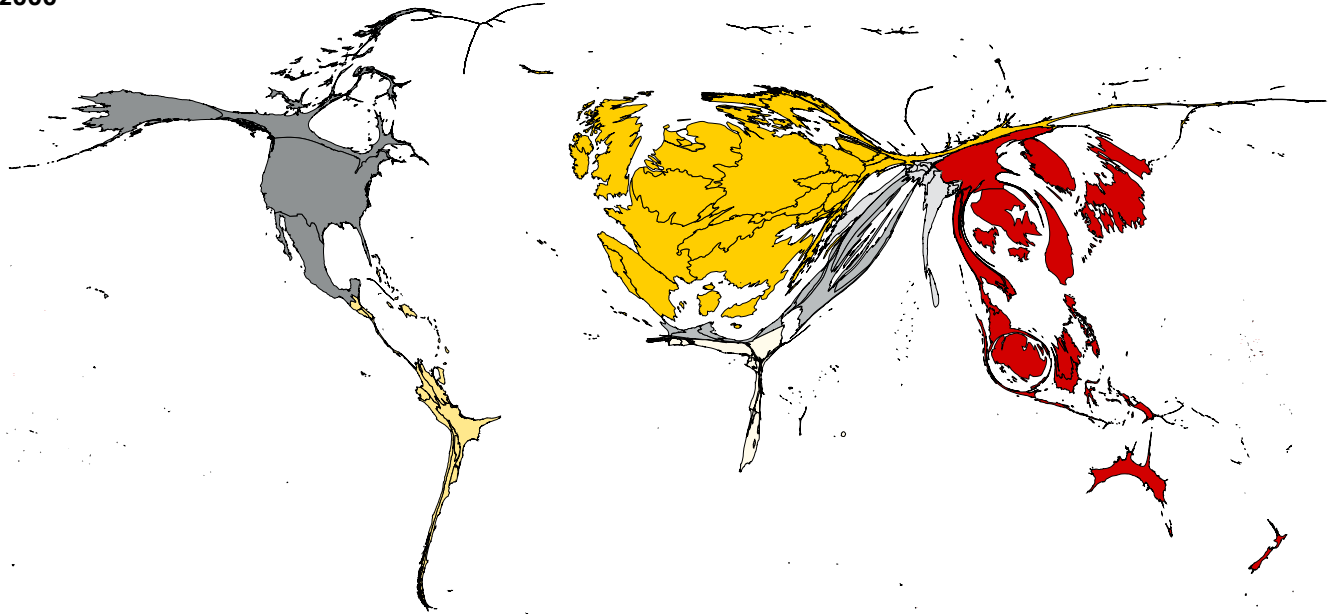
2024
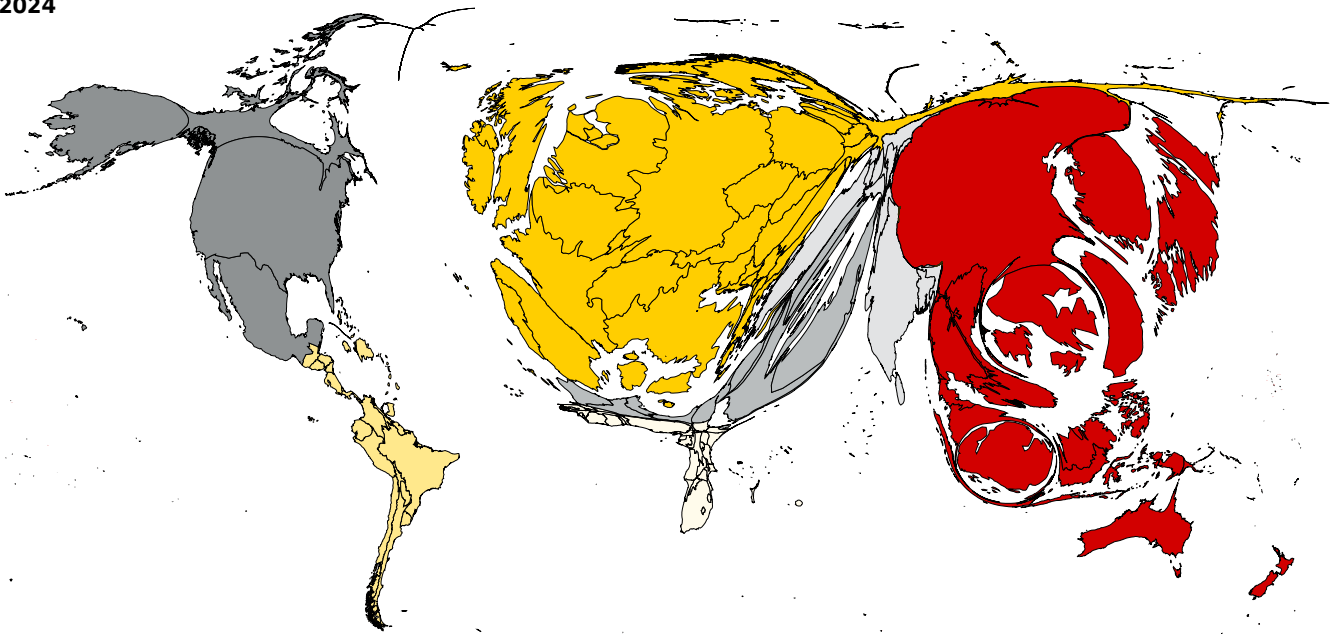
■ East Asia & Pacific   ■ Europe   ■ Middle East & North Africa   ■ North America   ■ South & Central America, Caribbean   ■ South & Central Asia   ■ Sub-Saharan Africa

Maps depicting both the growth and the changing geography of world trade help to avoid the misperception that a declining share of world trade for any region implies an actual decline in that region's trade flows. To visualize both growth and shifts over time, we display maps where countries are sized in proportion to their total trade volumes. As trade volumes grow, the total amount of land area shown expands.[11]

Trade flows grew across every region of the world since 2000, even as Asia's rising share shifted the center of gravity of world trade to the east.
Data Sources: IMF World Economic Outlook October 2024 and IMF Direction of Trade Statistics
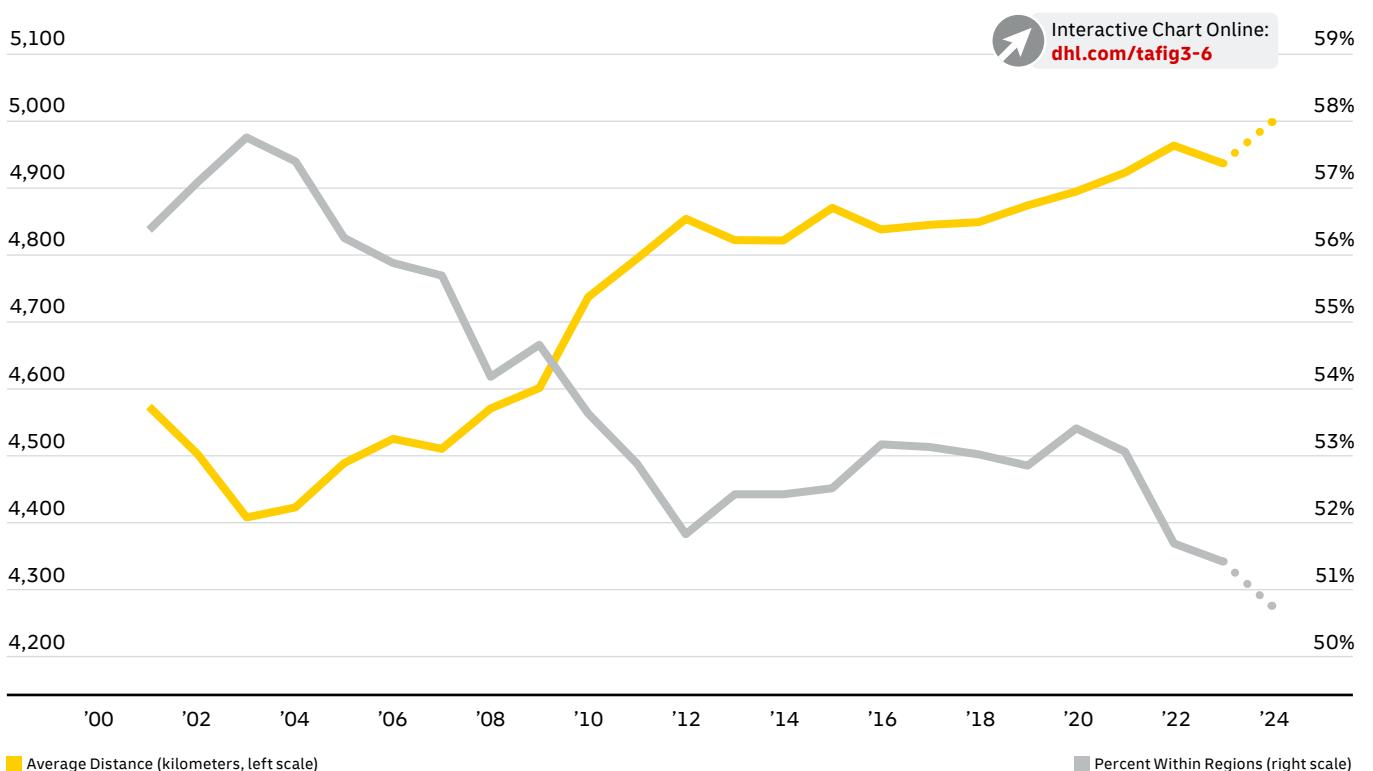
AVERAGE DISTANCE AND REGIONALIZATION

As trade grew around the world during the past two decades – with Asia leading the expansion – the growth of trade between regions tended to outpace the growth of trade within regions. This is largely because Europe and North America traded more with Asia as "Factory Asia" became increasingly central to global production networks.[12] As a result, the global average distance traversed by trade in goods increased and the share conducted within regions declined (see **Figure 3.6**.) Similar to the pattern we saw with the center of gravity of world exports and imports, the distance traversed by world trade increased rapidly during roughly the first decade of the 21st century and then stabilized as shifts in the geography of world trade slowed.[13]

> *Contrary to predictions that the Covid-19 pandemic and recent increases in geopolitical tensions would lead to more regionalized trade patterns, actual trade flows indicate the opposite trend.*

Since 2019, there is again a clear – but more modest – rising trend in the average distance over which countries trade and a decline in the share of trade happening inside regions. Contrary to predictions that the Covid-19 pandemic and recent increases in geopolitical tensions would lead to more regionalized trade patterns, actual trade flows indicate the opposite trend.[14]

FIGURE 3.6: WORLD GOODS TRADE AVERAGE DISTANCE AND REGIONALIZATION, 2000 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig3-6

■ Average Distance (kilometers, left scale)   ■ Percent Within Regions (right scale)

The average distance traversed by international trade flows increased swiftly between 2004 and 2012 and then remained fairly stable until 2019 before another clear rising trend became apparent.

Data Sources: IMF Direction of Trade Statistics, CEPII Gravity Database. Note: 2024 values are based on data from the first nine months of the year.

FIGURE 3.7: GOODS TRADE AVERAGE DISTANCE AND REGIONALIZATION, BY REGION, 2001 – 2024 (JAN – SEPT)

Europe

East Asia & Pacific

North America

Middle East & North Africa

Average Distance (kilometers, left scale)
Percent Within Regions (right scale)
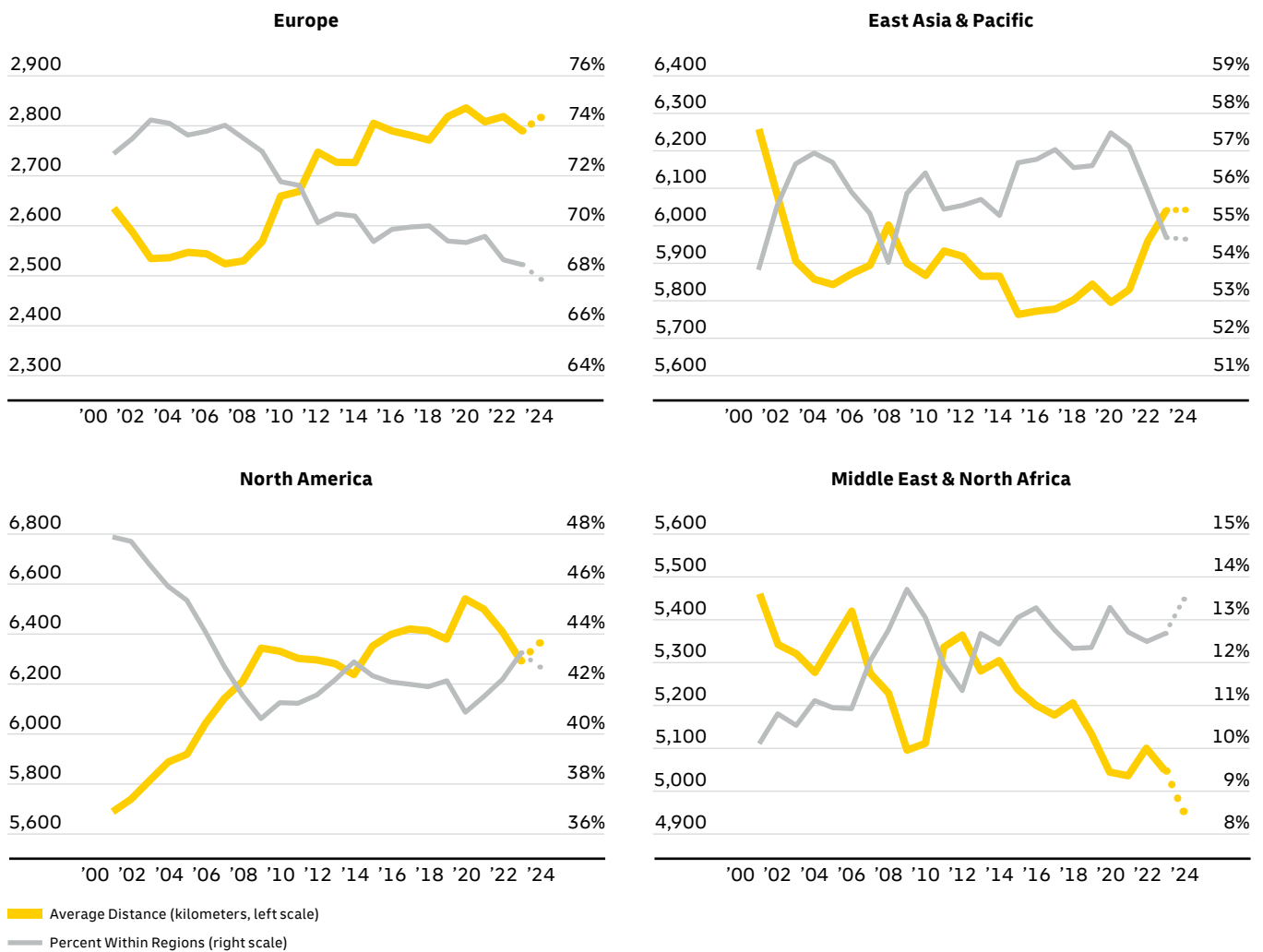
Between 2020 and 2023, East Asia & Pacific's trade became less regionalized, while North America's trade became more regionalized. However, neither of those trends continued during the first nine months of 2024.
Data Sources: IMF Direction of Trade Statistics, CEPII Gravity database. Note: 2024 values are based on data from the first nine months of the year.

During the first nine months of 2024, goods trade flows averaged the longest distance on record (approximately 5,000 km) and the lowest share within regions (51%).

A region-level view of changes in the average distance traversed by trade in goods, as shown in **Figure 3.7**, helps to explain the global patterns. The three regions shown first

in the figure jointly conduct 85% of world trade: Europe (36%), East Asia and Pacific (33%), and North America (16%). The trends across these regions therefore have the largest impact on the global results (which we compute as trade-weighted averages). During the early stages of the Covid-19 pandemic, North America and Europe drove the increases in the global average distance as they traded more with

South & Central America, Caribbean
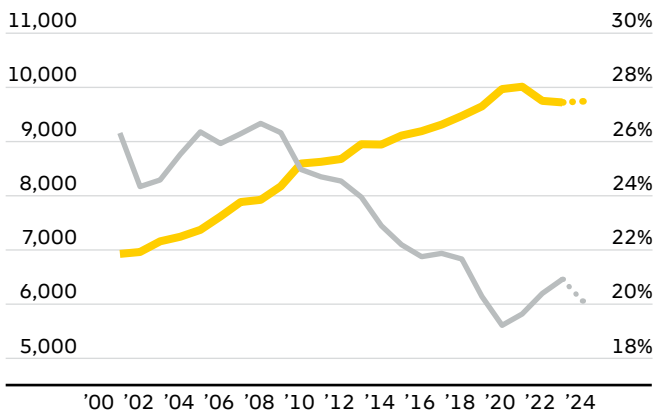
South & Central Asia
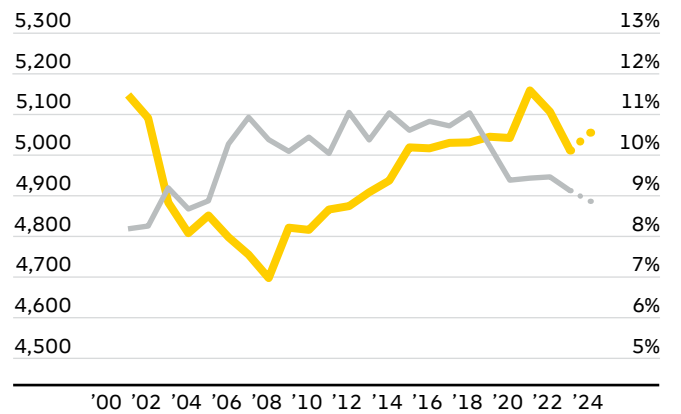
Sub-Saharan Africa
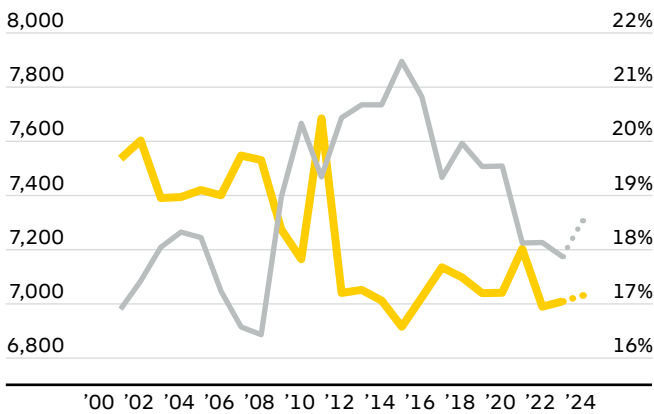
Interactive Chart Online:
dhl.com/tafig3-7

faraway Asia. Since 2021, further increases have been driven by East Asia & Pacific, where the region's largest economies (China, Japan, and Korea) have all traded over longer average distances. The share of China's imports coming from Japan and Korea has declined, contributing to a decline in the intra-regional share of trade in the East Asia & Pacific region.

Figure 3.8 provides a product-wise view of the average distance over which goods are traded. The goods traded over the longest distances tend to be non-perishable products with high value-to-weight and value-to-bulk ratios. The category averaging the longest distance (Footwear, Headgear, Umbrellas and Feathers) includes products such as shoes. More than half of the world's shoe exports by value originate in just two countries, China and Viet Nam, which export them to markets all over the world. In contrast, the goods traded over the shortest distances tend to be perish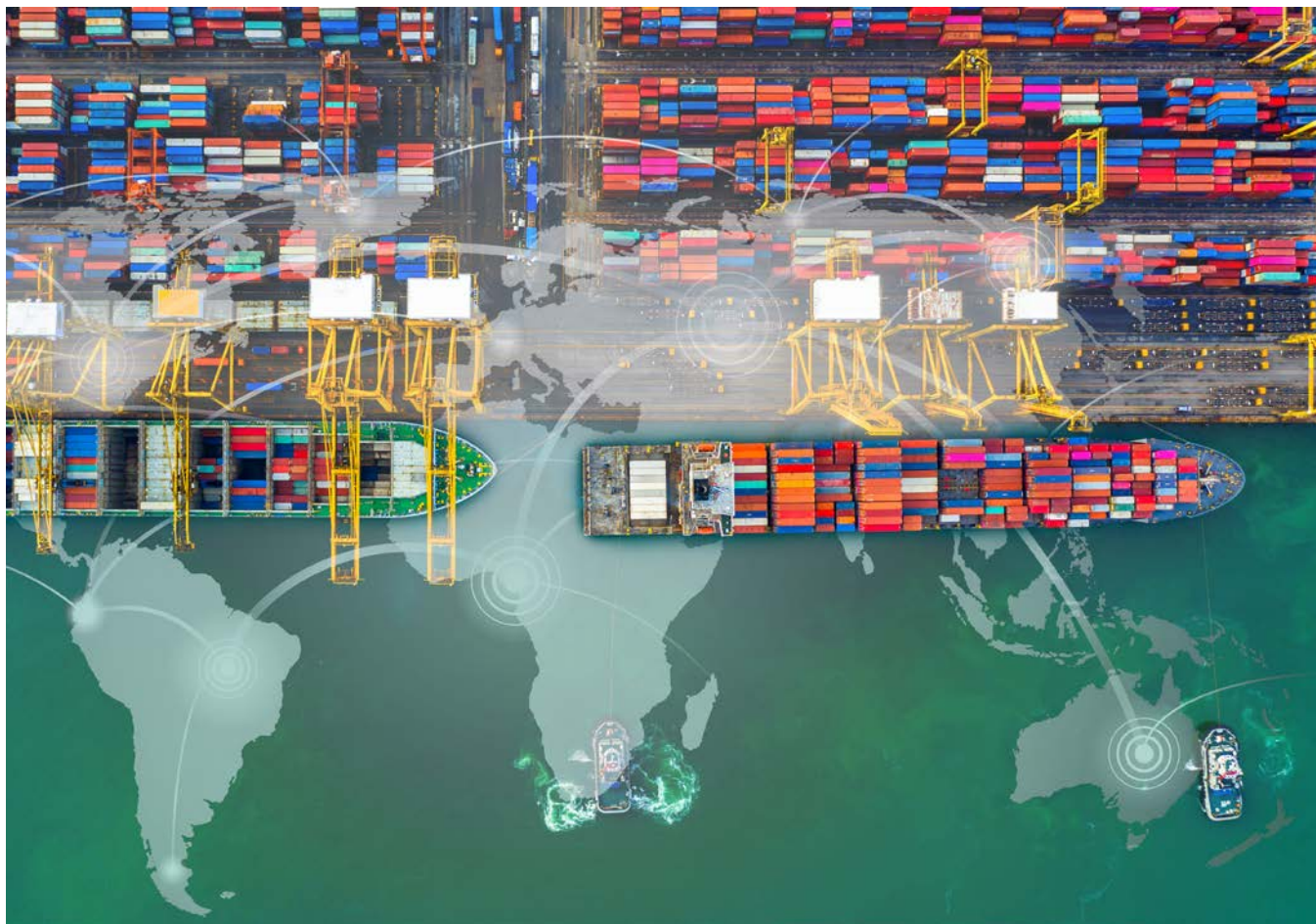able products (such as prepared foods) and products with low value-to-weight or value-to-bulk ratios, such as many wood products.

The most dramatic recent change involved Arms and Ammunition, which was traded over a much shorter average distance in 2022 than in 2017.[15] There was a large increase in shipments of weapons to Ukraine from nearby countries in Europe, reducing the average distance over which this category of goods was traded. Changes in average distance for all other product categories were comparatively small, and most categories were traded over longer distances in 2022 than in 2017.

In summary, recent shifts in the geography of world trade have been comparatively modest. After shifting dramatically to the east during the 2000s, recent movements in the center of gravity of world trade have been more limited. Changes in regions' shares of world trade have also been smaller. Trade has continued to grow in absolute terms even in regions whose shares of world trade declined over the past quarter century. Contrary to predictions that recent disruptions would lead to more regionalized trade patterns, trade has tended to take place over longer distances over time.

FIGURE 3.8: AVERAGE DISTANCE (KILOMETERS) BY PRODUCT CATEGORY (HS SECTIONS), 2022 VS. 2017
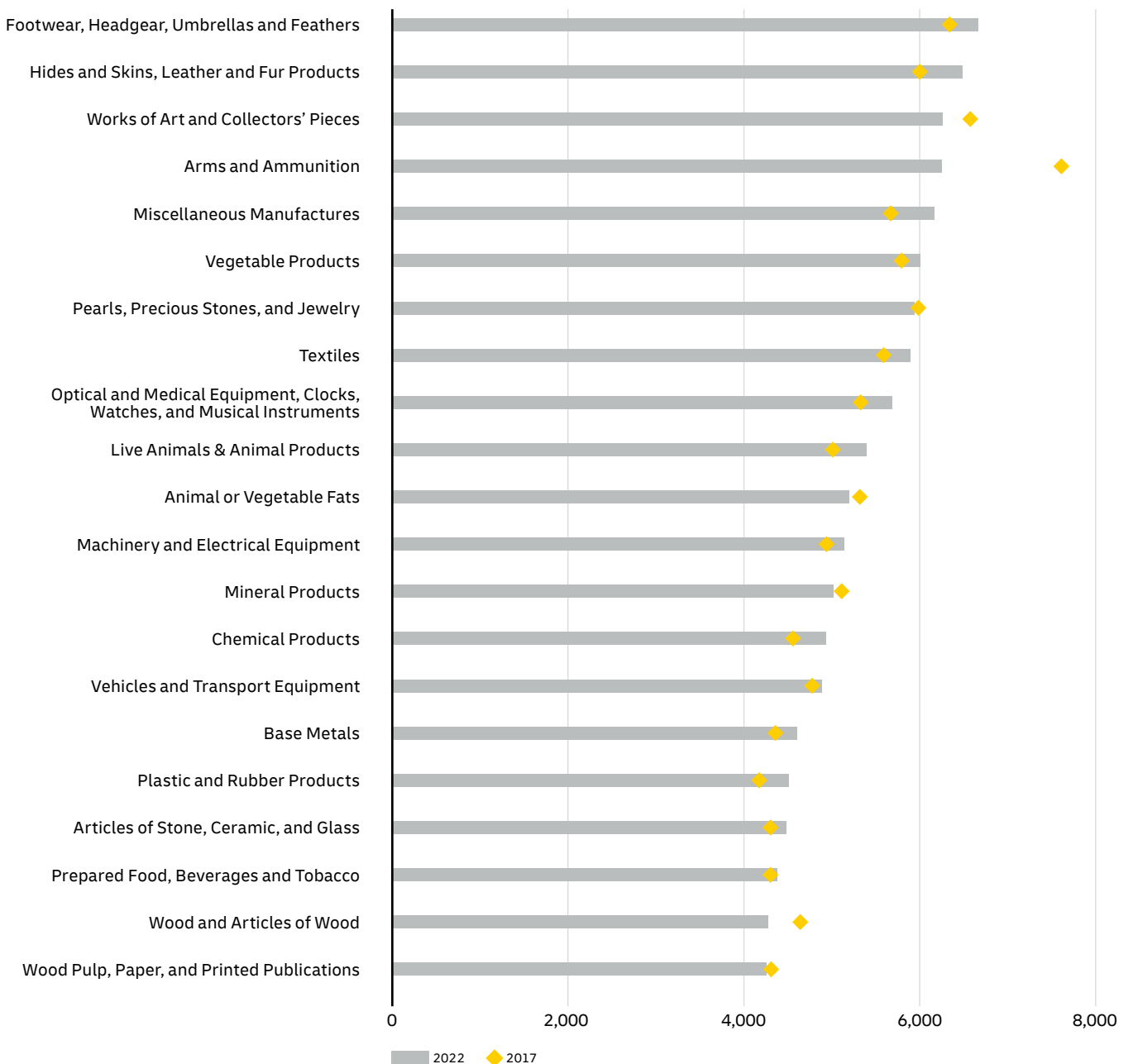
Trade in most product categories took place over longer distances in 2022 than in 2017. One notable exception, however, was Arms and Ammunition, which was traded over a shorter average distance in 2022 because of large transfers of weapons to Ukraine from neighboring countries in Europe.

Data Sources: CEPII BACI, CEPII Gravity database

4. GEOPOLITICS AND SHIFTING TRADE PATTERNS

Rising geopolitical tensions have raised the possibility of a fracturing of global trade between geopolitical blocs, with potentially severe economic consequences. In this section, we examine how much of the world's trade takes place between versus within groups of geopolitically aligned countries and we consider the latest evidence on geopolitically driven shifts in trade patterns.

# GEOPOLITICS AND TRADE SHIFTS IN GLOBAL PERSPECTIVE

Against the backdrop of rising tensions between the world's two largest economies – the United States and China – the world has seen a marked increase in violent conflicts and related disruptions to international trade. In 2024, there were more active conflicts underway around the world than at any other time since World War II.[1] This has led to an unprecedented proliferation of trade sanctions[2] and to concerns about a potential fracturing of the world economy into separate geopolitical blocs.

Multiple recent studies published by institutions such as the World Trade Organization (WTO) and the International Monetary Fund (IMF) show trade between rival geopolitical blocs growing more slowly than trade within such blocs, suggesting early signs of separation between rival blocs.[3] (The studies emphasize that such "geoeconomic fragmentation"

remains limited.) They also warn that a substantial fracturing of the world economy could have severe economic consequences. One study reports that a complete split of world trade between two rival blocs of countries could cut world GDP by as much as 7%.[4]

Figure 4.1 provides an update, tracking the value of trade between versus within blocs of close allies using a classification of close allies that was developed by Capital Economics (see **Country Blocs and Geopolitical Distance** on p. 50).[5] While it does confirm a decline in trade between blocs relative to trade within blocs in 2022 and 2023, it shows that this declining trend did not continue in 2024 (based on data through the first nine months of the year).[6] Trade pattern shifts caused by Russia's 2022 full-scale invasion of Ukraine may have largely played out by the end of 2023.

FIGURE 4.1: RATIO OF GOODS TRADE BETWEEN VS. WITHIN BLOCS OF CLOSE ALLIES, 2001 – 2024 (JAN – SEPT)
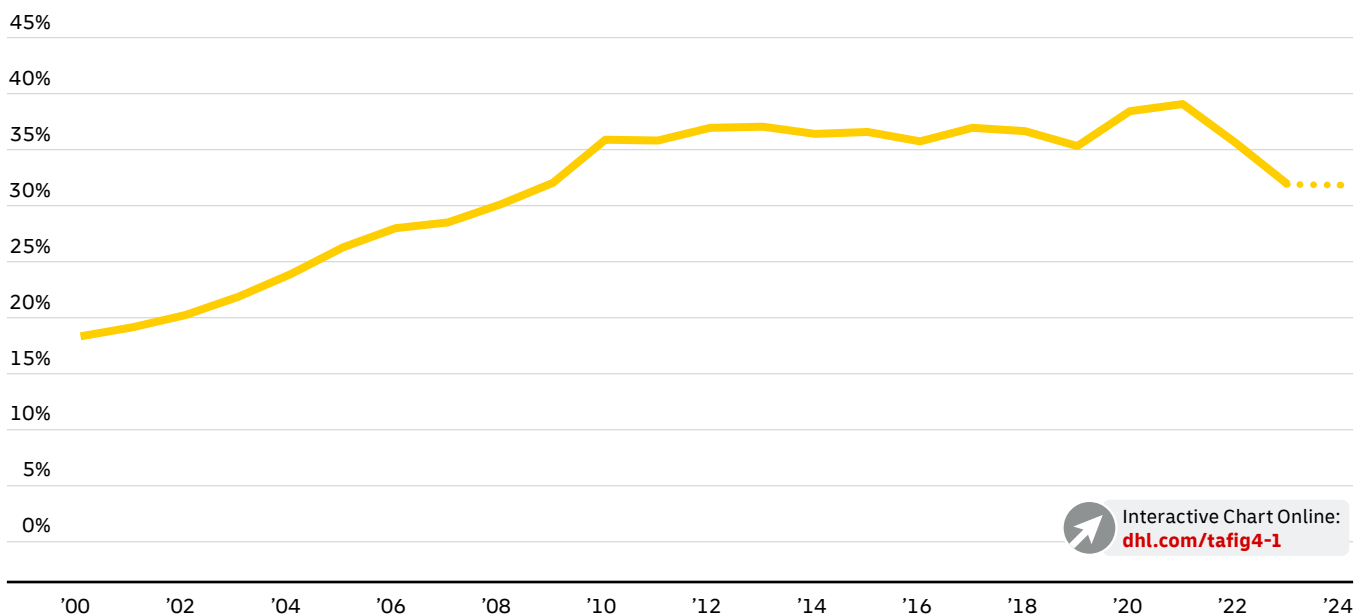
Interactive Chart Online:
dhl.com/tafig4-1

After declining in 2022 and 2023, the ratio of trade between blocs of close allies vs. within those blocs held steady during the first nine months of 2024.

Data Sources: IMF Direction of Trade Statistics, Capital Economics
Note: 2024 value is based on data from the first nine months of the year.

COUNTRY BLOCS AND GEOPOLITICAL DISTANCE[7]

The analysis of a potential split of the world economy along geopolitical lines requires measures of countries' geopolitical alignment. We use two complementary methods: (1) a classification of country blocs developed by Julian Evans-Pritchard and Mark Williams of Capital Economics[8] and (2) a continuous measure of geopolitical distance based on how countries vote in the United Nations General Assembly developed by political science scholars Michael Bailey, Anton Strezhnev, and Erik Voeten.[9]
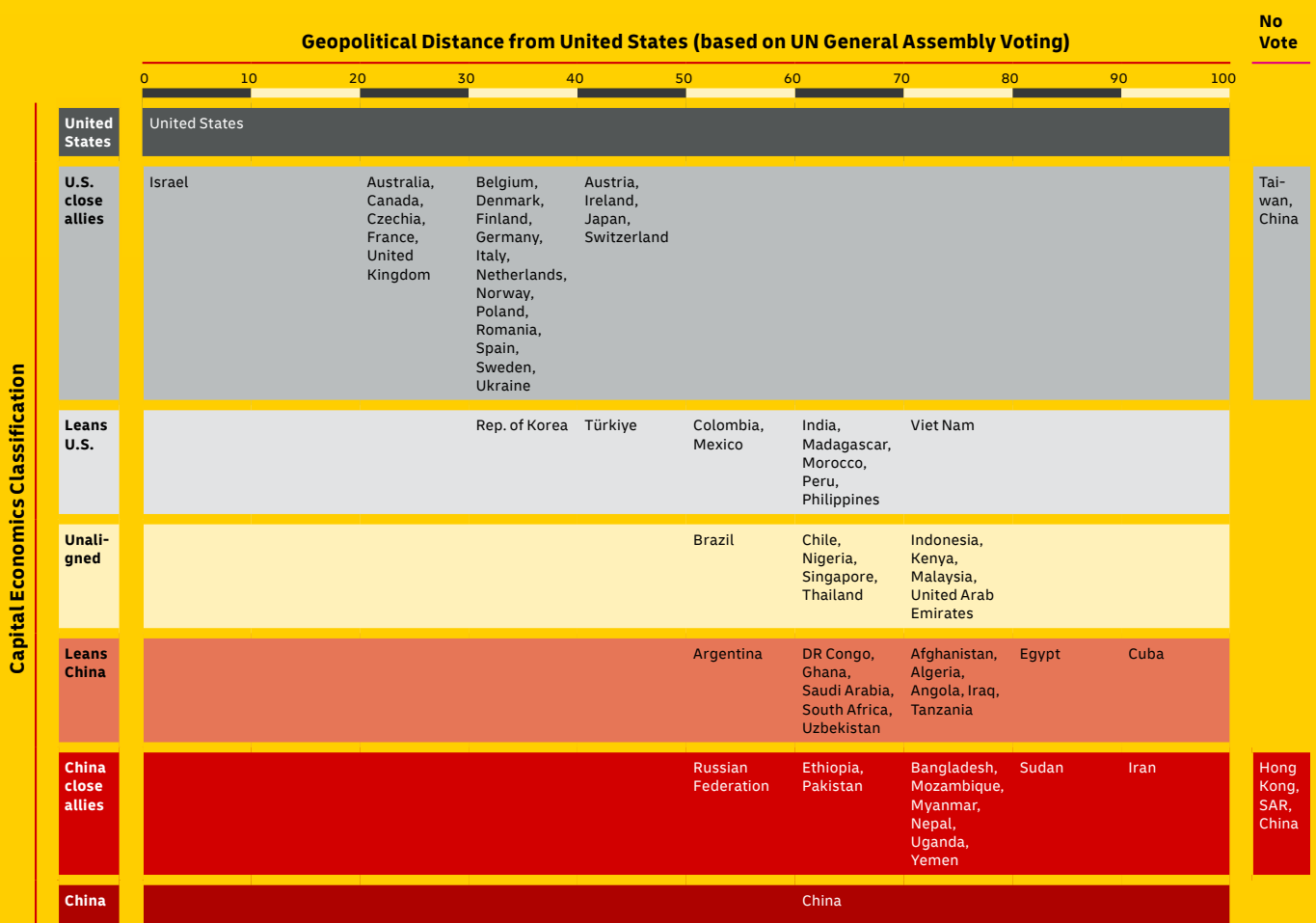
The Capital Economics classification is especially well suited to analysis of a split between blocs aligned with the U.S. and China. It reaches beyond measures commonly used in the academic literature to also take into account other factors, such as which countries have territorial disputes with China and which participate in major international initiatives led by the U.S. or China.[10]
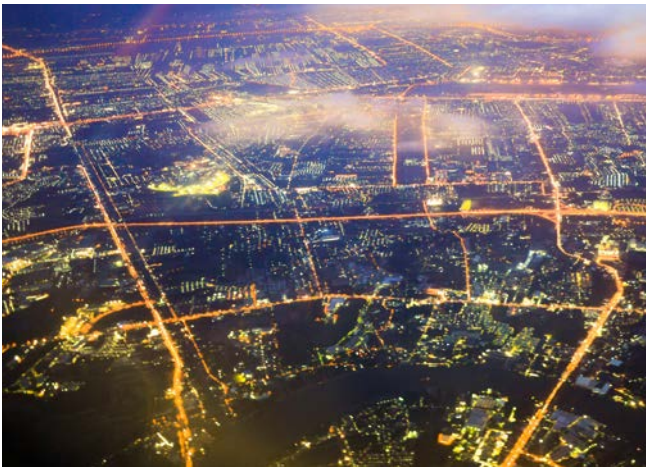
The continuous geopolitical distance measure based on UN General Assembly votes is widely used in the academic literature, and has also been adopted by institutions such as the WTO and IMF in their research on geoeconomic fragmentation. While several methods have been developed to assess countries' geopolitical alignment based on their votes at the UN, we selected this method for two main reasons: (1) it accounts for changes

over time in the topics countries vote on, and (2) it has been designed to measure countries' positions vis-a-vis the U.S.-led liberal international order. The distances shown here reflect the absolute value of the difference between countries "ideal points" (as revealed by the UN votes), averaged over the 5-year period 2018 – 2022 and rescaled between 0 and 100.

The figure below shows how countries are positioned using both methods (displaying countries that rank among the world's 50 largest by either GDP or population). The two methods yield fairly consistent results for "close allies," but there are larger differences for countries that Capital Economics only views as "leaning" toward one side or the other. In our view, a split between rival blocs is most likely to appear first among countries with stronger geopolitical ties. When using the Capital Economics classification, we therefore use blocs comprised only of "close allies" and treat all other countries as unaligned.

We must acknowledge that these methods of classifying countries according to geopolitical alignments are both backward-looking. Recent tariff threats between the U.S. and Canada illustrate the potential for major shifts in relations, even among countries that have historically been very close allies.

Geopolitical Distance from United States (based on UN General Assembly Voting)

Capital Economics Classification	0–10	20	30	40	50	60	70	80	90	100	No Vote
United States	United States										
U.S. close allies	Israel		Australia, Canada, Czechia, France, United Kingdom	Belgium, Denmark, Finland, Germany, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Ukraine	Austria, Ireland, Japan, Switzerland						Taiwan, China
Leans U.S.				Rep. of Korea	Türkiye	Colombia, Mexico	India, Madagascar, Morocco, Peru, Philippines	Viet Nam			
Unaligned						Brazil	Chile, Nigeria, Singapore, Thailand	Indonesia, Kenya, Malaysia, United Arab Emirates			
Leans China						Argentina	DR Congo, Ghana, Saudi Arabia, South Africa, Uzbekistan	Afghanistan, Algeria, Angola, Iraq, Tanzania	Egypt	Cuba	
China close allies						Russian Federation	Ethiopia, Pakistan	Bangladesh, Mozambique, Myanmar, Nepal, Uganda, Yemen	Sudan	Iran	Hong Kong, SAR, China
China						China					

FIGURE 4.2: GOODS TRADE AVERAGE GEOPOLITICAL DISTANCE BASED ON UN GENERAL ASSEMBLY VOTING PATTERNS, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online: **dhl.com/tafig4-2**

We find additional support for that perspective in the latest data on the average "geopolitical distance" over which trade in goods takes place, measured based on how countries vote in the United Nations General Assembly.[11] **Figure 4.2** shows that the average geopolitical distance over which goods were traded declined in 2022 and 2023 (implying less of the world's trade happening between countries with different geopolitical alignments), but there was no further decline during the first nine months of 2024. To the contrary, the 2024 data indicate a rebound in the average geopolitical distance for goods trade.

The average geopolitical distance traversed by goods trade increased during the first nine months of 2024, partially reversing a declining trend that has been apparent since 2016.

Data Sources: IMF Direction of Trade Statistics; Michael A. Bailey, Anton Strezhnev, and Erik Voeten, "Estimating dynamic state preferences from United Nations voting data," *Journal of Conflict Resolution*, 61, no. 2, 2017.
Note: Geopolitical distance based on UN General Assembly voting between 2018 and 2022, rescaled 0 – 100. Trade data for 2024 is based on the first nine months of the year.

FIGURE 4.3: SHARES OF TOTAL GOODS TRADE WITHIN AND BETWEEN GEOPOLITICAL BLOCS, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig4-3

■ Within China bloc ■ Within U.S. bloc ■ With unaligned ■ Between blocs ■ Between U.S. and China
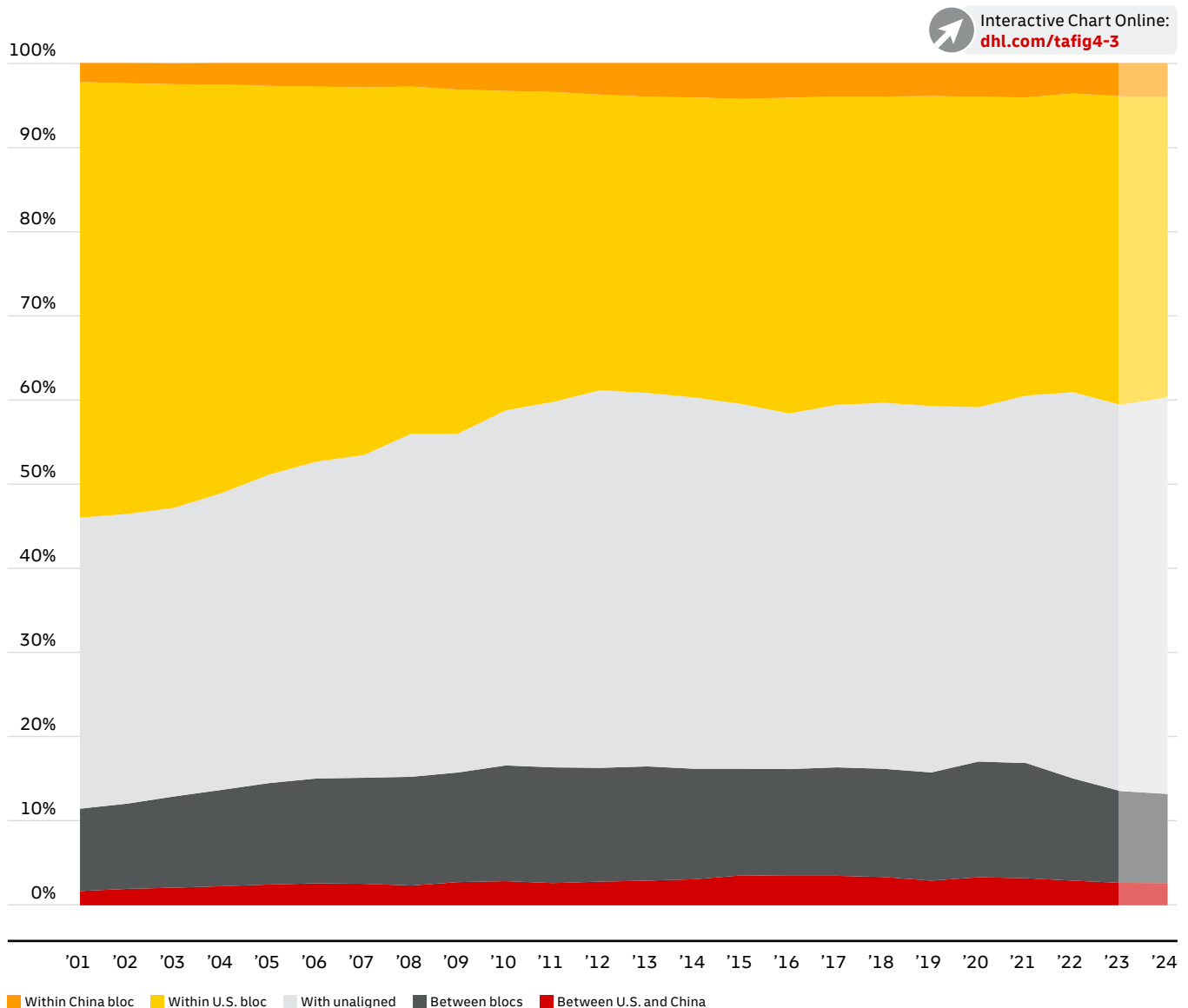
**Recent declines in trade between versus within geopolitical blocs are small in global perspective.**

Data Sources: IMF Direction of Trade Statistics, Capital Economics. Note: 2024 values are based on data from the first nine months of the year.

The shifts in trade patterns we have discussed so far in this section, while noteworthy, have only affected a small proportion of the world's total trade. To put these developments into global perspective, **Figure 4.3** tracks the shares of all trade in goods that take place directly between the U.S. and China, between versus among close allies of the U.S. and China, and with countries that are close allies of neither superpower. Starting with trade between geopolitical rivals, it shows that the share of world trade taking place directly between the U.S. and China has fallen from 3.5% in 2016 (before the start of the U.S. – China trade war) to 2.6% in 2024 (Jan – Sept).[12] This is a large drop for U.S. – China trade, but less than a one percentage point shift from a global perspective. (We return to U.S. – China trade shifts later in this section.)

Turning to trade between rival blocs of close allies, the share of world trade taking place between blocs (excluding direct trade between the U.S. and China) fell from 13.7% in 2021 (before Russia's full-scale invasion of Ukraine) to 10.6% in 2024 (Jan – Sept). However, most of that decline was due to the wholesale reorientation of Russia's trade flows due to the war in Ukraine and related sanctions.[13] If we exclude from the calculations Russia's trade with all countries, the decline in the share of trade crossing between blocs is much smaller (from 12.3% in 2021 to 10.5% in 2024). Moreover, there was an unusually high share of trade between blocs in 2021 due to the Covid-19 pandemic. Comparing 2019 to 2024, the share of world trade crossing between rival blocs of close allies has declined by less than one percentage point (from 11.4% to 10.5%).

FIGURE 4.4: TRADE FLOWS BY GEOPOLITICAL BLOC, 2023
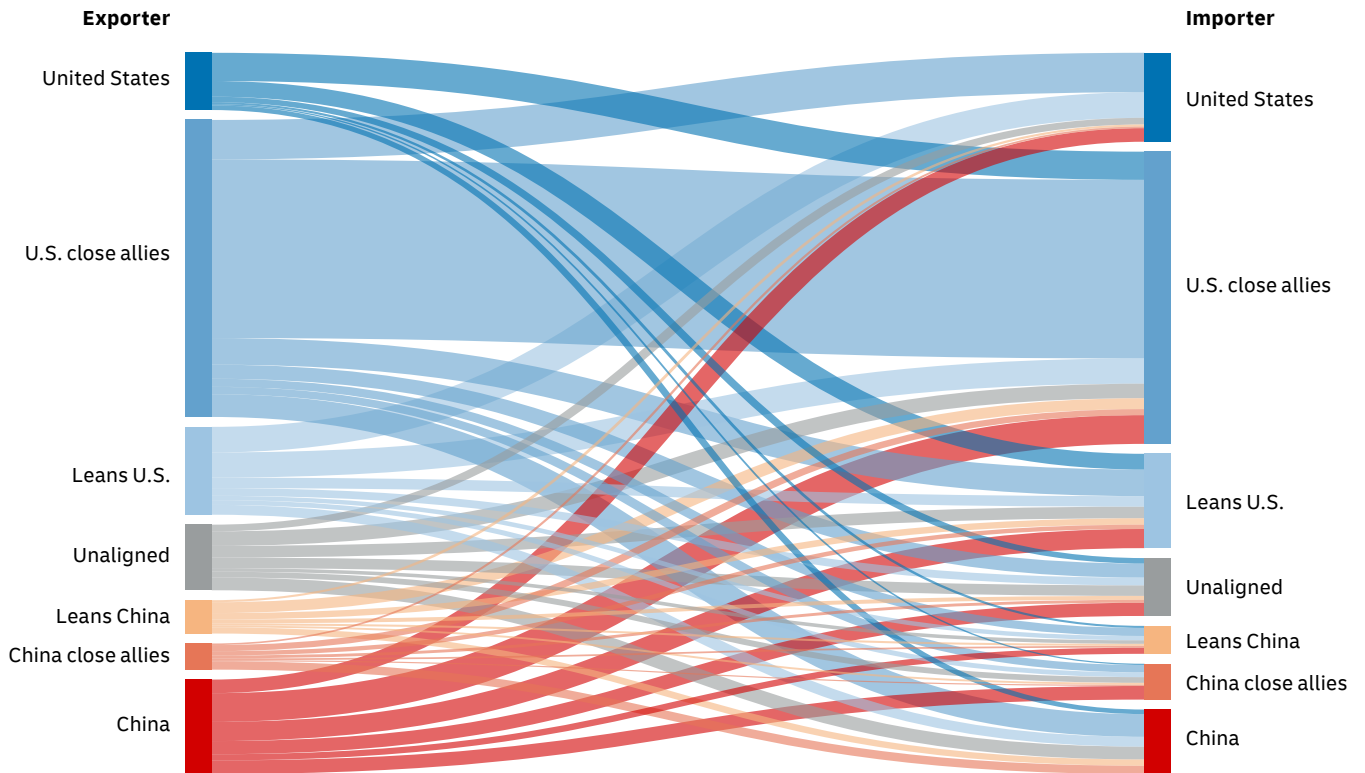
This figure shows flows of goods from exporter to importer in 2023. The height of the colored bars on the left represents the total value of each bloc's exports, while the bars on the right show the total value of each bloc's imports. The ribbons between them show the relative value of each bloc's trade flows from exporter to importer. Note that this figure does not include domestic trade, which is why neither the U.S. nor China has flows to itself; however, trade flows between separate countries within blocs are displayed, which is why, for example, the large flow between U.S. close allies is shown.

Both exports and imports are dominated by flows between the U.S. and its allies. There remains significantly more trade between China and the U.S. bloc than with its close allies. Data Sources: IMF Direction of Trade Statistics, Capital Economics.

It is also important to keep in mind that roughly four times more trade happens within groups of allied countries than between them. The share of trade happening within blocs of close allies has held fairly steady for more than a decade (with 37% of world trade taking place within the U.S.-aligned bloc in 2023 and 4% within the China-aligned bloc). **Figure 4.4** reinforces this point by visualizing trade flows in 2023 by origin and destination, using the same categories as Figure 4.3. It highlights how much larger the U.S.-aligned bloc's trade is compared to the China-aligned bloc.[14] The U.S. and its close allies generated 54% of global exports (67% if we also include countries classified as "leans U.S." in this bloc) and 58% of imports (72% including "leans U.S"). Even China trades three times more with the U.S. and its close allies than it does with its own close allies – and two times more with U.S. close allies only (excluding the U.S. itself).

Returning to trends over time (Figure 4.3), we have already noted a modest decline in the share of trade crossing between rival blocs and a fairly stable share of trade happening within blocs. The final category – with a clear rising trend in its share of world trade – is countries that are unaligned geopolitically or that only "lean" toward one superpower or the other. The share of trade involving countries that are neither close allies of the U.S. nor of China rose from 42% in 2016 to 47% in 2024. The United Arab Emirates, India, Viet Nam, Brazil, and Mexico exemplify this trend, ranking among the countries with the largest recent increases in their shares of world trade. The share of trade involving countries that are not even classified as "leaning" toward one or the other superpower rose from 15.4% in 2016 to 17.5% in 2024.

COUNTRIES AT THE CENTER OF CURRENT TENSIONS

The global trends we have examined so far in this section showed that geopolitically-driven shifts in trade patterns are still quite limited – and appear to have stalled based on data covering the first nine months of 2024. The trade flows of countries at the center of current tensions, nonetheless, do show much more substantial shifts.

The most dramatic recent change in trade patterns has been the almost complete reorientation of Russia's trade away from Western-aligned countries since the full-scale invasion of Ukraine. **Figure 4.5** highlights how the U.S. and its close allies have almost completely stopped importing goods from Russia, as Russia's share of the rest of the world's imports has increased dramatically. While this has caused noticeable effects on global trade patterns, these effects have been small because Russia's share of global exports is only about 2% and its share of global imports is even smaller.[15]

From a global perspective, a weakening of trade ties between the world's two largest economies – the U.S. and China – has the potential for larger consequences. As shown in the yellow line in **Figure 4.6**, the share of U.S. imports coming from China has fallen sharply since the start of the U.S. – China trade war in 2018. From 2017 to 2024 (Jan – Sept), the share of U.S. imports coming from China fell from 22% to 13%. The gray line in the figure helps to place this shift into perspective by showing the share of the rest of the world's imports coming from China, which has not changed appreciably in recent years. This confirms that the declining share of U.S. imports coming from China is not because of an overall decline in China's prominence as an exporter.

Comparing the yellow and gray lines also helps to show the limited extent of U.S. – China "decoupling" so far. The U.S. still brings in roughly the same share of its imports from

FIGURE 4.5: UNITED STATES AND CLOSE ALLIES VS. REST OF WORLD SHARE OF GOODS IMPORTS COMING FROM RUSSIA, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig4-5

U.S. and its Close Allies   Rest of World
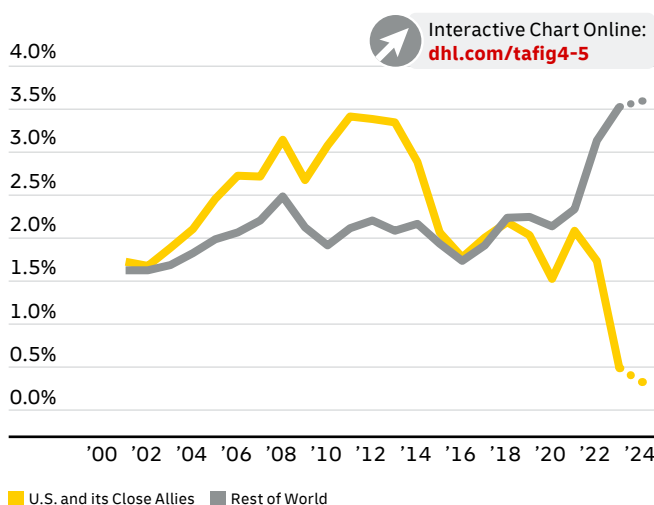
Since Russia's full-scale invasion of Ukraine, Western-aligned countries have almost completely stopped importing goods from Russia, while Russia's share of the rest of the world's imports has increased dramatically.

Data Sources: IMF Direction of Trade Statistics, Capital Economics.
Note: 2024 values are based on data from the first nine months of the year.

FIGURE 4.6: UNITED STATES VS. REST OF WORLD SHARE OF GOODS IMPORTS COMING FROM CHINA, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig4-6

United States   Rest of World
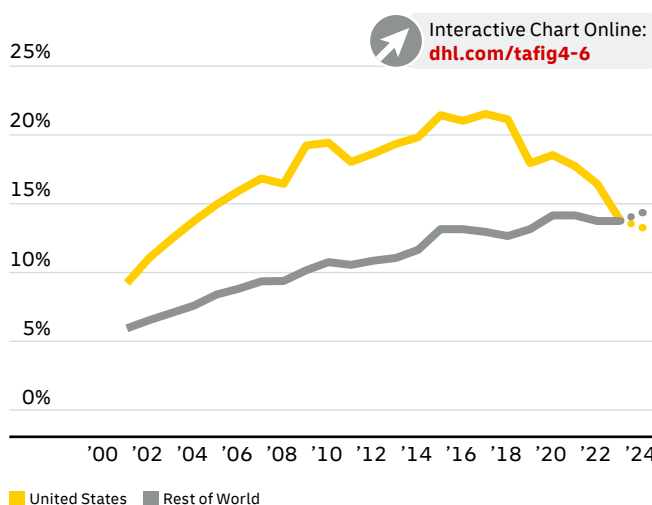
The share of U.S. imports coming from China has declined sharply since the start of the U.S. – China trade war, but the U.S. still brings in roughly the same share of its imports from China as the rest of the world does.

Data Sources: IMF Direction of Trade Statistics.
Note: 2024 values are based on data from the first nine months of the year.

China as the rest of the world does (down from an unusually high share before the current declining trend began). More-over, the yellow line in Figure 4.6 overstates the extent to which the U.S. has reduced its reliance on goods from China. As detailed on the following pages (**Has the U.S. Really Reduced its Reliance on Imports from China?**), the value of U.S. imports from China appears to be underreported, and traditional import statistics do not take into account the ris-ing amount of Chinese content that goes into U.S. imports from other countries.[16]

Figure 4.7 provides a parallel view of the share of European Union imports coming from China. It shows that the EU has only slightly reduced the share of its imports coming from China. The share of extra-EU imports coming from China peaked at 22.7% in 2020 and declined only to 21.2% by the first nine months of 2024. This is still a higher share of EU

imports coming from China than before the start of the Covid-19 pandemic, and it rose modestly from 2023 to 2024 (Jan – Sept).

Looking at the data from China's perspective, the most nota-ble change – apart from a declining share of exports going to the U.S. – is a large increase in the diversification of China's exports across trade partners. **Figure 4.8** shows the share of China's exports that go to its top five destination countries and the share of China's imports coming from its top five origin countries. Both shares have declined by more than 10 percentage points since 2016, even as China's overall trade has grown substantially.

FIGURE 4.7: EUROPEAN UNION VS. REST OF WORLD SHARE OF GOODS IMPORTS COMING FROM CHINA, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig4-7

Legend: ■ European Union   ■ Rest of World
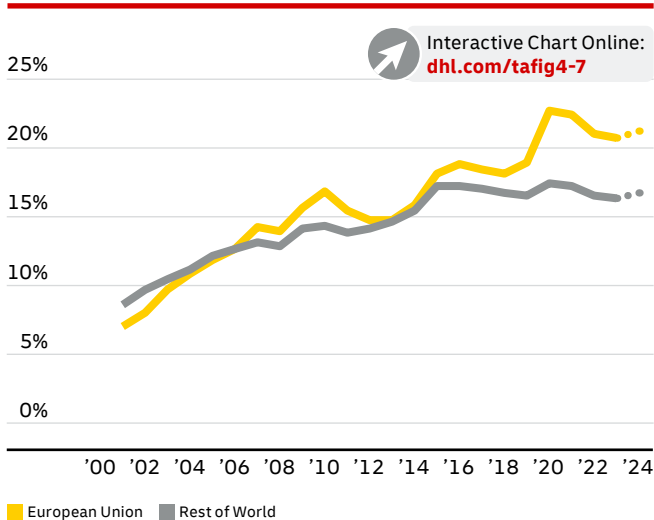
The share of EU imports coming from China remains above its pre-Covid level.
Data Sources: IMF Direction of Trade Statistics.
Note: Excludes intra-EU trade. 2024 values are based on data from the first nine months of the year.

FIGURE 4.8: CHINA SHARES OF GOODS EXPORTS AND IMPORTS WITH TOP 5 PARTNER COUNTRIES, 2001 – 2024 (JAN – SEPT)

Interactive Chart Online:
dhl.com/tafig4-8

Legend: ■ Exports   ■ Imports
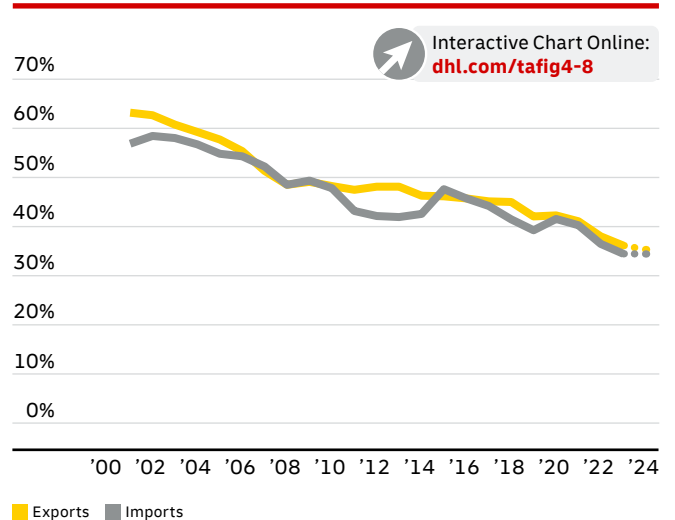
China has diversified its exports and imports across partner countries, with the shares involving China's top 5 partners declining by more than 10 percentage points since 2016 for both exports and imports.
Data Sources: IMF Direction of Trade Statistics.
Note: 2024 values are based on data from the first nine months of the year.

HAS THE U.S. REALLY REDUCED ITS RELIANCE ON IMPORTS FROM CHINA?

The declining share of U.S. imports coming from China (shown in Figure 4.6) suggests a substantial "decoupling" between the U.S. and Chinese economies, i.e., less U.S. reliance on goods from China. Two additional analyses, however, caution against that conclusion.

First, there appears to be substantial underreporting of U.S. imports from China. The gray line in **Figure 4.9** shows the share of U.S. imports coming from China according to U.S.-reported imports data (the standard data that we used for Figure 4.6), and the red line provides an alternative view of the same measure based on exports data reported by countries sending goods to the U.S. While there are always some discrepancies between reported exports and imports, there has been a striking shift since the U.S. began imposing steep tariffs on imports from China in 2018.

Prior to 2018, the exports data (the red line in the figure) indicated a lower share of U.S. imports coming from China.[17] But more recently, the exports data indicate a *higher* share. After the U.S. raised tariffs on imports from China, importers may have underreported the value of goods from China to reduce their tariff bills.[18] So, the exports data (which are not used to compute U.S. tariff charges) may now be more accurate, implying that the decline in the share of U.S. imports

coming from China has been less than half as large as it is normally reported to be (only 3.7 percentage points since 2018 rather than 7.9 percentage points).[19]

Second, the data we have looked at so far consider only imports coming *directly* from China to the U.S., ignoring the value of Chinese inputs that go into goods the U.S. imports from other countries. There is substantial evidence that U.S. tariffs on imports from China have prompted a redirection of trade via third countries, with more made-in-China inputs going to other countries where they are used in the production of goods that are exported to the U.S.[20]

For a more comprehensive view of U.S. reliance on imports from China, **Figure 4.10** tracks China's share of *all* foreign content ("value added") that is ultimately consumed in the U.S., regardless of whether it is imported directly or as an input to an import from another country.[21] It shows no meaningful reduction in U.S. reliance on content originating in China. The latest value (from 2023) is roughly the same as the pre-pandemic level (after a spike during the pandemic). While the data employed to construct this measure involve far more estimation than the data on direct exports (making the results more approximate), this analysis adds to the evidence against the U.S. having substantially reduced its reliance on imports from China.

FIGURE 4.9: ALTERNATIVE DATA ON CHINA SHARE OF UNITED STATES GOODS IMPORTS, 2000 – 2024 (JAN – SEPT)

Legend: ■ Based on U.S. Import Data   ■ Based on Trade Partners' Export Data
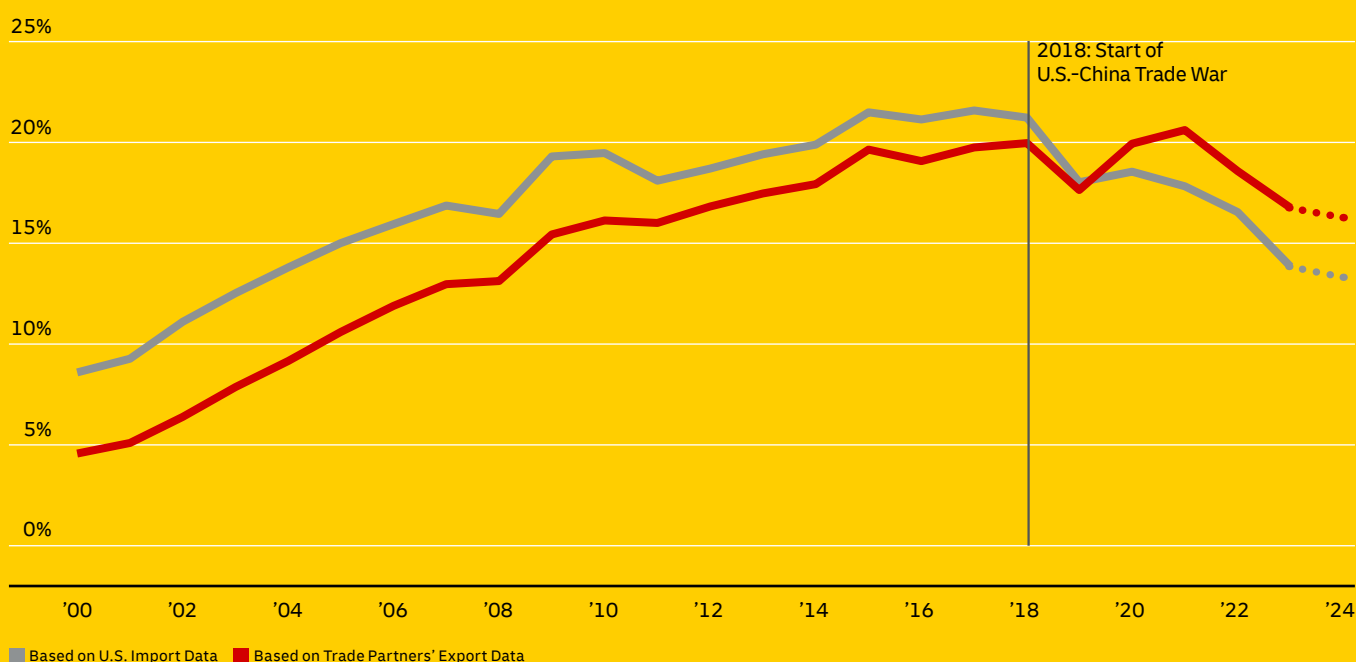
Data reported by U.S. trade partners indicate a far smaller reduction in China's share of U.S. imports than U.S.-reported imports do.
Data Source: IMF Direction of Trade Statistics

FIGURE 4.10: CHINA SHARE OF ALL FOREIGN VALUE ADDED CONSUMED IN UNITED STATES, 2000 – 2023

Interactive Chart Online:
dhl.com/tafig4-10

2018: Start of U.S.-China Trade War
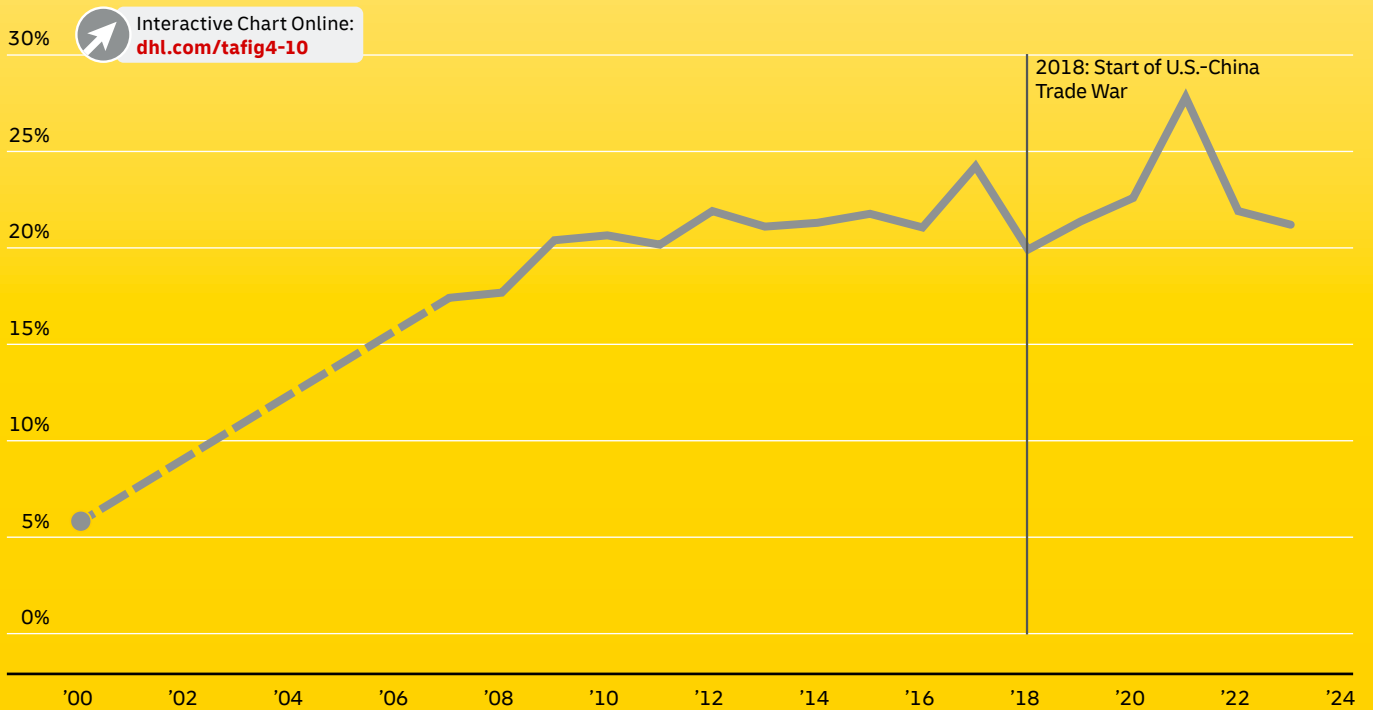
Considering both direct and indirect imports, the share of all foreign value added absorbed in the U.S. economy that comes from China has not declined to below its pre-pandemic level, suggesting that the U.S. has not meaningfully reduced its reliance on goods from China.

Data Source: Asian Development Bank Multiregional Input Output Tables

Note: Includes all foreign value absorbed in the U.S. economy for consumption, gross fixed capital formation, and changes in inventory and valuables.

In summary, geopolitically driven shifts in international trade patterns are still limited, primarily affecting countries at the center of current conflicts. There were small declines in trade between versus within geopolitical blocs in 2022 and 2023, but no further declines during the first nine months of 2024. The share of U.S. imports coming directly from China continues to decline, but the U.S. still brings in as high a share of its imports from China as the rest of the world does – and U.S. imports from other countries contain rising amounts of Chinese content. The share of EU imports coming from China remains above its pre-pandemic level. Meanwhile, countries that are neither close allies of the U.S. nor of China are growing their shares of world trade, trading more with both superpowers and their allies. The world remains very far away from a complete split into separate and disconnected geopolitical blocs.

5. THE MIX OF GOODS TRADED

Which types of goods are traded most around the world, and how is the mix of goods traded changing over time? This section begins with a look at global trade in goods by product category, highlighting the types of goods that feature most prominently in global trade. We then discuss changes over time, highlighting the categories of goods with the fastest recent trade growth.

CURRENT MIX OF GOODS TRADED[1]

Figure 5.1 summarizes the value of all goods traded internationally in 2022.[2] It categorizes goods according to the 21 *sections* of the Harmonized System (HS), which is used to report international shipments to customs agencies around the world.[3] The *sections* are the broadest official categories

used in the HS classification system. For additional background, refer to the box titled **The Harmonized Commodity Description and Coding System** on p. 60.

FIGURE 5.1: COMPOSITION OF WORLD TRADE BY HS SECTIONS, 2022
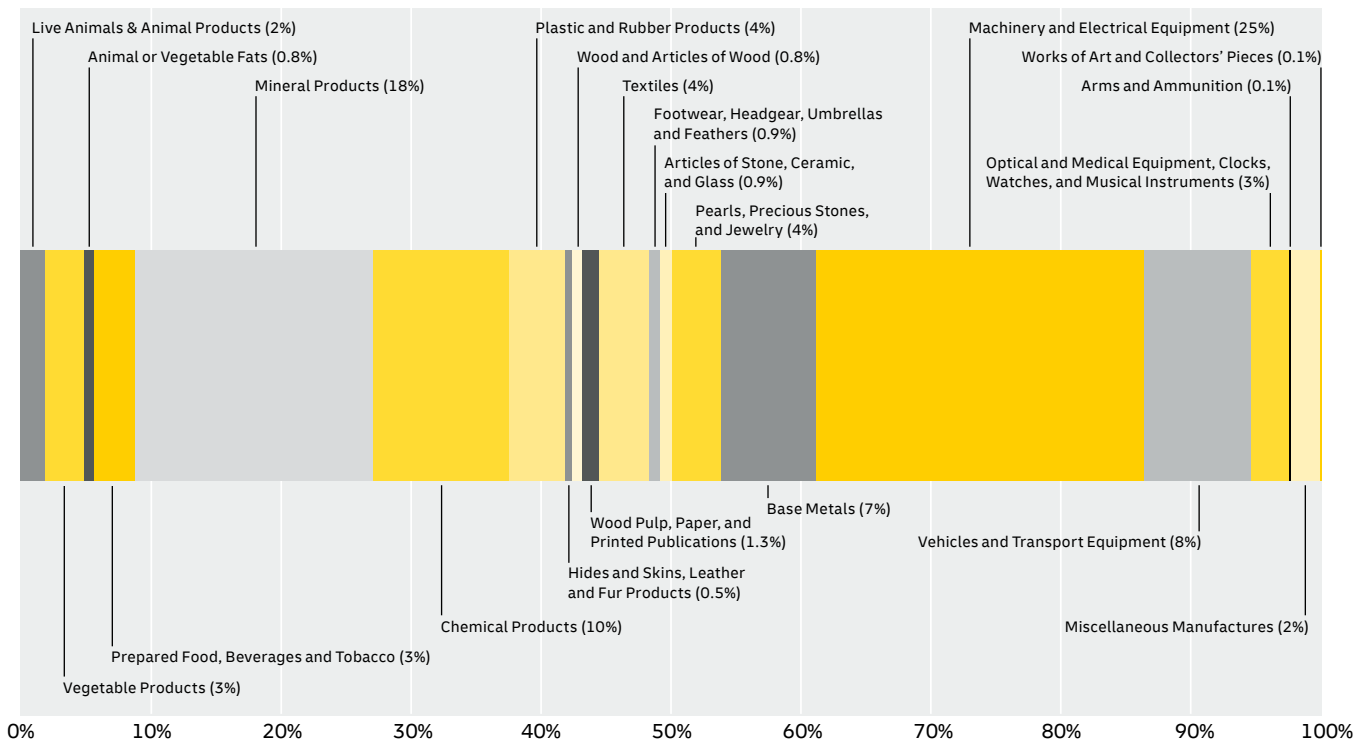
This figure summarizes all trade in goods using the 21 broad categories defined as *sections* in the Harmonized System (HS) administered by the World Customs Organization. The categories are shown in the

order they appear in that classification system – roughly from agricultural goods at the far left, to mineral goods, to increasingly sophisticated types of manufactured goods on the right.

In 2022, the largest categories of goods traded were Machinery and Electrical Equipment (25% of the value of world trade in U.S. dollar terms) and Mineral Products (18%).
Data Source: CEPII BACI

The Harmonized Commodity Description and Coding System

The Harmonized System, administered by the World Customs Organization, is the most commonly used product classification for international trade. It is used by customs authorities worldwide for specifying tariff rates, which means that products must be classified using this system to determine the duties owed when they cross national borders.

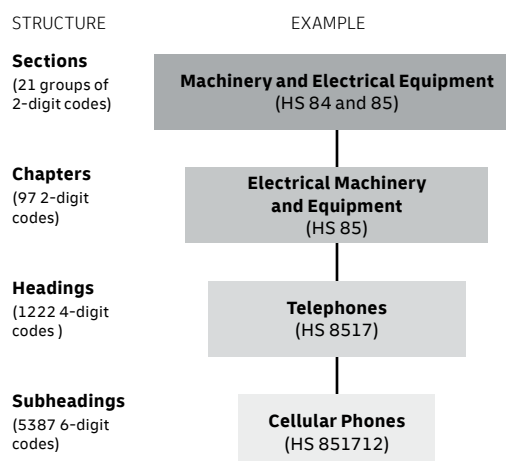Nearly all economies provide data using this classification scheme, making it possible to aggregate trade by product at the world level. There are four levels of aggregation defined for international use: *section* (defined by combinations of 2-digit codes), *chapter* (individual 2-digit codes), *heading* (4-digit codes), and *subheading* (6-digit codes). These levels move from broad to narrow. [4] Thus, for example, Cellular Phones have their own *subheading*, within the Telephones *heading*, which is itself part of the Electrical Machinery and Equipment *chapter* and the Machinery and Electrical Equipment *section*.

One advantage of this classification scheme is that it groups similar products together. However, one of its limitations is that it does not separate components and parts from finished products at its higher levels of aggregation. While it mostly separates raw materials

from manufactured goods, that division is also imperfect. And as with any classification system that has been in use for decades, past decisions about how to classify products may not reflect how we think of them now. Nevertheless, such historical conventions persist because changes are cumbersome and complicate the analysis of trends over time. [5]

HARMONIZED SYSTEM

STRUCTURE	EXAMPLE
Sections (21 groups of 2-digit codes)	**Machinery and Electrical Equipment** (HS 84 and 85)
Chapters (97 2-digit codes)	**Electrical Machinery and Equipment** (HS 85)
Headings (1222 4-digit codes)	**Telephones** (HS 8517)
Subheadings (5387 6-digit codes)	**Cellular Phones** (HS 851712)

Sources: World Customs Organization, "1988-2018: The Harmonized System: A Universal Language for International Trade 30 Years On," 2018; Atlas of Economic Complexity.

The product category Machinery and Electrical Equipment makes up one quarter of all international trade by value.

The categories of goods on Figure 5.1 proceed, roughly speaking, from agricultural products on the left, through mineral products, to a variety of manufactured goods towards the right. While there are some exceptions to that broad characterization, it becomes clear at this level of aggregation that the majority of the goods traded internationally (by value) are manufactured products. The four categories closest to the left side of Figure 5.1 (agricultural products and closely related goods such as processed foods) account for just 9% of world trade, while mineral products comprise 18%.

By far the largest category in Figure 5.1 is Machinery and Electrical Equipment, which makes up one quarter of all international trade by value. This category includes many of the most important products in the modern economy, from high-tech equipment to mobile telephones. Why are these products traded so intensively? Because they are subject to large economies of scale (it is most efficient to produce them in large quantities), their production requires capabilities that are not available in every country, their input costs (including labor) vary widely across markets, and the costs of transporting them are small relative to their value, among other reasons.

The next largest category is Mineral Products, which makes up more than one sixth of world trade by value. This includes petroleum products and other products of the mining

industry that are often important manufacturing inputs. These products are traded intensively because they are only found in certain parts of the world, often in different countries from where they are in greatest demand.
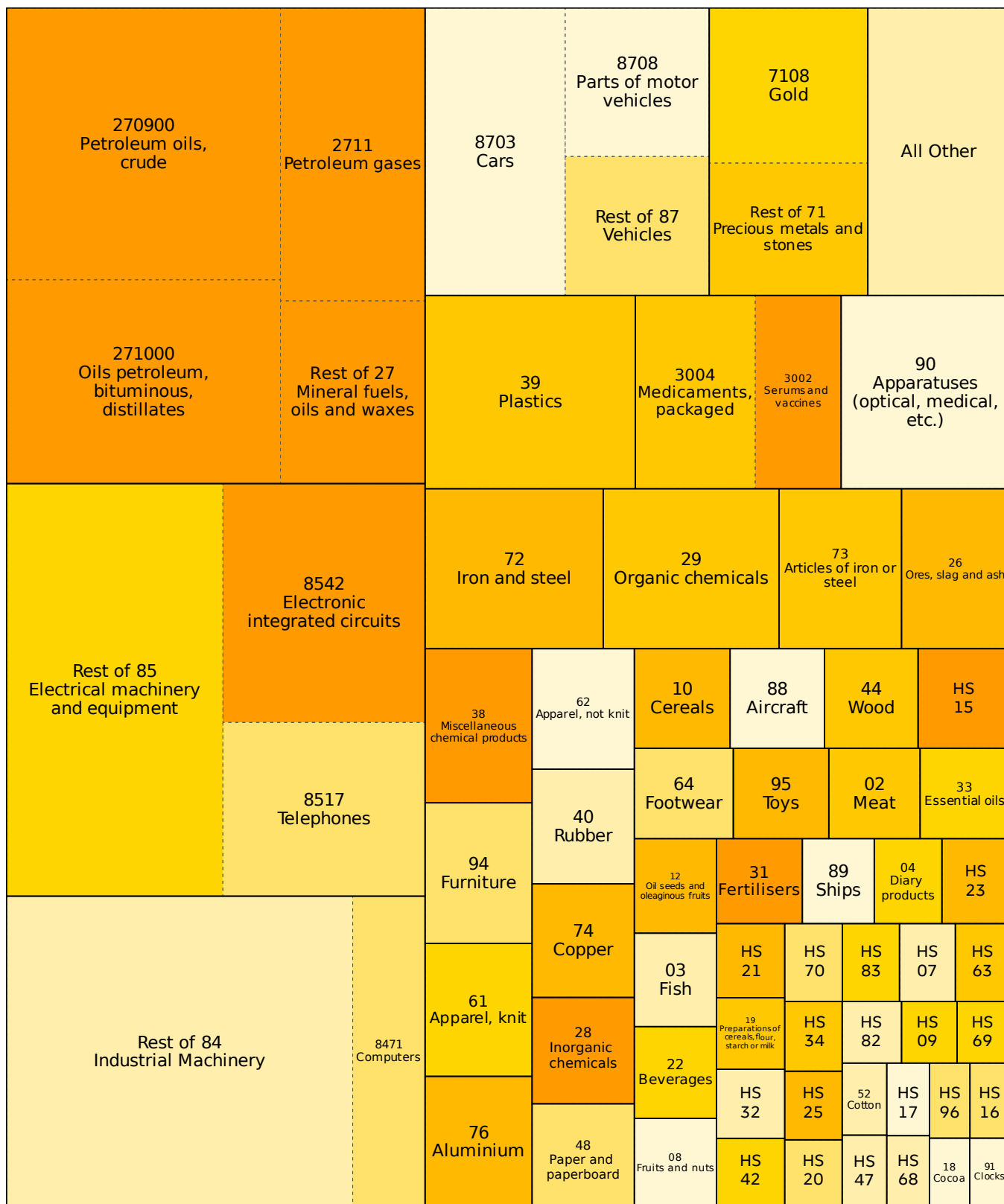
Chemical Products make up the third largest category, accounting for one tenth of all trade by value. Here we see a mix of both patterns. Some important chemical products are derived from inputs that are found more abundantly in certain parts of the world. Others rely more on processing capabilities that are not available worldwide and are subject to economies of scale.

Trade in vehicles (the fourth largest category, 8% of total) also gets a boost from the fact that different buyers often prefer different varieties of the same type of product, as with many other types of manufactured goods. For example, even though China produces more cars than any other country, some Chinese buyers prefer imported cars.[6]

Proceeding to a more detailed view of the composition of world trade, **Figure 5.2** (on the following page) shows the value of all goods traded in 2022 using narrower product categories (2-digit HS *chapters* and, for the largest categories, further subdivisions using 4-digit HS *headings* or 6-digit HS *subheadings*). The size of each rectangle in Figure 5.2 shows the share of total trade in each category, and the categories are arranged in descending order by value, starting at the top left and filling in towards the bottom right. The boxes on this figure are also colored according to how fast trade in each category grew from 2017 to 2022 (we will return to growth rates later in this section).

The top 10 product categories traded internationally at the *chapter* level were: Mineral Fuels, Oils, and Waxes (17%); Electrical Machinery and Equipment (14%); Industrial Machinery (11%); Vehicles (7%); Precious Metals and Stones (4%); Plastics (4%); Pharmaceutical Products (3%); Apparatuses (optical, medical, etc.) (3%); Iron and Steel (2%); and

FIGURE 5.2: COMPOSITION OF WORLD TRADE BY HS CHAPTERS, 2022

270900
Petroleum oils, crude

2711
Petroleum gases

8703
Cars

8708
Parts of motor vehicles

Rest of 87
Vehicles

7108
Gold

Rest of 71
Precious metals and stones

All Other

271000
Oils petroleum, bituminous, distillates

Rest of 27
Mineral fuels, oils and waxes

39
Plastics

3004
Medicaments, packaged

3002
Serums and vaccines

90
Apparatuses (optical, medical, etc.)

8542
Electronic integrated circuits

Rest of 85
Electrical machinery and equipment

8517
Telephones

72
Iron and steel

29
Organic chemicals

73
Articles of iron or steel

26
Ores, slag and ash

38
Miscellaneous chemical products

62
Apparel, not knit

10
Cereals

88
Aircraft

44
Wood

HS 15

94
Furniture

40
Rubber

64
Footwear

95
Toys

02
Meat

33
Essential oils

Rest of 84
Industrial Machinery

8471
Computers

74
Copper

12
Oil seeds and oleaginous fruits

31
Fertilisers

89
Ships

04
Diary products

HS 23

61
Apparel, knit

03
Fish

HS 21

HS 70

HS 83

HS 07

HS 63

28
Inorganic chemicals

19
Preparations of cereals, flour, starch or milk

HS 34

HS 82

HS 09

HS 69

76
Aluminium

22
Beverages

HS 32

HS 25

52
Cotton

HS 17

HS 96

HS 16

48
Paper and paperboard

08
Fruits and nuts

HS 42

HS 20

HS 47

HS 68

18
Cocoa

91
Clocks

Compound annual growth rate, 2017 – 2022

3.4%   4.6%   5.6%   6.4%   7.8%   11.2%

HS codes and corresponding product categories are listed on p. 284.

At the level of HS chapters (2-digit codes), the most heavily traded product categories in 2022 were Mineral Fuels, Oils, and Waxes; Electrical Machinery and Equipment; and Industrial Machinery.

Data Source: CEPII BACI

This figure highlights the most heavily traded types of goods. Each box on the figure represents a 2-digit *chapter* in the HS classification. These are sorted from top-left to bottom-right according to the value of the goods traded in 2022. The 2-digit *chapters* with the most trade are further subdivided into 4-digit *headings* to provide additional detail on the types of goods traded within those categories. Additionally, the boxes for each *chapter* (or *heading*) are colored according to their annualized growth rates from 2017 to 2022. These growth rates are reported in value terms (according to trade values reported in current U.S. dollars), because we do not have trade volume growth rates available at this level of detail. Therefore, the growth rates reported here are affected by changes in price levels over time.

Organic Chemicals (2%). These 10 categories made up two-thirds of all world trade in 2022.

The top *chapter* – Mineral Fuels, Oils, and Waxes – consists of commodities used primarily for energy. This is dominated by petroleum products, which make up 87% of trade in this category. Although this was the top *chapter* in 2022, it ranked second in 2021 and third in 2020, underscoring the role of oil prices in determining the composition of world trade by value. While the value of mineral fuels traded rose in 2021 and 2022, the quantity declined slightly.[7]

This product category is most traded in Europe, which accounted for 29% of exports of these products and 35% of imports. It is worth keeping in mind that Russia and the countries surrounding the North Sea are significant oil producers, and petroleum products at various stages of production are traded extensively between European countries. European countries are also major consumers of petroleum products and many rely almost exclusively on imports.

The second-ranked *chapter*-level category is Electrical Machinery and Equipment, which subsumes many different products, and includes both finished goods and intermediate goods. These products are sold worldwide, but their manufacture is dominated by a small number of countries. And since many are built in complex value chains that span many different countries, a large fraction of the trade in this chapter is in intermediate goods. East Asia and the Pacific dominates the exports of these goods, with a 68% market share in 2022. Europe exported 20%, and North America exported 9%. By contrast, East Asia and the Pacific was the destination of only 44% of imports, while Europe imported 27% and North America, 18%.

The Electrical Machinery and Equipment *chapter* includes two of the most iconic goods in the international marketplace. First, Electronic Integrated Circuits,[8] a *heading* that includes the processors that power computers, smart phones, and many other devices. And second, Telephones; here most trade is in smartphones with features well beyond what the category was originally meant to cover.[9] Integrated circuits, which made up just over a quarter of all Electrical Machinery and Equipment trade, are intermediate goods. The Telephones *heading* makes up just over a fifth of all Electrical Machinery and Equipment; it includes some parts, but roughly 75% is made up of final products.

The third-largest *chapter,* Industrial Machinery, also encompasses a wide variety of different products, from nuclear reactors to personal computers.[10] Again, East Asia and the Pacific is the largest exporting region, with a 45% share in 2022, and Europe at 36%. North America is a distant 15%. In terms of imports, Europe is the leader, taking in 35% of Industrial Machinery products, followed by East Asia and the Pacific (26%) and North America (24%).

GLOBAL TRADE MIX TRENDS

Figure 5.3 depicts the evolution of the trade mix by HS *section* (previously shown in Figure 5.1) from 2012 to 2022. While there are some movements, the main takeaway is that the broad categories of products traded in the global economy are fairly consistent over time. Most of the shifts we do see are due to fluctuations in the prices of goods (especially mineral fuels). The rise in the Mineral Products share of world trade in 2021 and 2022 was due entirely to price increases. As noted previously, the quantity of goods traded in this category declined slightly in both of those years.[11]

FIGURE 5.3: TRENDS IN COMPOSITION OF WORLD TRADE BY HS SECTION, 2012 – 2022

Share of total trade

Live Animals and Animal Products
Vegetable Products
Animal or Vegetable Fats
Prepared Food, Beverages and Tobacco
Mineral Products
Chemical Products
Plastic and Rubber Products
Hides and Skins, Leather and Fur Products
Wood and Articles of Wood
Wood Pulp, Paper, and Printed Publications
Textiles
Footwear, Headgear, Umbrellas and Feathers
Articles of Stone, Ceramic, and Glass
Pearls, Precious Stones, and Jewelry
Base Metals
Machinery and Electrical Equipment
Vehicles and Transport Equipment
Optical and Medical Equipment, Clocks, Watches, and Musical Instruments
Arms and Ammunition
Miscellaneous Manufactures
Works of Art and Collectors' Pieces

Across broad categories of goods, the composition of world trade has changed little over the past decade.
Data Source: CEPII BACI

TABLE 5.1: SPEED AND SCALE OF TRADE GROWTH, 2017 – 2022, TOP 20 HS CHAPTERS

Speed (Compound Annual Growth Rate)

		Percent Change
1.	Fertilizers	19.1%
2.	Mineral Fuels, Oils and Waxes	15.8%
3.	Nickel	14.9%
4.	Other Vegetable Materials	13.6%
5.	Inorganic Chemicals	13.1%
6.	Cereals	13.0%
7.	Animal or Vegetable Fats, Oils or Waxes	12.4%
8.	Miscellaneous Chemical Products	11.7%
9.	Salt, Sulfur, Lime, Cement, etc.	11.1%
10.	Feathers and Down	10.4%
11.	Food Residues and Animal Feed	10.4%
12.	Headgear	10.0%
13.	Flours, Starches and Malts	10.0%
14.	Ores, Slag and Ash	10.0%
15.	Aluminum	9.9%
16.	Other Vegetable Textile Fibers	9.1%
17.	Other Base Metals	9.1%
18.	Pharmaceutical Products	9.0%
19.	Oil Seeds and Oleaginous Fruits	8.8%
20.	Lac and Other Vegetable Extracts	8.7%

Scale (Absolute Increase in Trade Value)

		Current USD (millions)
1.	Mineral Fuels, Oils and Waxes	2,058
2.	Electrical Machinery and Equipment	987
3.	Industrial Machinery	483
4.	Pharmaceutical Products	287
5.	Precious Metals and Stones	277
6.	Plastics	226
7.	Iron and Steel	184
8.	Vehicles	169
9.	Organic Chemicals	157
10.	Miscellaneous Chemical Products	138
11.	Ores, Slag and Ash	127
12.	Articles of Iron or Steel	109
13.	Aluminum	106
14.	Inorganic Chemicals	100
15.	Cereals	86
16.	Fertilizers	85
17.	Apparatuses (Optical, Medical, etc.)	84
18.	Animal or Vegetable Fats, Oils or Waxes	80
19.	Copper	72
20.	Apparel, Knit	66

Data Source: CEPII BACI

Taking a more granular look at products by *chapter* reveals some variation in the speed and scale of trade growth. **Table 5.1** ranks the top 20 HS *chapters* (depicted in Fig. 5.2) in terms of trade growth between 2017 and 2022. The left side of the table focuses on the speed of trade growth, i.e., compound annual percent change in the value of goods traded in 2022 relative to 2017. The right side focuses on scale (absolute change in value from 2017 to 2022).

The fastest trade value growth has been for commodities that have seen large price increases: Fertilizers; Mineral fuels, Oils and Waxes; and Nickel make up the top three on the speed dimension. Mineral Fuels, Oils and Waxes also topped the scale dimension, followed by Electrical Machinery and Equipment and Industrial Machinery. These three *chapters* are also the most traded types of goods.

In summary, most international trade involves manufactured goods, and recent changes in the mix of goods traded have been fairly modest. At the highest level of aggregation, the largest categories of goods traded in 2022 were Machinery and Electrical Equipment (25%) and Mineral Products (18%). There were no dramatic changes in the mix of goods traded – across broad categories – over the past decade. The largest recent changes in shares of goods trade value by product category were driven by movements in the prices of heavily traded commodities, such as mineral fuels.

6. TRADE IN GLOBAL ECONOMIC CONTEXT

How large is the role of international trade in today's global economy? In this section, we start by showing how much of the economic value produced around the world is destined for foreign markets versus how much stays within countries. Then, to help business and public policy decision-makers better understand the role of trade for their own companies and countries, we present a series of snapshots of the world economy showing how trade intensity varies across industries and countries/regions.

THE GLOBAL BALANCE OF TRADE VS. DOMESTIC BUSINESS

How central is international trade really to the world economy? This simple question is harder to answer than one might presume, because trade takes place at many different stages of the value chains that deliver modern goods and services. For example, an electrical utility might sell electricity to a nearby chemical plant that exports chemicals to a foreign car component manufacturer, which in turn exports car parts that an automaker, in yet another country, installs on a car that is then sold to a local buyer. Some sales in this chain are domestic, while others are international, and the details can get complicated.

What matters most for understanding international trade relative to domestic business activity is how much of the value produced anywhere in this chain ultimately ends up in a foreign country – regardless of whether it is exported directly or at a later stage, and regardless of whether it crosses only one border or moves across several borders on the way to its final destination. Looking at the world economy in this way helps cut through the complexity of global value chains. It reveals that trade is substantial, but that most economic activity still takes place within rather than between countries.

In 2023, 21% of the value of all goods and services produced around the world was traded across one or more national borders and ultimately ended up in a different country from where it was produced (see **Figure 6.1**).[1] To calculate this, we draw upon the very timely analysis of transactions between industries and countries provided by the Asian Development Bank's Multiregional Input-Output Tables (ADB MRIO).[2] This dataset tracks international and domestic flows in "value added" terms, enabling us to see where the value created in each country and industry (the value of its output minus the value of the inputs it uses) ultimately ends up. This is different from traditional "gross" trade statistics, which only show the value of output crossing national borders (without subtracting the value of inputs that went into producing it).

FIGURE 6.1 WORLD EXPORT INTENSITY (GOODS AND SERVICES, VALUE ADDED), 2001 – 2023

Interactive Chart Online:
dhl.com/tafig6-1

■ Total Exports (Value Added, % of GDP)
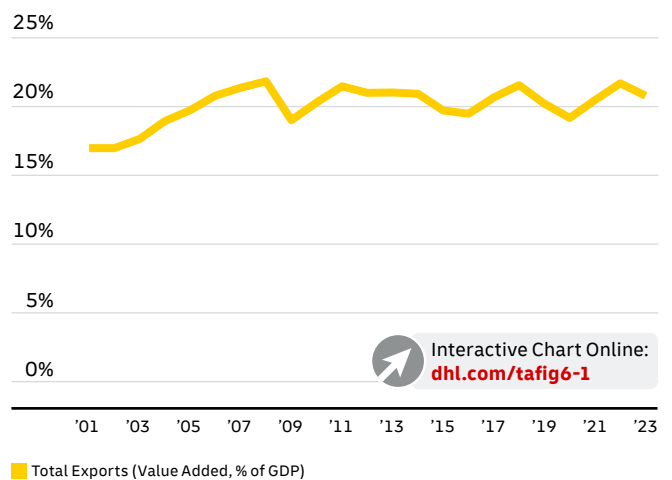
In 2023, 21% of the value of all goods and services produced was traded internationally, just shy of the all-time high of 22%.
Data Source: Asian Development Bank Multiregional Input-Output Database, with values prior to 2007 interpolated using 2000 ADB MRIO data and gross trade intensity data from World Bank World Development Indicators database.
Note: Export Intensity (Value Added) measures the share of value that ends up in a different country from where it was produced (regardless of how many borders it may cross in multi-country value chains).

> *While international trade is substantial, most economic activity still takes place within rather than between countries.*

By using trade data measured in value added terms, we can properly compare trade with domestic economic activity, which GDP statistics always measure in value added terms. This gives us an "apples-to-apples" comparison of transactions between versus within countries. If we simply divided gross exports or imports by world GDP – the traditional way of measuring trade intensity – the result (29%) would overstate the actual share of goods and services that end up in

foreign markets because gross exports counts the same value multiple times when it crosses more than one border (for example, first in the form of raw materials, then as part of a component, and then again in a finished product).[3]

Why is it important to take such care in comparing international trade to domestic activity? The fact that only 21% of global economic output ends up in a different country from where it was produced is more than just an interesting bit of macroeconomic trivia. It suggests that there is still very substantial headroom for future trade growth. Without new policy constraints, technological progress – which tends to make it easier to do business over longer distances – could boost the share of global output that is traded internationally to well above its current level.[4]

Moreover, an accurate view of how much business crosses national borders via international trade is essential to properly calibrate major public policy debates. Economic problems facing many countries, such as inequality and labor market insecurity, are often blamed on trade. However, the fact that most economic activity still occurs within countries rather than between them provides an important reminder that resolving such major economy-wide challenges depends primarily on domestic policy choices. Trade policy can, at best, play a supporting role.

In policy debates, it is also important to keep in mind that all trade intensity measures capture only the *current* balance of international relative to domestic activity – not what would happen if this balance rises or falls. It would be a mistake, for example, to presume that because only 21% of economic output ultimately ends up in foreign markets, eliminating all trade would only destroy 21% of global output. The loss would actually be much larger because of the interdependence between trade and domestic business.

If a company loses access to a key input that is not available domestically, the cost is far greater than the value of the input itself, because the company's entire production could be halted. In fact, it is not uncommon for a good to be designed in a given country, manufactured elsewhere, and then exported to the country where it was designed, where it is sold at a substantial markup from the price the foreign manufacturer was paid. In such cases, the viability of the product could be threatened if no domestic manufacturer is available, eliminating domestic activity on both sides of the manufacturing process. So, when it comes to thinking about raising or lowering global levels of trade intensity, it is best to think of 21% as a lower-bound – a floor rather than a ceiling – on the importance of trade to the world economy.

So far, we have considered trade intensity only at the level of the whole world. Next, we turn to how trade intensity varies across industries and countries to provide more focused measures in the domains most relevant for business and public policy decision-makers.
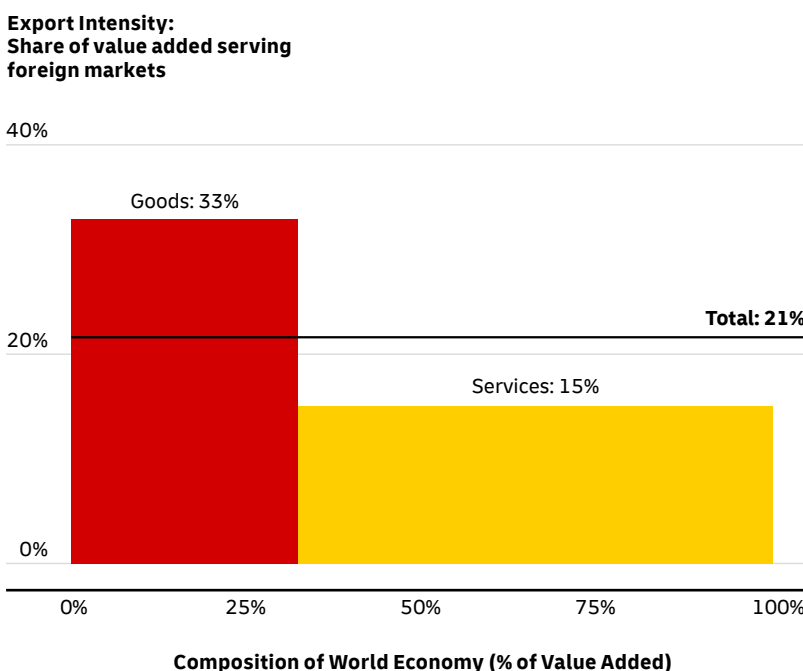
TRADE INTENSITY BY INDUSTRY AND COUNTRY

The fact that only 21% of the value of all goods and services ultimately ends up in foreign countries helps us to understand trade in macroeconomic terms, but business and public policy decision-makers need to consider more granular measures of trade intensity to have informed views about the role of trade in different industries and countries. We start to break down the role of trade in different parts of the world economy by separating the broad sectors of goods versus services. Then, we go deeper to look at specific industries within these broad sectors. Finally, we examine how trade intensity varies across countries/regions.

Figure 6.2 measures how much of the value produced in the goods versus services sectors ultimately ends up in foreign countries. Goods refer to all types of tangible goods –

everything from raw agricultural and mineral commodities to the most sophisticated manufactured products. Services, on the other hand, includes everything that one cannot physically touch – from haircuts to movies streamed online. In 2023, 33% of the value generated by goods-producing sectors ultimately ended up in a different country from where it was produced, as compared to only 15% for services-producing sectors. Physical goods are traded much more intensively than services because many services (like haircuts) can only be delivered in person. However, technological advances are making services increasingly tradable. As a result, the gap in trade intensity between goods and services has been narrowing slowly, with services trade growing faster than goods trade in recent years.[5]

FIGURE 6.2. EXPORT INTENSITY BY SECTOR (VALUE ADDED), 2023

**Export Intensity:
Share of value added serving
foreign markets**

Goods: 33%

Total: 21%

Services: 15%

Composition of World Economy (% of Value Added)

This graph provides a snapshot of the entire world economy, highlighting how the intensity of international trade varies across sectors. The width of the bars represents the size of each sector according to its share of the total value produced around the world. The height of the bars represents the share of their output that is traded internationally, measured as the share of the value produced in each sector that ultimately ends up in a different country from where it was produced.

Goods are traded more intensively than services, with 33% of value added in goods-producing industries ultimately serving foreign markets, as compared to 15% for services-producing industries. Data source: Asian Development Bank Multiregional Input-Output Database. Note: Calculated using value added exports by origin sector (OS) in ADB MRIO Exports Decomposition.

While this report focuses mainly on trade in physical goods, we include information on services in this section to place the analysis of goods trade into a wider context. In 2023, roughly 32% of all value produced in the world economy was in the goods sector, and the remaining 68% was in the services sector. So, to produce a proportional snapshot of the world economy, Figure 6.2 scales the goods sector to take up 32% of the width of the figure, and services 68%. This highlights how modern economies focus far more on services than on goods, and it provides an opportunity to recognize how the services sector contributes to goods trade.

The sector-level export intensities (33% for goods and 15% for services) shown in Figure 6.2 capture the share of all value created by a sector that ultimately makes its way to a foreign market, regardless of whether it is exported directly or if it serves as an input to an export from the other sector.[6] For example, if a design consultant provides a service to help a local automaker design a car that is exported, these statistics count the consultant's work as a services export, because it ultimately served a foreign buyer (since the car was exported), even though the consultant's immediate client was a local automaker.

This turns out to be a common situation, since goods exporters often rely on local service providers. By taking such indirect exports into account, these statistics highlight how much different parts of the world economy ultimately rely on foreign markets. Alternatively, if we treat all exports as coming from the sectors that directly send them abroad (classifying, for example, the design consultant's work as a goods export because it was exported as part of the value of a car), export intensity for services falls from 15% to 10% while export intensity for goods rises from 33% to 43%.[7] **Figure A.1** in the Appendix provides an alternative version of Figure 6.2 calculated in this way.
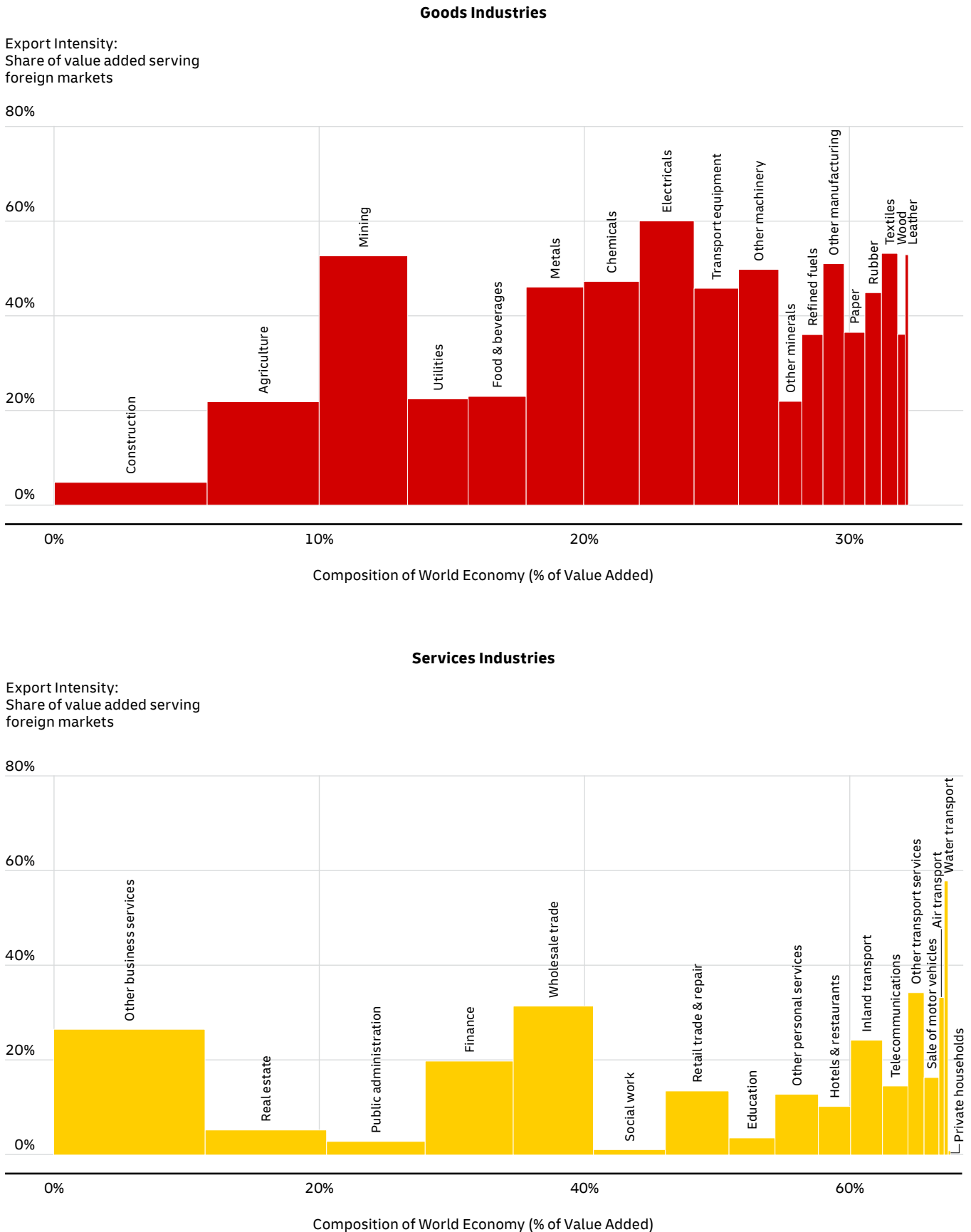
Figure 6.3 carries forward the same analysis as Figure 6.2, providing more granular views of the export intensity of

specific industries within the goods sector (top panel) and the services sector (bottom panel). We can see in Figure 6.3 that the goods-producing industry with the highest export intensity is Electricals (electrical and optical equipment). Roughly 60% of the value produced by this industry ultimately ended up in foreign markets in 2023, with Mining, Textiles, and Leather following close behind.

Several other goods-producing industries, such as Chemicals, Transport Equipment, and Metals also export very intensively, with roughly half of the value they create ultimately ending up in foreign markets. Other goods producing industries, such as Agriculture, Food and Beverages, and Utilities, have much lower export intensities, in the 20 – 25% range. These are still substantial export intensities, due in part to indirect exports. Utilities, for example, primarily sell to domestic customers, but they still contribute to their customers' exports. Figure 6.3 shows that 22% of the value generated in Utilities ultimately goes to foreign markets. However, direct exports comprise only 5% of this industry's value added (**Figure A.2** in the appendix shows industry-level export intensities based on direct exports).

The services industries with the highest export intensities play important roles supporting trade in physical goods. The service industry with the highest export intensity is Water Transport, which is unsurprising since about 80% of international trade by volume is shipped by sea.[8] Similarly, Wholesale Trade and Other Transport Services stand out for the relatively large shares of their value that is exported.

## FIGURE 6.3: EXPORT INTENSITY BY INDUSTRY (VALUE ADDED), 2023

Goods Industries

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)

Services Industries

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)

Industries differ widely in terms of the share of the value they produce that ultimately serves foreign markets. Electricals, Mining, Textiles, and Leather stand out for their especially high export intensities, while Social Work, Real Estate, Education, and Construction stand out for very low export intensities.
Data source: Asian Development Bank Multiregional Input-Output Database.
Note: Calculated using value added exports by origin sector (OS) in ADB MRIO Exports Decomposition.

FIGURE 6.4: EXPORT INTENSITY BY COUNTRY (VALUE ADDED), 2023

Export Intensity: Share of value added
serving foreign markets
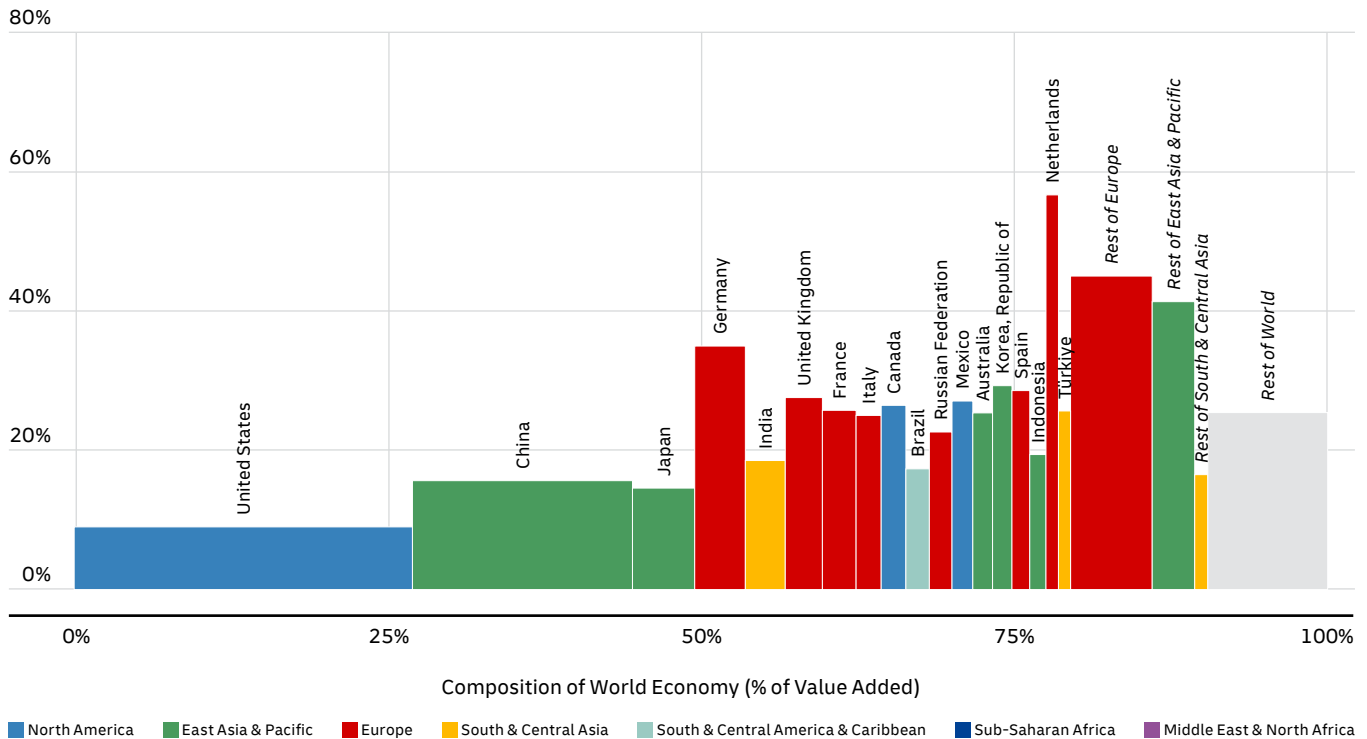
Smaller countries tend to export much more intensively than larger countries.
Data source: Asian Development Bank Multiregional Input-Output Database. Note: Calculated using value added exports by origin sector (OS) in ADB MRIO Exports Decomposition. Rest of region values reflect data only from countries included in the 62-country version of the ADB MRIO tables. Other countries from the same regions are included in Rest of World.

We can also take a geographic snapshot of the world economy to highlight how participation in international trade varies across countries rather than across sectors and industries. **Figure 6.4** works the same way as Figures 6.2 and 6.3, but here the width of the bars reflects countries' shares of all value produced in the world economy, and the height of the bars tracks the share of the value produced in each country that ultimately ends up in other countries. (**Figure A.3** in the Appendix presents separate versions of Figure 6.4 for goods versus services.)

The results highlight how smaller economies tend to rely much more heavily on exports than larger economies do. This is unsurprising, since large economies present companies with vast domestic markets, naturally leading to a higher share of their activity remaining domestic. It is striking, nonetheless, how the U.S. and China comprise more than 40% of the world economy (as shown by the width of the bars) and are the world's two largest exporters (shown by the area of the bars), but they are among the countries with the lowest shares of their economic output ultimately going to foreign markets. Even as large countries wield substantial influence over the global trading system, smaller countries rely far more on secure and predictable access to international markets.

In summary, even after large increases in trade intensity over recent decades, most business is still domestic. Only 21% of the value of all goods and services produced around the world crosses one or more national borders and ultimately ends up in a different country from where it was produced. Trade intensity, however, varies widely across industries. Goods are traded much more intensively than services, but services are often exported indirectly when they serve as inputs to goods that are destined for foreign markets. Export intensity also varies widely across countries, with smaller countries sending a higher share of their output to foreign markets. An accurate view of trade intensity helps to calibrate public policy debates. Since most business is still domestic, major economy-wide challenges typically require domestic policy solutions, with trade policy often limited to a supporting role.

NOTES
EXECUTIVE SUMMARY

1. The Trade Policy Uncertainty Index developed by Dario Caldara, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo provides data back to 1960, and monthly average levels reached after the re-election of Donald Trump in November 2024 far exceed all prior observations. For background on this index, refer to Dario Caldara, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo, "The Economic Effects of Trade Policy Uncertainty," *Journal of Monetary Economics*, 109, 2020.

2. Economist Intelligence Unit, International Monetary Fund (IMF) World Economic Outlook, Oxford Economics, and S&P Global Market Intelligence.

3. Country income groups follow the World Bank classification. In 2025, countries with a gross national income per capita of USD 14,005 and above are considered high-income economies.

4. Average distance between exporting and importing countries weighted by trade values in current U.S. dollars. Distance data sourced from CEPII Gravity database. Regions are defined in Section 3 note 7.

5. Based on data from the first nine months of 2024.

6. Calculated based on trade data from IMF Direction of Trade Statistics, using blocs of close allies defined by Capital Economics (see p. 50)

7. Michael A. Bailey, Anton Strezhnev, and Erik Voeten, "Estimating dynamic state preferences from United Nations voting data," *Journal of Conflict Resolution*, 61, no. 2, 2017.

8. The share decline is less than half as large when calculated based on data reported by exporting countries.

9. Share of foreign value added absorbed in the U.S. economy, calculated using data from the Asian Development Bank Multiregional Input-Output tables (ADB MRIO).

10. Capital Economics classifies India, Viet Nam, and Mexico as "leaning" toward the U.S. bloc but not as "close allies" of the U.S., and classifies the United Arab Emirates as "Unaligned." See p. 50.

11. Data on trade by product category from CEPII BACI database.

12. This analysis is based on trade in value added terms using data from the Asian Development Bank Multiregional Input-Output tables (ADB MRIO).

NOTES SECTION 1
1. GLOBAL TRADE GROWTH

1   The combined growth rate projections were obtained by extrapolating each individual forecast from 2023 out to 2029, then taking a geometric mean of the resulting annual levels and calculating the annual growth rates of the resulting series.

2   From 2019 to 2024, global trade volume grew at a 2.0% CAGR (affected by the Covid-19 pandemic). From 2014 to 2019, this growth rate was 2.7%, and it was 2.4% over the full decade from 2014 to 2024.

3   Comparison of "harmful" versus "liberalizing" policy interventions as reported by Global Trade Alert. See https://www.old.globaltradealert.org/global_dynamics/area_all/year-to_2023/day-to_1231. For sanctions trends, refer to the Global Sanctions Database, which provides updates based on Constantinos Syropoulos, Gabriel Felbermayr, Aleksandra Kirilakha, Erdal Yalcin, and Yoto V. Yotov, "The global sanctions data base – release 3: COVID-19, Russia, and multilateral sanctions," *Review of International Economics*, Volume 32, Number 1, 2024.

4   WTO World Trade Report 2024, p. 21. New research published by the WTO indicates that this is not due primarily to preferential trade agreements. In 2022, 51% of imports were subject duty-free on most-favored-nation basis. See Tomasz Gonciarz and Thomas Verbeet, "Over 80 per cent of global merchandise trade is on most-favoured-nation basis," WTO Data Blog, January 22, 2025.

5   A recent OECD study attributes the decline in global merchandise trade volumes in 2023 to cyclical factors such as inventory reductions, post-pandemic spending shifts back to services and away from goods, weak import demand due to high inflation and interest rates. See OECD, "Risk and Resilience in Global Trade: Key Trends in 2023 – 2024," December 11, 2024.

6   The Trade Policy Uncertainty index presented in Figure 1.2 extends all the way back to 1960, and the current spike far exceeds all prior observations.

7   Oxford Economics, "Research Briefing: The global implications of more extreme US tariffs," November 28, 2024.

8   This Oxford Economics analysis is based on total trade volumes, including both goods and services. It compares more extreme U.S. tariff increases relative to a baseline that assumes the "US gradually imposes blanket tariffs of 30% on Chinese exports, more targeted tariffs on Canada, Mexico, the EU, Japan, South Korea, and Vietnam with some retaliation." See Ben May and Kiki Sondh, "The global implications of more extreme US tariffs," Oxford Economics Research Briefing, November 28, 2024.

9   Walter Frick, "What's Left of Globalization Without the US?," *Bloomberg*, November 15, 2024.

10   Gabriel Felbermayr, Julian Hinz, and Rolf J. Langhammer, "US Trade Policy After 2024: What Is at Stake for Europe?" Kiel Policy Brief No. 178, October 2024.

11   Gabriel Felbermayr, Julian Hinz, and Rolf J. Langhammer, "US Trade Policy After 2024: What Is at Stake for Europe?" Kiel Policy Brief No. 178, October 2024.

12   Antoine Bouët, Leysa Maty Sall, and Yu Zheng, "Trump 2.0 Tariffs: What Cost for the World Economy?," CEPII Policy Brief No. 49, October 2024.

13   IMF Direction of Trade Statistics.

14   As noted previously, this Oxford Economics analysis is based on total trade volumes, including both goods and services. It compares more extreme U.S. tariff increases relative to a baseline that assumes the "US gradually imposes blanket tariffs of 30% on Chinese exports, more targeted tariffs on Canada, Mexico, the EU, Japan, South Korea, and Vietnam with some retaliation." See Ben May and Kiki Sondh, "The global implications of more extreme US tariffs," Oxford Economics Research Briefing, November 28, 2024. While the same analysis was not available for goods only, given the magnitude of trade in goods relative to total trade, one can presume that trade in goods would also record positive growth over the next five years even under the most extreme tariff increase scenario, although that scenario would presumably imply at least a single year (2027) with declining goods trade volumes. Applying the trade volume reductions estimated in other studies discussed on pp. 15 – 16 to the composite baseline forecast shown on p. 13 results in the same conclusion (no

sustained reduction in global trade volumes). However, it should be noted that these studies all focus on U.S. tariff increases and direct retaliation against the U.S. If a broader pattern of increases in trade barriers were to develop, that would be more likely to lead to a sustained reduction in global trade volumes. Likewise, a major decline in global GDP growth (induced by trade policy changes or other developments) could lead to a reduction in global trade volumes.

15   Vivienne Born, Lee Warren Brown, and Dinesh Hasija, "Who obtains political exemptions? An attention-based analysis of steel tariff exclusion requests," *Journal of International Business Policy*, Volume 7, 2024.

16   World Trade Organization, "Trading with intelligence: How AI shapes and is shaped by international trade," 2024.

17   European Commission, "EU and Mercosur reach political agreement on groundbreaking partnership," December 5, 2024.

18   UNCTAD, 2024 Digital Economy Report, Figure V.3. For additional details on this analysis, refer to UNCTAD, "Business e-commerce sales and the role of online platforms," UNCTAD Technical Notes on ICT for Development No. 1, 2024.

19   Astute Analytica reports, "The Global cross-border e-commerce market was valued at US$ 2,830.7 billion in 2023 and is expected to reach a valuation of US$ 16,454.9 billion by 2032 at a CAGR of 21.6% during the forecast period from 2024 to 2032." (Source: Astute Analytica, "Cross-Border E-Commerce Market – Industry Dynamics, Market Size, And Opportunity Forecast To 2032," February 2024.) Statista reports, "The global B2C cross-border e-commerce market is expected to reach a value of 7.9 trillion U.S. dollars by the year 2030. In 2021, the cross-border online shopping sector was valued at roughly 785 billion U.S. dollars." (Source: Statista, "Cross-border business-to-consumer (B2C) e-commerce market value worldwide in 2021 and 2030," August 8, 2024.) Juniper Research predicts that cross-border e-commerce transaction values will grow at a 16% annualized rate from 2023 to 2028, as compared to 8% for domestic sales. (Source: Juniper Research Press Release, "Juniper Research: 33% of eCommerce Spend to Be Cross-Border by 2028 Globally," July 17, 2023.) Note that Juniper's forecast calls for "cross-border eCommerce transaction values to grow by 107% globally over the next five years" and "Domestic eCommerce transaction values to grow by 48% over the same period."

20   Economist Intelligence Unit, "US moves to crack down on de minimis shipments," September 19, 2024. For analysis of the welfare implications of potential U.S. de minimis policy changes, see Pablo D. Fajgelbaum and Amit Khandelwal, "The Value of De Minimis Imports," NBER Working Paper 32607, June 2024.

21   Eurostat, "Internet purchases - origin of sellers (2020 onwards)," https://doi.org/10.2908/ISOC_EC_IBOS, accessed on November 27, 2024.

22   UNCTAD, 2024 Digital Economy Report, Figure V.3. For additional details on this analysis, refer to UNCTAD, "Business e-commerce sales and the role of online platforms," UNCTAD Technical Notes on ICT for Development No. 1, 2024.

23   DHL eCommerce, "2024 Online Shopper Trends."

24   IMF, OECD, UN, World Bank Group, and WTO, "Digital Trade for Development," 2023; Tidiane Kinda, "E-commerce as a Potential New Engine for Growth in Asia," IMF Working Paper WP/19/135, July 1, 2019; Praveen Shanmugalingam, Ahashraaj Shanmuganeshan, Abinaya Manorajan, Mathusany Kugathasan, and Geethma Yahani Pathirana, "Does e-commerce really matter on international trade of Asian countries: Evidence from panel data," *PLoS One*, April 24, 2023; Susan Lund, James Manyika, Lola Woetzel, Jacques Bughin, Mekala Krishnan, Jeongmin Seong, and Mac Muir, "Globlization in Transition: The future of trade and global value chains," McKinsey Global Institute, January 16, 2019.

25   Henadi Al-Saleh, "E-commerce is globalization's shot at equality," World Economic Forum, January 19, 2020; IMF, OECD, UN, World Bank Group, and WTO, "Digital Trade for Development," 2023.

26   UNCTAD, 2024 Digital Economy Report, Figure V.3.

27 This insert was adapted from the article "Six Reasons Why Globalization Can Survive Trump 2.0" by Steven A. Altman, first published in the Korean media outlets The Herald Business and The Korea Herald. The original article is available at https://biz.heraldcorp.com/article/10390891.

28 Walter Frick, "What's Left of Globalization Without the US?," Bloomberg, November 15, 2024.

29 Simon Evenett, "America's Trade Policy Reversal: Quantifying Trading Partner Exposure To Abrupt Losses of Goods Market Access," Zeitgeist Series Briefing #41, Global Trade Alert, November 4, 2024.

30 Kevin Breuninger, "Trump promises 'fully expedited' permits for investors of $1 billion-plus in U.S.," *CNBC*, December 10, 2024. Note that, in our view, a shift from serving a foreign market via exports to serving it by investing in local production capacity (FDI) would reflect a change but not necessarily a reduction in globalization.

31 Steven A. Altman and Caroline R. Bastian, "Connecting to the World: Lessons from 10 Years of the DHL Global Connectedness Index," Deutsche Post DHL Group, 2021.

32 Eddy Bekkers and Sofia Schroeter, "An Economic Analysis of the US – China Trade Conflict," WTO Staff Working Paper ERSD-2020-04, March 19, 2020. Melissa Chan, "Some Canadians are boycotting U.S. products in protest of looming tariffs," *NBC News*, February 3, 2025.

33 This is a major theme of research by DHL Global Connectedness Index co-creator Pankaj Ghemawat. See, for example, Pankaj Ghemawat, "Not That Flat: Pankaj Ghemawat Challenges Globalization's Adherents," Knowledge at Wharton, September 4, 2012.

34 Calculated based on trade in value added terms (see Section 6).

35 The data discussed in this paragraph are reported and discussed in Steven A. Altman and Caroline R. Bastian, "DHL Global Connectedness Tracker: November 2024." That edition of the Tracker is archived at https://doi.org/10.58153/w7fak-t4r89.

36 Arvind Subramanian and Martin Kessler, "The hyperglobalization of trade and its future," Peterson Institute for International Economics Working Paper 13-6, July 2013; Douglas A. Irwin, *Free Trade Under Fire,* 5th edition, Princeton University Press, 2020.

37 This box was adapted from content discussed on pages 16 – 18 of Steven A. Altman and Caroline R. Bastian, "Connecting to the World: Lessons from 10 Years of the DHL Global Connectedness Index," Deutsche Post DHL Group, 2021.

38 Frankel and Romer's work uses an instrumental variables technique to predict trade flows using geographical variables only, thus removing the effect of income on trade from the analysis of trade's effect on income. Using this approach, Frankel and Romer showed that increased trade leads to economic growth. See Jeffrey A. Frankel and David H. Romer, "Does trade cause growth?," *American Economic Review* 89.3, 1999.

39 James Feyrer, "Trade and income – exploiting time series in geography," *American Economic Journal: Applied Economics* 11.4, 2019. The Feyrer study addresses important critiques raised about the original Frankel and Romer analysis, most notably by Francisco Rodriguez and Dani Rodrik, "Trade policy and economic growth: a skeptic's guide to the cross-national evidence," *NBER Macroeconomics Annual 2000*, 2001. For an extensive and up-to-date review, see Douglas A. Irwin, "Does trade reform promote economic growth? A review of recent evidence," *The World Bank Research Observer*, 2024.

40 Mill referred to trade's more subjective benefits as its "intellectual and moral" effects, which he viewed as even larger than its economic advantages. See John Stuart Mill, Principles of Political Economy, with some of their Applications to Social Philosophy, Longmans, 1848. Douglas A. Irwin, *Free Trade Under Fire, 5th edition*, Princeton University Press, 2020 provides an up-to-date discussion of the benefits of international trade using this framework and served as a primary resource for the development of the material that follows in this box.

41 David Ricardo's classic law of comparative advantage highlights how relative (rather than absolute) productivity differences create opportunities for all countries to specialize and gain from international trade. The benefits of specialization appear to be quite large: one multisector model with intermediate goods estimates that static gains from trade boost welfare in the average country by 30%. See Arnaud Costinot and Andrés Rodríguez-Clare, "Trade theory with numbers: Quantifying the consequences of globalization," *Handbook of international economics*, Vol. 4, Elsevier, 2014, as cited in Douglas A. Irwin, *Free Trade Under Fire, 5th edition*, Princeton University Press, 2020.

42 According to a recent study, "Trade is estimated to have reduced by two-thirds (one quarter) the price of the household consumption basket of a typical advanced economy low-income (high income) household." Quoted from International Monetary Fund, World Bank, and World Trade Organization, "Making Trade an Engine of Growth for All: The Case for Trade and for Policies to Facilitate Adjustment," April 2017, based on Pablo D. Fajgelbaum and Amit K. Khandelwal, "Measuring the unequal gains from trade," *The Quarterly Journal of Economics* 131.3, 2016. For additional material on this topic, refer to Xavier Jaravel and Erick Sager, "What are the price effects of trade? Evidence from the US and implications for quantitative trade models," CEPR Discussion Paper No. DP13902, August 2019 and Robert C. Feenstra and David E. Weinstein, "Globalization, markups, and US welfare," *Journal of Political Economy* 125.4, 2017.

43 The benefits of variety extend beyond goods that cannot be produced domestically, such as out-of-season fruits and vegetables and scale-intensive products (e.g., airplanes) in small countries. Even when domestic products are available at similar price and quality levels, some buyers will prefer the options offered by foreign sellers. Irwin, *Free Trade Under Fire*, cites research indicating that the welfare losses from a tariff that reduces the variety of imported goods can be as much as 10 times larger than those from a tariff that just reduces the quantity of imported goods. See Paul Romer, "New goods, old theory, and the welfare costs of trade restrictions," *Journal of Development Economics* 43.1, 1994.

44 According to a widely-cited study, differences in prices of capital goods across countries explain about 25% of cross-country productivity differences. See Jonathan Eaton and Samuel Kortum, "Trade in capital goods," *European Economic Review* 45.7, 2001.

45 See, for example, Ufuk Akcigit, "Globalization and Innovation," in Luís Catão and Maurice Obstfeld (editors), *Meeting Globalization's Challenges: Policies to Make Trade Work for All*, Princeton University Press, 2019.

46 John Stuart Mill argued, in the source cited earlier in this section, that "the economical advantages of commerce are surpassed in importance by those of its effects which are intellectual and moral. It is hardly possible to overrate the value, in the present low state of human improvement, of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar."

47 Alberto Ades and Rafael Di Tella, "Rents, competition, and corruption," *American Economic Review* 89.4, 1999.

48 For a wide-ranging examination of this topic, refer to Edward D. Mansfield and Brian M. Pollins, eds., *Economic Interdependence and International Conflict: New Perspectives on an Enduring Debate*, University of Michigan Press, 2009. For a recent contribution before the start of the war in Ukraine, see Frederick R. Chen, "Extended Dependence: Trade, Alliances, and Peace," *The Journal of Politics*, 83:1, January 2021. The WTO's 2023 World Trade Report provides additional background and analysis on this topic, finding encouraging evidence of trade reducing conflicts, especially when conducted within a multilateral system of agreed rules.

NOTES SECTION 2
2. TRADE GROWTH BY COUNTRY AND REGION

1 The term "countries" is used throughout this publication to refer to both countries and other territories that report separate trade statistics, regardless of their political status.

2 Market shares tend to be less stable in fast-growing markets or industries. This pattern shows up in studies dating back to the 1960s. See, for example, Michael Gort, "Analysis of stability and change in market shares," *Journal of Political Economy* 71.1, 1963. For a more recent study, refer to Masatoshi Kato and Yuji Honjo, "Market share instability and the dynamics of competition: A panel data analysis of Japanese manufacturing industries," *Review of Industrial Organization* 28.2, 2006.

3 The vertical axis shows the annual growth rate of countries' trade volumes, and the horizontal axis shows the absolute growth of each country's trade, i.e. how much more trade each country conducted in 2024 than in 2019 (in constant 2023 prices). Note that the horizontal axis is on a logarithmic scale, to make it easier to see the variation across countries. Only countries with positive trade growth are shown.

4 For a globalization-focused case study on the United Arab Emirates, refer to Steven A. Altman and Caroline R. Bastian, "Connecting to the World: Lessons from 10 Years of the DHL Global Connectedness Index," Deutsche Post DHL Group, 2021.

5 World Bank World Development Indicators.

6 For a globalization-focused case study on Viet Nam, refer to Steven A. Altman and Caroline R. Bastian, "Connecting to the World: Lessons from 10 Years of the DHL Global Connectedness Index," Deutsche Post DHL Group, 2021.

7 According to data from the IMF World Economic Outlook, October 2024, Ireland was on track to achieve a compounded average real GDP growth rate of 5.0% from 2019 to 2024, as compared to 1.2% for the European Union (and 0.7% for the United Kingdom).

8 Frida Ghitis, "Guyana's Oil Wealth Comes With Some Strings Attached," *World Politics Review,* March 10, 2022.

9 Based on data from Oxford Economics and S&P Global Market Intelligence.

10 Shares of trade by product category here and later in this section are all drawn from the CEPII BACI dataset. These values are based on 2022 data only, so they differ somewhat from the values depicted in the Country Profiles at the back of this report, which combine product-level trade data across the period from 2017 to 2022.

11 World Bank World Development Indicators.

12 IMF, "Republic of Armenia: Staff Report for the 2023 Article IV Consultation and Second Review Under the Stand-by Arrangement and Request for Modifications of Performance Criteria and Monetary Policy Consultation Clause," November 17, 2023.

13 Based on data from IMF Direction of Trade Statistics.

14 Alexandra Wexler and Yusuf Khan, "In Quest for Battery Metals, U.S. Takes On Cobalt's 'Inconvenient Truth'," *The Wall Street Journal*, August 24, 2023.

15 GlobalData, "Copper production in the Democratic Republic of the Congo and major projects," August 23, 2024; Bob Woods, "Copper is critical to energy transition. The world is falling way behind on producing enough," *CNBC,* September 27, 2023.

16 Based on trade intensity data reported in the World Bank's World Development Indicators.

17 The combined growth rate projections were obtained by extrapolating each individual forecast from 2023 out to 2029, then taking a geometric mean of the resulting annual levels and calculating the annual growth rates of the resulting series.

18 FT Locations fDi Markets database.

19 McKinsey & Company, "Diversifying global supply chains: Opportunities in Southeast Asia," September 5, 2024.

20 McKinsey & Company, "Diversifying global supply chains: Opportunities in Southeast Asia," September 5, 2024.

21 Niña Myka Pauline Arceo, "PH still lags in supply chain diversification," *The Manila Times,* May 30, 2024; Louella Desiderio, "Philippines among emerging manufacturing hotspots," *The Philippines Star,* July 12, 2024.

22 See, for example, World Bank, "India Development Update: India's trade opportunities in a changing global context," September 2024; IBEF, "Infrastructure Sector in India Industry Report," November 2024; World Bank Press Release, "Vietnam's Economic Growth Slows Due to Global Headwinds and Internal Constraints," August 10, 2023; Luis E Breuer, Jaime Guajardo, Tidiane Kinda, *Realizing Indonesia's Economic Potential*, International Monetary Fund, 2018; Tristan Hennig, Margaux MacDonald, and Melih Firat, "Philippines: Selected Issues," International Monetary Fund, November 15, 2024.

23 Based on World Bank country income group classifications.

NOTES SECTION 3
3. THE SHIFTING GEOGRAPHY OF WORLD TRADE

1 Several methodologies have been developed for measuring the world's center of gravity based on economic indicators. This figure was developed using the method employed in Richard Dobbs, Jaana Remes, James Manyika, Charles Roxburgh, Sven Smit, and Fabian Schaer, "Urban world: Cities and the rise of the consuming class," McKinsey Global Institute, June 2012. This method takes a weighted average across locations in three dimensions according to their trade values and then projects that location to the nearest point on the surface of the Earth. For another prominent method for such visualizations, see Danny Quah, "The global economy's shifting centre of gravity," *Global Policy* 2.1, January 2011.

2 The material in this section, unless otherwise noted, is based on trade values in current U.S. dollars.

3 The actual center of gravity generated via such calculations is located beneath the surface of the Earth, and we show the point on the Earth's surface that is located closest to the calculated center of gravity.

4 Persistent U.S. trade deficits have contributed to this phenomenon. According to data from the World Bank's World Development Indicators, the U.S. has run trade deficits (on goods and services combined) since 1976, peaking in 2005-06 at 5.7% of GDP. Since 2013, U.S. trade deficits have hovered around 3% of GDP. China's trade surplus peaked at 8.7% of GDP in 2007 before declining to 2.4% in 2011, similar to its 2023 level of 2.2%.

5 Because North America and East Asia are located across the North Pole from one another, increases in the share of trade conducted by these regions push the center of gravity to the north. Changes in oil prices also affect the latitude trends. When oil prices rise, this tends to push the center of gravity of exports toward the south, and falling oil prices have the opposite effect.

6 The predicted shift of the center of gravity of world trade toward the southeast is consistent with the trade volume growth forecasts in the previous section that highlighted prospects for especially rapid growth in South & Central Asia, Sub-Saharan Africa, and the ASEAN sub-region of East Asia & Pacific. However, it is important to keep in mind that the center of gravity analysis is conducted in value terms, and the value forecast differs somewhat from the volume forecast. In value terms, the ASEAN region is predicted to achieve the fastest trade growth over the next five years (6.8%) followed by the Middle East & North Africa (5.0%), South & Central Asia (4.9%). Those regions are forecast to achieve faster trade value growth than the world as a whole, leading to expectations that their share of world trade will increase, drawing the center of gravity toward these regions.

7 We calculate regions' shares of world trade using data on both exports and imports, including intra-regional trade flows. For region definitions, we follow in this report the same seven-region classification scheme employed in the DHL Global Connectedness Report series. The seven regions are: **East Asia & Pacific:** Australia, Brunei Darussalam, Cambodia, China, Fiji, Hong Kong SAR (China), Indonesia, Japan, Kiribati, Korea (Democratic People's Republic of), Korea (Republic of), Lao People's Democratic Republic, Macau SAR (China), Malaysia, Marshall Islands, Micronesia (Federated States of), Mongolia, Myanmar, Nauru, New Zealand, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, Taiwan (China), Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, Viet Nam. **Europe:** Albania, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom. **Middle East & North Africa:** Algeria, Bahrain, Djibouti, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen. **North America:** Canada, Mexico, United States. **South & Central America & the Caribbean:** Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela (Bolivarian Republic of). **South & Central Asia:** Afghanistan, Armenia, Azerbaijan,

Bangladesh, Bhutan, Georgia, India, Iran (Islamic Republic of), Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Türkiye, Turkmenistan, Uzbekistan. **Sub-Saharan Africa:** Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania (United Republic of), Togo, Uganda, Zambia, Zimbabwe.

8 China's share of world trade was elevated during the Covid-19 pandemic due both to surging demand for products with high shares made in China (such as electronics and medical products) and to the resilience of China's supply base while other suppliers struggled with pandemic-related disruptions.

9 Income groups as defined by the World Bank. "For the current 2025 fiscal year, low-income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of $1,145 or less in 2023; lower middle-income economies are those with a GNI per capita between $1,146 and $4,515; upper middle-income economies are those with a GNI per capita between $4,516 and $14,005; high-income economies are those with more than a GNI per capita of $14,005." See https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.

10 Trade volume growth rates from IMF World Economic Outlook (October 2024) applied to 2023 trade values from IMF Direction of Trade Statistics.

11 All maps in this publication are stylized and not drawn according to the physical scale of any country or territory. They do not reflect a position by DHL Group or NYU Stern on the legal status of any country or area or the delineation of any frontiers.

12 For discussion of "Factory Asia," refer to Asian Development Bank and Korea Economic Research Institute, "Future of Factory Asia," edited by Byung-il Choi and Changyong Rhee, 2014.

13 The decline in average distance and increase in the intra-regional share of trade between 2001 and 2003 reflected increases in trade regionalization particularly in Europe (following EU expansion) and East Asia & Pacific (following China's entry into the WTO, which boosted trade between China and other major Asian economies).

14 Bindiya Vakil, "Regionalized supply chains: the key to resilience," CSCMP's Supply Chain Quarterly, May 14, 2022; David W. Simon, "Managing Supply Chain Disruption in an Era of Geopolitical Risk," Foley & Lardner LLP, July 19, 2022; Felix Thompson, "RCEP to accelerate regionalisation of trade, as Asian importers eye markets closer to home," Global Trade Review, January 11, 2022; Susan Lund, James Manyika, Lola Woetzel, Jacques Bughin, Mekala Krishnan, Jeongmin Seong, and Mac Muir, "Globalization in transition: The future of trade and value chains," McKinsey Global Institute, January 16, 2019; Jens Burchardt, Michel Frédeau, Miranda Hadfield, Patrick Herhold, Chrissy O'Brien, Cornelius Pieper, and Daniel Weise, "Supply Chains as a Game-Changer in the Fight Against Climate Change," Boston Consulting Group, March 2021

15 This analysis ends in 2022 due to longer reporting lags for dyadic trade data at the level of specific product categories.

NOTES SECTION 4
4. GEOPOLITICS AND SHIFTING TRADE PATTERNS

1   Institute for Economics and Peace, "Global Peace Index 2024," June 2024.

2   Constantinos Syropoulos, Gabriel Felbermayr, Aleksandra Kirilakha, Erdal Yalcin, Yoto V. Yotov, "The Global Sanctions Data Base – Release 3: Covid-19, Russia, and Multilateral Sanctions," *Review of International Economics*, 2023.

3   Michael Blanga-Gubbay and Stela Rubínová, "Is the Global Economy Fragmenting?" WTO Staff Working Paper ERSD-2023-10, October 11, 2024; Gita Gopinath, Pierre-Olivier Gourinchas, Andrea F Presbitero, Petia Topalova, "Changing Global Linkages: A New Cold War?" April 5, 2024; UNCTAD Global Trade Update, December 2023.

4   Shekhar Aiyar, Jiaqian Chen, Christian Ebeke, Roberto Garcia-Saltos, Tryggvi Gudmundsson, Anna Ilyina, Alvar Kangur, Tansaya Kunaratskul, Sergio Rodriguez, Michele Ruta, Tatjana Schulze, Gabriel Soderberg, and Juan Pedro Trevino, "Geoeconomic Fragmentation and the Future of Multilateralism," IMF Staff Discussion Note SDN 2023/001, January 2023.

5   We use here the 2023 update of this classification described in Julian Evans-Pritchard and Mark Williams, "The shape of the fractured world economy in 2024," Capital Economics, November 16, 2023. Further details are available in the original publication, Julian Evans-Pritchard and Mark Williams, "China Economics Focus: Mapping Decoupling," Capital Economics, September 17, 2021. Note that our analysis simply tracks the ratio of total trade value between versus within blocs. Studies on this topic published by the IMF and WTO employed regression models to estimate the effects of membership in geopolitical blocs.

6   We confirmed this result using a variety of ways of classifying countries into geopolitical blocs. Figure 4.1 uses blocs of close allies defined in research by Capital Economics (Julian Evans- Pritchard and Mark Williams, "The shape of the fractured world economy in 2024," Capital Economics, November 16, 2023). The online version of this figure (available at www.dhl.com/tafig4-1) also shows the same analysis using the bloc definitions employed in Michael Blanga-Gubbay and Stela Rubínová, "Is the Global Economy Fragmenting?" WTO Staff Working Paper ERSD-2023-10, October 11, 2024 and in Gita Gopinath, Pierre-Olivier Gourinchas, Andrea F Presbitero, Petia Topalova, "Changing Global Linkages: A New Cold War?" April 5, 2024.

7   We would like to thank Davis Fattedad for his assistance with the development of this content (which appeared originally in the DHL Global Connectedness Report 2024) as well as for his broader contributions to earlier versions of our work on geopolitically driven shifts in patterns of international flows.

8   Julian Evans-Pritchard and Mark Williams, "The shape of the fractured world economy in 2024," Capital Economics, November 16, 2023.

9   Michael A. Bailey, Anton Strezhnev, and Erik Voeten, "Estimating dynamic state preferences from United Nations voting data," *Journal of Conflict Resolution* 61, no. 2, 2017.

10   All other countries are classified as close allies of the U.S. or China, leaning toward the U.S. or China, or as unaligned. In our analysis, we focus only on countries designated as close allies, since early evidence of decoupling or fragmentation is most likely to appear among countries with stronger geopolitical alignments. For our analysis, we also assume that a small number of economies that are not included in the Capital Economics classifications are close allies of neither the U.S. nor China (we consider them as unaligned). The criteria used by Capital Economics to classify countries were:

• Alignment on the UN's Human Rights Commission
• Territorial dispute with China?
• Official Bridge and Road Initiative (BRI) participant?
• Attended the 2021 BRI conference?
• Official Build Back Better World participant?
• UN General Assembly voting alignment
• Net public opinion (% favorable, U.S. minus China, latest)
• U.S./China military presence
• Security alliance (NATO, SCO, etc.)
• EU membership?
• Full diplomatic relations with Taiwan?
• Overseas territory or dependency (of China or U.S./ally)?

• Goods exports to U.S. minus exports to China (% of GDP)
• Services exports to U.S. minus exports to China (% of GDP)
• Total exports to U.S. minus exports to China (% of GDP)
• FDI flow, U.S. minus China (% of GDP, 2019)
• FDI stock, U.S. minus China (% of GDP, 2019)
• Aid from DAC countries (% of GNI, 2019)
• Public borrowing from U.S. vs. China (% of GDP, 2019)

11   We use the ideal point distance based on Michael A. Bailey, Anton Strezhnev, and Erik Voeten, "Estimating dynamic state preferences from United Nations voting data," *Journal of Conflict Resolution* 61, no. 2, 2017, calculated using data on UN General Assembly voting between 2018 and 2022, rescaled 0 – 100.

12   Larger economies tend to trade less intensively than smaller economies, since more of their activity naturally takes place within their large domestic markets. As the world's two largest economies, it is therefore unsurprising that the share of trade taking place between the U.S. and China is much lower than these two countries' shares of both GDP and total trade.

13   The share of trade crossing between blocs rose during the Covid-19 pandemic, and part of the decline since 2021 reflected a reversion to pre-pandemic levels.

14   Note that the trade among European Union member states is included in trade within the U.S.-aligned bloc. Intra-EU trade comprises 34% of trade within the U.S.-aligned bloc.

15   IMF Direction of Trade Statistics.

16   Trang Hoang and Gordon Lewis, "As the U.S. is Derisking from China, Other Foreign U.S. Suppliers Are Relying More on Chinese Imports," FEDS Notes, August 2, 2024.

17   This has been attributed to China's exports data underreporting mainland exports that pass through Hong Kong SAR (China) and to China's tax policy incentives. See Hunter L. Clark and Anna Wong, "Did the U.S. Bilateral Goods Deficit With China Increase or Decrease During the US-China Trade Conflict?," *FEDS Notes*, June 21, 2021.

18   According to one study, evasion of U.S. tariffs was the largest factor, while changes in China's tax policy and unexplained factors played a smaller part in this phenomenon. See Hunter L. Clark and Anna Wong, "Did the U.S. Bilateral Goods Deficit With China Increase or Decrease During the US-China Trade Conflict?," *FEDS Notes*, June 21, 2021. The growth of "de minimis" imports may have also contributed to this phenomenon. See "Trump's China Tariff Plan Has $64 Billion Import Hole," *BNN Bloomberg*, December 5, 2024.

19   Imports data are typically regarded as more accurate than exports data. Nonetheless, the striking shift in shares based on reported exports and imports suggests that the exports data are, at minimum, worthy of careful attention in this case.

20   Caroline Freund, Aaditya Mattoo, Alen Mulabdic, and Michele Ruta, "Is US Trade Policy Reshaping Global Supply Chains?," *Journal of International Economics*, Volume 152, November 2024; Laura Alfaro and Davin Chor, "Global Supply Chains: The Looming 'Great Reallocation'," NBER Working Paper 31661, September 2023; Ebehi Iyoha, Edmund Malesky, Jaya Wen, Sung-Ju Wu, and Bo Feng, "Exports in Disguise?: Trade Rerouting during the US-China Trade War," Harvard Business School Working Paper 24-072, May 24, 2024.

21   More technically, this measures the share of "value added" from China that is "absorbed" in the U.S. economy. This was calculated based on the Asian Development Bank's Multi-Regional Input Output tables (62-country version in current prices) by dividing value added from China in U.S. final consumption, gross fixed capital formation, and changes in inventories and valuables by value added from all countries except the United States in the same categories.

NOTES SECTION 5
5. THE MIX OF GOODS TRADED

1 The majority of this report uses data from the IMF's Direction of Trade Statistics (DOT) database for historical periods. However, the DOT database does not disaggregate by product. In this new edition, we use data from the CEPII BACI database (see Guillaume Gualier and Soledad Zignago, "BACI: International Trade Database at the Product-Level," CEPII Working Paper No. 2010 – 23, October 2010) to analyze the mix of goods traded. We access and summarize the data using the Harmonized System (HS) for classifying goods, but we use simplified category names from the Atlas of Economic Complexity throughout the relevant text and figures (see The Growth Lab at Harvard University, "Classifications Data," V4, 2019, accessed via Harvard Dataverse. DOI: 10.7910/DVN/3BAL1O). In some cases we have combined higher level categories.

2 In this section, we have focused on the goods traded in 2022, as the BACI data were only available through 2022 at the time of writing. However, as we have observed, the composition of trade changes much more slowly than its geography.

3 There are 22 HS sections (rather than 21) if also including categories that vary across countries for special classifications and provisions. Since these categories are not standardized globally, we do not employ them here.

4 World Customs Organization (2022). *HS Nomenclature 2022 Edition*.

5 Perhaps the best example of this is that computers are classified as industrial machinery (chapter 84) since they were originally not the type of machinery that consumers would have in their homes. This puts them in a chapter with nuclear reactors and boilers, not chapter 85, that includes monitors and home electronics, as they probably would be classified today. It is also striking that the integrated circuits that are the core of these same computers are found in chapter 85, whereas the computers themselves are in chapter 84.

6 OICA motor vehicle production statistics (https://www.oica.net/category/production-statistics/).

7 The CEPII BACI dataset used here measures quantity in metric tons.

8 HS code 8542.

9 HS code 8517; note: this chapter also includes other devices used for the transmission or reception of voice, images, and other data; as well as other telephony equipment.

10 See note 5.

11 The CEPII BACI dataset used here measures quantity in metric tons.

NOTES SECTION 6
6. TRADE IN GLOBAL ECONOMIC CONTEXT

1 In more precise economic terms, 21% of global value added is absorbed (consumed or invested) abroad. This is calculated by summing DAVAX and REX in the ADB MRIO Export Decomposition and dividing by Value Added.

2 We rely on this data source because it provides very timely updates along with extensive geographic and industry level coverage. Another very useful source for this type of analysis is the OECD's dataset on Trade in Value Added (TiVA). For this publication, we have used the Asian Development Bank source because it provides results through 2023, whereas the most recent year available as of this writing (December 2024) in the OECD dataset is 2020.

3 Some sources add together the value of gross imports and exports before dividing by world GDP, which introduces another layer of full double-counting to the calculation (since every export is also an import). This approach results in a trade-to-GDP ratio of 59% for 2023, which overstates the actual level of trade intensity by an even wider margin.

4 If borders and distance ceased to matter and buyers simply purchased goods and services in proportion to how much is produced in different countries, international trade would comprise about 90% of economic activity – because far more goods and services are produced outside of any given country than within it. In a hypothetical frictionless world, each country would buy goods and services in proportion to countries' shares of world GDP. As a result, each country's imports-to-GDP ratio would be equal to one minus its share of world GDP, and the global ratio of exports or imports to world GDP would equal one minus the sum of all countries' squared shares of world GDP. See James E. Anderson, "The Gravity Model," *Annual Review of Economics* 3, no. 1, 2011 and Arvind Subramanian and Martin Kessler, "The Hyperglobalizaion of Trade and Its Future," PIIE Working Paper 13-6, Peterson Institute for International Economics, July 2013.

5 For trade intensity trends comparing goods versus services, refer to the DHL Global Connectedness Tracker at https://dhl.com/globalconnectedness.

6 This is calculated using data by origin sector (OS) in the Asian Development Bank's Multiregional Input-Output Database.

7 Calculations based on "direct exports" were made using data by export sector (ES) in the ADB MRIO Exports Decomposition.

**8** UNCTAD Review of Maritime Transport 2021.

APPENDIX

This section provides supplementary figures depicting recent and forecast trade growth. It also contains tables listing ISO country codes and HS product codes, selected bibliography, and additional information about the trade data sources employed in the development of this report.

SUPPLEMENTARY TABLES AND FIGURES

FIGURE A.1: EXPORT INTENSITY BY DIRECT EXPORTING SECTOR (VALUE ADDED), 2023
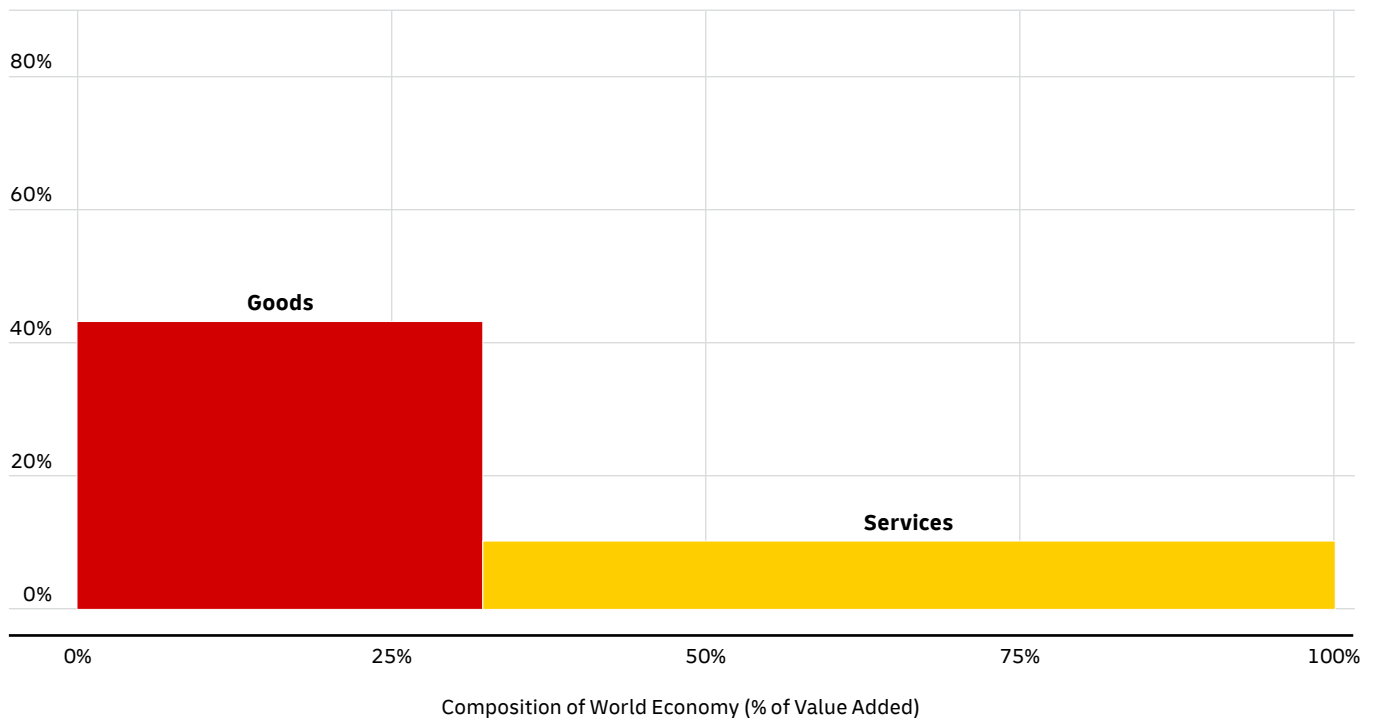
Export Intensity:
Share of value added serving
foreign markets
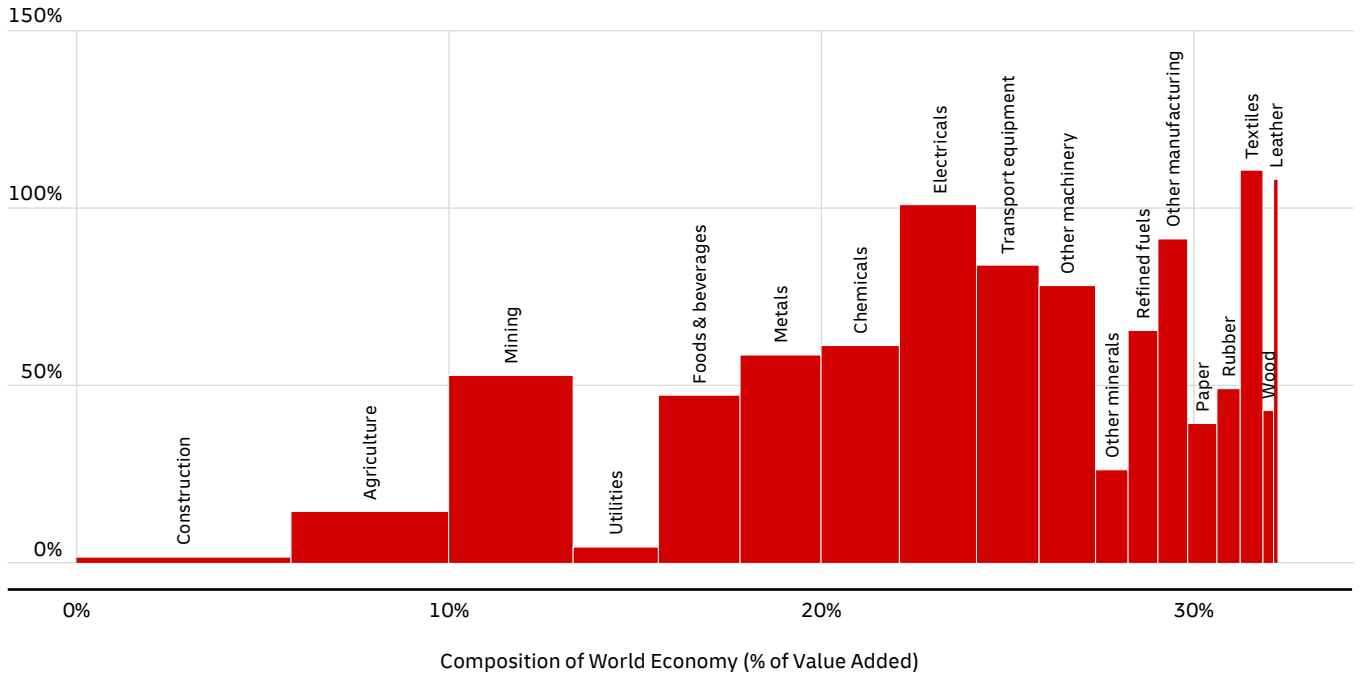

Composition of World Economy (% of Value Added)

Data source: Asian Development Bank Multiregional Input-Output Database.
Note: Calculated using value added exports by export sector (ES) in ADB MRIO Exports Decomposition.

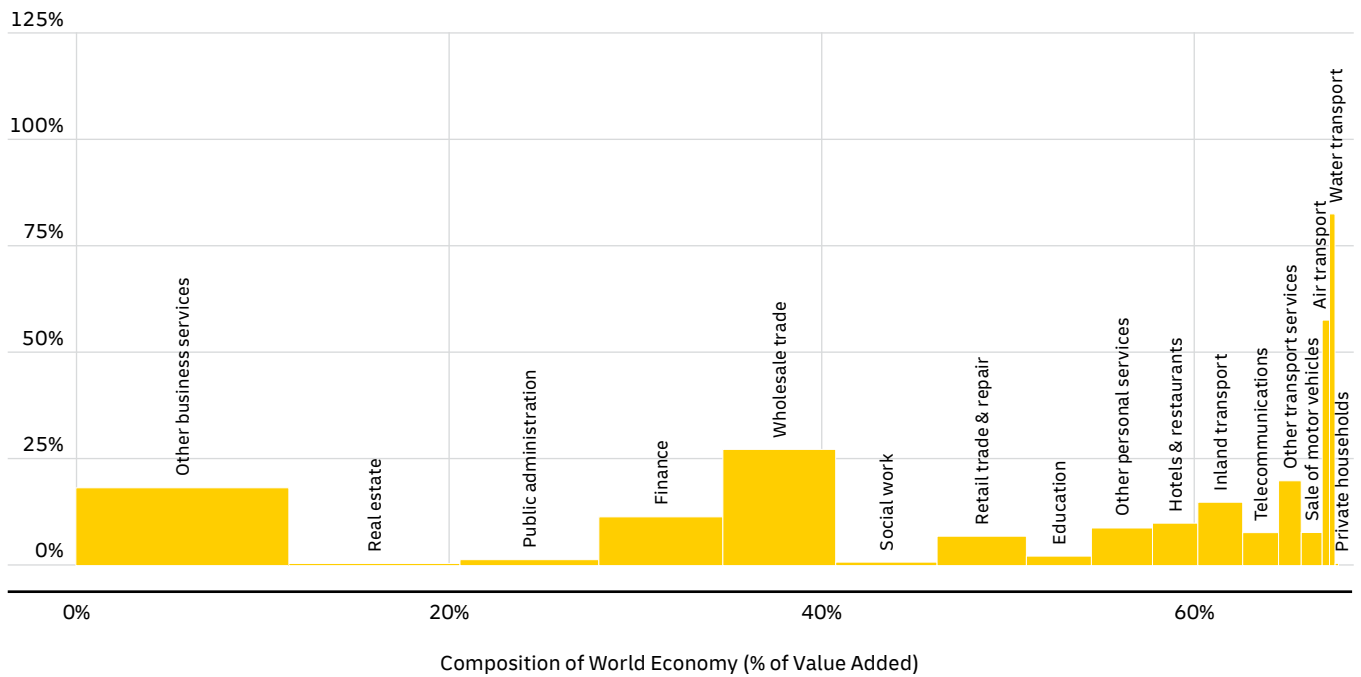**FIGURE A.2: EXPORT INTENSITY BY DIRECT EXPORTING INDUSTRY (VALUE ADDED), 2023**

Goods Industries

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)

Services Industries

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)

Data source: Asian Development Bank Multiregional Input-Output Database.
Note: Calculated using value added exports by export sector (ES) in ADB MRIO Exports Decomposition.
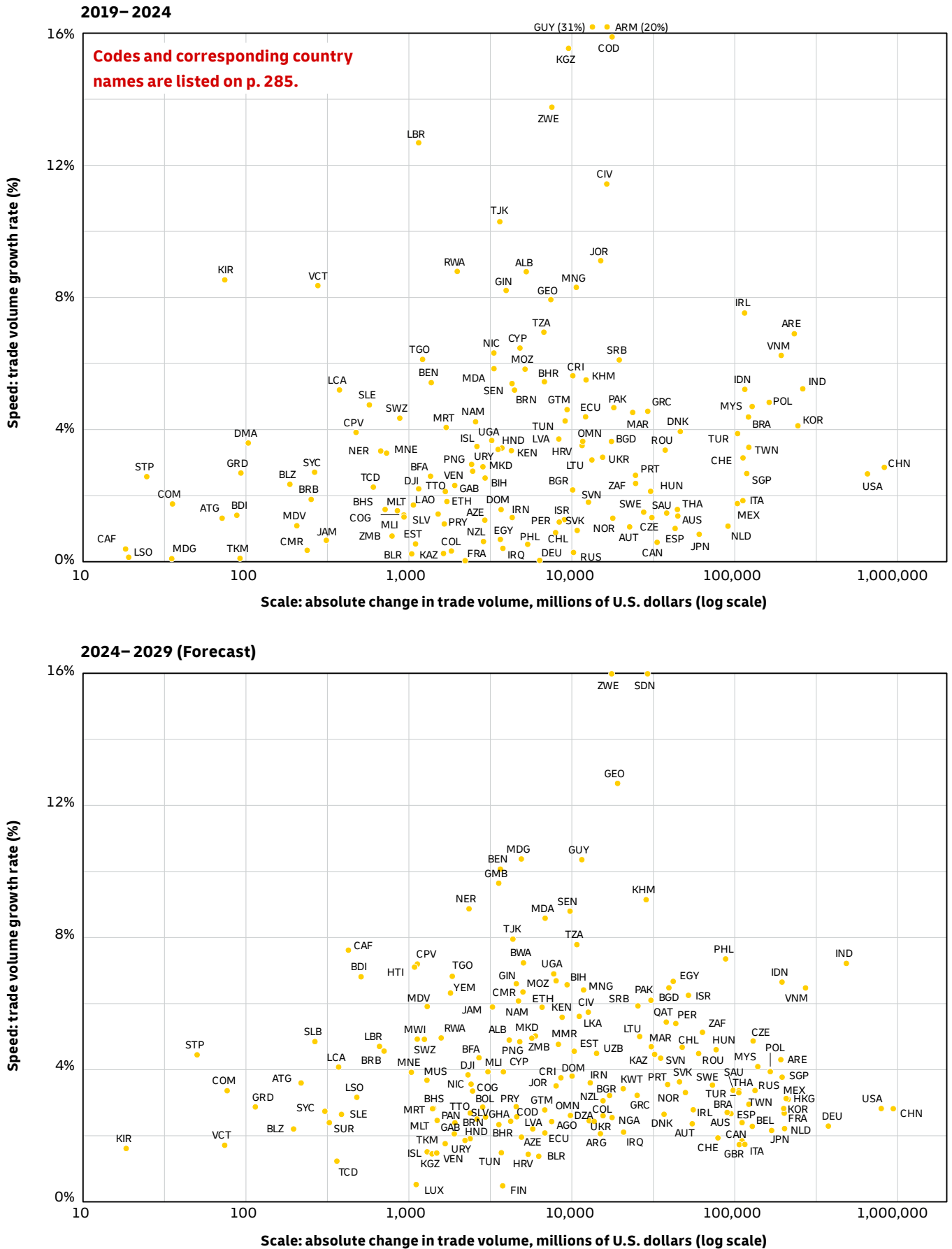
FIGURE A.3: EXPORT INTENSITY BY COUNTRY AND SECTOR (VALUE ADDED), 2023

Goods Sector

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)

Services Sector

Export Intensity:
Share of value added serving
foreign markets

Composition of World Economy (% of Value Added)
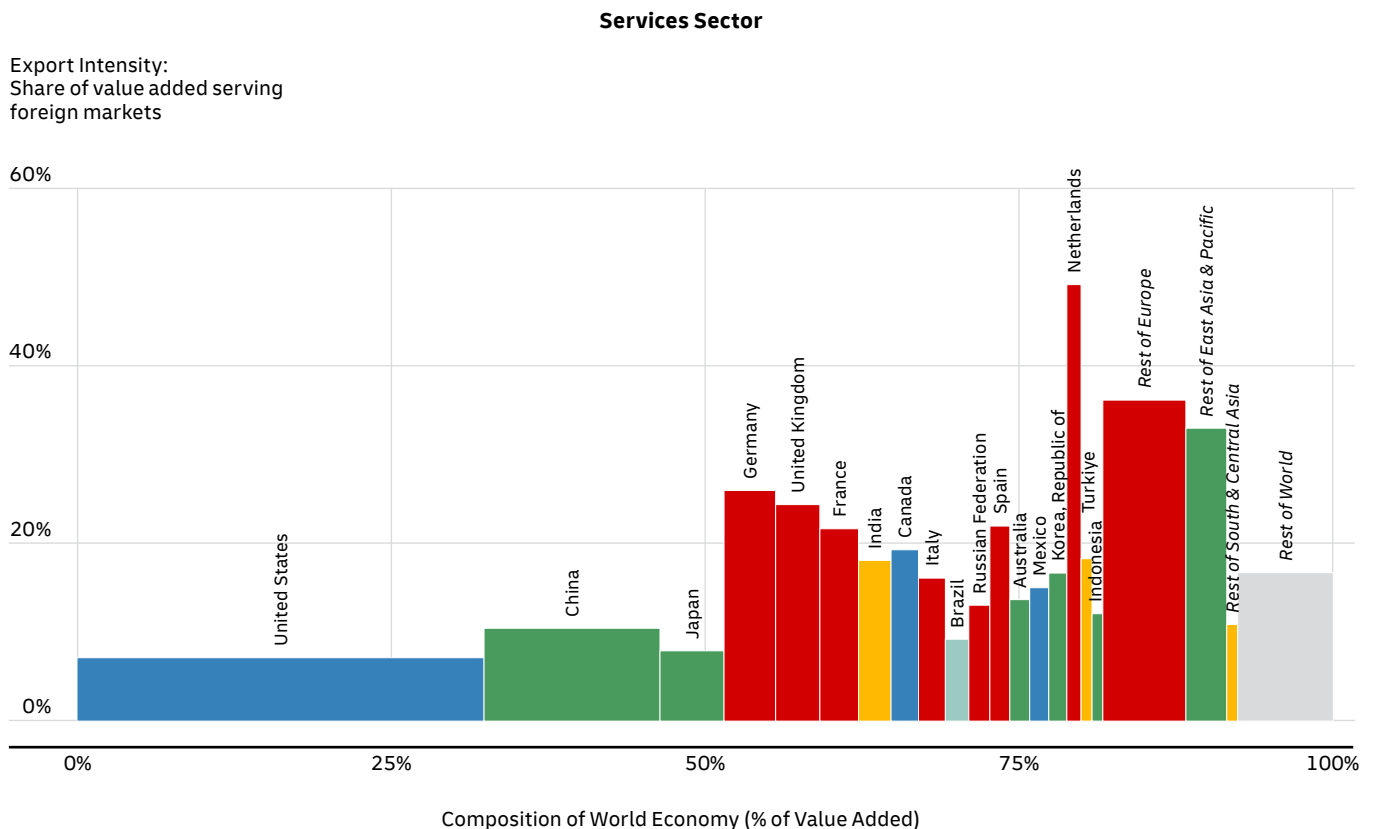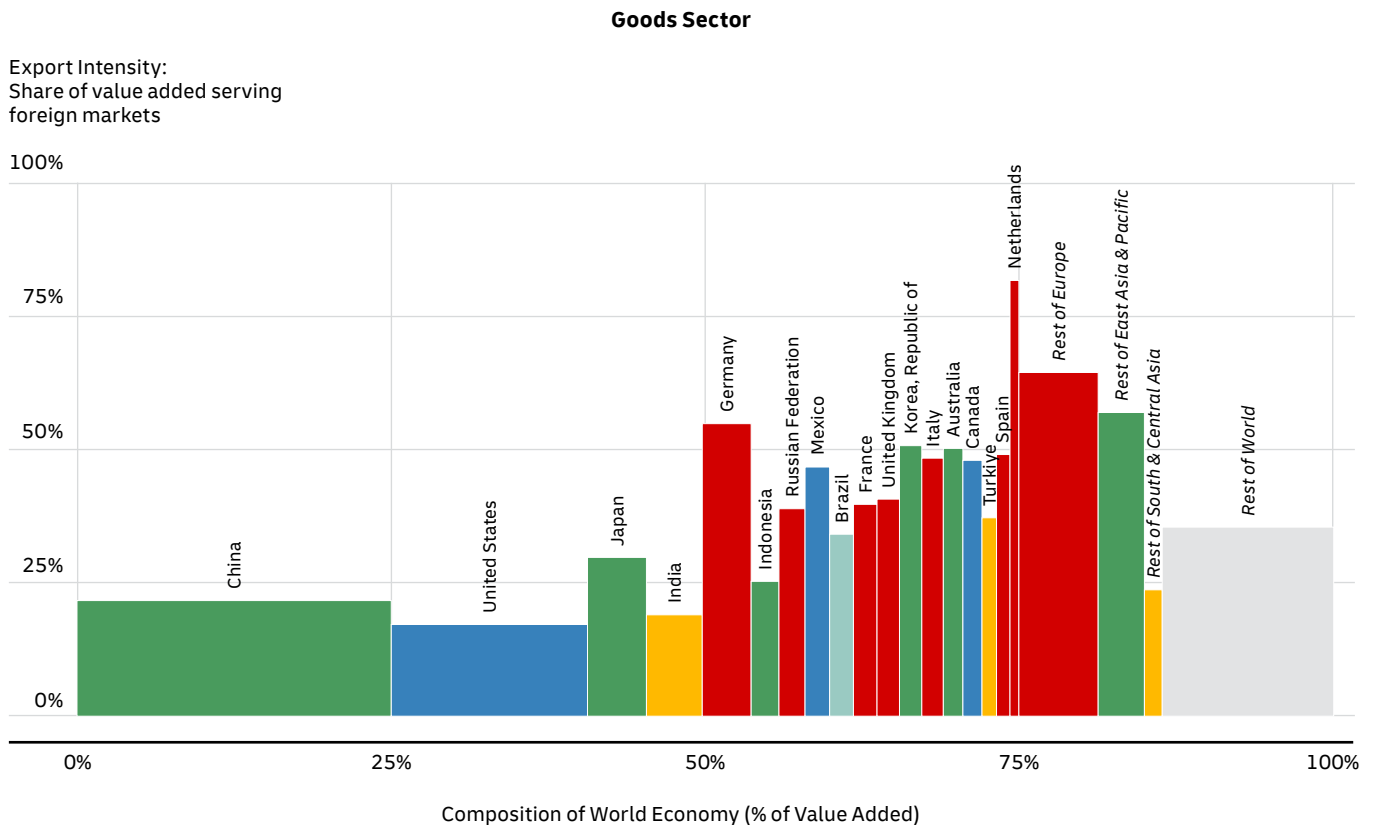
Legend:
■ North America   ■ East Asia & Pacific   ■ Europe   ■ South & Central Asia   ■ South & Central America & Caribbean   ■ Sub-Saharan Africa   ■ Middle East & North Africa
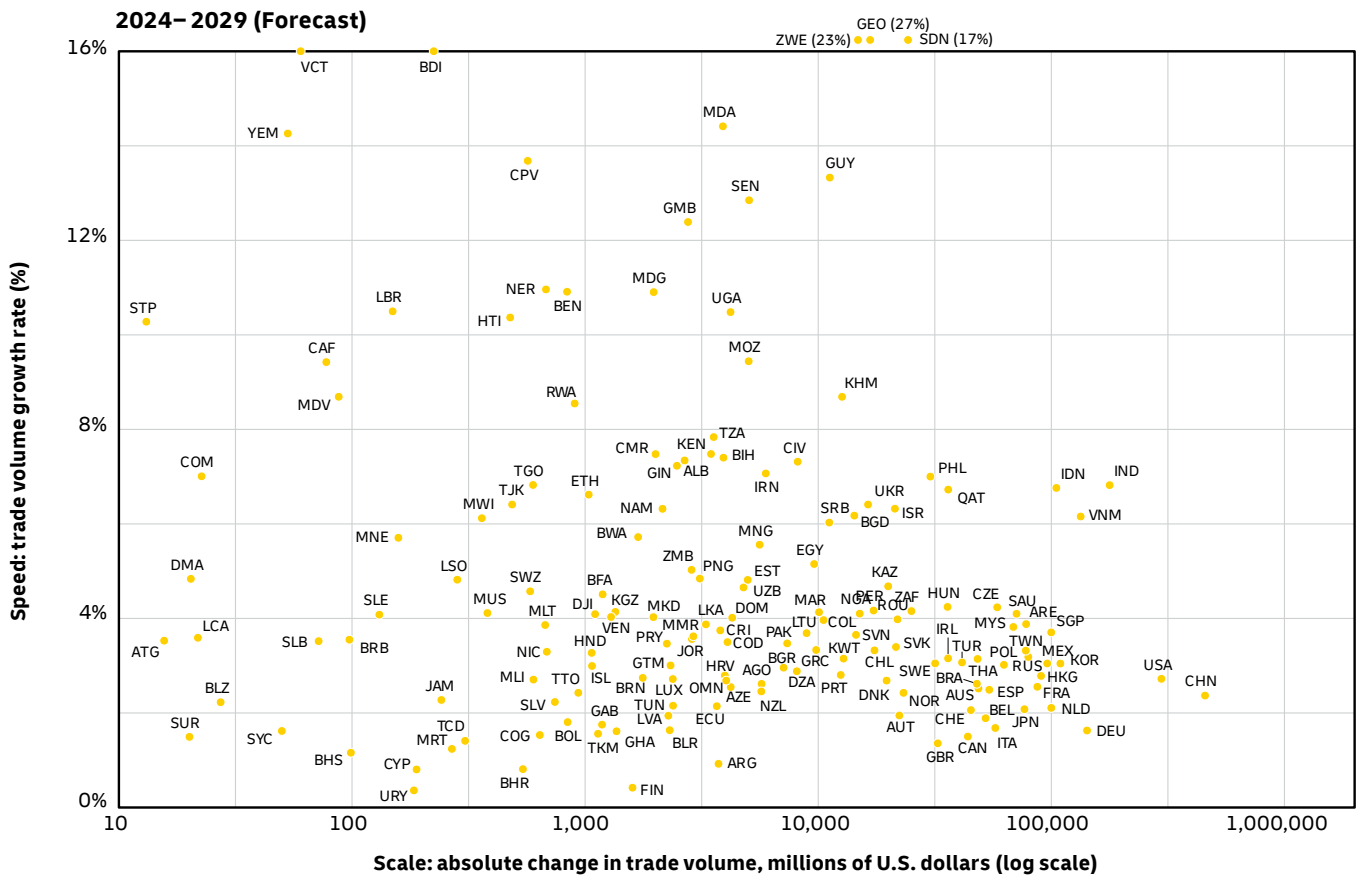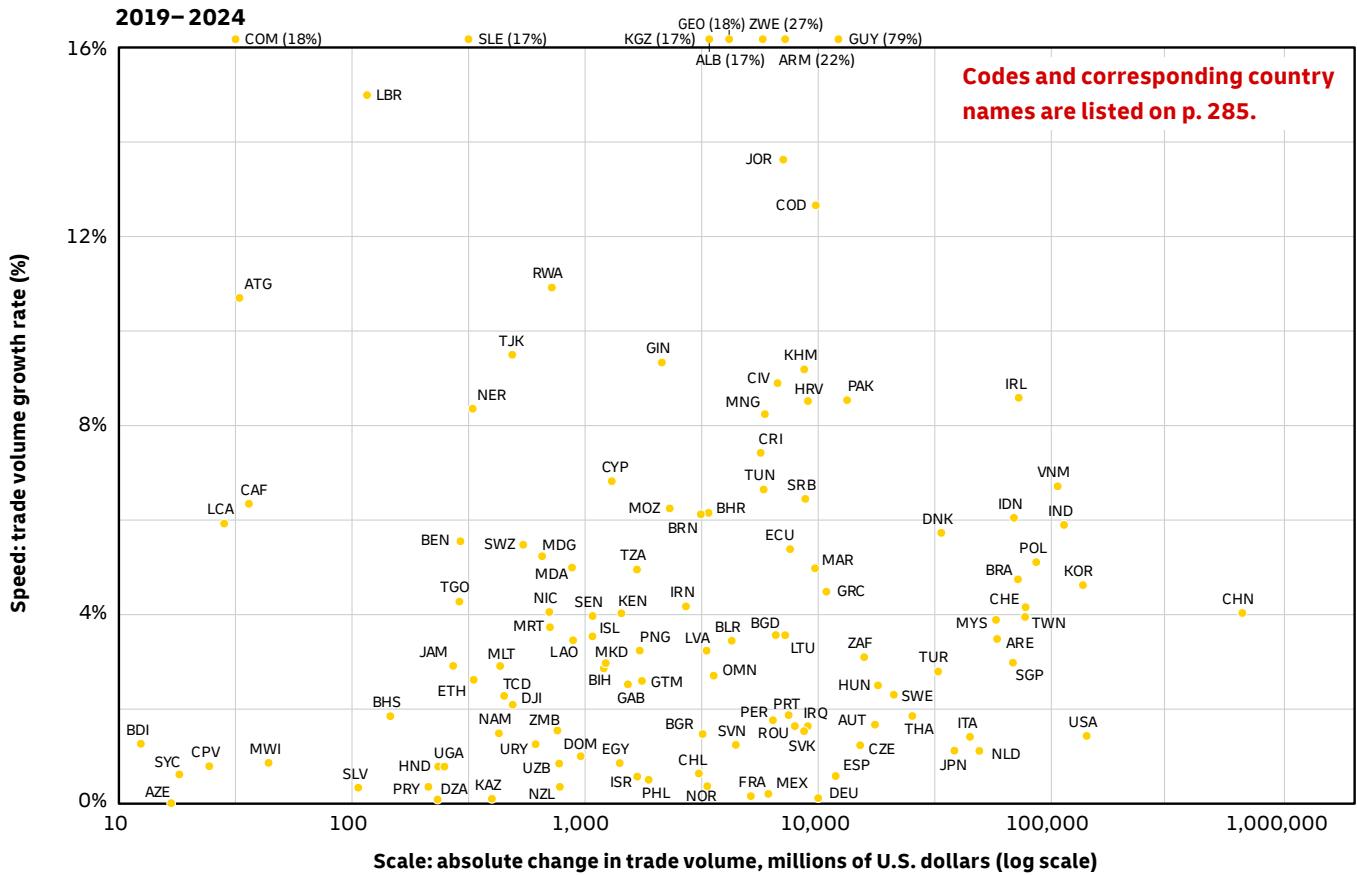
Data source: Asian Development Bank Multiregional Input-Output Database.
Note: Calculated using value added exports by origin sector (OS) in ADB MRIO Exports Decomposition.

FIGURE A.4: GOODS TRADE GROWTH SPEED AND SCALE

2019– 2024

Codes and corresponding country
names are listed on p. 285.

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)

2024– 2029 (Forecast)

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)
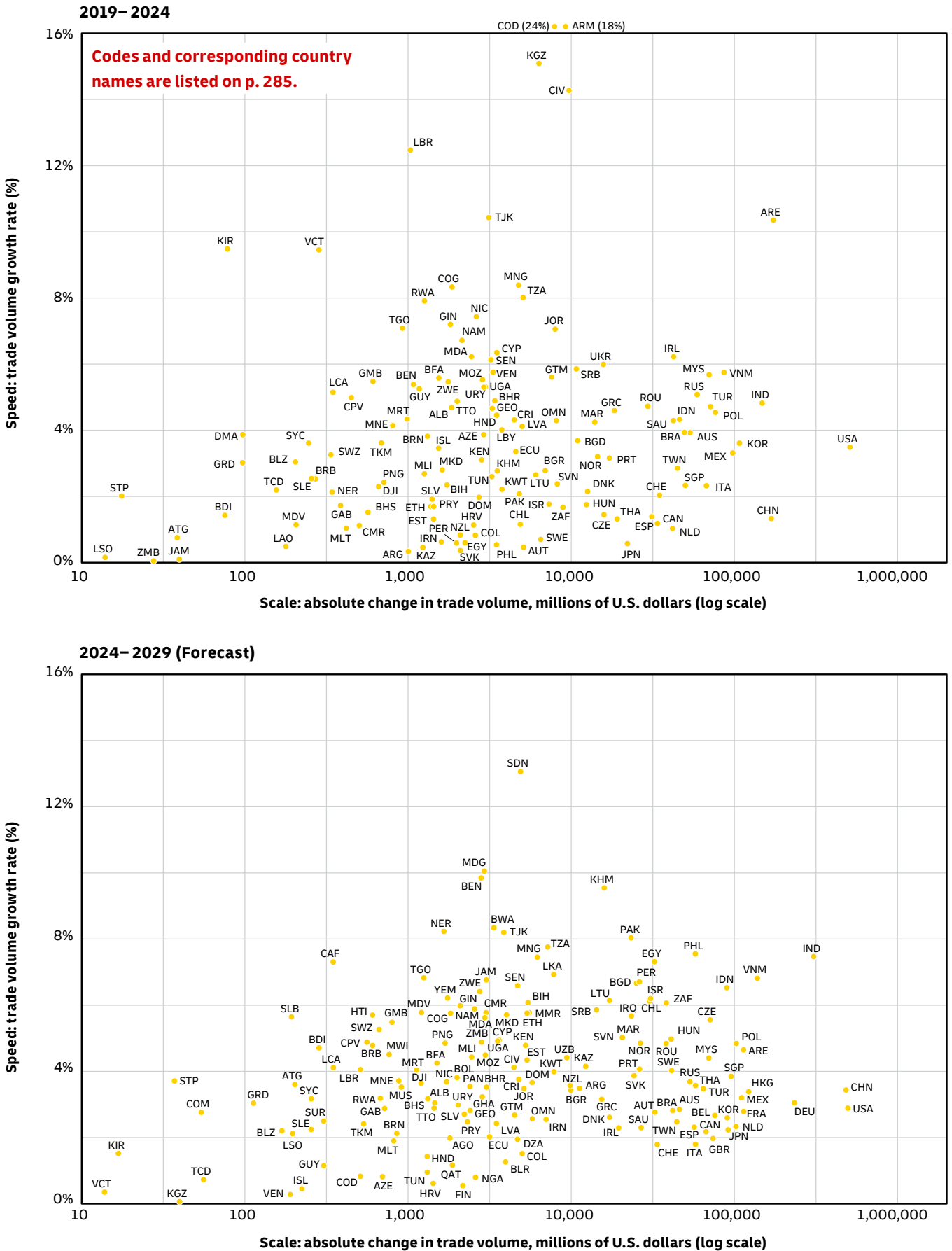
Data Sources: IMF Direction of Trade Statistics, IMF World Economic Outlook, S&P Global, Economist Intelligence Unit, and Oxford Economics.
Note: Countries with negative growth are omitted from these figures.

FIGURE A.5: GOODS EXPORTS GROWTH SPEED AND SCALE

2019–2024

Codes and corresponding country names are listed on p. 285.

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)

2024–2029 (Forecast)

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)

Data Sources: IMF Direction of Trade Statistics, IMF World Economic Outlook, S&P Global, Economist Intelligence Unit, and Oxford Economics.
Note: Countries with negative growth are omitted from these figures.

FIGURE A.6: GOODS IMPORTS GROWTH SPEED AND SCALE

2019– 2024

Codes and corresponding country names are listed on p. 285.

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)

2024– 2029 (Forecast)

Speed: trade volume growth rate (%)

Scale: absolute change in trade volume, millions of U.S. dollars (log scale)

Data Sources: IMF Direction of Trade Statistics, IMF World Economic Outlook, S&P Global, Economist Intelligence Unit, and Oxford Economics.
Note: Countries with negative growth are omitted from these figures.

TABLE A.1: LIST OF HS CODES (2-DIGIT CHAPTERS)

HS Code	Product Category	HS Code	Product Category
01	Live animals	50	Silk
02	Meat	51	Wool
03	Fish	52	Cotton
04	Dairy products	53	Other vegetable textile fibres
05	Animal products	54	Man-made filaments
06	Plants	55	Man-made staple fibres
07	Vegetables	56	Wadding, felt and nonwovens
08	Fruits and nuts	57	Carpets
09	Coffee, tea and spices	58	Special woven fabrics
10	Cereals	59	Impregnated, coated or laminated textile fabrics
11	Flours, starches and malts	60	Knitted fabrics
12	Oil seeds and oleaginous fruits	61	Apparel, knit
13	Lac and other vegetable extracts	62	Apparel, not knit
14	Other vegetable materials	63	Other made up textile articles
15	Animal or vegetable fats, oils or waxes	64	Footwear
16	Preparations of meat or fish	65	Headgear
17	Sugar and candy	66	Umbrellas and walking-sticks
18	Cocoa	67	Feathers and down
19	Preparations of cereals, flour, starch or milk	68	Articles of stone, plaster, cement, etc.
20	Preparations of vegetables, fruit, or nuts	69	Ceramic products
21	Miscellaneous edible preparations	70	Glass and glassware
22	Beverages	71	Precious metals and stones
23	Food residues and animal feed	72	Iron and steel
24	Tobacco	73	Articles of iron or steel
25	Salt, sulphur, lime, cement, etc.	74	Copper
26	Ores, slag and ash	75	Nickel
27	Mineral fuels, oils and waxes	76	Aluminium
28	Inorganic chemicals	78	Lead
29	Organic chemicals	79	Zinc
30	Pharmaceutical products	80	Tin
31	Fertilisers	81	Other base metals
32	Dyes, paints, inks, etc.	82	Metal tools and tableware
33	Essential oils	83	Miscellaneous articles of base metal
34	Soaps, waxes, and paints	84	Industrial Machinery
35	Albuminoidals; modified starches; glues; enzymes	85	Electrical machinery and equipment
36	Explosives	86	Trains
37	Photographic or cinematographic goods	87	Vehicles
38	Miscellaneous chemical products	88	Aircraft
39	Plastics	89	Ships
40	Rubber	90	Apparatuses (optical, medical, etc.)
41	Leather and skins	91	Clocks
42	Articles of leather	92	Musical instruments
43	Furskins	93	Arms and ammunition
44	Wood	94	Furniture
45	Cork	95	Toys
46	Manufactues of plaiting materials	96	Miscellaneous manufactured articles
47	Pulp of wood	97	Art
48	Paper and paperboard	99	Other
49	Products of the printing industry		

TABLE A.2: LIST OF COUNTRY/TERRITORY CODES (ISO 3166-1 ALPHA-3 CODES)

ISO Code	Country/Territory
AGO	Angola
ALB	Albania
ARE	United Arab Emirates
ARG	Argentina
ARM	Armenia
ATG	Antigua and Barbuda
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BDI	Burundi
BEL	Belgium
BEN	Benin
BFA	Burkina Faso
BGD	Bangladesh
BGR	Bulgaria
BHR	Bahrain
BHS	Bahamas
BIH	Bosnia and Herzegovina
BLR	Belarus
BLZ	Belize
BOL	Bolivia, Plurinational State of
BRA	Brazil
BRB	Barbados
BRN	Brunei Darussalam
BWA	Botswana
CAF	Central African Republic
CAN	Canada
CHE	Switzerland
CHL	Chile
CHN	China
CIV	Côte d'Ivoire
CMR	Cameroon
COD	Democratic Republic of the Congo
COG	Congo
COL	Colombia
COM	Comoros
CPV	Cabo Verde
CRI	Costa Rica
CYP	Cyprus
CZE	Czechia
DEU	Germany
DJI	Djibouti
DMA	Dominica
DNK	Denmark

ISO Code	Country/Territory
DOM	Dominican Republic
DZA	Algeria
ECU	Ecuador
EGY	Egypt
ESP	Spain
EST	Estonia
ETH	Ethiopia
FIN	Finland
FRA	France
GAB	Gabon
GBR	United Kingdom
GEO	Georgia
GHA	Ghana
GIN	Guinea
GMB	Gambia
GNQ	Equatorial Guinea
GRC	Greece
GRD	Grenada
GTM	Guatemala
GUY	Guyana
HKG	Hong Kong SAR, China
HND	Honduras
HRV	Croatia
HTI	Haiti
HUN	Hungary
IDN	Indonesia
IND	India
IRL	Ireland
IRN	Iran, Islamic Republic of
IRQ	Iraq
ISL	Iceland
ISR	Israel
ITA	Italy
JAM	Jamaica
JOR	Jordan
JPN	Japan
KAZ	Kazakhstan
KEN	Kenya
KGZ	Kyrgyzstan
KHM	Cambodia
KIR	Kiribati
KNA	St. Kitts and Nevis
KOR	Korea, Republic of
KWT	Kuwait
LAO	Lao People's Democratic Republic

ISO Code	Country/Territory
LBR	Liberia
LBY	Libya
LCA	St. Lucia
LKA	Sri Lanka
LSO	Lesotho
LTU	Lithuania
LUX	Luxembourg
LVA	Latvia
MAR	Morocco
MDA	Moldova
MDG	Madagascar
MDV	Maldives
MEX	Mexico
MKD	North Macedonia
MLI	Mali
MLT	Malta
MMR	Myanmar
MNE	Montenegro
MNG	Mongolia
MOZ	Mozambique
MRT	Mauritania
MUS	Mauritius
MWI	Malawi
MYS	Malaysia
NAM	Namibia
NER	Niger
NGA	Nigeria
NIC	Nicaragua
NLD	Netherlands
NOR	Norway
NZL	New Zealand
OMN	Oman
PAK	Pakistan
PAN	Panama
PER	Peru
PHL	Philippines
PNG	Papua New Guinea
POL	Poland
PRT	Portugal
PRY	Paraguay
QAT	Qatar
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
SAU	Saudi Arabia
SDN	Sudan

ISO Code	Country/Territory
SEN	Senegal
SGP	Singapore
SLB	Solomon Islands
SLE	Sierra Leone
SLV	El Salvador
SRB	Serbia
STP	São Tomé and Príncipe
SUR	Suriname
SVK	Slovakia
SVN	Slovenia
SWE	Sweden
SWZ	Eswatini
SYC	Seychelles
TCD	Chad
TGO	Togo
THA	Thailand
TJK	Tajikistan
TKM	Turkmenistan
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Türkiye
TWN	Taiwan, China
TZA	Tanzania, United Republic of
UGA	Uganda
UKR	Ukraine
URY	Uruguay
USA	United States
UZB	Uzbekistan
VCT	St. Vincent and the Grenadines
VEN	Venezuela, Bolivarian Republic of
VNM	Viet Nam
YEM	Yemen
ZAF	South Africa
ZMB	Zambia
ZWE	Zimbabwe
ZAF	South Africa
ZMB	Zambia
ZWE	Zimbabwe

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TRADE DATA SOURCES AND DISCLAIMER

TRADE DATA SOURCES

Unless otherwise specified in the report text or endnotes, the trade data employed in this report were drawn from the following sources:

Historical data (2023 and prior years):

- IMF Direction of Trade Statistics (primary source for trade in value terms)
- IMF World Economic Outlook, October 2024 (primary source for trade growth in volume terms)
- CEPII BACI, April 9, 2024 version (primary source for trade values by product category)

Projections and Forecasts (2024 and later years, composite forecast aggregated from the following sources):

- Economist Intelligence Unit (EIU), updated January 6, 2025
- IMF World Economic Outlook, October 2024
- Oxford Economics, updated December 30, 2024
- S&P Global Market Intelligence, updated November 22, 2024

DISCLAIMER (S&P GLOBAL MARKET INTELLIGENCE)

HS Code	Product Category
01	Live animals
02	Meat
03	Fish
04	Dairy products
05	Animal products
06	Plants
07	Vegetables
08	Fruits and nuts
09	Coffee, tea and spices
10	Cereals
11	Flours, starches and malts
12	Oil seeds and oleaginous fruits
13	Lac and other vegetable extracts
14	Other vegetable materials
15	Animal or vegetable fats, oils or waxes
16	Preparations of meat or fish
17	Sugar and candy
18	Cocoa
19	Preparations of cereals, flour, starch or milk
20	Preparations of vegetables, fruit, or nuts
21	Miscellaneous edible preparations
22	Beverages
23	Food residues and animal feed
24	Tobacco
25	Salt, sulphur, lime, cement, etc.
26	Ores, slag and ash
27	Mineral fuels, oils and waxes
28	Inorganic chemicals
29	Organic chemicals
30	Pharmaceutical products
31	Fertilisers
32	Dyes, paints, inks, etc.
33	Essential oils
34	Soaps, waxes, and paints
35	Albuminoidals; modified starches; glues; enzymes
36	Explosives
37	Photographic or cinematographic goods
38	Miscellaneous chemical products
39	Plastics
40	Rubber
41	Leather and skins
42	Articles of leather
43	Furskins
44	Wood
45	Cork
46	Manufactues of plaiting materials
47	Pulp of wood
48	Paper and paperboard
49	Products of the printing industry
50	Silk
51	Wool
52	Cotton
53	Other vegetable textile fibres
54	Man-made filaments
55	Man-made staple fibres
56	Wadding, felt and nonwovens
57	Carpets
58	Special woven fabrics
59	Impregnated, coated or laminated textile fabrics
60	Knitted fabrics
61	Apparel, knit
62	Apparel, not knit
63	Other made up textile articles
64	Footwear
65	Headgear
66	Umbrellas and walking-sticks
67	Feathers and down
68	Articles of stone, plaster, cement, etc.
69	Ceramic products
70	Glass and glassware
71	Precious metals and stones
72	Iron and steel
73	Articles of iron or steel
74	Copper
75	Nickel
76	Aluminium
78	Lead
79	Zinc
80	Tin
81	Other base metals
82	Metal tools and tableware
83	Miscellaneous articles of base metal
84	Industrial Machinery
85	Electrical machinery and equipment
86	Trains
87	Vehicles
88	Aircraft
89	Ships
90	Apparatuses (optical, medical, etc.)
91	Clocks
92	Musical instruments
93	Arms and ammunition
94	Furniture
95	Toys
96	Miscellaneous manufactured articles
97	Art
99	Other

Praise for DHL Trade Atlas 2025:

"This report does a massive public service in grounding the discussion of global ties in facts. It marshals an impressive and diverse array of evidence that effectively rebuts the presumption that globalization is dead. The enduring imperative to trade across borders is affirmed in this data-driven report."

Simon J. Evenett, Professor of Geopolitics and Strategy at IMD Business School and Co-Chair of the World Economic Forum's Global Future Council on Trade and Investment

"The DHL Trade Atlas presents a comprehensive and highly visual overview of the global trade landscape, with convenient and accessible material on the state of trade globally and in specific countries and regions. It can help companies identify promising opportunities, and it can contribute to more informed debate on key trade policy issues."

Valerie Picard, Head of Trade, International Chamber of Commerce