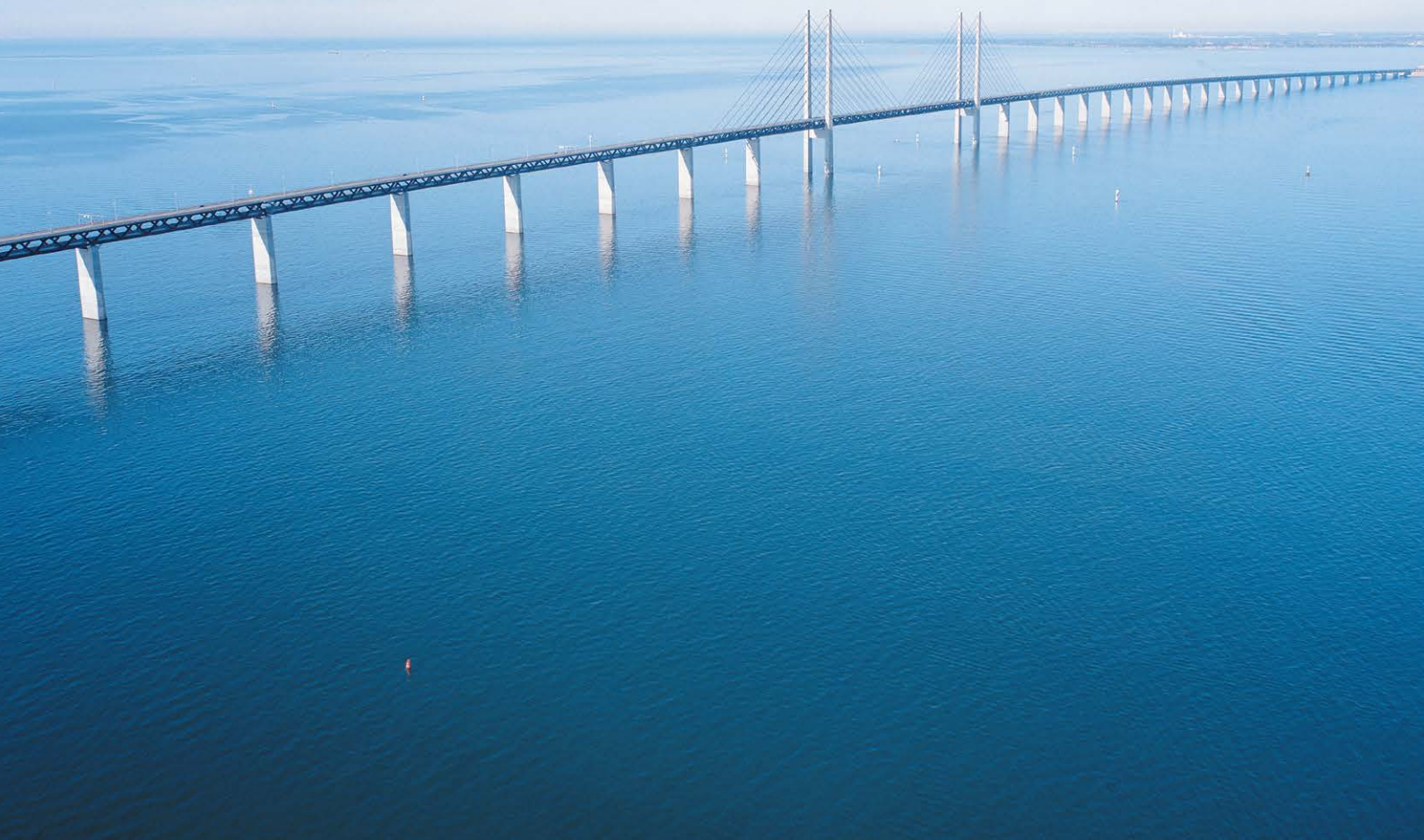


STEVEN A. ALTMAN AND CAROLINE R. BASTIAN

# CONNECTING TO THE WORLD

Lessons from 10 Years of the  
DHL Global Connectedness Index



In partnership with



NYU | STERN

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# CONNECTING TO THE WORLD

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Center for the Future of Management

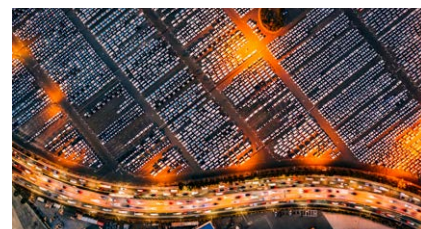
DHL Initiative on Globalization



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**DEAR READER,**

Facts matter. Now more than ever. We live in an unpredictable world, marked by ever accelerating change. The Covid-19 pandemic has upended public and business life around the globe. It has also supercharged digitalization, which is transforming one industry after the next. At the same time, sustainability imperatives are changing consumer behavior and giving a boost to new business models. All this is happening against the backdrop of geopolitical tensions, which threaten the gains we have made in international collaboration and which make global connectedness appear increasingly fragile.

To make sense of such a fast-paced and uncertain environment, we need hard facts based on hard data. Ten years ago, we published together with the authors Pankaj Ghemawat and Steven Altman the first edition of the DHL Global Connectedness Index (GCI) to turn that data into facts and then into insights you can use. Since then, we have regularly brought out new editions, making the GCI series an established, reliable and timely “health check” on the state of trade, capital, information and people flows around the globe.

The report we present today adds a new perspective. It explores what we can learn from countries that have excelled in our connectedness rankings. Based on two decades worth of data, the report’s authors have established five key factors that can help a country drive its connectedness forward. Strikingly, it is not always the most obvious policy choices that deliver the most effective results. Policies that support a healthy domestic business environment, for example, can be more effective than policies aimed directly at boosting international flows.



This report also makes it clear that there is no single route, no single “silver bullet” to achieving—and reaping—the benefits of increased connectedness. As our case studies show, certain countries have been successful in advancing their connectedness in their own specific way. Ultimately, though,

as the example of the Netherlands plainly demonstrates—and has repeatedly done so with its first place ranking in all of our GCI reports—world-leading connectedness and prosperity for all are only reached when a country excels across all five parameters.

These insights can make us optimistic even amidst all the current uncertainty. Time after time, we have seen that countries with stronger global ties also perform better when it comes to the prosperity and well-being of their own people. I am con-

vinced that globalization and global trade will remain a dynamic driver of progress going forward—and that those countries which skillfully leverage this force will come out ahead.

This report offers valuable guidance along the way. In my opinion, it is required reading for those who want to help their countries improve their connections to the world and make the most of their global opportunities.

I wish you an inspiring read!

A handwritten signature in black ink, appearing to read 'Frank Appel', written in a cursive style.

Frank Appel  
CEO, Deutsche Post DHL Group

## DEAR READER,

The story of human progress is a story of expanding our horizons—of growing the circles of cooperation and competition in which business and life take place. But this progression has always entailed risks and challenges, and advances have often been followed by setbacks. The DHL Global Connectedness Index report series tracks this multifaceted phenomenon based on more than 3.5 million data points on international trade, capital, information, and people flows.

On the 10<sup>th</sup> anniversary of the DHL Global Connectedness Index, we are delighted to present this brief report highlighting lessons from this body of research. It describes the power of a connected world to expand prosperity (**Section II**), and it identifies five key policy areas for strengthening countries' levels of connectedness (**Section III**). These are relevant for countries across regions and levels of economic development, as highlighted by a series of country case studies (**Section IV**).

I am deeply grateful to the two co-authors whose insights and analytical contributions have been crucial to the success of this research program. Caroline Bastian has co-authored this report, as well as each edition of the DHL Global Connectedness Index since 2018. Pankaj Ghemawat spearheaded the creation of the index and was the lead author of the 2011 through 2016 reports. Thanks also to Sinziana Dorobantu, Niccolò Pisani, Robert Salomon, and Robert Seamans for reviewing preliminary drafts, to Klaudia Kokoszka, Justin Melnick, and Ahsan Usmani for excellent research assistance, to Björn Schuman and Keir Bonine for editorial support and proofreading, and to Dirk Hrdina for the design and production of this report.

At an institutional level, I am profoundly grateful to Deutsche Post DHL Group for its longstanding support of this research, which led, in 2020, to the creation of the DHL Initiative on Globalization at the New York University Stern School of Business. I would especially like to thank DHL Express CEO

John Pearson for leading the company's engagement on this initiative since 2018. Thanks also to Anita Gupta, Irene Casanova, and Johannes Oppolzer for guiding the development and publication of this report.

In addition to the DHL Global Connectedness Index, the DHL Initiative on Globalization at NYU Stern produces a variety of events, tools, and other publications. To learn more and to get involved, please visit our website at

[www.stern.nyu.edu/globalization](http://www.stern.nyu.edu/globalization).



A handwritten signature in black ink, which appears to read "Steven A. Altman". The signature is fluid and cursive.

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

# KEY TAKE-AWAYS



**Global connectedness is a powerful force for expanding prosperity, with the potential to improve lives in countries at all levels of economic development.**



**Some of the most important drivers of connectedness—such as countries' income levels, population sizes, and geographic locations—are beyond the direct control of policymakers.**



**Five policy areas, nonetheless, stand out for their potential to strengthen countries' links to the rest of the world**

- 1. Peace and security** are fundamental building blocks for global connectedness.
- 2. An attractive domestic business environment** may boost a country's global connectedness even more than traditional pro-globalization policies.
- 3. Policies directly increasing openness to international flows** can also be very effective, and they can be tailored to target specific types of trade, capital, information and people flows.
- 4. Regional integration** powerfully supports global connectedness, since about half of all international flows take place inside major world regions.
- 5. Building societal support for global connectedness** is crucial to sustaining the benefits of a more open world.





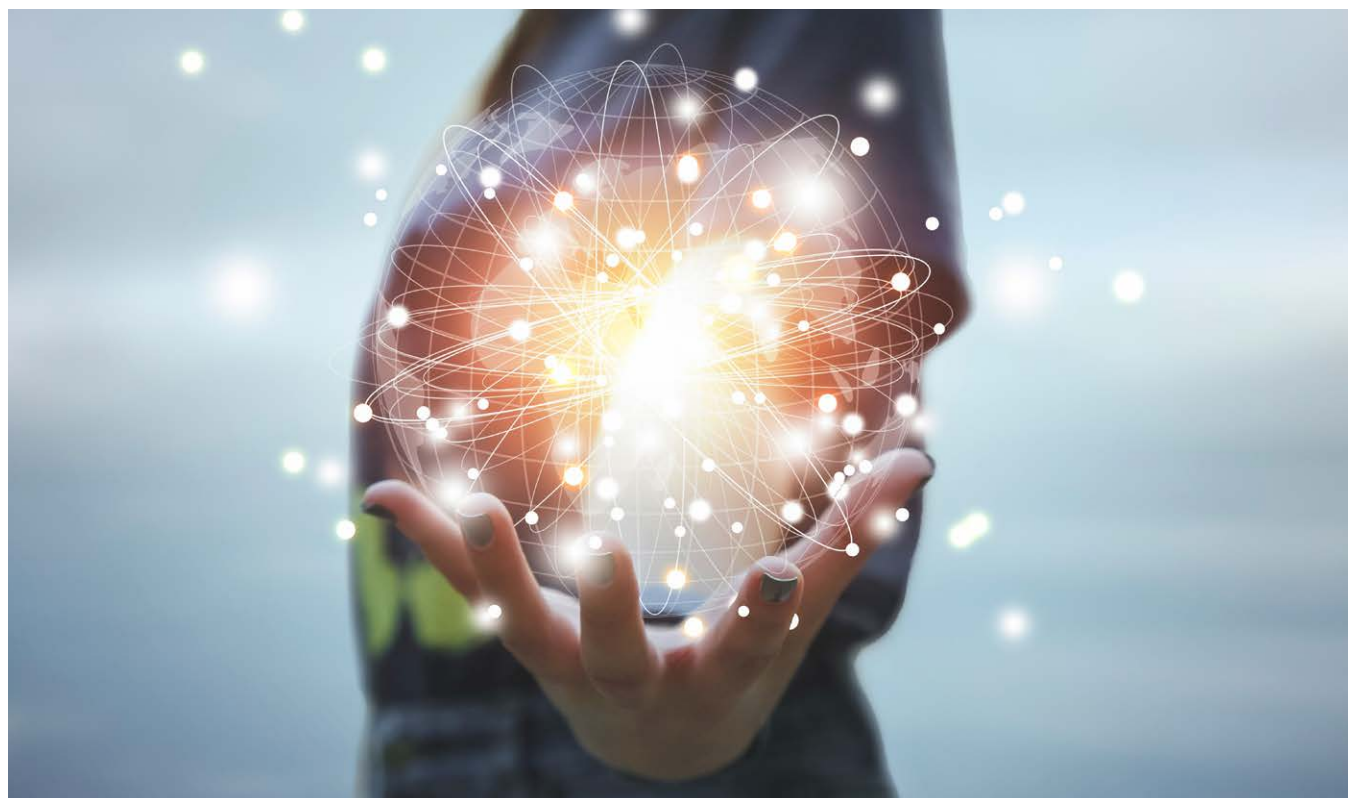
**Global connectedness is not a one-size-fits-all package that must be either embraced fully or rejected. Instead, countries can foster the connections that fit best with their national contexts and priorities.**



**Despite setbacks, the world remains close to a record high level of globalization. Trends point to a future where countries and companies will still have large opportunities to gain from stronger links to the wider world.**







## EXECUTIVE SUMMARY

A more connected world is a more prosperous world. But what can countries do to connect more productively to opportunities beyond their national borders? The most prominent levers for growing a country's international activity, such as lowering tariffs or scaling back visa requirements, are not always the most powerful ones. This report draws on the DHL Global Connectedness Index's unique tracking of international trade, capital, information, and people flows to highlight **five key policy areas** for global connectedness.

**First**, the most fundamental building blocks for global connectedness are peace and security. In other words, danger is a powerful disconnector, cutting countries off from productive engagement with the rest of the world. The two countries where global connectedness increased the most over the past roughly two decades, Sierra Leone and Mozambique, powerfully illustrate this pattern. In both countries, large increases in connectedness followed the conclusion of brutal civil wars.

**Second**, an attractive domestic business environment can powerfully boost global connectedness. There is some evidence that the domestic environment is an even stronger

driver of connectedness than policies that directly target international flows. This makes sense, because the more compelling the opportunities a country presents, the higher the hurdles foreign companies, investors, and even individuals will overcome to access those opportunities.

**Third**, policies that directly target openness to international flows can also increase a country's global connectedness. But lowering barriers to international flows, such as tariffs, represents only one approach. For many countries, even larger gains are available in other areas, such as improving logistics performance or the efficiency of export/import processes (trade facilitation). There is no standard recipe; countries can focus on the aspects of globalization where they see the best opportunities—across the broad domains of trade, capital, information, and people flows. They can also enact globalization policies on their own or in cooperation with other countries.

**Fourth**, globalization policies aimed at regional integration merit special attention because about half of all international flows take place within rather than between world regions. Countries can become more connected by joining and strengthening regional blocs that facilitate trade,

investment, and other flows with their neighbors. Regional integration is not a substitute for globalization but rather a natural and efficient foundation of a more connected world.

**Fifth**, efforts to expand the benefits of global connectedness should look beyond public policy alone to also consider public perceptions and preferences. Most people think international flows are much larger than they really are, and this inflames fears about globalization. Leaders must also reckon with concerns about the unequal consequences of globalization's advance, even though globalization is not the main driver of rising inequality. Concerns about how globalization affects national cultures also demand serious attention and should be considered in the pacing and targeting of policies aimed at increasing global connectedness.

While this report focuses on *how* to increase a country's global connectedness, the question of *why* to do so must also be addressed. We briefly review the benefits of more connectedness, and we consider some of the main concerns about its potential to cause harm. There is strong evidence that trade and several other aspects of globalization boost productivity and expand prosperity. By contrast, most research does not support contentions that globalization is causing a race to the bottom in environmental standards or

that turning back from globalization would make the world a safer place to live.

The policy approach employed in this report recognizes that countries do not start from a blank slate in developing their global flows. A country's level of economic development, the size of its population, and how close it is to foreign markets all have large effects on international ties. These three factors alone explain more than 70% of the variation across countries in their levels of connectedness. Since policymakers cannot directly change these country characteristics, at least over a reasonable planning horizon, we focus on policies that are strongly associated with connectedness even after accounting for these factors.

To illustrate the power of the policy areas highlighted in this report, we examine five country case studies. The Netherlands, the top-ranked country on the DHL Global Connectedness Index since 2005, excels in all five of our policy areas. We also analyze the various paths that led to the United Arab Emirates, Viet Nam, Mexico, and Sierra Leone all featuring among the 10 countries where global connectedness has increased the most since 2001.

The diverse set of countries featured in this report—and the variety of policy levers they employed to stand out—reinforce the notion that globalization is not a one-size-fits-all package that countries can only embrace or reject. Globalization is a multifaceted phenomenon, creating a panoply of opportunities for mutual gains across the roughly 200 countries around the world. Policymakers can draw from this rich menu to pursue the aspects of international integration that afford the largest opportunities for their own countries, given their unique national contexts.





## SECTION II

# LAYING THE GROUNDWORK

This section lays the groundwork for our analysis of how countries can boost their global connectedness. It highlights countries that have emerged from more than a decade of DHL Global Connectedness Index research as global connectedness standouts. It also discusses how countries can benefit from increasing their global connectedness, and it explains how we identified the policy measures covered in the next section.



# 1 GLOBAL CONNECTEDNESS STANDOUTS

A decade has passed since the first edition of the DHL Global Connectedness Index was released in 2011. Since then, the index has become, according to one textbook, “the de facto benchmark for tracking the status of globalization.”<sup>1</sup> The latest full report, published in December 2020, encompasses more than 3.5 million data points on country-to-country flows over the period from 2001 to 2019. This rich historical record creates an opportunity to learn from countries that have emerged as connectedness leaders along various dimensions.

The DHL Global Connectedness Index measures globalization based on international trade, capital, information, and people flows. It does so at the global level, the regional level, and across 169 countries and territories that comprise 99% of the world’s economy. The DHL Global Connectedness Index is unique in that it tracks both the size of countries’ international flows relative to their domestic activity (“depth”) and their geographic reach around the world (“breadth”). For additional background, refer **The DHL Global Connectedness Index—A Brief Overview** (on page 14).

Looking back on the DHL Global Connectedness Index results, three sets of countries stand out:

- *Leaders* that have consistently achieved top scores over the years.
- *Climbers* that have made impressive gains between 2001 and 2019.
- *Outperformers* that have regularly scored much higher on the index than we would expect based on their income levels, sizes, and geographic locations.

The *leaders* are a natural place to begin looking for examples of policies that have successfully supported global connectedness. **Figure 1** highlights the 10 countries that have averaged the highest levels of global connectedness since 2001. Atop the list of leaders is the Netherlands, which has ranked first on the DHL Global Connectedness Index every year



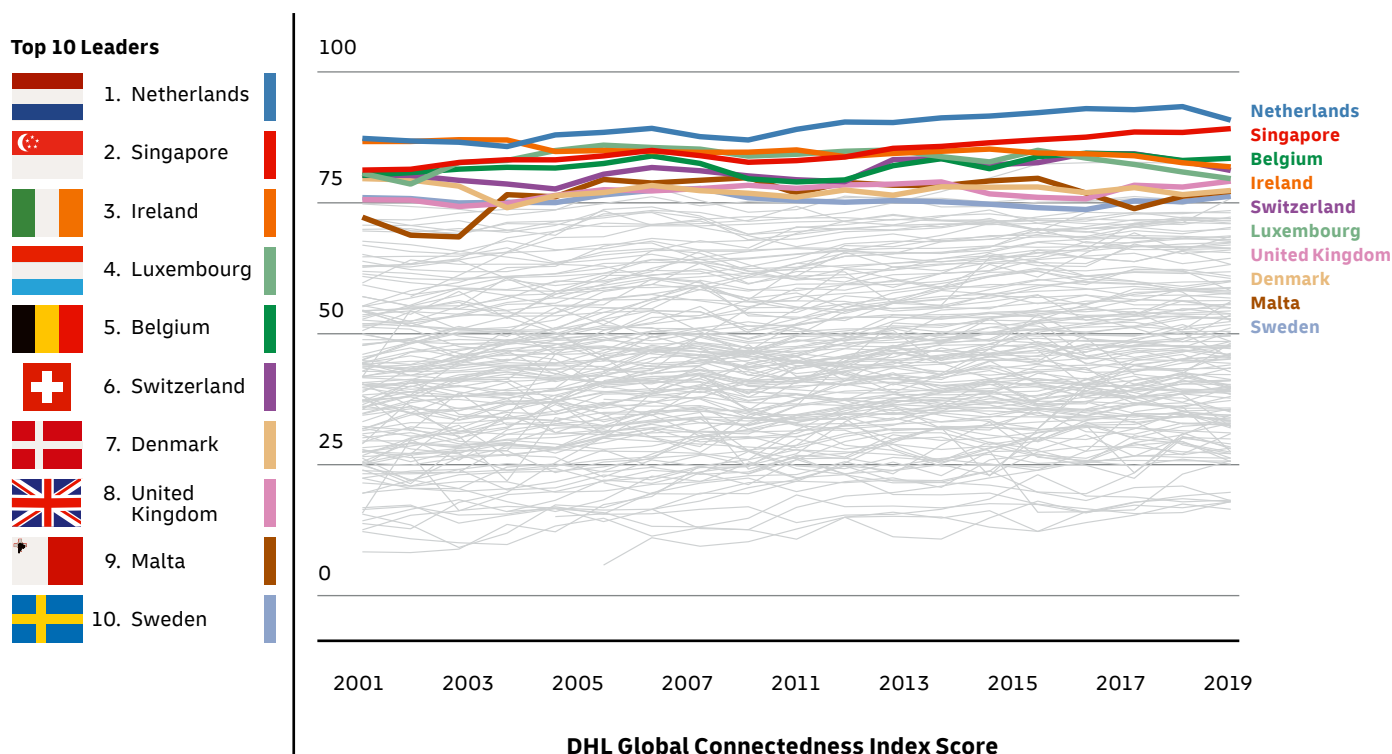
since 2005. Singapore has ranked second every year since 2012, and Ireland has consistently ranked among the top five countries.

All of these countries are advanced economies, which fits with an important pattern we will discuss later in this section: more connected countries tend to be significantly more prosperous than less connected countries. Additionally, all of the top 10 connectedness leaders, except Singapore, are located in Europe. We will also see later on how the global connectedness of European countries has been boosted by a variety of structural and policy factors.

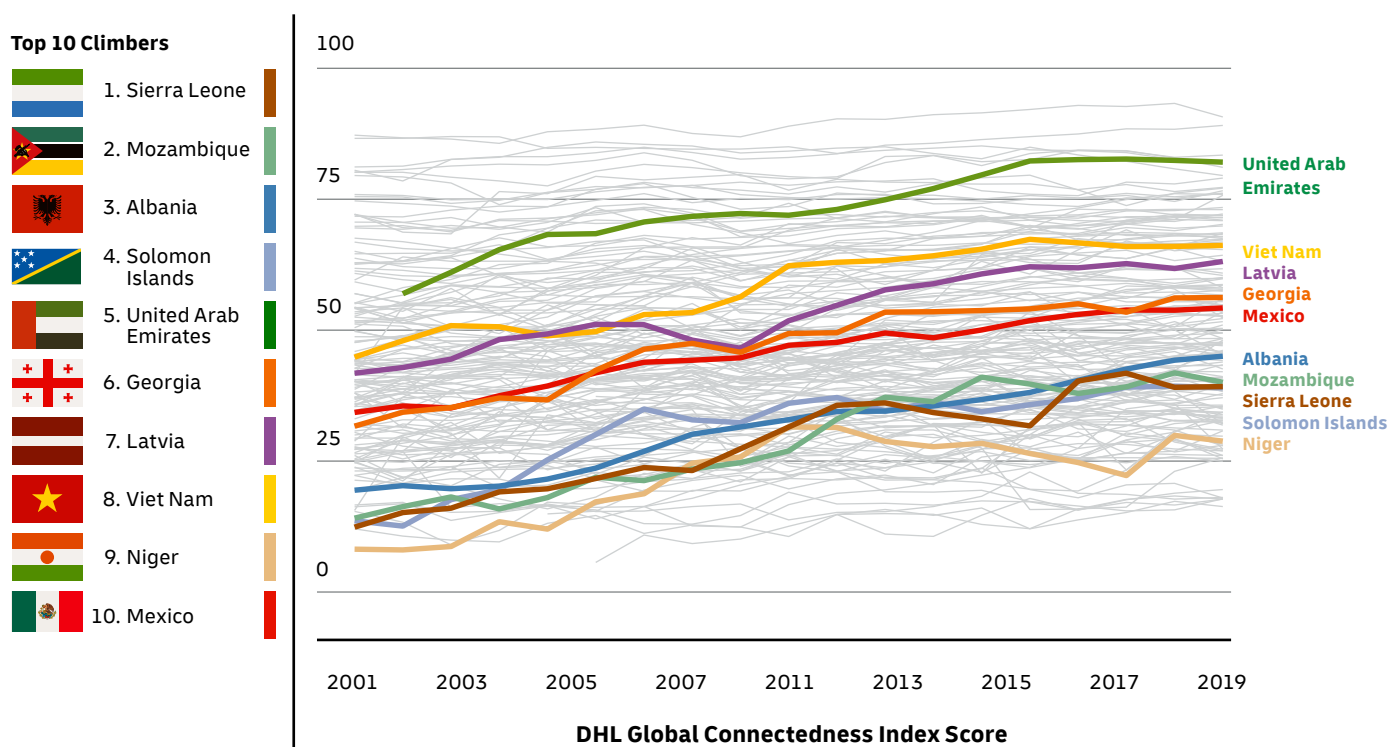
**Figure 2** highlights the *climbers*—the countries where global connectedness increased the most from 2001 to 2019. This is a very diverse set of countries. The largest increases were posted by Sierra Leone and Mozambique, two countries where connectedness rose markedly following the

**More connected countries tend to be significantly more prosperous than less connected countries.**



**FIGURE 1: THE LEADERS—TOP 10 COUNTRIES BASED ON AVERAGE GLOBAL CONNECTEDNESS SCORE, 2001 – 2019**

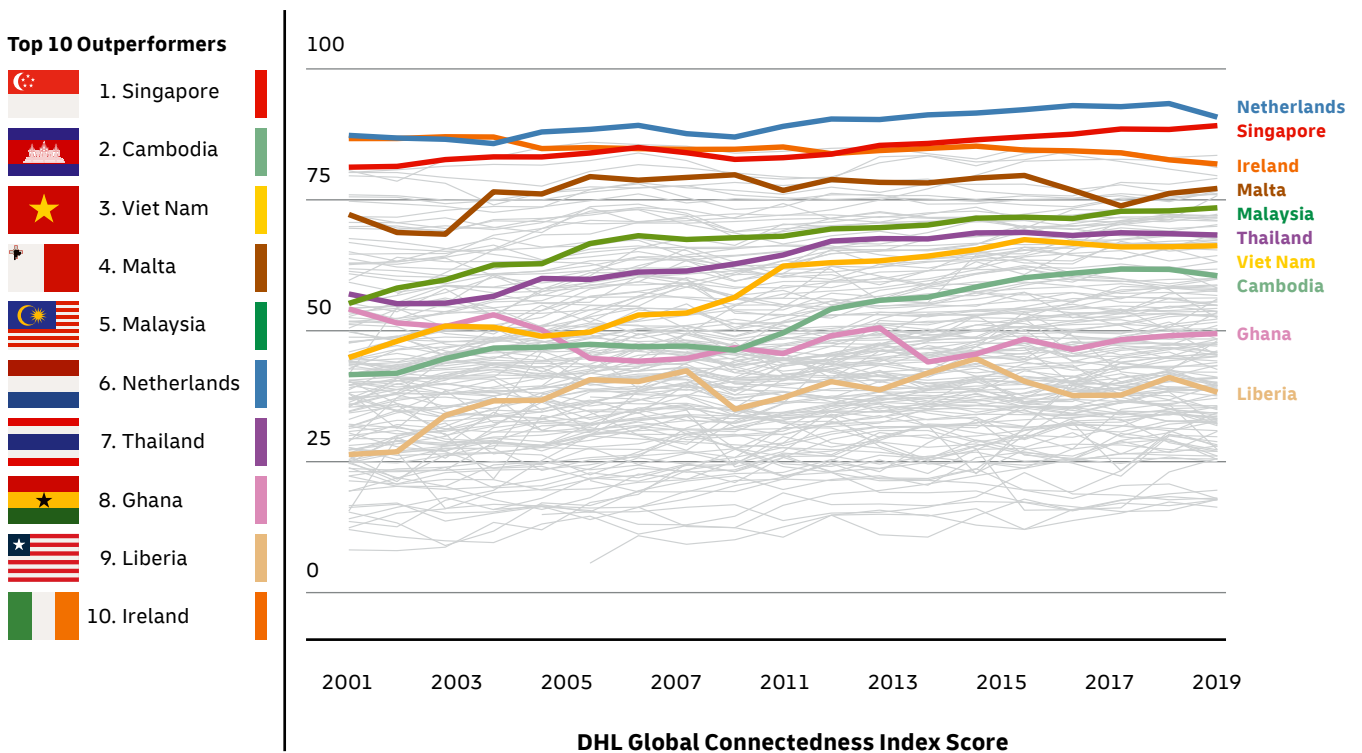
The 10 countries that averaged the highest global connectedness scores between 2001 and 2019 are all advanced economies, and all but one are located in Europe.  
Source: DHL Global Connectedness Index 2020

**FIGURE 2: THE CLIMBERS—TOP 10 COUNTRIES BASED ON GLOBAL CONNECTEDNESS SCORE INCREASES, 2001 – 2019**

The 10 countries where global connectedness increased the most come from all levels of the index—from the United Arab Emirates, which rose to 4th place in 2019, to Niger, which ranked last in 2001. Source: DHL Global Connectedness Index 2020



**FIGURE 3: THE OUTPERFORMERS—TOP 10 COUNTRIES BASED ON AVERAGE OUTPERFORMANCE VS. STRUCTURAL PREDICTIONS, 2001 – 2019**



The 10 countries that beat expectations by the widest margin range from emerging economies pursuing export-led development strategies, such as Cambodia and Viet Nam, to sophisticated global hubs like Singapore and the Netherlands. Source: DHL Global Connectedness Index 2020

conclusion of civil wars. Others, such as Albania, Georgia, and Viet Nam, implemented substantial economic reforms.

Several of the *climbers* accelerated their cross-border integration by joining regional blocs or trade agreements. Latvia joined the European Union (EU) in 2004. Albania and most of its Balkan neighbors joined the Central European Free Trade Agreement (CEFTA) in 2007<sup>2</sup> and concluded a Stabilization and Association Agreement with the EU in 2009.<sup>3</sup> Similarly, Georgia<sup>4</sup> and Mexico<sup>5</sup> also saw increases in their global connectedness after they signed trade agreements with major economies in their regions.

**Figure 3** highlights the top 10 *outperformers*—countries where global connectedness beat our expectations the most, on average, since 2001, based on a statistical model. As we will discuss later in this report, a country's size, level of economic development, and proximity to foreign markets strongly influence its connectedness. We compare each country's actual connectedness to what the model predicts based on these characteristics.<sup>6</sup> This analysis identifies a set of outperformers that have consistently punched above their weight in global flows.

These connectedness outperformers include another diverse set of countries ranging from emerging economies pursuing

export-led development strategies, such as Cambodia and Viet Nam, to sophisticated global hubs like Singapore and the Netherlands. Five of the top 10 outperformers are in Southeast Asia, a region that is developing rapidly, in part due to its participation in regional supply chains and integration efforts under the auspices of the Association of Southeast Asian Nations (ASEAN). The others are in Europe and Africa.

Taken together, these three groups of countries span every major world region and include countries at all levels of economic development. This highlights how global connectedness creates opportunities for all countries around the world.

So what does this highly diverse group of connectedness leaders, climbers, and outperformers have in common? Why do these countries stand out in terms of globalization and what can we learn from them? We will turn to answering these questions comprehensively in **Section III**. But before we analyze how countries can increase their global connectedness, we need to make the case more explicitly for why they should do so.

## THE DHL GLOBAL CONNECTEDNESS INDEX—A BRIEF OVERVIEW

### A DECADE OF THE DHL GLOBAL CONNECTEDNESS INDEX

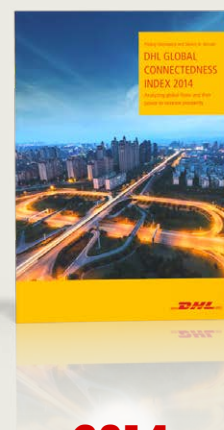
The first edition of the DHL Global Connectedness Index was published in 2011. Since 2012, the full index, including country and regional data, has been released every two years. In 2019, we also introduced a shorter world-level update, which we publish in years when we do not release the full index.



2011



2012



2014

### HOW WE MEASURE GLOBAL CONNECTEDNESS

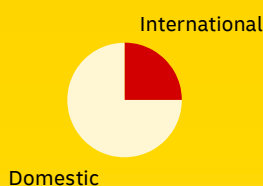
The DHL Global Connectedness Index goes beyond just tracking metrics such as the quantity of traded goods or the amount of international investment. These absolute numbers alone say little about the actual extent of globalization. For example, could we say that globalization has progressed just because trade has grown by 2%? And should we be afraid of hyper-globalization if the world's exports reach \$30 trillion? To answer questions like these, we need to put these numbers in perspective. The index does this in two ways:



\* Country Level Only

#### 1. We measure the *depth* of international flows

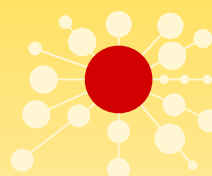
We look at each cross-border flow in relation to relevant domestic activities. For trade, for example, we compare exports to total economic output. This and other ratios help us evaluate the significance of the respective international flow. In other words, depth measures indicate how international the world really is with respect to each type of activity.



**Depth**  
International flows relative to domestic activity

#### 2. We measure the *breadth* of international flows

We evaluate to what extent flows are distributed broadly around the globe rather than concentrated between specific origins and destinations. After all, in a truly globalized world, one would expect countries to trade not just with a few neighbors, but with a wide variety of nations.



**Breadth**  
Geographic distribution of international flows



## WHY THE DHL GLOBAL CONNECTEDNESS INDEX STANDS OUT

Several features distinguish the DHL Global Connectedness Index from other material on globalization:

- **Fact-based:** To separate myth from reality, the index draws on more than 3.5 million data points capturing flows between countries.
- **Multifaceted:** The index tracks 13 types of international trade, capital, information, and people flows.
- **Global and local:** The index complements its broad global coverage with detailed country-level data and analysis. The latest full report, released in December 2020, covers 169 countries which together make up 99% of world GDP and 97% of world population.
- **Long-term:** The most recent update covers the period from 2001 to 2020 along with early data and forecasts into 2021.

The DHL Global Connectedness Index builds on several key insights from research by **Pankaj Ghemawat**, the lead author of the GCI reports from 2011 through 2016. One of these insights is the enduring power of distance to shape international flows, making regionalization a cornerstone of globalization.<sup>7</sup> Prior globalization indexes did not distinguish between regional and global activity.<sup>8</sup> The DHL Global Connectedness Index pioneered the measurement of globalization based on both the depth and the breadth of international flows.



Pankaj Ghemawat



## 2 THE CASE FOR GLOBAL CONNECTEDNESS

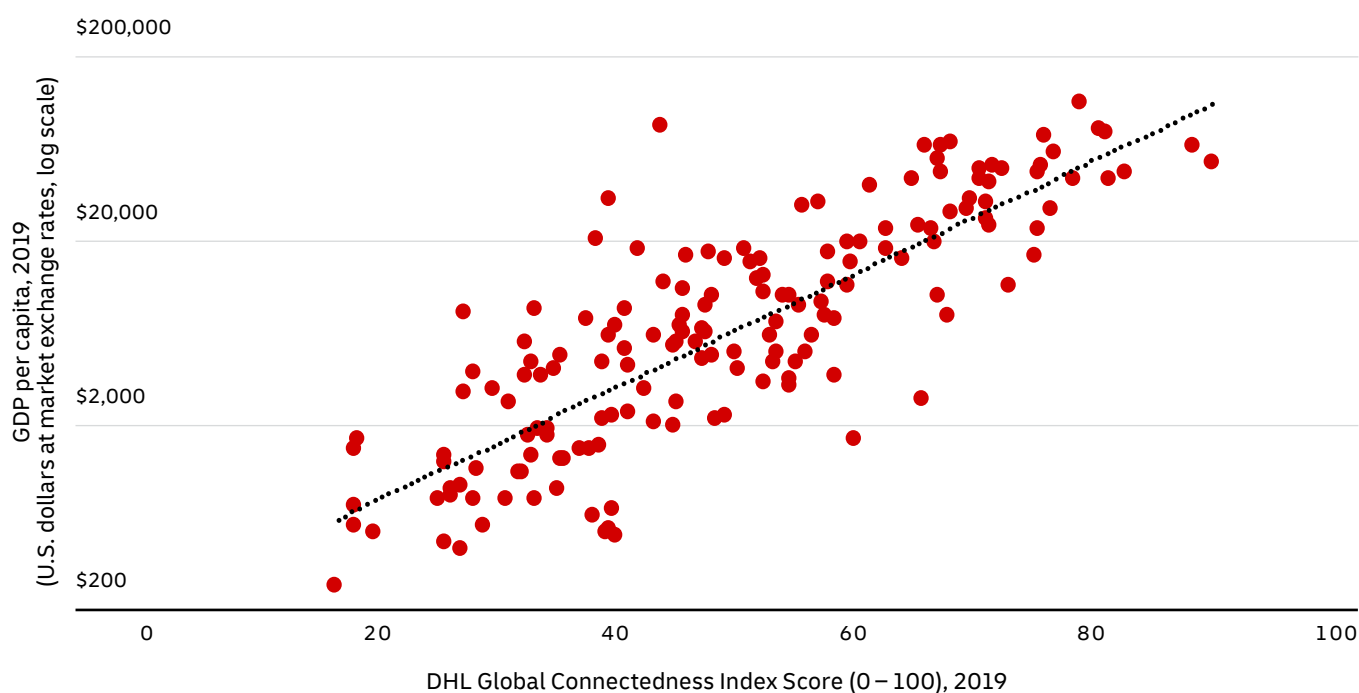
This report focuses on how countries can boost their connections with the rest of the world. But globalization is a controversial topic, so we need to lay the groundwork for that analysis by considering why a country might benefit from stronger ties to other countries. We first consider the benefits of global connectedness, and then we address concerns that feature prominently in the public debate.

We start by considering the simple pattern that countries with stronger global connectedness tend to enjoy higher levels of prosperity. **Figure 4** plots countries' economic output per person relative to their most recent scores on the DHL Global Connectedness Index. 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.

*People live better and longer lives in countries with stronger global ties.*

Broader measures of societal well-being show the same pattern. The Human Development Index, produced by the United Nations Development Program, combines income levels with health and education indicators. The relationship between this broader measure of human development and global connectedness very closely resembles Figure 4. People live better and longer lives in countries with stronger global ties.

**FIGURE 4: GLOBAL CONNECTEDNESS AND PROSPERITY**



Countries that are more connected to international activity typically enjoy much higher income levels. Sources: DHL Global Connectedness Index 2020, World Bank World Development Indicators



Thus, it is clear that prosperity and human development go hand in hand with global connectedness. But does global connectedness actually *contribute* to greater prosperity? We cannot simply assume so, because the relationship between connectedness and prosperity is not a one-way street. There are reasons to believe that prosperity boosts connectedness as well. Richer countries, for example, might connect more because they can afford larger investments in the types of infrastructure that facilitate international flows.

Because connectedness 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 globalization's economic benefits came two decades ago, when economists Jeffrey Frankel and David Romer used a novel approach to demonstrate that trade does raise countries' per capita incomes.<sup>9</sup> A 2019 study by 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%.<sup>10</sup>

Our own preliminary analyses using similar methods suggest that several other aspects of globalization measured on the DHL Global Connectedness Index also contribute to greater prosperity.<sup>11</sup> These findings are consistent with studies conducted by others using a variety of methods. Extensive

research highlights, in particular, the economic benefits of foreign direct investment, immigration, and inbound tourism.<sup>12</sup>

How does globalization boost prosperity? We can look to more than a century of trade research to articulate several important mechanisms. 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.<sup>13</sup> Research highlights 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.<sup>14</sup>
- *Competition Boosting Quality, Lowering Prices:* Trade increases business competition, pressing sellers to raise their quality or lower their prices.<sup>15</sup>
- *Greater Variety of Products and Services:* Many products and services would simply be unavailable without international trade.<sup>16</sup>

The key to the indirect economic benefits of trade—and globalization more generally—is its power to boost productivity over time. History has consistently shown that countries that



cut themselves off from the world fall behind. International connections boost 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.<sup>17</sup>
- *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.<sup>18</sup>
- *Competition pushing progress:* International competition can induce 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.<sup>19</sup> 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.<sup>20</sup> 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.<sup>21</sup>

*What about globalization's potential downsides?* In our view, the aspects of globalization measured on the DHL Global

Connectedness Index deliver net benefits to the world and the countries that participate in them. We have intentionally excluded from the index international linkages where risks could arguably outweigh the benefits. Most notably, our capital flow analysis excludes most forms of cross-border debt, because high levels of foreign debt can make countries more vulnerable to financial crises. Nonetheless, concerns about aspects of globalization that we do measure, such as trade, must be grappled with seriously. Three of the most prominent concerns revolve around:

- *Inequality:* The strong evidence that globalization expands economic opportunities comes with no guarantee that its gains (and losses) will be shared broadly or equitably.<sup>22</sup> Most research, however, shows that globalization does not have a large effect on countries' income distributions.<sup>23</sup> Since most economic activity is domestic rather than international—just about 20% of economic output ends up in a different country from where it was produced—who wins and who loses within a country depends mainly on domestic factors rather than international flows.<sup>24</sup>

***Trade, capital, information, and people flows can all propel ideas and technologies across national borders, accelerating productivity growth.***

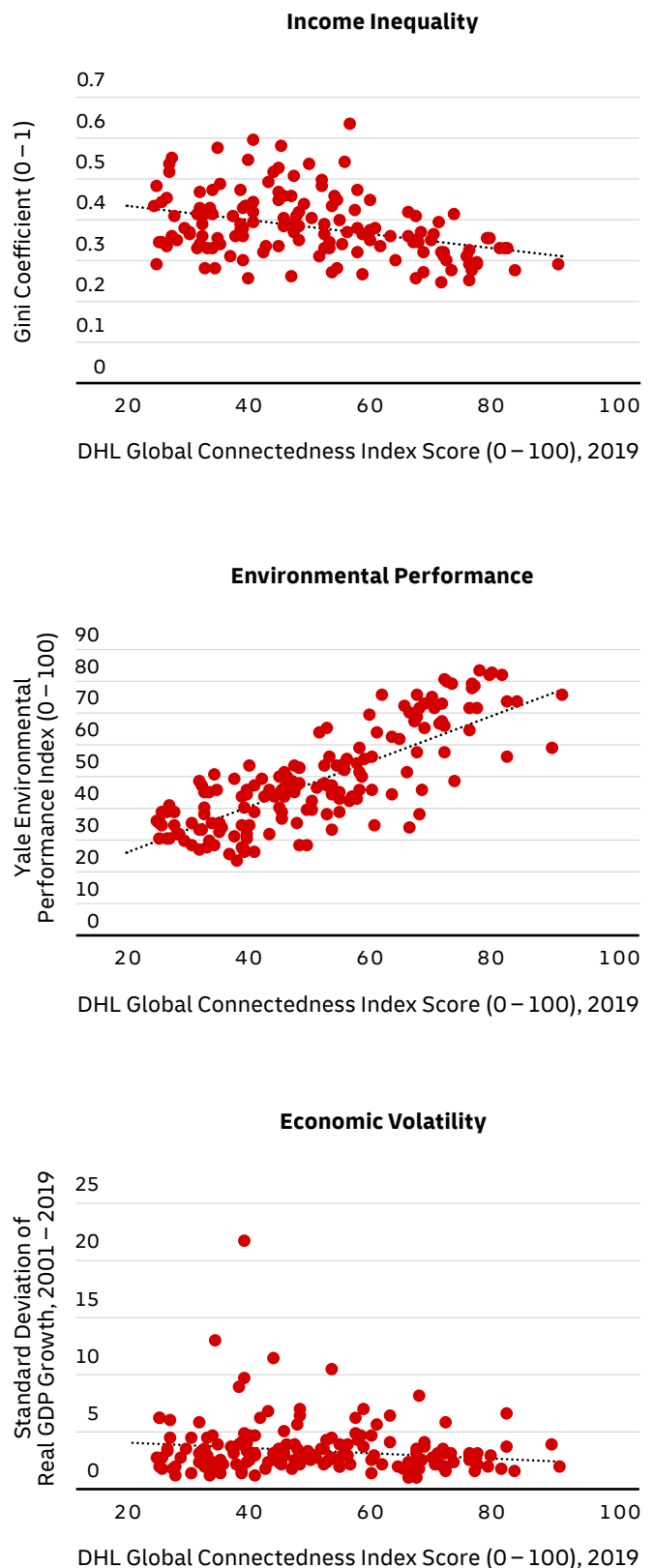


**More connected countries tend to have lower income inequality and better environmental performance, and there is no strong link between global connectedness and economic volatility.**

- **Environmental harms:** International transportation (of passengers and cargo, by air and sea) generates 4-6% of global greenhouse gas emissions.<sup>25</sup> Thus, it is not a dominant contributor, but these levels are not negligible, and efforts are underway to reduce transportation-related environmental impacts.<sup>26</sup> Other environmental concerns about globalization focus on the possibility of shifts toward dirtier methods of production. Most studies, however, do not find evidence of a “race to the bottom” in environmental standards or of substantial production migrating to “pollution havens.” At the same time, researchers have found that globalization also fosters the diffusion of cleaner practices around the world.<sup>27</sup>
- **Economic risks:** Connectedness can increase interdependence. Does it exacerbate economic and other risks? This depends on the shape of countries’ international flows and how they are managed. Consider global supply chains, for example. Diversification across supply locations, coupled with appropriate inventory levels and visibility, reduces risk. Excessive reliance on a single supply location abroad can be problematic. Risk assessments should also pay careful attention to geopolitical developments and take seriously the possibility of significant business disruptions becoming more frequent.<sup>28</sup>

In other words, global connectedness is not a driving force behind inequality, environmental problems, or economic risks. This is reinforced when we look at data on how indicators of those phenomena vary with global connectedness. **Figure 5** plots DHL Global Connectedness Index scores relative to levels of income inequality (Gini coefficient), environmental performance (Yale University’s Environmental Performance Index), and economic volatility (standard deviation of real GDP growth). More connected countries tend to have *lower* income inequality and *better* environmental performance, and there is no strong link between global connectedness and economic volatility.<sup>29</sup>

**FIGURE 5: INCOME INEQUALITY, ENVIRONMENTAL PERFORMANCE, AND ECONOMIC VOLATILITY**



Countries with higher levels of global connectedness tend to have lower levels of inequality and better environmental performance. There is no strong link between global connectedness and economic volatility. Sources: DHL Global Connectedness Index 2020, World Bank World Development Indicators, Zachary A. Wendling, John W. Emerson, Alex de Sherbinin, and Daniel C. Esty, “2020 Environmental Performance Index,” Yale Center for Environmental Law & Policy, IMF World Economic Outlook database

## MAKING GLOBALIZATION WORK BETTER

This section has emphasized the benefits of a more connected world, and it has responded to some of the main arguments against globalization. But the sense that globalization creates large net benefits does not mean that we cannot make globalization work better. Globalization should be viewed not as an ideal or an ideology but as a vehicle for human progress, one that has been improved in the past and can be made still better to address present challenges.<sup>30</sup>

### MORE PROSPEROUS

The link between globalization and growth can be strengthened by policies that boost a country's capacity to absorb and adapt new technologies and business practices, accelerating economic upgrading.<sup>31</sup> Stable macroeconomic conditions and well-functioning domestic markets can also help globalization do more to boost productivity and prosperity.<sup>32</sup>

### MORE EQUITABLE

Several types of policies can help a country share globalization's benefits—and adjustment costs—more equitably. Leading approaches focus on helping workers and communities adjust better to job losses, regardless of whether they are caused by international competition, technological change, or the normal churn of a dynamic economy. Examples include active labor market policies, stronger social safety nets, and place-based policies.<sup>33</sup> Gender equity can also be improved, in areas ranging from tariff policy to access to international market opportunities.<sup>34</sup>

### MORE SUSTAINABLE

The UN's 2030 Agenda for Sustainable Development highlights important roles for international trade, foreign direct investment (FDI), migration, and tourism, and many opportunities have yet to be realized. Removing barriers to trade in environmental goods, for example, could boost trade's contribution to sustainable development.<sup>35</sup> And the OECD's new FDI Qualities Indicators can inform efforts to boost sustainability gains from FDI.<sup>36</sup>

### MORE RESILIENT

As globalization has advanced, much has been learned about how to avoid potential pitfalls of a more interdependent world. For example, the International Monetary Fund (IMF) reconsidered its opposition to controls on capital flows after the 2008–09 global financial crisis, due to evidence that volatile capital flows can threaten macroeconomic stability.<sup>37</sup> Recently, the Covid-19 pandemic has highlighted the importance of global public health policies, supply chain diversification, and the maintenance of appropriate stockpiles of essential goods.<sup>38</sup>

***A common enabler of many efforts to make globalization work better is stronger international cooperation. Reforms addressing longstanding conflicts over key multilateral institutions such as the World Trade Organization (WTO) would give a major boost to global governance and cooperation.***

This discussion has highlighted only a few of the many arguments that have been advanced for and against connecting more across national borders. While debate will go on about the merits of globalization, it is important to recognize that global connectedness is not a one-size-fits-all package that must be embraced fully or rejected completely. The DHL Global Connectedness Index highlights the multifaceted nature of globalization, encompassing a broad variety of trade, capital, information, and people flows among roughly 200 countries and territories around the world. Moreover, we can continue to improve globalization (see the box on

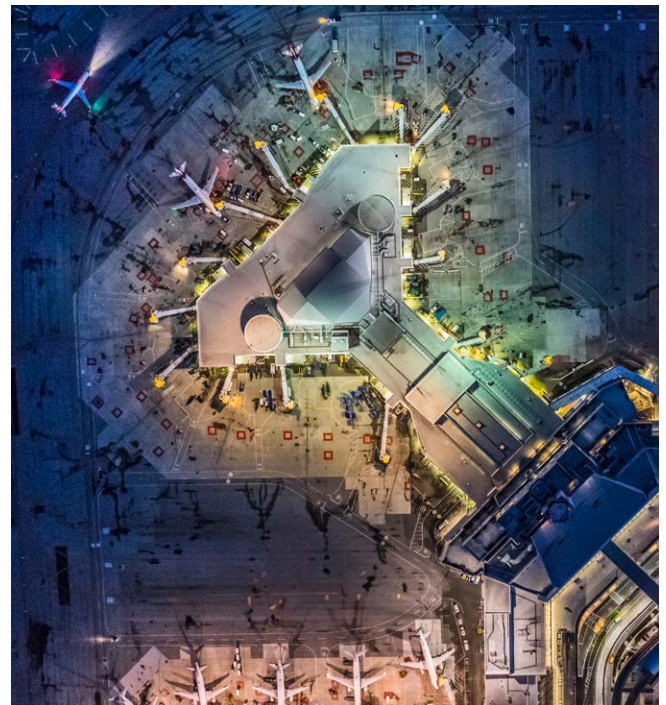
**Making Globalization Work Better**). Connectedness presents a broad menu of possibilities, from which policymakers can select according to their own country's conditions and priorities.

### 3 HOW TO BOOST CONNECTEDNESS

Before we dive into policies for boosting connectedness in the next section, it is important to define the actual “playing field,” the area that policymakers can actually influence. We need to keep in mind one essential fact: countries do not start from a blank slate when it comes to developing their global flows. Several factors that are largely beyond the direct control of policymakers strongly influence levels of connectedness, most notably:

- **Economic development:** Wealthier countries with more advanced economies tend to be more connected than poorer countries. All else equal, if one country has twice the GDP per capita of another country, its global connectedness score will tend to be about six points higher (on a 100-point scale).
- **Country size:** Larger countries have more global reach (higher “breadth”) but their international flows are smaller relative to their domestic activity (lower “depth”). While these effects partially offset each other, there is still a small positive relationship between size and overall global connectedness. If one country has twice the population of another, its global connectedness score will tend to be roughly 1 point higher.
- **Proximity to foreign markets:** When countries are assigned proximity scores between 0 and 10 based on their distance from foreign markets, an increase of 5 points in proximity is associated with an increase of more than 6 points on global connectedness.

These three “structural” characteristics alone—development, size, and proximity—explain more than 70% of the variation in levels of connectedness across countries. Other structural characteristics, such as whether a country shares a common language with other major economies, if it is a small island, or if it is landlocked, can also influence global connectedness, but these are relatively minor factors compared to the three described above.



**Countries do not start from a blank slate when it comes to developing their global flows. Several factors that are largely beyond the direct control of policymakers strongly influence levels of connectedness.**





Policy analysis aimed at helping countries increase their global connectedness should, therefore, take countries' structural characteristics as a starting point. With this in mind, the policy measures identified in the next section were selected based on their ability to explain differences in countries' connectedness after controlling statistically for economic development (measured by GDP per capita), size (in terms of population), and proximity to foreign markets (GDP-weighted distance to all other countries).<sup>39</sup>

In **Section III**, we introduce five key policy areas for boosting global connectedness: safety and security, the domestic business environment, international openness, regional integration, and bolstering public support for globalization. Across the first four of these areas, quantitative analyses demonstrate their significant positive relationships with global connectedness, even after controlling for countries' structural characteristics. The final theme, public support, is included because of the clear effects of anti-globalization political movements on international activity, even though parallel statistical evidence in this area could not be generated with currently available data.<sup>40</sup>

## SECTION III

# FIVE KEY DRIVERS OF CONNECTEDNESS

This section highlights how global connectedness is affected by a wide variety of domestic and international policy levers. It discusses five key action areas for countries looking to increase their connectedness: (1) peace and security, (2) domestic business environment, (3) international openness, (4) regional integration, and (5) public support.





# 1 PEACE AND SECURITY

**Peace and security are the most fundamental building blocks of an attractive environment and, by extension, a key foundation for a country's capacity to develop strong global connections. On the flip side, a dangerous environment is a powerful disconnecter, cutting countries off from international opportunities.**

Peace and security encompass several aspects, both domestic (how safe is a country within its own borders) and international (the nature of its international security relationships). To analyze the links between peace and connectedness, we employ the established *Global Peace Index*, published by the Institute for Economics & Peace.<sup>1</sup>

The *Global Peace Index* compares countries on a variety of indicators across the three domains of societal safety and security, ongoing domestic and international conflict, and militarization (see **Figure 6**). There is a strong relationship between country scores on the *Global Peace Index* and the DHL Global Connectedness Index, indicating that more peaceful countries are more globally connected, even after accounting statistically for the effects of country size, economic development, and proximity to international markets that were discussed at the end of **Section II**. For example, if Afghanistan (the lowest ranked country on the *Global Peace Index* in 2019) were as peaceful as Jordan (the median country), we would expect it to score 8.4 points higher on the DHL Global Connectedness Index.<sup>2</sup>

The link between peace and connectedness is intuitive. Countries that lack basic safety and security are dangerous places to do business, travel, and take up residence. Economic activity in general is depressed in war-torn and violent countries. Violence also makes institutions less reliable and business decisions riskier, which makes doing business in countries with such problems less attractive to foreign firms.

**FIGURE 6: DOMAINS OF THE GLOBAL PEACE INDEX**

<b>Societal Safety and Security</b>	Measures the level of harmony or discord within a nation via indicators such as level of violent crime, number of deaths from organized internal conflict, and impact of terrorism
<b>Ongoing Domestic and International Conflict</b>	Investigates the extent to which countries are involved in internal and external conflicts, as well as their role and duration of involvement in conflicts
<b>Militarization</b>	Tracks countries' levels of military build-up and access to weapons

The *Global Peace Index* comprises the three domains of societal safety and security, ongoing domestic and international conflict, and militarization. Among these, safety and security has the strongest positive relationship with global connectedness.

Source: Based on Institute for Economics & Peace, *Global Peace Index 2020: Measuring Peace in a Complex World*, June 2020, p. 84.

Regional conflicts may have especially pernicious effects on countries' international flows. Countries at war with their neighbors tend to interact with them less in other ways, and nearby countries often offer the best opportunities for the positive types of interactions measured in the Global Connectedness Index. As we will see later in this section, roughly half of all international activity takes place within rather than between major world regions.

Prior research also highlights the possibility of self-reinforcing linkages between peace and international openness. There is a vast literature attempting to determine if globalization (and particularly trade) leads to more peace and stability.<sup>3</sup> One recent study finds, for example, that increasing trade openness has a positive effect on peace, as countries prefer not to risk the financial repercussions of deteriorating relationships.<sup>4</sup> By contrast, other recent research indicates that greater peace leads to more tourism, but tourism does not necessarily reinforce peace.<sup>5</sup>



In addition to being more connected, a more peaceful world would be significantly more prosperous. The Institute for Economics & Peace estimates the economic cost of violence and conflict on the world economy at 10.5% of global output.<sup>6</sup>

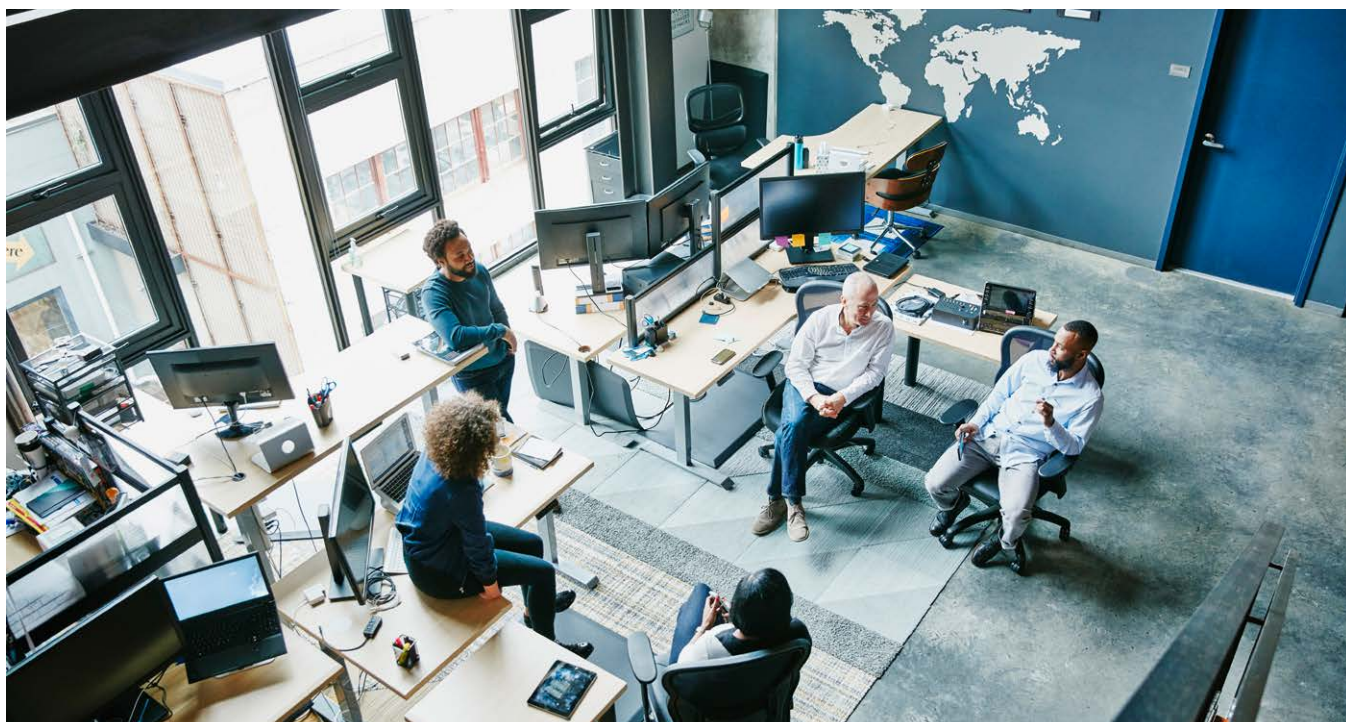
If we take a closer look at the relationship between the *Global Peace Index* and the DHL Global Connectedness Index, we see that the three domains of the *Global Peace Index* influence global connectedness quite differently. The “militarization” domain does not appear to play a significant role, whereas “ongoing domestic and international conflict” is a significant factor for connectedness. However, the domain with the strongest link to global connectedness is “societal safety and security.” Here, access to weapons, perceived criminality in society, and homicides are the most important (negative) predictors of global connectedness.

And if we focus specifically on international trade, it is precisely these three components of the *Global Peace Index*—access to weapons, perceived criminality in society, and homicides—that most severely depress countries’ trade connectedness. By contrast, external conflicts, political terror, and violent demonstrations do not correlate as strongly with trade connectedness.



***A dangerous environment is a powerful disconnecter, cutting countries off from international opportunities.***

## 2 DOMESTIC BUSINESS ENVIRONMENT



**Building upon the foundation of peace and security, an attractive domestic environment can powerfully boost global connectedness. The path to stronger international flows should begin at home. This is because companies, when deciding where to expand internationally, usually focus first on a location's attractiveness and then analyze its accessibility only if the opportunity looks sufficiently compelling. For especially attractive opportunities, firms will often find ways to access markets even if they must comply with costly or cumbersome restrictions on international flows.**

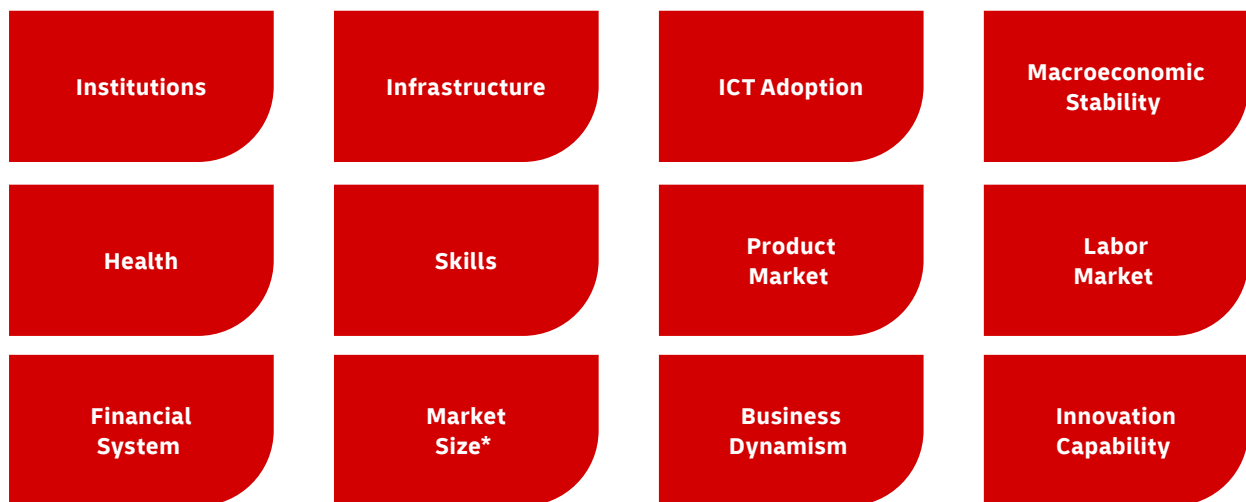
A broad array of policy areas can affect the attractiveness of a country's domestic business environment. The World Economic Forum's *Global Competitiveness Index* is designed to measure factors that drive countries' levels of productivity, and this index has emerged as a powerful measure of how

domestic environments help explain differences in levels of global connectedness.<sup>7</sup>

The *Global Competitiveness Index* is aggregated from 103 individual indicators that are divided into 12 pillars: institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labor market, financial system, market size, business dynamism, and innovation capability (see **Figure 7**).<sup>8</sup> We find a clear positive relationship between how countries rank on this index and their global connectedness. An improvement from the 25<sup>th</sup> percentile on this index (Mongolia) to the 75<sup>th</sup> percentile (Italy) would be associated with an 11.4 point higher expected global connectedness score.<sup>9</sup> This is an even larger effect than we find for policies directly targeting openness to international flows, underscoring the power of domestic policy to attract international activity.<sup>10</sup>

**Policies addressing multiple areas of domestic attractiveness complement each other and maximum benefits are achieved when they are pursued in concert.**

**FIGURE 7: PILLARS OF THE GLOBAL COMPETITIVENESS INDEX**



The World Economic Forum's *Global Competitiveness Index* comprises 103 indicators across 12 pillars. Among these, financial system depth and institutions are especially strong predictors of global connectedness. Source: World Economic Forum Global Competitiveness Index 2019. Note(\*): Market Size is excluded from the modified version of this index analyzed here because it is treated as a structural characteristic that separately influences a country's global connectedness. The Security portion of the Institutions pillar and the Trade Openness portion of the Product Market pillar are also excluded because they are already covered in other parts of our analysis.

One of the strengths of the *Global Competitiveness Index* for measuring countries' domestic attractiveness is that it proves to be more than the sum of its parts as a predictor of global connectedness. The overall index is more strongly related to global connectedness than any of its individual pillars. This suggests that policies addressing multiple areas of domestic attractiveness complement each other and that maximum benefits are achieved when they are pursued in concert.

To help prioritize such policies, however, it is useful to note that the most powerful predictor of global connectedness within the *Global Competitiveness Index* is what it calls "Financial System Depth." This measures domestic credit to the private sector, access to financing for SMEs, venture capital availability, market capitalization, and size of the insurance market.<sup>11</sup>

Another strong predictor of global connectedness is the Institutions pillar of the *Global Competitiveness Index*. This highlights the importance of policies that foster effective governance and a well-functioning public sector, such as those that improve transparency, property rights, corporate governance, and the performance of public sector entities.



## 3 INTERNATIONAL OPENNESS

**Policies that directly target openness to international flows can also increase a country's global connectedness. But lowering formal barriers, such as tariffs, represents only one approach. For many countries, even larger gains are available in other areas, such as improving logistics performance or the efficiency of export/import processes. Globalization policies can be targeted to influence specific types of international flows, and they can be pursued either unilaterally or in cooperation with other countries.<sup>12</sup>**

In the previous two subsections, we identified well-established indexes that conveniently aggregated policy indicators related to global connectedness. In the case of openness policies, however, a single index does not capture the variety of policies that countries can enact.<sup>13</sup> Therefore, we highlight six indicators here, and we introduce a simple composite index based on them. The following correlate particularly strongly with global connectedness: the World Bank's *Logistics Performance Index*, the tariffs countries apply to their imports, the OECD's *Trade Facilitation Indicators*, participation in free trade agreements, capital account openness, and visa-free travel.

Based on these indicators, our “simple index of openness policies” proves to be a strong predictor of global connectedness. In fact, it performs better as an indicator of the overall DHL Global Connectedness Index than all of its components except the *Logistics Performance Index*. An improvement from the 25th percentile (Bolivia) on this index to the 75th percentile (Hungary) is associated with an increase of 10.1 points on the DHL Global Connectedness Index.<sup>14</sup> For more on this index, see the box titled **A Simple Index of Openness Policies**.

Having established a strong positive relationship between the overall index of openness policies and global connectedness, we look at the effects of specific policy measures, starting with those focused on trade.<sup>15</sup> The indicator that most strongly predicts global connectedness scores is the

*Logistics Performance Index*. This index, developed by the World Bank, ranks countries on customs performance, infrastructure quality, ease of arranging shipments, competence and quality of logistics services, the ability to track and trace consignments, and the on-time arrival of shipments.<sup>16</sup>

The second strongest trade-focused predictor of global connectedness is the simple average tariff level, followed by the OECD's *Trade Facilitation Indicators*, and participation in trade agreements (measured as the percentage of rest-of-world GDP with which each country has a free trade agreement).<sup>17</sup>

**Globalization policies can be targeted to influence specific types of international flows, and they can be pursued either unilaterally or in cooperation with other countries.**

While tariffs and trade agreements are widely understood as influences on globalization, trade facilitation receives less attention outside of the international trade community. Trade facilitation focuses on improving the efficiency of export and import processes. The OECD *Trade Facilitation Indicators* include factors such as information availability, judicial efficiency, formalities, cooperation, and governance impartiality.<sup>18</sup> According to the WTO, full implementation of the WTO's 2017 Trade Facilitation Agreement could “reduce trade costs by an average of 14.3% and boost global trade by up to \$1 trillion per year.”<sup>19</sup>

Looking beyond trade-focused measures, capital account openness is the policy indicator most closely related to the capital flows measured on the DHL Global Connectedness Index.<sup>20</sup> While there is a positive relationship between capital

## A SIMPLE INDEX OF OPENNESS POLICIES

To streamline the analysis of policies directly affecting openness to international flows, we aggregate six indexes and indicators in this area, as shown below:

### Logistics Performance Index

World Bank index ranking countries on customs performance, infrastructure quality, timeliness of shipments, and related areas, based on a survey of logistics professionals

### Tariffs

Unweighted mean of countries' tariff rates, as reported by the WTO World Tariff Profiles

### Trade Agreements

Share of rest-of-world GDP covered by free trade agreements in the *Design of Trade Agreements* (DESTA) database

### Trade Facilitation Indicators

OECD dataset tracking countries' border procedures across 11 focus areas ranging from information availability to formalities

### Capital Account Openness











Index measuring a country's degree of capital account openness, based on restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions

### Visa-Free Travel

The square root of the product of the number of countries that holders of a given passport are allowed to travel to without an advance visa and the number of countries whose citizens are allowed to visit that country without a visa



### SIMPLE INDEX OF OPENNESS POLICIES, TOP 10 COUNTRIES AND TERRITORIES IN 2019 AND CORRESPONDING DHL GCI RANKS

	Country	GCI Rank
1.	 Singapore	2
2.	 Switzerland	6
3.	 Hong Kong SAR (China)	25
4.	 Korea (Republic of)	22
5.	 Germany	13
6.	 Sweden	12
7.	 Spain	27
8.	 Israel	24
9.	 Finland	17
10.	 Austria	18

account openness and global connectedness, it is not as strong a relationship as identified for the trade indicators. In part, this reflects the stronger predictive power of domestic policy on capital flows.<sup>21</sup>

Visa-free travel is most closely related to people flows, and countries that have more open visa policies also tend to score higher on overall global connectedness.<sup>22</sup> Visa-free outbound travel, i.e., the number of foreign countries a citizen of a country can visit without first obtaining a visa, is more strongly related to global connectedness than visa-free inbound travel. However, visa-free outbound travel is much

more difficult for governments to influence than visa-free inbound travel, since each government sets its own policies on who can visit.<sup>23</sup>

The measures discussed here align with three of the four categories of flows measured on the DHL Global Connectedness Index (trade, capital, and people flows). The remaining category is information flows, on which data comparing countries' international openness are still limited.<sup>24</sup> Recent research, however, does show that data localization policies slow the growth of services trade, which suggests that data flow restrictions have negative effects on global connectedness.<sup>25</sup>

## 4 REGIONAL INTEGRATION

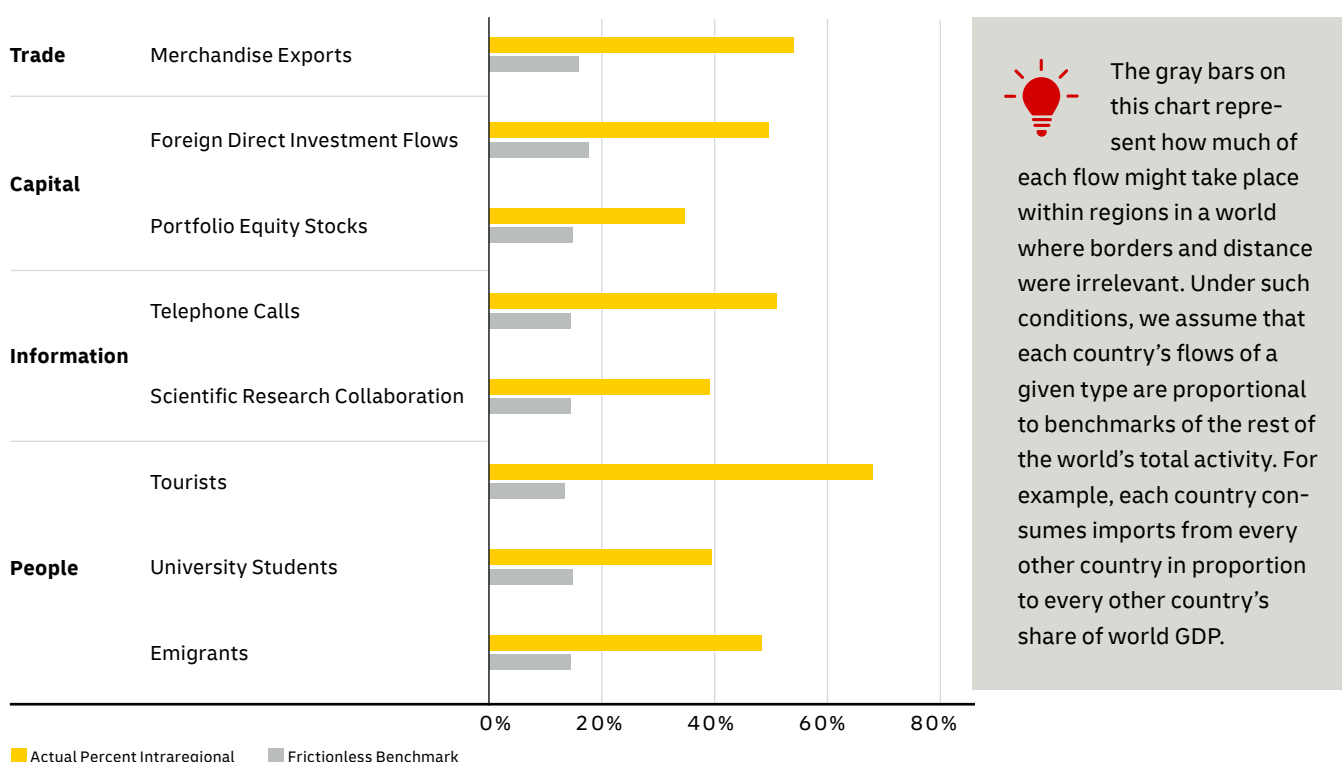
**Globalization policies focused on regional integration merit special attention because about half of all international flows take place within rather than between world regions. Regional integration is not a substitute for globalization but rather a natural and efficient foundation of a more connected world.**

The notion that technological advances have rendered distance irrelevant is a myth. The DHL Global Connectedness Index highlights how countries typically connect far more intensively with their neighbors than with more distant

countries. If we divide the world into seven regions, 48%<sup>26</sup> of the flows measured on the breadth dimension of the index take place within regions. This is three times more than one would expect if distance and differences between countries had ceased to matter.

Some types of international activity are even more regionalized. A full 68% of international tourism takes place within regions, and 54% of merchandise exports go to destinations within the same regions (see **Figure 8**).

**FIGURE 8: PROPORTION OF INTERNATIONAL FLOWS BETWEEN COUNTRIES IN THE SAME REGION**



On average, 48% of international flows take place within rather than between major world regions. Regional integration is not a substitute for globalization but rather a natural and efficient foundation of a more connected world. Source: DHL Global Connectedness Index 2020





Surprisingly, the logic for regionalization, even with respect to trade in physical goods, has relatively little to do with transportation costs. Less than 30% of the dampening effect of distance on trade flows is due to transportation costs.<sup>27</sup> The advantages of doing business within regions are largely the result of geography's historical legacy in the form of myriad similarities and linkages between neighboring countries. For example, countries in the same region are nearly three times more likely to share a common official language, five times more likely to be linked by a trade agreement, and more than twice as similar in terms of levels of per capita income.<sup>28</sup>

Such similarities can increase the potential gains from intraregional flows while simultaneously making them simpler and less costly. For example, a product tailored to the needs of one country can more often be sold with limited adaptation in nearby countries rather than distant ones, because the product is already appealing and affordable to buyers in that part of the world. At the same time, intraregional business links are easier because of simpler communications, travel, and transportation within regions. Overlapping working hours (common time zones) also contribute to the relative ease of operating within regions.

Building on the natural advantages of regional business activity, regional trade blocs and other institutions further support international flows. Participation in a regional bloc can significantly increase a country's DHL Global Connectedness Index score. If Mexico were not part of a regional trade bloc with the U.S. and Canada (USMCA, formerly NAFTA), our model predicts that its global connectedness score would be seven points lower.<sup>29</sup>

***Recent research shows that deeper trade agreements do more to promote the growth of trade in intermediate goods and the development of international value chains.***

Beyond simply participating in regional blocs, countries can also undertake efforts to deepen levels of cooperation within these blocs. Trade agreements have tended to deepen over time to facilitate international cooperation that extends far beyond simply reducing tariffs. Recent research has shown that deeper trade agreements lead to larger increases in trade among their signatories, and they have an especially large impact on the growth of trade in intermediate goods, facilitating the development of international value chains.<sup>30</sup> The depth of integration achieved by the European Union is one of the reasons why nine of the top 10 connectedness leaders highlighted in **Section II** are in Europe.

## 5 PUBLIC SUPPORT

In the face of powerful anti-globalization movements in many countries, efforts to expand the benefits of global connectedness should look beyond public policy alone to also consider public perceptions and preferences. Research suggests the importance of addressing cultural as well as economic concerns, and efforts to do so should address myths that distort the public debate about globalization.

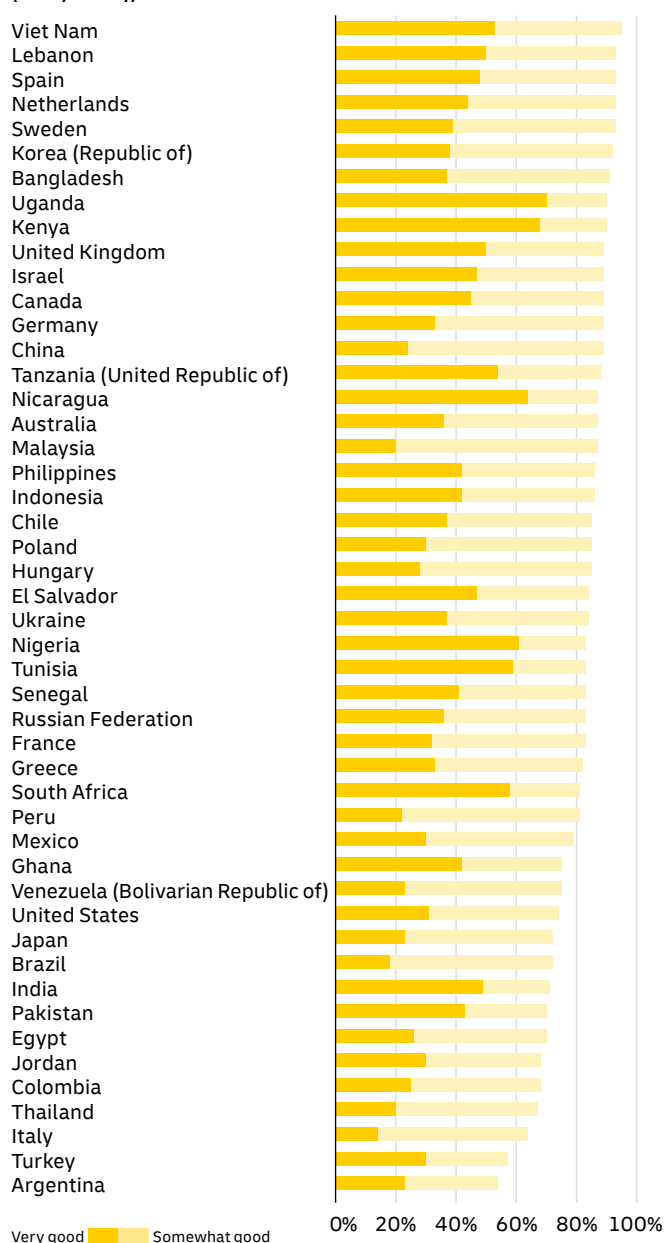
Research on trade, foreign direct investment (FDI), and migration all underscore the power of public opinion to influence globalization-related policies.<sup>31</sup> In this context, policy-makers should recognize that key elements of globalization, such as international trade, do enjoy substantial public support, even in countries where opposition to globalization features prominently in national politics (see Figure 9).

But even in countries where public support for globalization in general is high, large segments of the public have major concerns about particular types of international activity. Public support for immigration is generally much lower than for trade, and support for FDI often depends on the type of investment.<sup>32</sup> Attitudes toward foreign companies building factories in a country tend to be very positive, but public support for foreign companies buying out domestic ones is consistently much lower (see Figure 10).<sup>33</sup>

Individuals with higher levels of education tend to hold significantly more positive views about trade, migration, and foreign investment than those with lower levels of education. Scholars have traditionally viewed this as reflecting the perceived economic self-interest of low-skilled workers in advanced economies, who may be exposed to greater competition with lower-paid workers from emerging economies when markets become more integrated.<sup>34</sup> But several recent studies suggest that the link between education and support for globalization primarily reflects concerns about societies at large, both economic and cultural, rather than individual self-interest. Education may boost support for globalization

**FIGURE 9: PUBLIC SUPPORT FOR GROWING TRADE AND OTHER INTERNATIONAL BUSINESS TIES<sup>35</sup>**

What do you think about the growing trade and business ties between (survey country) and other countries?

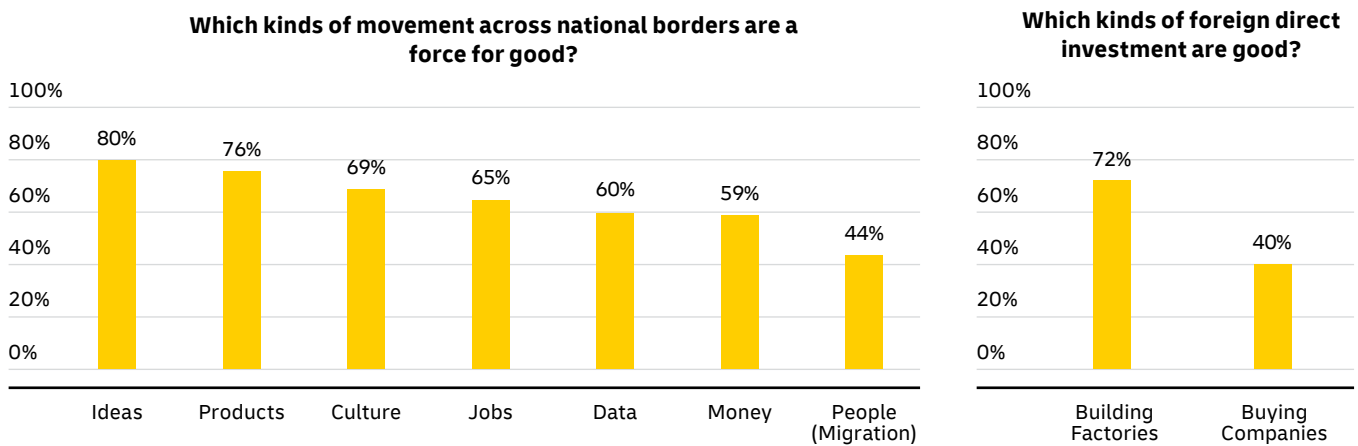


Public opinion polling shows surprisingly robust support for growing trade and other business ties across many countries. Source: Pew Global Attitudes Survey (Spring 2018 and Spring 2014 editions)

*People tend to think the world is much more globalized than it really is, and this exacerbates fears about globalization.*

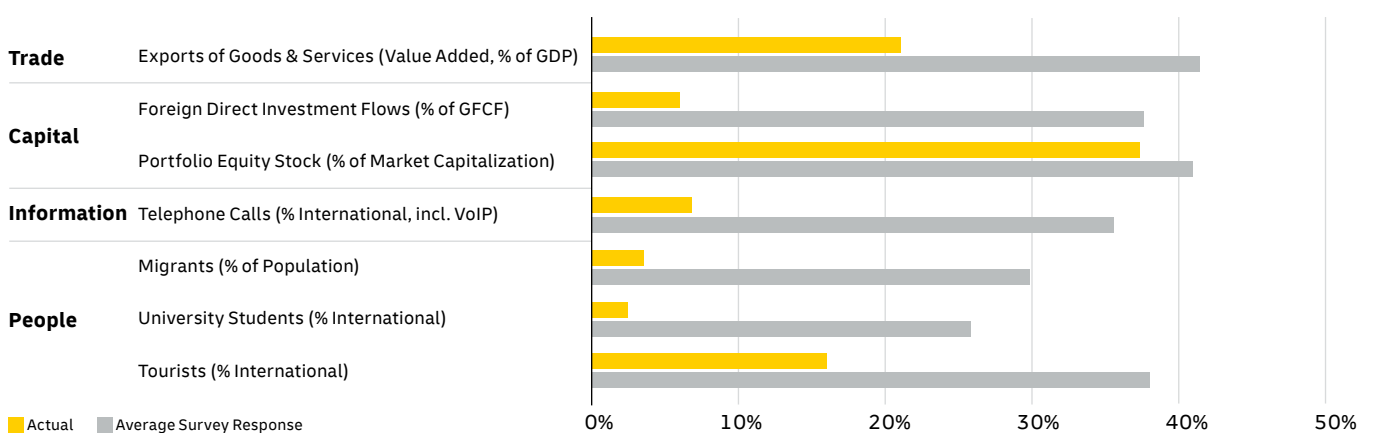


**FIGURE 10: PUBLIC SUPPORT BY TYPE OF INTERNATIONAL ACTIVITY<sup>36</sup>**



Levels of public support vary widely across types of international activity. Foreign direct investment receives far more support when it involves building new factories rather than buying domestic companies. Sources: Bertelsmann Stiftung 2020 GED Globalization Dynamics Survey (15-country survey conducted February – March 2020), Pew Global Attitudes Survey, Spring 2018 (18-country median)

**FIGURE 11: ACTUAL GLOBALIZATION MEASURES VERSUS MANAGERS' PERCEPTIONS**



International trade, capital, information, and people flows are much smaller than most managers think. Source: DHL Global Connectedness Index 2018, 2020

both by imparting more sophisticated ways of reasoning about economic issues and by fostering more cosmopolitan cultural outlooks.<sup>37</sup>

Across all levels of education, however, people tend to think the world is much more globalized than it really is, and this exacerbates fears about globalization. **Figure 11** compares actual globalization measures to perceived levels from a





survey of 6,035 managers across three advanced economies (Germany, the UK, and the U.S.) and three emerging economies (Brazil, China, and India). The managers overestimated this set of globalization measures, on average, by five times.<sup>38</sup>

Exaggerated perceptions of globalization distort public policy debates in important ways. Most notably, they boost the kinds of societal fears about globalization we discussed in **Section II**. Survey respondents who overestimate globalization measures even more than others do are more likely to see globalization as a major cause of problems such as inequality and climate change. Additionally, exaggerated perceptions of globalization feed the tendency to blame international flows for problems that actually originate within a country's borders.<sup>39</sup>

Correcting misperceptions about levels of globalization contributes to more fact-based policy debates, but does it also shift policy preferences in favor of more support for globalization? Research on immigration suggests that broader efforts are required. Multiple studies have shown that informing people about actual levels of immigration leads to fewer believing that there are too many immigrants in their countries.<sup>40</sup> But to change immigration policy preferences, at least in the U.S. context, appears to require correcting misperceptions not only about how many immigrants are in the country, but also about the characteristics of immigrant populations, such as how many are employed and how many

***Public support for opening up is stronger when it involves flows to or from a country that offers a similar level of openness in return and where the country is not seen as a geopolitical rival.***

have learned the local language.<sup>41</sup> Similarly, there is evidence from U.S. research that efforts highlighting human similarities across trade partners and correcting misperceptions about the identity of a country's largest trade partner can increase support for trade, at least among some segments of the public.<sup>42</sup> Unsurprisingly, information highlighting benefits of trade and immigration also boosts support for both types of flows.<sup>43</sup>

Furthermore, there is a growing body of evidence that reciprocity and geopolitics shape public attitudes toward international flows. Public support for opening up is stronger when it involves flows to or from a country that offers a similar level of openness in return and where the country is not seen as a geopolitical rival.<sup>44</sup>

When considering the public opinion research discussed here, three implications stand out. First, providing accurate

information about global flows should be a priority to support a more informed debate. This is an area where the DHL Global Connectedness Index report series is intended to make a direct contribution. Second, the substantial variation in levels of support for globalization within countries and across types of flows implies that policymakers should pay careful attention to concerns about how globalization's benefits (and costs) are shared across societies. Research has long highlighted the complementarity between economic

openness and strong social safety nets.<sup>45</sup> Third, cultural concerns must also be addressed sensitively, since they may be more important drivers of opposition to globalization than economic concerns. From both economic and cultural perspectives, the pacing and targeting of pro-globalization policies are important considerations.<sup>46</sup>

**As we have seen in Section III**, globalization is not a one-size-fits-all package that must be either fully embraced or rejected. Rather, connectedness presents a broad menu of possibilities, from which policymakers can select according to their own country's conditions and priorities. The five key policy factors for global connectedness discussed in this section emerge from our analysis of nearly two decades of DHL Global Connectedness Index data as high-leverage factors that can help policymakers expand gains from global connectedness for their countries.

#### **FIGURE 12. FIVE KEY POLICY FACTORS FOR GLOBAL CONNECTEDNESS**



Peace and security and the domestic business environment form a foundation upon which international openness, regional integration, and public support can also boost global connectedness.

We visualize these five factors as a pyramid (see **Figure 12**) with peace, security, and the domestic business environment at the base, i.e., the foundation upon which to build connectedness strategies. International openness and regional integration build upon this foundation. Finally, public support can spur progress across all the other categories, make progress more sustainable, and build confidence in a country's commitment to international engagement. Greater business confidence, in turn, can promote investments that depend on long-run expectations about a country's openness, precisely the kinds of investments that are likely to foster the largest productivity increases over time.

Next, in **Section IV**, we present country case studies that illustrate how a diverse set of economies have stood out on the DHL Global Connectedness Index. These cases highlight real-world applications of the policy lessons introduced in Section III.

## SECTION IV

# COUNTRY CASE STUDIES

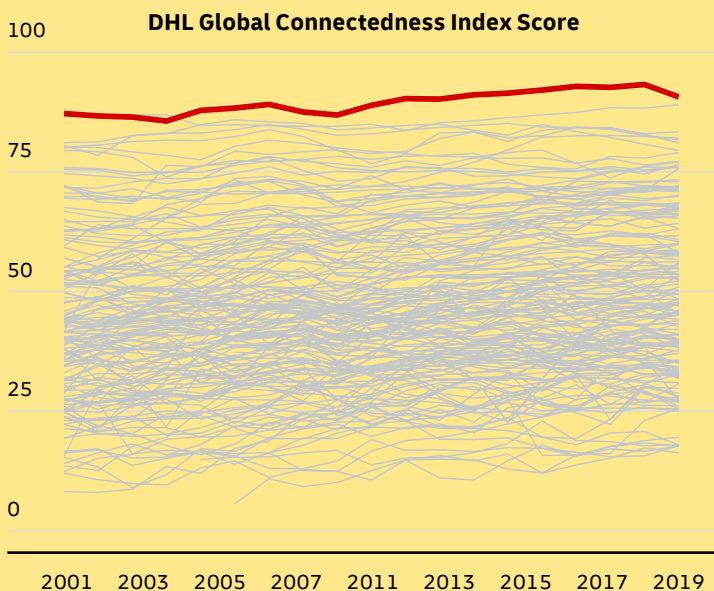
This section examines five countries that have stood out over the almost two decades of globalization trends measured on the DHL Global Connectedness Index: the Netherlands, the United Arab Emirates, Sierra Leone, Mexico, and Viet Nam. In the 2020 edition, the Netherlands ranked as the world's most connected country, and the United Arab Emirates ranked fourth. Sierra Leone posted the largest connectedness increase since 2001. Viet Nam, the United Arab Emirates, and Mexico are also among the countries that increased their connectedness the most, and Viet Nam and the Netherlands are among those that have consistently beaten expectations by the widest margin.





# 1 THE NETHERLANDS

## THE NETHERLANDS—KEY DATA



	Rank <sup>1</sup>
DHL Global Connectedness Index 2020	1 / 169
Depth	4 / 169
Breadth	3 / 169
Global Peace Index 2020 <sup>2</sup>	15 / 146
Global Competitiveness Index 2019	4 / 138
Openness Policies	20 / 138
Regional Bloc	EU, EEA
Support for Trade and Business Ties <sup>3</sup>	4 / 48 (93%)

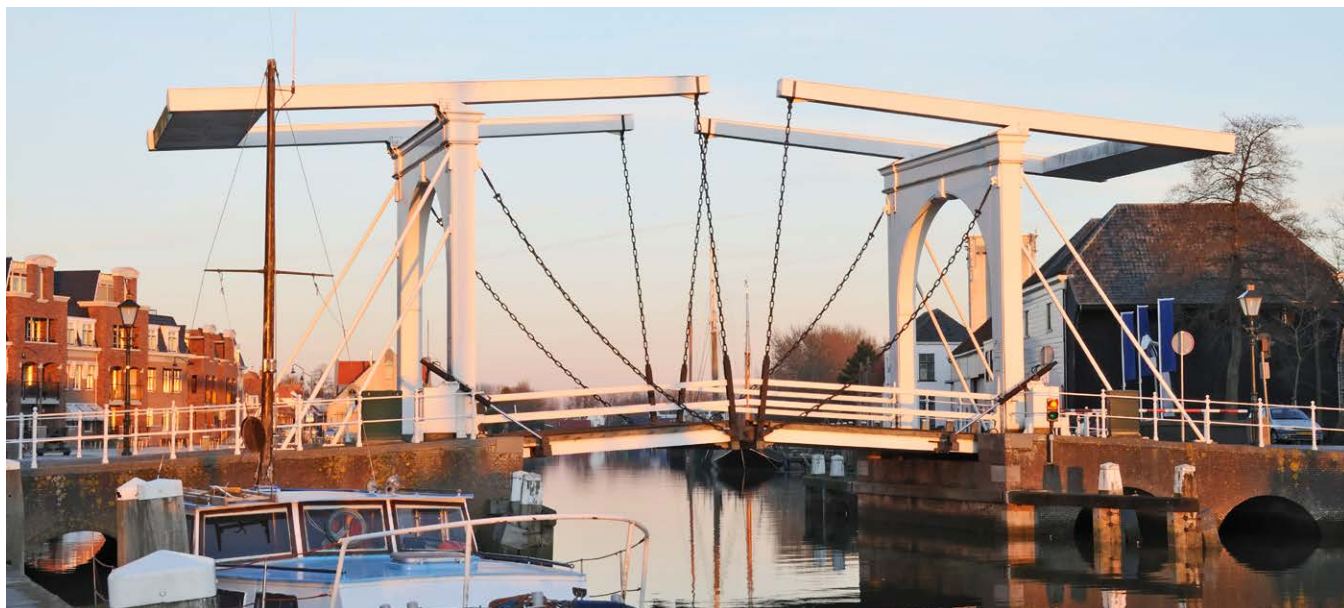
EU (European Union), EEA (European Economic Area)

**The Netherlands has ranked first on the DHL Global Connectedness Index every year since 2005. As one of the world's most advanced economies, with a strategic location for connections within and beyond Europe, the Netherlands has excellent structural conditions for global connectedness. But the Netherlands is far more connected even than one would predict based on its economic development, size, and geographic location. The success of the Netherlands in globalization highlights all five of the policy areas discussed in the previous section.**

The Netherlands has a long history as a global hub. During the 17<sup>th</sup> century, the Dutch merchant fleet was Europe's largest, and Amsterdam emerged as its most important trading city and a hotbed of financial and administrative innovation.

The Dutch East India Company, formed in 1602, is often regarded as the forerunner of today's modern multinational corporations. It was also one of the world's first limited liability companies, and it sold its shares on what became the first stock exchange.<sup>4</sup> Amsterdam's flourishing market and relative religious tolerance attracted immigrants and refugees from other parts of Europe, to the extent that foreigners comprised 40% of people getting married in the city in the 1640s.<sup>5</sup>

Both historically and in the present, the Netherlands has benefitted from its excellent structural characteristics for global connectedness. The Netherlands had the world's 12<sup>th</sup> highest GDP per capita in 2019 (\$52,448) and ranked third in the world on proximity to foreign markets, behind only its neighbors Luxembourg and Belgium. The Netherlands'



population of 17 million<sup>6</sup> means it lies in between the large countries, which tend to have high breadth but low depth of global flows, and the small countries, which tend to have high depth but low breadth.<sup>7</sup>

The Netherlands, however, is even more connected than one would expect based on its structural characteristics (in 2019, it beat expectations on overall global connectedness by 17 points). Considering only its per-capita income, population, and proximity to foreign markets, we would predict the Netherlands to rank 14<sup>th</sup> (just below Hungary) rather than first. To better understand how the Netherlands topped the ranking, it is worth taking a closer look at how the Netherlands stacks up in terms of the five key policy areas discussed in the previous section.

In terms of **peace and security**—a basic foundation for connectedness—the Netherlands stands strong. It ranked 15<sup>th</sup> on the *Global Peace Index* in 2019,<sup>8</sup> with similarly high rankings on the portions of that index that are most closely related to global connectedness (15<sup>th</sup> on safety and security and 16<sup>th</sup> on domestic and international conflict).<sup>9</sup>

The Netherlands truly shines when it comes to its **domestic business environment**. The World Economic Forum's *Global Competitiveness Index* ranked the Netherlands 4<sup>th</sup> overall in 2019, which made it the most competitive country in Europe. Only Singapore, the United States, and Hong Kong SAR (China) outrank the Netherlands on this index.<sup>10</sup> The country also ranked among the top 10 on six pillars of the *Global Competitiveness Index* and excelled especially on macroeconomic stability (tied for 1<sup>st</sup>), infrastructure (2<sup>nd</sup>) and business dynamism (2<sup>nd</sup>). Its lowest rank was on ICT adoption (24<sup>th</sup>).

The Netherlands complements its attractive domestic environment with **policies that attract and facilitate international flows**. It ranks 20<sup>th</sup> on the “simple index of openness policies” introduced in the previous section. Most notably, the Netherlands achieved the world's second highest score (after Hong Kong SAR, China) on the OECD's *Trade Facilitation Indicators*<sup>11</sup> in 2019 and ranked sixth on the World Bank's *Logistics Performance Index*, reinforcing its role in global trade networks as the home of Europe's largest port (Rotterdam). Favorable tax policies for international investment have also boosted the Netherlands' capital flows, although these have proven more controversial and their effects may be reduced by efforts currently underway to reform the taxation of multinational corporations.<sup>12</sup>

**Regional integration** has also served as a powerful enabler of globalization for the Netherlands. The Netherlands established itself at the heart of European economic integration as a founding member of the European Coal and Steel Community, which formed the basis for later European integration efforts. In 1992, the Treaty of Maastricht, signed in the Dutch city of the same name, created the European Union.<sup>13</sup> In 2002, the Netherlands became one of the original 12 countries to adopt the euro as its currency.<sup>14</sup>

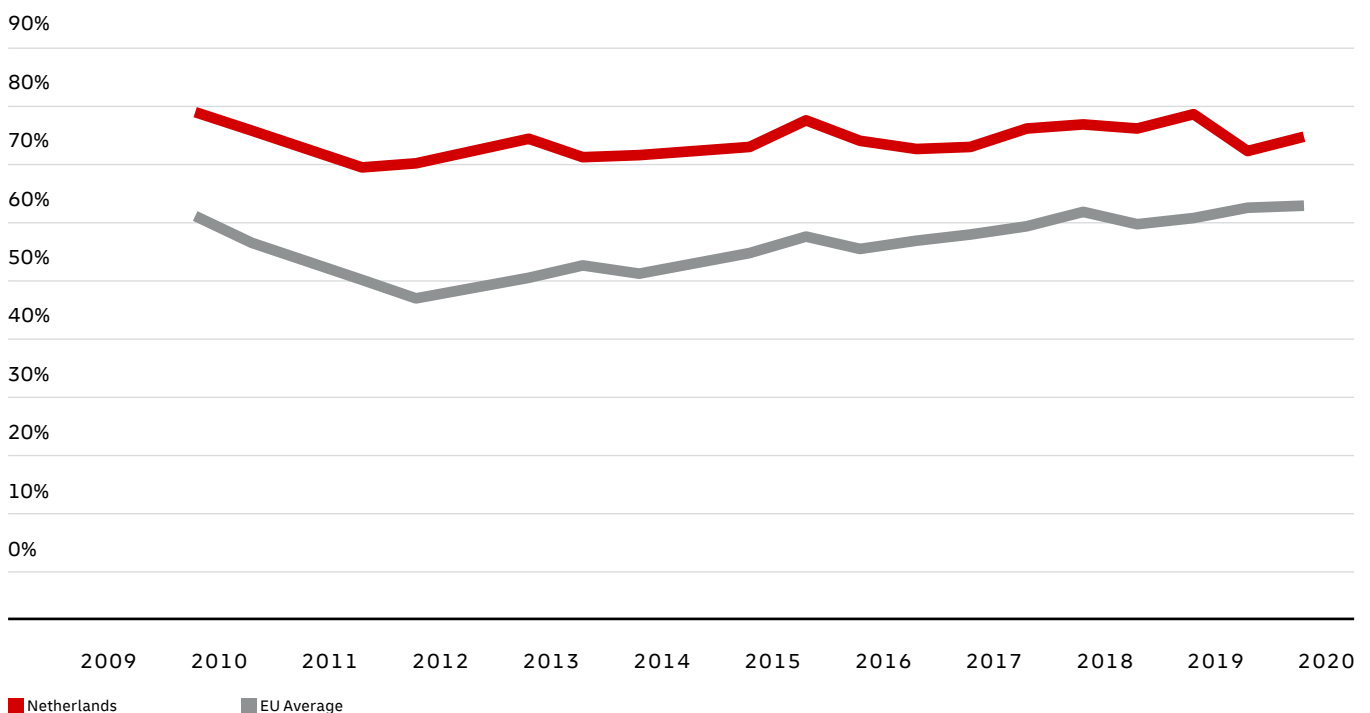
The Netherlands benefits from links between regional and global integration as a gateway for flows between Europe and the rest of the world. About 44% of the Netherlands' total international flows take place to or from other EU members, a lower proportion than the EU-wide average, in part because of the Netherlands' role linking other European countries to more distant markets.

**Public support** for globalization in the Netherlands tends to be high, although anti-globalization and Eurosceptic movements have become a prominent feature of Dutch politics. On Eurobarometer surveys, Dutch respondents consistently agree in higher numbers (compared to the EU-wide average) with the view that globalization is an opportunity for economic growth—most recently 75% vs. 63% (see **Figure 13**). On the Pew Global Attitudes Survey, 93% of respondents in the Netherlands agreed that growing trade and business ties between their country and others is a good thing, the fourth highest out of the 48 countries surveyed since 2014.<sup>15</sup> As of late 2020, support for the view that EU membership is “a good thing” was also stronger in the Netherlands than across

the EU (79% vs. 63%).<sup>16</sup> However, on an earlier survey, only half of Dutch respondents agreed with the statement that “Immigrants today make our country stronger because of their work and talents”—below the median for the 18 countries surveyed.<sup>17</sup>

*The Netherlands complements its attractive domestic environment with policies that attract and facilitate international flows.*

**FIGURE 13: PUBLIC SUPPORT FOR GLOBALIZATION: NETHERLANDS VS. EUROPEAN UNION AVERAGE<sup>18</sup>**

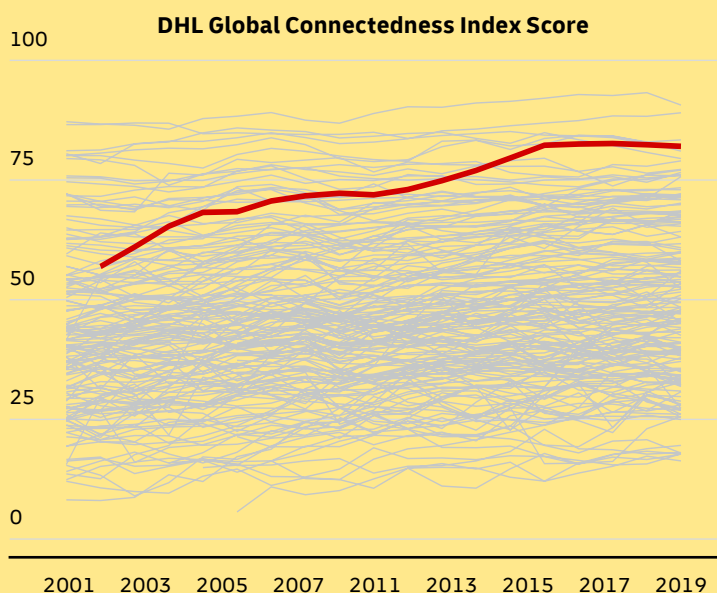


Public support for globalization is consistently higher in the Netherlands than on average across the European Union. Source: Eurobarometer



## 2 THE UNITED ARAB EMIRATES

### THE UNITED ARAB EMIRATES—KEY DATA



	Rank <sup>1</sup>
DHL Global Connectedness Index 2020	4 / 169
Depth	6 / 169
Breadth	25 / 169
Global Peace Index 2020 <sup>2</sup>	46 / 146
Global Competitiveness Index 2019	25 / 138
Openness Policies	48 / 138
Regional Bloc	GCC
Support for Trade and Business Ties <sup>19</sup>	–

GCC (Gulf Cooperation Council)

**The United Arab Emirates entered the DHL Global Connectedness Index in 2002 with a rank of 32<sup>nd</sup> out of 152. As of 2019, it now ranks fourth out of 169. Its score on the index has risen even more dramatically, from 57 to 82 points (out of a potential 100). The United Arab Emirates stands out not only because it is one of the most rapidly globalizing countries, but also because it is one of the most globalized overall and one of the strongest outperformers relative to expectations based on its economic development, size, and distance from global markets.**

The United Arab Emirates (UAE) ranks as the most globalized country in the Middle East. It has seen the fifth-largest increase in its level of globalization since the inception of the DHL Global Connectedness Index. (Sierra Leone, which recorded the largest

increase, is discussed next.) The UAE's remarkable rise reflects an economic development strategy that has aggressively pursued growth via globalization (see **Figure 14**). While some roots of the country's global and regional ties, such as Dubai's role as an entrepôt on trade routes between Europe and Asia, reach back more than a century, the territories that would become the UAE were still very small economies during the mid-20<sup>th</sup> century, with a combined population of less than 200,000 people.<sup>20</sup>

The UAE's globalization-fueled economic takeoff began in the 1960s, when Abu Dhabi (the largest of the seven emirates) became a major oil exporter and smaller oil exports also began from Dubai (the second largest). In the decades following the UAE's independence from the UK (in December

*In the decades following the UAE's independence, international shipping, air connections, tourism, and finance all became entrenched as key components of the country's economic development model, supported by extensive employment of foreign labor and capital.*

**FIGURE 14: UNITED ARAB EMIRATES INTERNATIONAL FLOWS: 2001 VS. 2019**<sup>21</sup>

	2001		2019
Container Traffic (TEUs)	5 mn	4x	19 mn
Tourist Arrivals	4 mn	5x	21 mn
Services Trade (USD)	11 bn	13x	148 bn
Foreign Direct Investment Stocks (USD)	4 bn	70x	310 bn

Sources: UNCTAD, UNWTO, WTO

1971), international shipping, air connections, tourism, and finance all became entrenched as key components of the country's economic development model, supported by extensive employment of foreign labor and capital. By 2014, Dubai had overtaken London Heathrow as the world's busiest international airport, its port handled more container traffic than any other port outside of East Asia, and more than 80% of the UAE's population was foreign-born.<sup>22</sup>

The UAE's structural conditions for global connectedness have improved as the country has developed. Most notably, its GDP per capita rose to \$43,103 by 2019, making the UAE a high-income country according to the World Bank, even though the IMF still classifies it as an emerging and developing economy. Its population has grown to almost 10 million (88% foreign-born as of 2019). In terms of proximity to foreign markets, the UAE ranks only 72<sup>nd</sup>. While the UAE is indeed far away from the world's largest economies, it plays a central role in connecting the Middle East, South Asia, and Africa with each other and with the rest of the world.

The UAE ranked 46<sup>th</sup> on the overall *Global Peace Index* in 2019. However, it ranked 21<sup>st</sup> on the **safety and security**



portion, which was the best predictor of connectedness, and was the second-highest ranked country in the Middle East & North Africa region on this measure, behind 20<sup>th</sup>-ranked Qatar.<sup>23</sup> The UAE (and Qatar) also outrank all of the countries in South & Central Asia and in Sub-Saharan Africa on safety and security, contributing to the UAE's role as a connector across those regions. The UAE, on the other hand, ranked lower on domains of the *Global Peace Index* that are affected by international conflicts: 72<sup>nd</sup> on domestic and international conflict and 135<sup>th</sup> on militarization.<sup>24</sup>

In terms of **domestic attractiveness**, the UAE ranked 25<sup>th</sup> on the *Global Competitiveness Index* in 2019.<sup>25</sup> The Global Competitiveness Report highlights that the UAE has among the best transportation systems in the world and a well-developed financial system.<sup>26</sup> Like the Netherlands, the UAE tied for first place on macroeconomic stability. It also ranked highly on the ICT adoption (2<sup>nd</sup>) and product market (4<sup>th</sup>) pillars of the *Global Competitiveness Index*. At the individual component level, the UAE ranked first worldwide on mobile broadband subscriptions, with 250 per 100 people. Its lowest pillar rank (92<sup>nd</sup>) was on health, which is measured based on life expectancy.



On the “simple index of openness policies” from the previous section, the UAE ranks 48<sup>th</sup> (out of 133 countries). Logistics performance (on which the UAE ranks 11<sup>th</sup>) is the only part of that index where the UAE excels. However, these measures probably understate the UAE’s **policy support for international flows** because of the outsized role played by “free zones” in the UAE’s globalization. The UAE’s free zones allow full foreign ownership of businesses, repatriation of capital and profits, exemptions from customs duties and income taxes, and recruitment of foreign workers, while also providing a range of facilitation services.<sup>27</sup> One zone, the Dubai International Financial Center, even has a separate common law judiciary for civil and commercial matters, with the majority of its judges coming from abroad (several each from the UK and Australia).<sup>28</sup>

Given the major policy advantages afforded by the UAE’s free zones, a large proportion of the country’s FDI and non-oil trade take place in these zones.<sup>29</sup> According to 2018 data, free zones generated 32% of Dubai’s GDP.<sup>30</sup> However, the UAE has recently undertaken policy reforms to attract more international activity “onshore.” In 2020, the country announced that it would begin allowing 100% foreign ownership of companies outside of free zones.<sup>31</sup>

The UAE participates in **regional integration** via the Gulf Cooperation Council (GCC), along with five other Persian Gulf countries,<sup>32</sup> most notably Saudi Arabia, which makes up 48% of the GDP and 59% of the population of the bloc. In 2019, only 11% of the UAE’s flows of trade, capital, information, and people were with the rest of the GCC, of which almost half were with Saudi Arabia alone. The GCC faced a significant setback in 2017 when a major dispute prompted Saudi

Arabia, the UAE, and Bahrain to cut diplomatic relations and transport links with fellow member Qatar.<sup>33</sup> Relations were restored in January 2021, but the future course of regional integration under the GCC remains uncertain.<sup>34</sup>

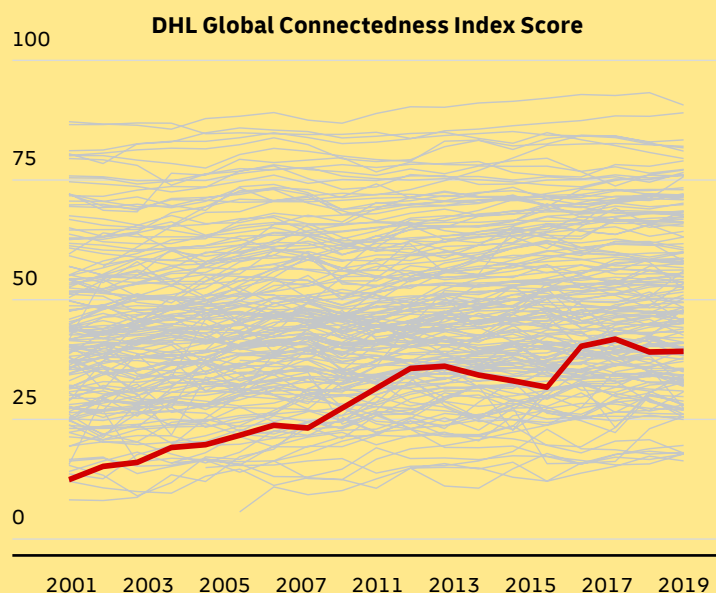
*Given the major policy advantages afforded by the UAE’s free zones, a large proportion of the country’s FDI and non-oil trade take place in these zones.*

People in the UAE tend to have **positive views about globalization**. On a 2019 survey, the UAE ranked among the countries with the strongest public support for the view that “globalization is important and a positive goal to strive toward.”<sup>35</sup> Survey respondents in the UAE also reported positive views about their country as a destination for immigrants. A full 91% of UAE participants in a 2020 poll felt that their country was a good place for immigrants, the highest percentage across all 113 countries surveyed.<sup>36</sup>



## 3 SIERRA LEONE

### SIERRA LEONE—KEY DATA



	Rank <sup>1</sup>
DHL Global Connectedness Index 2020	117 / 169
Depth	123 / 169
Breadth	98 / 169
Global Peace Index 2020 <sup>2</sup>	41 / 146
Global Competitiveness Index 2018 <sup>37</sup>	134 / 140
Openness Policies	127 / 138
Regional Bloc	ECOWAS
Support for Trade and Business Ties <sup>19</sup>	—

ECOWAS (Economic Community of West African States)

**In 2001, Sierra Leone ranked 147<sup>th</sup> out of 149 on the DHL Global Connectedness Index. This made it the third least connected country, due in large part to the effects of the country's brutal civil war. Since then, it has improved its score by 27 points, achieving a rank of 117<sup>th</sup> in 2019. Although this remains in the lower half of countries, Sierra Leone is the country where global connectedness has increased the most since 2001.**

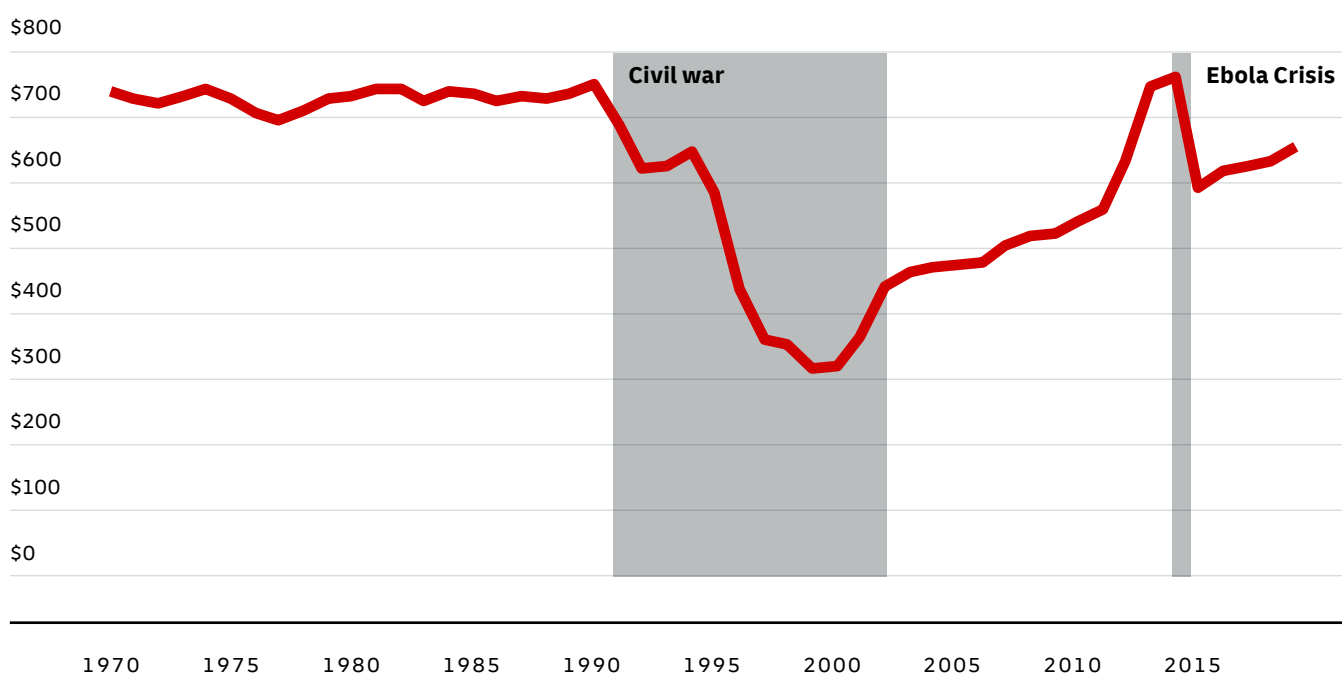
Sierra Leone is a small West African country with a coast on the Atlantic Ocean. Its GDP per capita was \$504 in 2019, more than double its 2000 level but still ranking among the world's least developed economies.<sup>38</sup> Sierra Leone's geographic location also poses challenges for its global connectedness, ranking only 118<sup>th</sup> out of 164 countries in terms of proximity to world markets.

Sierra Leone's rising connectedness is largely due to major improvements in **peace and security**. The country went through a horrendous civil war from 1991 to 2002, leaving an estimated 70,000 Sierra Leoneans dead and 2.6 million displaced (more than half the country's 2002 population).<sup>39</sup> The war devastated Sierra Leone's economy (see **Figure 15**), which was also hit hard by an Ebola outbreak in 2014 that killed thousands of people and caused major disruption to life in the country.<sup>40</sup>

The historical data available on the *Global Peace Index* does not extend back to the period of Sierra Leone's civil war, but it is striking to observe how Sierra Leone's economic recovery and its strong increase in connectedness both began immediately upon the conclusion of that conflict. Sierra Leone thus powerfully illustrates how a lack of security can disconnect

**Sierra Leone’s economic recovery and its strong increase in connectedness both began immediately upon the conclusion of the country’s civil war.**

**FIGURE 15: SIERRA LEONE GDP PER CAPITA IN CONSTANT (2019) US DOLLARS**



Sierra Leone's GDP per Capita plummeted during the country's brutal civil war, but it began a strong rebound after the end of that conflict in 2002. Source: UNCTAD

a country from international opportunities, and how quickly a country can start reconnecting once a reasonable level of security is reestablished. In 2019, Sierra Leone ranked 41<sup>st</sup> out of 146 countries on the *Global Peace Index* (including only those covered in the DHL Global Connectedness Index), with the fourth-highest rank in Africa, behind only Mauritius, Botswana, and Ghana.<sup>41</sup>

Sierra Leone's **domestic business environment**, however, continues to lag behind in several areas. Sierra Leone was not included in the 2019 *Global Competitiveness Index*, but in the 2018 edition it ranked 134<sup>th</sup> out of 140, making it one of the least competitive countries in the world. Its highest rank was 106<sup>th</sup> on institutions. This points to many areas for improvement, but it is important to keep in mind that the

median rank for Sub-Saharan African countries was 120.5—higher than Sierra Leone, but in the same ballpark.<sup>42</sup>

On **international openness policies**, Sierra Leone also ranks near the bottom, at 127<sup>th</sup> out of 138 countries on the index introduced in the previous section. This suggests a great deal of room for improvement in this area, as well. Most notably, Sierra Leone ranks 162<sup>nd</sup> out of 167 on the World Bank's *Logistics Performance Index* and 150<sup>th</sup> out of 164 on the OECD's *Trade Facilitation Indicators*. However, Sierra Leone has identified trade as a key component of its effort to become a middle-income country by 2039, and its government has been working with the World Bank's Trade Facilitation Support Program on improving its export and import processes. The country has set a goal of reducing trade costs by 10% by 2023, and computer system upgrades at the



Freetown Port have already been implemented.<sup>43</sup> The government has also made considerable efforts to attract FDI by implementing favorable investment policies.<sup>44</sup>

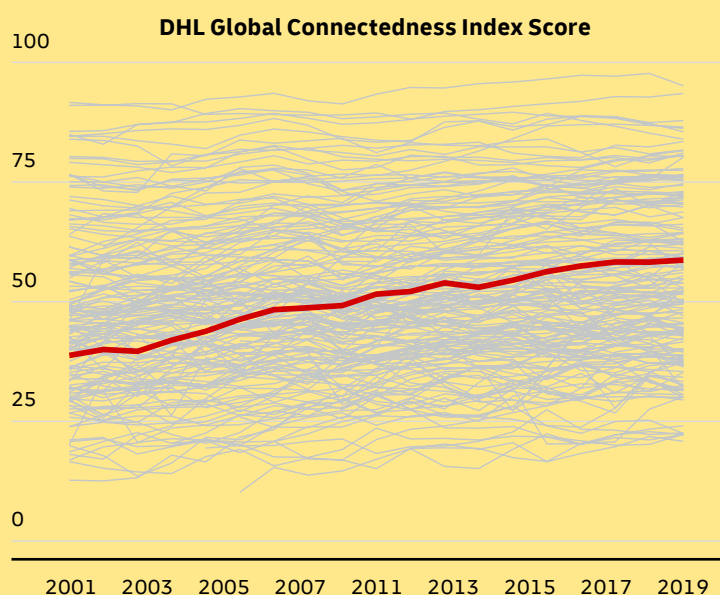
In terms of **regional integration**, Sierra Leone is a founding member of the Economic Community of West African States (ECOWAS), which was created in 1975.<sup>45</sup> Like many regional blocs, however, ECOWAS remains limited in its level of economic integration. Only about 18% of Sierra Leone's combined trade, capital, information, and people flows were with other ECOWAS countries in 2019, despite their proximity. Only 21% were with the whole continent of Africa.

**Public opinion** data regarding globalization in Sierra Leone remains very limited. One positive data point, however, is Sierra Leone's standing on Gallup's "Migrant Acceptance Index." Sierra Leone ranks fifth worldwide and first in Africa on this index, which reflects polling on "whether people think migrants living in their country, becoming their neighbors, and marrying into their families are good things or bad things."<sup>46</sup>



## 4 MEXICO

### MEXICO—KEY DATA



	Rank <sup>1</sup>
DHL Global Connectedness Index 2020	65 / 169
Depth	79 / 169
Breadth	71 / 169
Global Peace Index 2020 <sup>2</sup>	125 / 146
Global Competitiveness Index 2019	48 / 138
Openness Policies	28 / 138
Regional Bloc	NAFTA/USMCA
Support for Trade and Business Ties <sup>3</sup>	34 / 48 (79%)

NAFTA (North American Free Trade Agreement),  
USMCA (United States-Mexico-Canada Agreement)

**Like Sierra Leone, Mexico achieved a large increase in connectedness, rising 20 points between 2001 and 2019 and moving from a rank of 104<sup>th</sup> to 65<sup>th</sup>. Unlike Sierra Leone, however, this was not due to the end of internal conflict. Instead, it is the result of a concerted effort on the part of the Mexican government to take advantage of trading relationships with its partners in North America, Latin America, Europe, and the Pacific.**

The government began a process of opening up in the mid-1980s, joining the General Agreement on Tariffs and Trade (GATT) in 1986.<sup>47</sup> In 1994, it entered a trade agreement with Canada and the United States: the North American Free Trade Agreement (NAFTA). Mexico's GDP per capita reached \$9,863 in 2019, making it an upper middle-income country. It ranked 81<sup>st</sup> out of 164 on proximity to international markets.

On the *Global Peace Index*, Mexico ranks only 125<sup>th</sup> out of 146 countries, reflecting its continuing challenges with providing internal **safety and security**.<sup>48</sup> Among Latin American countries, Mexico ranks third-from-last on the *Global Peace Index* (above only Venezuela and Colombia). In 2019, only 11 countries worldwide had lower scores on the homicides component of the index. If Mexico succeeds in addressing these challenges, large increases in connectedness and prosperity are likely to follow. The cost of violence to Mexico's economy was estimated at 21% of GDP in 2019.<sup>49</sup>

In terms of the attractiveness of its **business environment**, Mexico fares much better in international comparisons. Mexico ranked 48<sup>th</sup> overall on the *Global Competitiveness Index*—narrowly missing the top third of countries—and second in Latin America and the Caribbean, behind only Chile. It



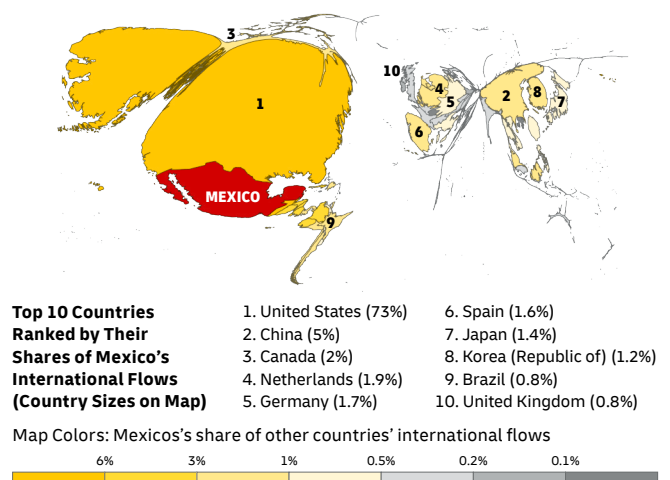
achieves strong macroeconomic stability (it ranks 41<sup>st</sup>, but 33 countries are tied for first). It also scores fairly well on its business dynamism (41<sup>st</sup>), innovation capability (52<sup>nd</sup>), and product market (53<sup>rd</sup>), although the difference between Mexico and the top ranked countries was somewhat larger in those categories. The World Economic Forum's 2019 Global Competitiveness Report notes that Mexico has made significant progress on its four worst-performing pillars, but it still has substantial room to improve, particularly in terms of skills and institutions.<sup>50</sup>

**Globalization policy** is where Mexico has truly shined over the last few decades. It ranked 28<sup>th</sup> on the “simple index of openness policies” developed in **Section III**—third in the Americas after Chile and Canada. From its early efforts with NAFTA, Mexico had expanded its base of free trade agreements by 2019 to cover 46 countries that account for 73% of the rest of the world's GDP, including trade agreements with the U.S., European Union, and Japan.<sup>51</sup> Mexico is also open to foreign investment: its 1993 Foreign Investment Law, updated in 2017, provides national treatment of foreign enterprises and liberalizes criteria for approval of FDI.<sup>52</sup>

From a **regional integration** perspective, Mexico's connections to North America remain central to the country's flows and are now facilitated by the United States-Mexico-Canada Agreement that replaced NAFTA in 2020. Given Mexico's proximity to the United States, it should come as no surprise

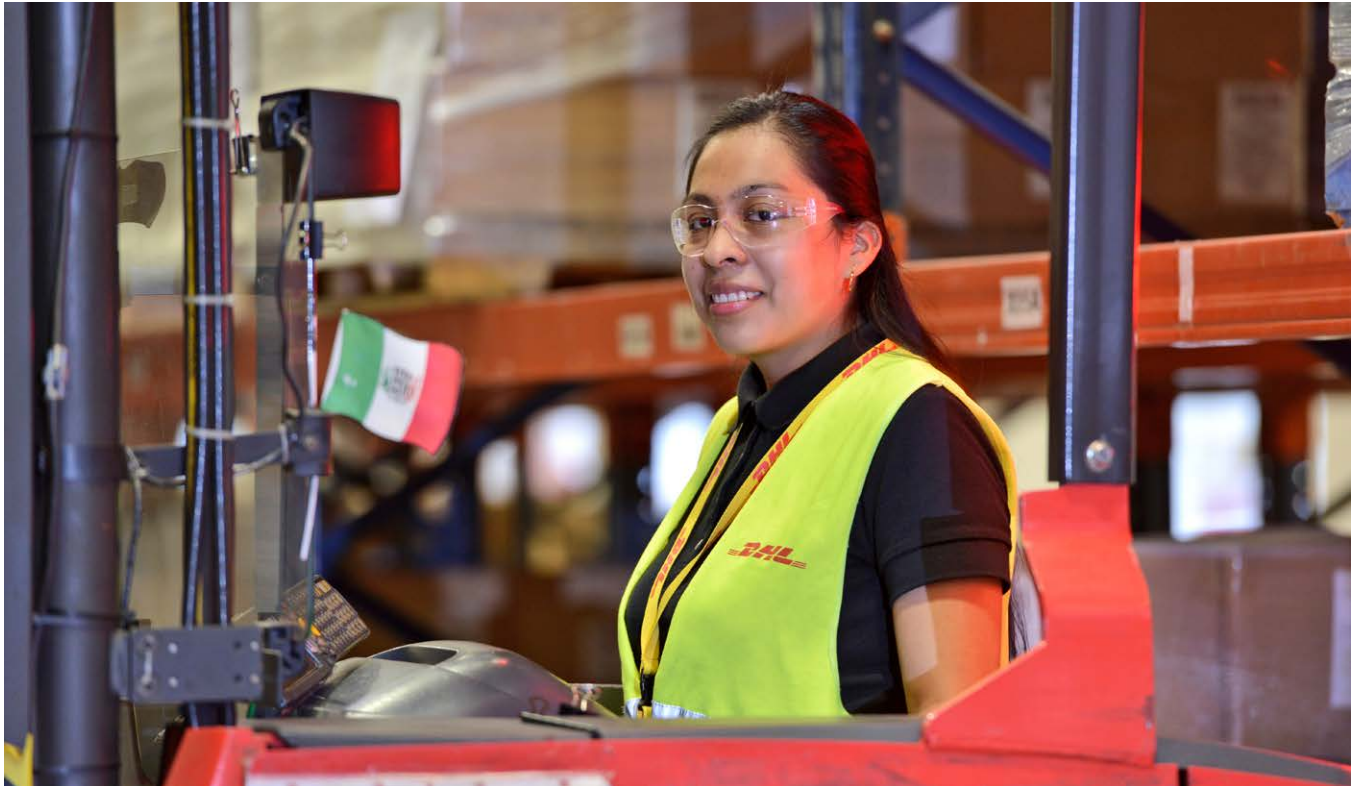
**FIGURE 16: WORLD MAP WITH COUNTRIES SIZED BASED ON MEXICO'S TRADE, CAPITAL, INFORMATION, AND PEOPLE FLOWS**

#### MEXICO'S GLOBAL CONNECTIONS



**Regional integration is central to Mexico's global connectedness. Almost three quarters of Mexico's combined trade, capital, information, and people flows were to or from the United States in 2019.** Source: DHL Global Connectedness Index 2020

Note: For similar maps of other countries' flows, refer to the DHL Global Connectedness Index 2020 Country Book, available for download at [dhl.com/gci](https://dhl.com/gci). Information about how to read these maps is provided on pp. 16–17 of that publication.



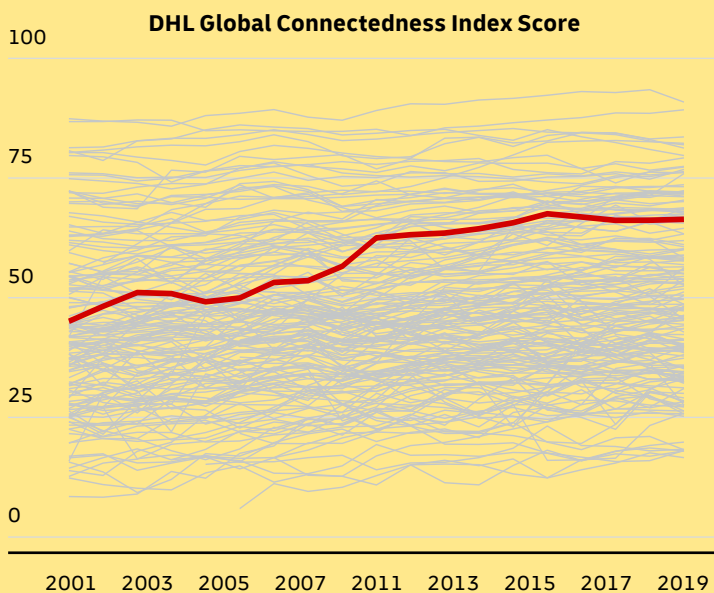
that about 73% of its international flows are with the U.S. (see **Figure 16**). This is down from 78% in 2001. Although Canada is Mexico's third most important partner (behind the U.S. and China), it makes up only about 2.4% of Mexico's international flows.

Globalization and regional integration are more controversial in Mexico than in the Netherlands, the UAE, or Viet Nam.<sup>53</sup> While 79% of Mexicans indicated on the Pew Global Attitudes Survey that they believe that trade and business ties with other countries are either very good or somewhat good for Mexico, this places Mexico in the bottom third of countries. Other polls indicate even lower levels of **public support for globalization** in Mexico and highlight how Mexican elites have tended to be more supportive of globalization than the general public.<sup>54</sup> A major area of concern has been the unequal distribution of globalization's benefits and challenges. While northern states near the U.S. border have seen substantial increases in investment, southern states have not seen the same levels of economic growth.<sup>55</sup>



## 5 VIET NAM

### VIET NAM—KEY DATA



	Rank <sup>1</sup>
DHL Global Connectedness Index 2020	38 / 169
Depth	31 / 169
Breadth	46 / 169
Global Peace Index 2020 <sup>2</sup>	58 / 146
Global Competitiveness Index 2019	67 / 138
Openness Policies	51 / 138
Regional Bloc	ASEAN
Support for Trade and Business Ties <sup>3</sup>	1 / 48 (95%)

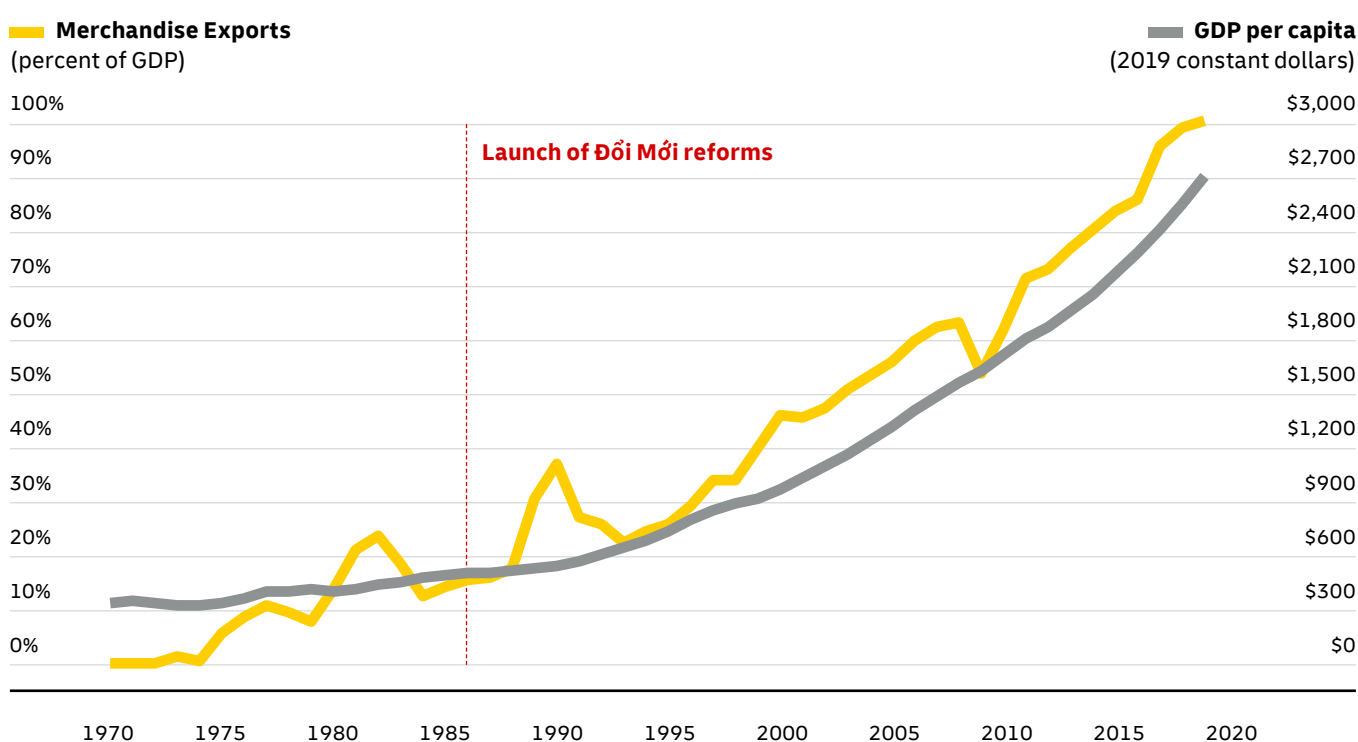
ASEAN (Association of Southeast Asian Nations)

Like its neighbors Cambodia, Malaysia, and Singapore, Viet Nam is among the world's best performing countries on the DHL Global Connectedness Index relative to expectations based on economic development, population, and proximity to foreign markets. In 1985, Viet Nam's GDP per capita of roughly \$500 (in 2019 U.S. dollars) placed it among the poorest countries in the world. Since then, reforms to open up the economy have paid off. Viet Nam is now a middle-income country with a GDP per capita of \$2,715.

Viet Nam's Đổi Mới ("renovation") reform process, launched in 1986, dramatically changed the economy, moving from central planning to what it called a "socialist-oriented market economy." This concept combined some state intervention, particularly at early stages of industry development, with

free-market incentives.<sup>56</sup> In 1993, the country entered into partnerships with the World Bank and IMF to improve development prospects. It joined the Association of Southeast Asian Nations (ASEAN) in 1995.<sup>57</sup> Figure 17 shows the rapid growth of Viet Nam's GDP per capita as its economy became increasingly focused on exports.<sup>58</sup>

Based on its structural characteristics alone, Viet Nam would be expected to rank 91<sup>st</sup> on the DHL Global Connectedness Index. In addition to its middle-income status, the country is reasonably well-positioned in the global economy, with a rank of 76<sup>th</sup> on proximity to global markets. But in fact, Viet Nam does much better on the DHL Global Connectedness Index than would be implied by these structural factors: in 2019, it ranked 38<sup>th</sup>.


**FIGURE 17: DEVELOPMENT OF VIET NAM'S MERCHANDISE EXPORTS AND GDP PER CAPITA, 1970 – 2019**


As Viet Nam's economy became increasingly focused on exports since the launch of its Đổi Mới reform process, the country's GDP per capita grew from \$500 to \$2,715 (in constant 2019 U.S. dollars). Source: UNCTAD, World Development Indicators

Viet Nam is a relatively peaceful country, ranking 58<sup>th</sup> on the *Global Peace Index* in 2019. It scores reasonably well on **safety and security** as well as on domestic and international conflict, the two key parts of that index for global connectedness.<sup>59</sup>

The **domestic business environment** in Viet Nam has become increasingly attractive. It ranks in the upper half of countries on the *Global Competitiveness Index*, at 67<sup>th</sup> out of 138,<sup>60</sup> achieving the most improvement of any country on that index in 2019.<sup>61</sup> Its highest ranks were for ICT adoption (41<sup>st</sup>) and financial system (60<sup>th</sup>).<sup>62</sup> Viet Nam has room to improve on skills (93<sup>rd</sup>), institutions (89<sup>th</sup>), and business

dynamism (89<sup>th</sup>), as well as on innovation capability (76<sup>th</sup>), where Viet Nam lags furthest behind the top countries.

Viet Nam has also enacted **policies to boost its international flows**, with particular focus on merchandise trade contributing to its rise to 5<sup>th</sup> place on the Trade pillar of the DHL Global Connectedness Index in 2019. In January 2007, Viet Nam joined the World Trade Organization.<sup>63</sup> By 2019, it had also entered into trade agreements with countries that account for 67% of the rest of the world economy (ranking 7<sup>th</sup> globally on this measure of participation in international trade agreements). Viet Nam is a founding member of the CPTPP and has also signed the RCEP agreement which, when it enters into



***Viet Nam has enacted policies to boost its international flows, with particular focus on merchandise trade contributing to its rise to 5<sup>th</sup> place on the Trade pillar of the DHL Global Connectedness Index in 2019.***

Viet Nam is **linked to its region** as a member of ASEAN, which is one of the more successful trade blocs. However, only 12% of Viet Nam's combined trade, capital, information, and people flows are with ASEAN countries, making it the least regionally focused country in the bloc (by contrast, 28% of Thailand's, 35% of Cambodia's, and 61% of Lao PDR's flows are with other ASEAN countries).

force on January 1, 2022, will extend the reach of Viet Nam's trade agreements to include almost all major economies worldwide.<sup>64</sup>

More generally, Viet Nam ranks 51<sup>st</sup> out of 138 countries on the openness policies index introduced in the previous section. Offsetting its high ranks on some trade-related enablers, Viet Nam scores lower in other areas. Viet Nam, for example, requires visitors from all but 24 countries to secure visas, and travelers from Viet Nam must also obtain visas to travel to most foreign countries (only 54 countries are visa-free for Vietnamese travelers).<sup>65</sup>

**Support for trade and business ties** is very strong in Viet Nam, with 95% of respondents saying they have a favorable view of such linkages on the Pew Global Attitudes Survey, the highest across all countries surveyed since 2014. This may seem surprisingly positive, but at the same time, 88% of Viet Nam's respondents to a Pew survey said that life was better today than it was 50 years ago. This was higher than any of the 37 other countries where that question was asked and more than double the global average.<sup>66</sup>

**The five country cases discussed in Section IV**—the Netherlands, the United Arab Emirates, Sierra Leone, Mexico, and Viet Nam—highlight the diverse paths that countries can take to boosting their benefits from global connectedness. They also highlight the power of the five key policy areas we discussed in the previous section: peace and security, domestic business environment, international openness, regional integration, and public support.

The Netherlands exemplifies all five policy areas, with a particular focus on the benefits of regional integration. The United Arab Emirates and Mexico stand out most prominently for their openness policies, while Sierra Leone's rising connectedness after the end of its civil war exemplifies the importance of peace and security. The case of Viet Nam highlights how improvements to a country's domestic business environment, supported by increasing economic openness, can powerfully expand a country's international flows.

Should countries continue to pursue global connectedness in the future, even in the face of anti-globalization headwinds? In the concluding section of this report, we revisit its key policy topics in light of the outlook for globalization.



An aerial photograph of a busy highway interchange at dusk or dawn. The highway has multiple lanes with cars moving in different directions, creating light trails. To the right of the highway is a large, rectangular parking lot filled with hundreds of cars parked in neat rows. The scene is illuminated by the warm, orange glow of the low sun, which casts long shadows and highlights the textures of the pavement and the density of the vehicles.

## SECTION V

# OUTLOOK

We conclude this report by considering its key policy implications in the context of ongoing debates about the future of globalization.



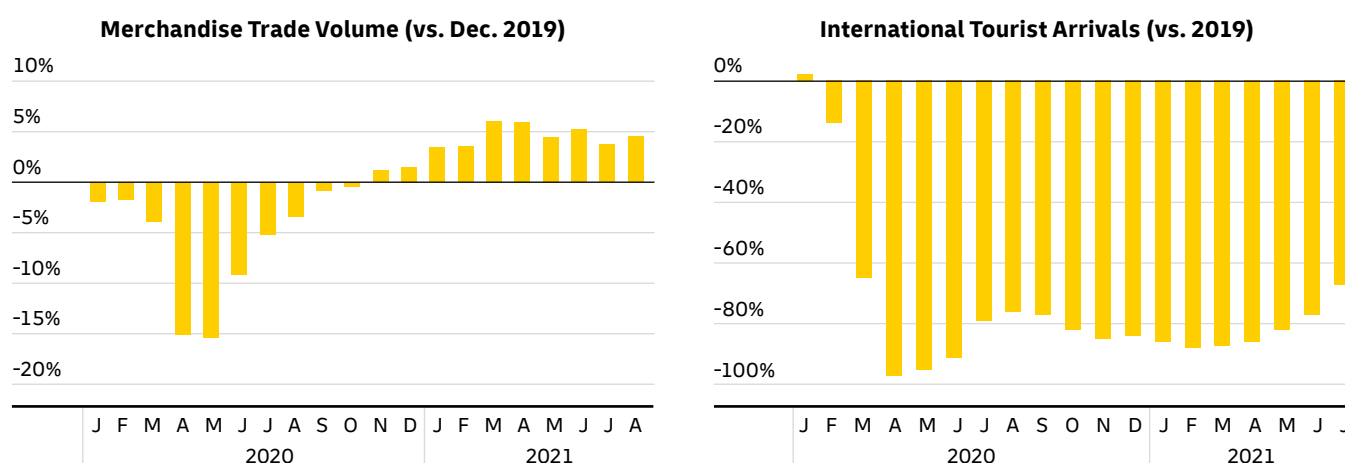
**This report has highlighted the advantages of a more connected world and discussed ways that countries can expand their gains from global connectedness. Can we be confident that these priorities will continue to make sense well into the future? Or is their value threatened by the possibility of a major reversal of globalization? In this section, we revisit our main public policy themes to consider how they might be affected by shifts in the global business environment.**

The benefits of the first two policy areas emphasized in this report—peace and security and the domestic business environment—do not depend on whether the world is becoming more or less globalized. While these are among the most powerful factors influencing a country's international flows, they are of intrinsic value regardless of the state of globalization. Since most business and life still take place within national borders, fostering a secure and productive domestic environment will always top the policy agenda. Moreover, if the world were to become less globalized, domestic conditions would become even more important.

The value of our third policy area—international openness—is affected by how levels of globalization are trending. When globalization advances, each country has more to gain from adopting policies that boost its participation in international flows. By contrast, a major reversal of globalization would diminish countries' potential gains from opening up, since they would find fewer partners abroad for international exchange. Given this conditionality, it is reassuring that broad indicators of globalization show no signs of a major decline in countries' international opportunities.

The Covid-19 pandemic that swept the world in 2020 presented the most severe stress test to globalization in decades. But the DHL Global Connectedness Index 2020 reported that the world has remained more connected through the pandemic than it was at the depths of the 2008–09 global financial crisis. Trade in goods proved to be surprisingly resilient, bouncing back to above its pre-pandemic level less than a year after it suffered its steepest decline on record (see **Figure 18**). The pandemic also accelerated the growth of international data flows, partially offsetting the pause it imposed on flows of people around the world.<sup>1</sup>

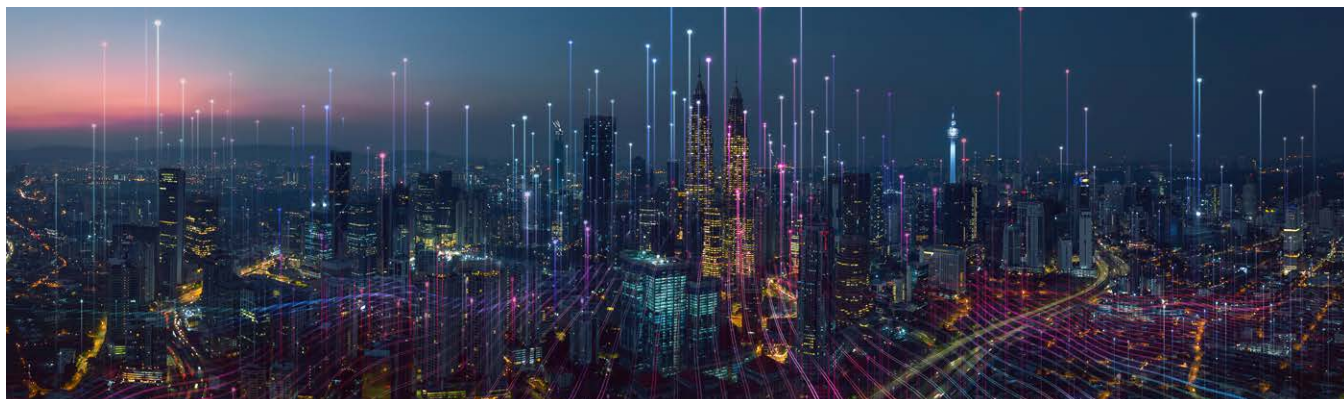
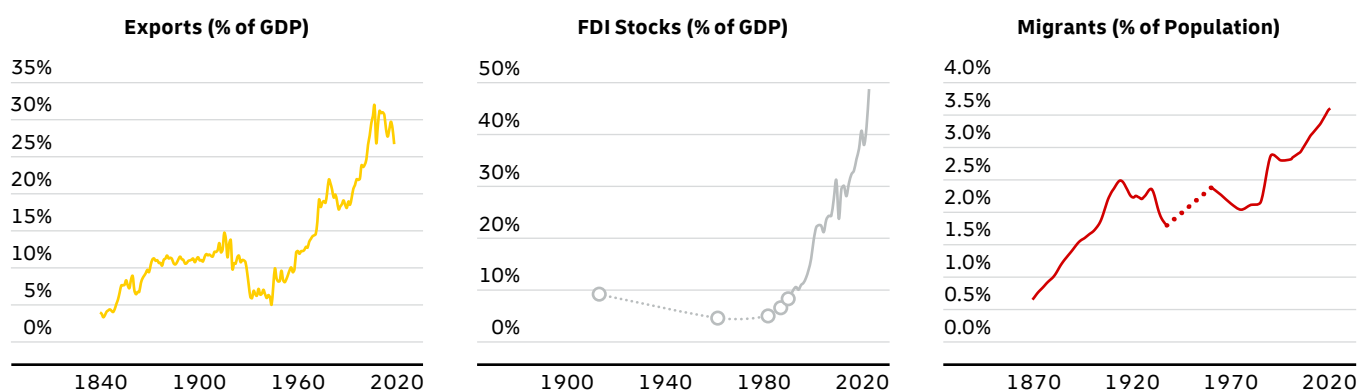
**FIGURE 18. TRADE VERSUS TRAVEL DURING THE COVID-19 PANDEMIC**



**International trade rebounded strongly during the Covid-19 pandemic, while international travel was largely put on pause.**

Note: Percent change in trade volume versus December 2019, seasonally adjusted.  
Data source: CPB World Trade Monitor

Note: Percent change in international arrivals versus same month in 2019, including business travel. Data source: UNWTO


**FIGURE 19: LONG-RUN TRADE, FOREIGN DIRECT INVESTMENT, AND MIGRATION TRENDS<sup>2</sup>**


Long-run trade, investment, and migration trends indicate that the world remains close to a record high level of globalization.

A longer-run historical perspective shows that the world is still close to an all-time record high level of globalization.

**Figure 19** tracks the intensity of international trade, foreign direct investment, and migration over more than a century. It highlights the large expansion of international flows over the past few decades, most of which has remained intact even through headwinds such as the U.S.-China trade conflict and the Covid-19 pandemic.

These trends boost confidence in the future of globalization and suggest that countries should continue to make international openness a central part of their development strategies.<sup>3</sup> We continue to see a world of robust international flows, creating large opportunities for countries that embrace policies to strengthen their global connectedness. The flipside of this point should also serve as a warning to policymakers considering new barriers to international activity. The more other countries continue to connect, the faster a country that disconnects itself will fall behind.

The enduring nature of the mechanisms by which global connectedness expands prosperity also bolsters the case for

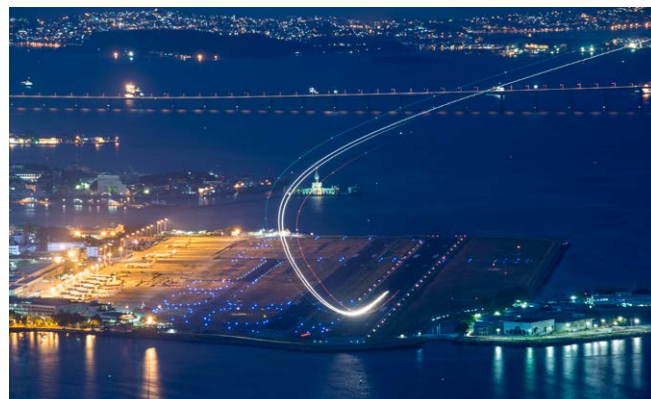
international openness. Competitive international markets, economies of scale, and faster diffusion of innovations will not lose their power to increase productivity. While countries can turn away from such opportunities—and have done so in the past—the potential gains from globalization will persist.

Regional integration—our fourth policy area—will also continue to present an attractive path for expanding countries' gains from globalization. **Figure 20** shows the rise of trade within world regions during the second half of the 20<sup>th</sup> century. It also highlights how more than half of all merchandise trade continues to take place regionally. Moving forward, regional integration may become even more important as companies pursue regional supply chain development.<sup>4</sup> Persistent geopolitical tensions between the world's largest economies could also lead to a more regionalized world in the future, although data on global flows do not (at least yet) demonstrate that such a shift is currently underway.<sup>5</sup>

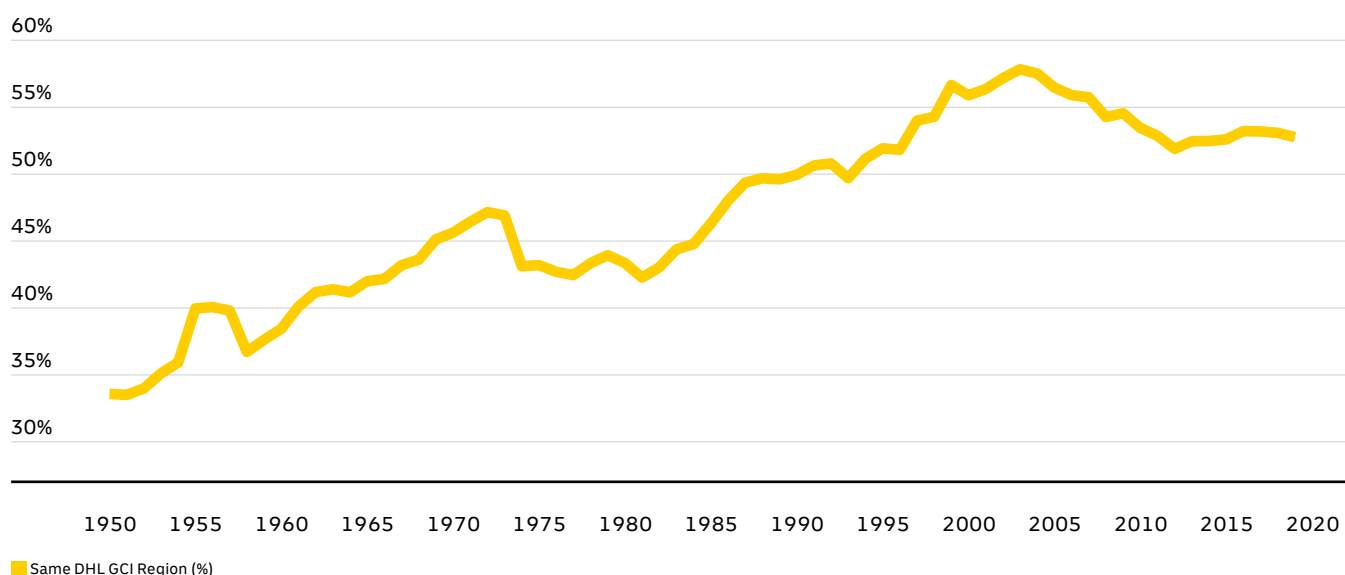
The final policy area emphasized in this report—bolstering public support—is also set to remain highly salient moving forward. For most of human history, people lived in small



*We continue to see a world of robust international flows, creating large opportunities for countries that embrace policies to strengthen their global connectedness.*



**FIGURE 20: MERCHANDISE TRADE, PERCENT INTRA-REGIONAL, 1950 – 2019**



Recent changes in the intra-regional share of merchandise trade have been small from a historical perspective. Sources: IMF Direction of Trade Statistics, UN Comtrade Database

groups, banding together with their immediate neighbors to protect themselves from external threats. It has always taken courage to expand the boundaries of trust, cooperation, and fair competition.<sup>6</sup> At the same time, even as societies gain collectively from a more connected world, many have failed to adequately care for those who have fallen behind in the process. Without broad support—underpinned by widely shared benefits—uncertainty about whether pro-globalization policies will be sustained can reduce their effectiveness.<sup>7</sup>

In conclusion, the five policy areas we have highlighted in this report can continue to guide efforts to expand the benefits of global connectedness well into the future. They are grounded in the enduring reality of what DHL Global Connectedness Index co-creator Pankaj Ghemawat has called “semiglobalization.” National borders *and* the flows that

cross them will both continue to loom large well into the future. This complex reality of a partially connected world provides a rich landscape in which countries can creatively pursue the globalization gains that make the most sense in their own national contexts.

## NOTES SECTION II

### LAYING THE GROUNDWORK

1 Ilan Alon, Eugene Jaffe, Christiane Prange, Donata Vianelli, *Global Marketing: Strategy, Practice, and Cases*, 3rd edition, Taylor & Francis, 2020.

2 Central European Free Trade Agreement Secretariat, "CEFTA Parties," 2016.

3 European Commission, "Trade Policy: Western Balkans," April 26, 2021.

4 Georgia entered into a free trade agreement with regional heavyweight Turkey in 2007, which it expanded in 2018. See The Economist Intelligence Unit, "Georgia and Turkey expand free-trade agreement," March 1, 2018. Georgia also signed an Association Agreement (including a Deep and Comprehensive Free Trade Area) with the EU in 2014. See European Commission, "Trade Policy: Georgia," April 26, 2021.

5 Mexico's rising connectedness was spurred by its participation in the North American Free Trade Agreement (NAFTA), which entered into force in 1994 between Mexico, the United States, and Canada.

6 Outperformance is measured by comparing actual index results against a linear regression model, in which the dependent variable is a country's global connectedness score. This model includes data from 2001–2019 with fixed effects for year. The results of the model are shown in the following table:

	Coefficient	Standard Error
GDP per capita (logged)	8.782	0.491
Remoteness from world markets	-1.366	0.321
Population (logged)	1.617	0.315
Constant	-43.417	7.555

The regression had 3,072 total observations and an adjusted R-squared of 0.729.

7 Pankaj Ghemawat, "Distance Still Matters: The Hard Reality of Global Expansion," *Harvard Business Review*, 2001. See also, Pankaj Ghemawat, *The Laws of Globalization and Business Applications*, Cambridge University Press, 2017.

8 Axel Dreher, Noel Gaston, Pim Martens, and Lotte Van Boxem, "Measuring Globalization – Opening the Black Box. A Critical Analysis of Globalization Indices," *Journal of Globalization Studies* 1, May 2010.

9 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.

10 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.

11 Due to the Frankel & Romer (1999) approach's more direct applicability beyond trade than the preferable Feyrer (2019) approach, we have taken Frankel & Romer (1999) as the starting point for this analysis. We replicate the calculations by Frankel & Romer across the flows covered on the breadth dimension of the DHL Global Connectedness Index. Instrumental variables are generated using gravity models that employ only geographic explanatory variables, and those instruments are then employed in regressions relating globalization depth measures and country size to countries' levels of GDP per Capita. We test models both including and excluding population as a size variable because our information and people pillar depth ratios are primarily scaled by population. We also experiment with log-transformed depth ratios in the regressions examining relationships between measures of the depth of globalization and GDP per capita. Looking beyond Frankel & Romer's original focus on merchandise trade, we find that such models suggest support for a positive causal relationship between the depth of globalization and GDP per capita with respect to services exports, FDI, scientific research collaboration, immigration, and tourist arrivals. It is important to note, however, that these analyses rely on instrumental variables constructed using geographic data, and geography strongly shapes most types of international flows. This implies that it is better to view our results as supporting a positive relationship

between globalization and GDP per capita in general, rather than identifying the effects of each specific type of flow, a point that echoes Feyrer's interpretation of his trade results.

12 Research on FDI highlights the importance (consistent with themes in this report) of domestic human capital and local financial markets to the economic benefits countries can derive from FDI. See, for example, Eduardo Borensztein, Jose De Gregorio, and Jong-Wha Lee, "How does foreign direct investment affect economic growth?" *Journal of International Economics* 45, 1998 and Laura Alfaro, Areendam Chanda, Sebnem Kalemli-Ozcan, and Selin Sayek, "FDI and economic growth: the role of local financial markets," *Journal of International Economics* 64, 2004. Studies of immigration show the potential for even larger benefits, as much as a doubling of world GDP from the removal of all restrictions and sizable gains from more feasible (partial) reductions in barriers to migration. See Michael A. Clemens, "Economics and emigration: Trillion-dollar bills on the sidewalk?" *Journal of Economic Perspectives* 25.3, 2011. A recent publication addressing critiques of such large gains is Michael A. Clemens and Lant Pritchett, "The new economic case for migration restrictions: an assessment," *Journal of Development Economics* 138, 2019. For a meta-analysis of studies relating tourism to economic growth, see Mercedes Castro-Nuño, José A. Molina-Toucedo, and María P. Pablo-Romero, "Tourism and GDP: A meta-analysis of panel data studies," *Journal of Travel Research* 52, 2013.

13 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 section.

14 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. Leading scholars have weighed in on the contemporary relevance of Ricardo's work 200 years since its original publication in *Cloth for Wine? The Relevance of Ricardo's Comparative Advantage in the 21st Century*, edited by Simon J. Evenett, CEPR Press, 2017. The benefits of specialization appear to be quite large: one multi-sector 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.

15 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.

16 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, op. cit. 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.

- 17 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.
- 18 See, for example, Ufuk Arkcigit, "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.
- 19 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."
- 20 Alberto Ades and Rafael Di Tella, "Rents, competition, and corruption," *American Economic Review* 89.4, 1999.
- 21 See, for example, Patrick J. McDonald, "Peace through trade or free trade?" *Journal of Conflict Resolution* 48.4, 2004.
- 22 Diffuse gains are often set against concentrated losses, and recent research has highlighted the particular challenges of geographically concentrated job losses due to import competition. See David H. Autor, David Dorn, and Gordon H. Hanson, "The China syndrome: Local labor market effects of import competition in the United States," *American Economic Review* 103.6, 2013, and research building on that contribution.
- 23 Elhanan Helpman, *Globalization and Inequality*, Harvard University Press, 2018.
- 24 Steven A. Altman and Caroline Bastian, "DHL Global Connectedness Index 2020," Deutsche Post DHL, 2020.
- 25 International Maritime Organization (IMO), "Fourth IMO Greenhouse Gas Study," 2020; IATA "Air Cargo Carbon Footprint," accessed at <https://www.iata.org/en/programs/cargo/sustainability/carbon-footprint/> on April 7, 2021. For additional background on carbon emission across modes of transportation, refer to Hannah Ritchie, "Cars, planes, trains: where do CO2 emissions from transport come from?" Our World in Data, October 6, 2020.
- 26 For example, DHL is making major investments in climate neutral logistics, aiming to reduce greenhouse gas emissions by electrifying much of its fleet, expanding its use of climate-neutral buildings, and funding research in alternative aviation fuels. See <https://www.dpdhl.com/en/media-relations/press-releases/2021/dpdhl-accelerated-roadmap-to-decarbonization.html>
- 27 For an extensive discussion of the environmental consequences of globalization, refer to Chapter 6 of Pankaj Ghemawat, *World 3.0*, Harvard Business Review Press, 2011. See also Irwin, op. cit. pp. 69–82 and Brian R. Copeland, Joseph S. Shapiro, and M. Scott Taylor, "Globalization and the Environment," NBER Working Paper 28797, May 2021.
- 28 Susan Lund, James Manyika, Jonathan Woetzel, Edward Barriball, Mekala Krishnan, Knut Alicke, Michael Birshan, Katy George, Sven Smit, Daniel Swan, and Kyle Hutzler, "Risk, resilience, and rebalancing in global value chains," McKinsey Global Institute, August 6, 2020.
- 29 The correlation between global connectedness in 2019 and the Gini coefficient is -0.38, with the Yale Environmental Performance Index 0.80, and with the volatility of economic growth -0.16.
- 30 The policies emphasized in this report focus on countries' participation in international flows. A holistic agenda for maximizing countries' benefits from globalization should also encompass several other policy priorities. A new four-part categorization of global value chain (GVC)-oriented policies introduced in Carlo Pietrobelli, Roberta Rabellotti, and Ari Van Assche, "Making sense of global value chain-oriented policies: The trifecta of tasks, linkages and firms," *Journal of International Business Policy* 4.3, September 2021 proposes thinking in terms of: (1) "participation policies aimed at entering in and enhancing the local economy's participation in GVCs," (2) "value capture policies intended for strengthening the local economy's value creation and capture within GVCs," (3) inclusiveness policies directed to improve the local social and environmental conditions in GVCs, and (4) "resiliency policies designed for strengthening the local economy's resiliency."
- 31 Economic upgrading has been a central theme of the literature on global value chains. For a convenient overview, refer to Gary Gereffi, "Economic upgrading in global value chains," *Handbook on Global Value Chains*, edited by Stefano Ponte, Gary Gereffi, and Gale Raj-Reichert, Edward Elgar Publishing, 2019.
- 32 As Douglas Irwin has written, "Free trade is not a 'magic bullet' that can solve all economic problems. The real and substantial gains from free trade should not be exaggerated when other fundamental economic problems are pressing. Stable macroeconomic policies, the rule of law, and the protection of property rights that enable the market mechanism to function properly are preconditions for reaping the full benefits of international trade." See Douglas A. Irwin, *Free Trade under Fire*, 5th edition, Princeton University Press, 2020. p. 82.
- 33 See, for example, 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.
- 34 An extensive policy agenda is articulated in World Bank Group and World Trade Organization, "Women and Trade: The Role of Trade in Promoting Gender Equality," 2020. See also UNCTAD, "Multinational Enterprises and the International Transmission of Gender Policies and Practices," 2021.
- 35 Jaime de Melo and Jean-Marc Solleder, "Barriers to trade in environmental goods: How important they are and what should developing countries expect from their removal," *World Development* 130, 2020.
- 36 OECD, "FDI Qualities Indicators: Measuring the sustainable development impacts of investment," 2019. For another perspective on the contribution of FDI to sustainable development, highlighting the importance of financial returns, see Simon J. Evenett and Johannes Fritz, "Advancing Sustainable Development With FDI: Why Policy Must Be Reset," *Global Trade Alert*, June 2, 2021.
- 37 International Monetary Fund, "The IMF's Institutional View on Capital Flows in Practice," 2018.
- 38 For a wide-ranging and timely perspective on this topic, refer to Ian Goldin, "Rethinking Global Resilience," *Finance & Development*, IMF, Fall 2020.
- 39 To match the cross-sectional regressions employed in Section III, the analysis of structural drivers discussed earlier was repeated using just the most recent year's data (typically 2019). The regression coefficients, based on data normalized using the formula  $(x_i - \text{mean}(x)) / \text{sd}(x)$  were as follows:

	Coefficient	Standard Error
GDP per capita (logged)	14.288	0.789
Proximity to world markets	3.844	0.800
Population (logged)	3.449	0.671
Constant	46.857	0.680

The regression had an adjusted R-squared of 0.769 and was based on 164 observations.

- 40 The number of countries covered on most public opinion surveys is relatively small, insufficient to establish statistical significance in the context of the models used here.



## NOTES SECTION III

### FIVE KEY DRIVER OF CONNECTEDNESS

1 Institute for Economics & Peace, *Global Peace Index 2020: Measuring Peace in a Complex World*, June 2020.

2 This quantification is based on a cross-sectional regression relating DHL Global Connectedness Index scores in 2019 to *Global Peace Index* scores, along with the three main structural determinants of connectedness discussed earlier in this report. This type of analysis does not demonstrate a causal relationship. Moreover, we should note that *Global Peace Index* scores are correlated with other influences on connectedness, such as the domestic and international policy measures discussed in the next two subsections. Therefore, readers should recognize that there is some overlap in the quantifications reported here and those in later subsections, and these quantifications, therefore, should be viewed as describing upper bounds on the relationships between global connectedness and the specific measures discussed. The regression coefficients, based on data normalized using the formula  $(x_i - \text{mean}(x)) / \text{sd}(x)$  were as follows:

	Coefficient	Standard Error
GDP per capita (logged)	13.402	0.886
Proximity to world markets	3.697	0.798
Population (logged)	3.252	0.934
Global Peace Index	2.408	0.818
Constant	47.298	0.724

The regression had an adjusted R-squared of 0.801 and was based on 142 observations.

3 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. More recently: Frederick R. Chen, "Extended Dependence: Trade, Alliances, and Peace," *The Journal of Politics*, 83:1, January 2021.

4 Pascal L. Ghazalian and Mohammad Hammoud, "The Peace Level of Nations: An Empirical Investigation into the Determining Factors," *Defence and Peace Economics*, 2020 employs the *Global Peace Index* to analyze this relationship.

5 Stephen Pratt and Anyu Liu, "Does Tourism Really Lead to Peace? A Global View," *International Journal of Tourism Research* 18: 82–90, 2016.

6 2019 estimate measured in purchasing power parity terms. See Institute for Economics & Peace, *Economic Value of Peace 2021: Measuring the Global Economic Impact of Violence and Conflict*, January 2021.

7 Klaus Schwab, *The Global Competitiveness Report 2019*, World Economic Forum, 2019. Note: Although the *Global Competitiveness Report* was published again in 2020, it did not include the index. Other indexes that capture aspects of countries' business environments that are associated with higher levels of global connectedness include the Heritage Foundation's Index of Economic Freedom, the Cato Institute's Human Freedom Index, the Fraser Institute's Economic Freedom of the World Index, UNCTAD's Productive Capacities Index, the World Bank's Ease of Doing Business Index, and the World Justice Project's Rule of Law Index.

8 Because we discuss security and openness-related measures elsewhere in this section, we analyze a modified version of the *Global Competitiveness Index* that focuses only on domestic policy. Specifically, we remove the portion of the Institutions pillar measuring security (which overlaps with the material on peace and security discussed in the previous subsection), the Market Size pillar (which overlaps with our treatment of size as a structural driver of connectedness), and the trade openness part of the Product Market pillar (which overlaps with indicators of openness to international flows discussed in the next subsection).

9 For background and caveats about such quantifications, see note 2. The regression coefficients, based on data normalized using the formula  $(x_i - \text{mean}(x)) / \text{sd}(x)$  were as follows:

	Coefficient	Standard Error
GDP per capita (logged)	7.202	1.868
Proximity to world markets	3.198	0.765
Population (logged)	1.224	0.811
Global Competitiveness Index	7.809	1.755
Constant	49.865	0.877

The regression had an adjusted R-squared of 0.820 and was based on 134 observations.

10 The importance of domestic policy as a driver of international flows has also been highlighted by others. According to economist Kimberly Clausing, "foreign countries' domestic policy decisions are likely the dominant factor increasing trade flows in recent decades." See Kimberly Clausing, *Open: The Progressive Case for Free Trade, Immigration, and Global Capital*, Harvard University Press, 2019.

11 Klaus Schwab, *The Global Competitiveness Report 2019*, World Economic Forum, 2019.

12 In practice, countries that have favorable globalization-related policies also tend to have strong domestic policies and tend to be relatively stable, safe, and secure. This underscores the difficulty of disentangling the separate effects of policies directly regulating international flows from those of favorable domestic business environments.

13 The *KOF Globalization Index's de jure* index is somewhat of a contender here, and many of the elements included in the *de jure* index were also considered individually in our analysis. However, several of the indicators in the KOF *de jure* index, such as telephone subscriptions and television access, are indicators of access rather than policies, whereas some policy variables, such as press freedom and human capital are clearly domestic policies, which, as we have already described, facilitate globalization by providing an improved business environment. Of the six sub-pillars, the most strongly correlated with the residuals on the DHL Global Connectedness Index after taking structural factors into account was financial globalization, followed by trade globalization. See Savina Gygli, Florian Haelg, Niklas Potrafke and Jan-Egbert Sturm, "The KOF Globalisation Index – revisited," *The Review of International Organizations*, 14, 2019.

14 For background and caveats about such quantifications, see note 2. The regression coefficients, based on data normalized using the formula  $(x_i - \text{mean}(x)) / \text{sd}(x)$  were as follows:

	Coefficient	Standard Error
GDP per capita (logged)	9.408	1.210
Proximity to world markets	3.096	0.804
Population (logged)	1.429	0.874
Simple Index of Openness Policies	5.768	1.129
Constant	49.293	0.778

The regression had an adjusted R-squared of 0.803 and was based on 131 observations.

15 The set of trade-focused indicators on our index highlights complementary approaches that countries can take to boosting their trade flows. The tariff and trade agreement measures highlight how tariffs (and other policy restraints on trade) can be reduced both via unilateral action and via agreements with trading partners. The *Logistics Performance Index* and the *Trade Facilitation Indicators* both highlight other avenues for enabling countries to trade more efficiently.

16 World Bank, "International LPI," Accessed May 17, 2021. It is worth keeping in mind, however, that the LPI is also strongly correlated with domestic policy indicators, so its effects overlap significantly with those discussed in the previous subsection. See <https://lpi.worldbank.org/international>

17 The data on trade agreements comes from the DESTA project. Andreas Dür, Leonardo Baccini and Manfred Elsig, "The Design of International Trade Agreements: Introducing a New Database," *Review of International Organizations* 9.3, 2014.

- 18 OECD, "Introducing the OECD Trade Facilitation Indicators," Accessed May 17, 2021. Note: For our index, we take the simple average of the 11 published indicators. See <https://www.oecd.org/trade/topics/trade-facilitation/documents/trade-facilitation-indicators-methodology.pdf>
- 19 World Trade Organization (WTO), "Trade topics: Trade facilitation," Accessed May 17, 2021. See [https://www.wto.org/english/tratop\\_e/tradfa\\_e/tradfa\\_e.htm](https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm)
- 20 We measure capital account openness here using a widely-used index of de jure financial openness developed by economists Menzie D. Chinn and Hiro Ito. It measures the extensity of capital controls based on the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*. See Menzie D. Chinn & Hiro Ito, "A New Measure of Financial Openness," *Journal of Comparative Policy Analysis*, 10.3: 309–322, 2008.
- 21 For further discussion on this topic, refer to Pankaj Ghemawat and Steven A. Altman, "DHL Global Connectedness Index 2012," Deutsche Post DHL, 2012.
- 22 Visa-free travel is measured here as the square root of the number of countries a passport holder from each country can visit without obtaining a visa in advance times the number of foreign countries whose citizens can visit the same country without an advance visa, based on data reported by Henley & Partners.
- 23 Visa-free inbound travel has a significant and positive relationship with the People pillar of the DHL Global Connectedness Index, but its positive relationship with the overall index does not achieve statistical significance at conventional levels in regressions that control for countries' structural characteristics.
- 24 Available measures were not sufficient to demonstrate strong statistical relationships between information flow policies and global connectedness.
- 25 Martina F. Ferracane and Erik van der Marel, "The Costs of Data Protectionism," ECIPE blog, October 2018.
- 26 Weighted average using DHL Global Connectedness Index component weights, as described in Section VI of the 2020 DHL Global Connectedness Index report. The region classification employed here is: **East Asia and the Pacific:** Australia, Brunei Darussalam, Cambodia, China, Fiji, Hong Kong SAR (China), Indonesia, Japan, Kiribati, Korea (Republic of), Lao People's Democratic Republic, Macau SAR (China), Malaysia, Mongolia, Myanmar, New Zealand, Philippines, Samoa, Singapore, Solomon Islands, Taiwan (China), Thailand, Timor-Leste, Tonga, 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom. **Middle East and North Africa:** Algeria, Bahrain, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates, Yemen. **North America:** Canada, Mexico, United States. **South and Central America and the Caribbean:** Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, 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 and Central Asia:** Afghanistan, Armenia, Azerbaijan, Bangladesh, Georgia, India, Iran (Islamic Republic of), Kazakhstan, Kyrgyzstan, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkey, Uzbekistan. **Sub-Saharan Africa:** Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Tanzania (United Republic of), Togo, Uganda, Zambia, Zimbabwe.
- 27 Keith Head and Thierry Mayer, "What Separates Us? Sources of Resistance to Globalization," *Canadian Journal of Economics/Revue canadienne d'économie* 46(4), November 2013.
- 28 Countries in the same region are also 52% more likely to share common legal origins, an enduring legacy of shared institutional histories. For data sources and additional discussion, refer to Pankaj Ghemawat and Steven A. Altman, "Geographic Distance and Regionalization," in Pankaj Ghemawat, *The Laws of Globalization and Business Applications*, Cambridge University Press, 2017, pp. 336–338.
- 29 For background and caveats about such quantifications, see note 2. The regression coefficients, based on data normalized using the formula  $(x_i - \text{mean}(x)) / \text{sd}(x)$  were as follows:
- |                              | Coefficient | Standard Error |
|------------------------------|-------------|----------------|
| GDP per capita (logged)      | 13.479      | 0.840          |
| Proximity to world markets   | 2.867       | 0.895          |
| Population (logged)          | 3.326       | 0.672          |
| Regional bloc (% of ROW GDP) | 2.342       | 0.962          |
| Constant                     | 47.113      | 0.685          |
- The regression had an adjusted R-squared of 0.768 and was based on 160 observations.
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- 36 The Bertelsmann survey asked: "Do you think the following aspects of globalization are a force for good or bad for the world?" The Pew survey asked: "In your opinion, when foreign companies build new factories in (survey country), does this have a very good, somewhat good, somewhat bad, or a very bad impact on our country?" and "In your opinion, when foreign companies buy (survey nationality) companies, does this have a very good, somewhat good, somewhat bad, or a very bad impact on our country?"

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- 46 See, for example, the emphasis on the pacing of policies opening up markets in Jagdish Bhagwati, *In Defense of Globalization*, Oxford University Press, 2004.



## NOTES SECTION IV

### COUNTRY CASE STUDIES

- 1 Ranks are based on the countries covered by each index that are also covered in the DHL Global Connectedness Index. These rankings may not match the index's own published rankings.
- 2 Based on the 2019 values published in the 2020 *Global Peace Index*.
- 3 Most recent available results from the Pew Research Center's Global Attitudes Survey (2018 or 2014). The question posed was: "What do you think about the growing trade and business ties between [survey country] and other countries – do you think it is a very good thing, somewhat good, somewhat bad, or a very bad thing for our country?" The percentage shown is the percentage who answered "very good" or "somewhat good" in the most recent survey of each country.
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- 5 Prak, op. cit., p. 265.
- 6 The Netherlands ranks 67th on population out of the 169 countries included on the index, which puts it at the 40th percentile.
- 7 Data sources and calculation methods are described in Table 3 of the DHL Global Connectedness Index 2020 Country Book (p. 192).
- 8 This includes only countries that were covered by both the DHL Global Connectedness Index and the Global Peace Index. The official ranking for 2019 in the 2020 release of the index was 16th, as Bhutan does not appear in the DHL Global Connectedness 2020.
- 9 The Netherlands ranks lower on militarization (114th), but that part of the *Global Peace Index* is not a significant predictor of global connectedness. The *Global Peace Index 2020* report notes that the Netherlands is among the top 10 weapons exporters per capita. See Institute for Economics and Peace, "Global Peace Index 2020: Measuring Peace in a Complex World," June 2020, p. 32.
- 10 Using the modified index discussed in the previous section, the Netherlands also ranks 4th overall, behind Singapore, Switzerland, and Hong Kong SAR (China).
- 11 Average score across the Trade Facilitation Indicators.
- 12 The Netherlands has come under scrutiny for its role in structures via which multinational corporations reduce their tax liabilities. As multi-country reform efforts advance, domestic political trends in this area also appear to be shifting. See Diederik Baazil, "'Tax Haven' No More? Rutte Starts Leaning Left in Dutch Election," *Bloomberg*, March 16, 2021.
- 13 European Union. "The History of the European Union."
- 14 European Commission. "The euro: EU Countries and the euro."
- 15 Pew Global Attitudes Survey, Spring 2018. Ranking includes only countries covered on the DHL Global Connectedness Index.
- 16 European Parliament, "Socio-demographic trends in national public opinion – Edition 7," 2020. Note that among the 19 countries of the eurozone, respondents in the Netherlands were least likely to say that "Generally speaking, having the euro is a good thing for the EU," although at 68%, more than half still agreed with the statement. See European Commission, "Flash Eurobarometer 488: The euro area report," May 2021.
- 17 Pew Global Attitudes Survey, Spring 2018. Perceptions of immigrants and their perceived integration into society may influence this measure. Researchers at the University of Manchester show that public opinion on integration in the Netherlands is multidimensional, with natives valuing immigrants who are involved in the social and civic aspects of their communities. See Maria Sobolewska, Silvia Galandini and Laurence Lessard-Phillips, "The public view of immigrant integration: multidimensional and consensual. Evidence from survey experiments in the UK and the Netherlands," *Journal of Ethnic and Migration Studies* 43(1), 2018.
- 18 Percentage of respondents who agree with the statement "Globalization is an opportunity for economic growth."
- 19 Unfortunately, there are no data for the United Arab Emirates or Sierra Leone on this question.
- 20 Steve Dobransky, "The United Arab Emirates and the Black Pearl model of economic development," *International Journal on World Peace*, 2011.
- 21 Services Trade is sum of exports and imports; FDI Stock is sum of outward and inward.
- 22 Airports Council International, "ACI World releases preliminary world airport traffic and rankings for 2014 – DXB becomes busiest airport for international passenger traffic," Press Release, March 26, 2015; World Shipping Council; World Bank World Development Indicators.
- 23 This includes only countries that were covered by both the DHL Global Connectedness Index and the *Global Peace Index*. The official ranking for the United Arab Emirates on safety and security was 22nd (and its official overall rank was 47th).
- 24 A big part of the UAE's militarization ranking is that it spends more than \$2,000 per citizen on its military, second only to Saudi Arabia. Institute of Economics & Peace, "Global Peace Index 2020: Measuring Peace in a Complex World," June 2020, p. 48.
- 25 Using the modified index, it also ranks 25th.
- 26 Klaus Schwab, "The Global Competitiveness Report 2019," World Economic Forum, 2019, p. 20.
- 27 *Gulf News*, "Big benefits for UAE business set-up: Free zones offer multiple advantages to global investors," April 7, 2021.
- 28 The Dubai International Financial Centre (DIFC), "Legal framework" as described here: <https://www.difccourts.ae/about/difc-courts>
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- 34 Mark Townsend, "GCC: A Steep Road To Recovery," *Global Finance Magazine*, April 8, 2021.
- 35 Sintia Radu, "The World Still Believes in Globalization," *U.S. News & World Report*, June 27, 2019.
- 36 Gallup World Poll, 2020.

- 37 Sierra Leone was not included in the 2019 edition of the *Global Competitiveness Index*; rank shown is from the 2018 edition.
- 38 Among the countries with data available in the April 2021 IMF World Economic Outlook Database, only six had levels of GDP per Capita at current prices in US dollars below Sierra Leone's in 2019.
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- 40 WHO, "Statement on the end of the Ebola outbreak in Sierra Leone," November 7, 2015.
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- 42 Klaus Schwab, "The Global Competitiveness Report 2018," World Economic Forum, 2018.
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- 45 Economic Community of West African States (ECOWAS), "History," Accessed June 8, 2021.
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- 47 WTO, "Member Information: Mexico and the WTO," 2021.
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- 51 Authors' calculations using data from DESTA and the World Bank's World Development Indicators.
- 52 U.S. Department of State, "2020 Investment Climate Statements: Mexico," 2020.
- 53 NAFTA has been blamed for a myriad of societal ills, from increased pollution to obesity and malnutrition. See Kevin Gallagher, *Free Trade and the Environment: Mexico, NAFTA, and Beyond*, Stanford: Stanford Law and Politics, 2004 and Sarah E. Clark et al, "Exporting obesity: US farm and trade policy and the transformation of the Mexican consumer food environment," *International Journal of Occupational and Environmental Health* 18:1, 2012.
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- 55 Alexia Bautista Aguirre, "Was globalization good for Mexico?" *TradeTankMx*, November 17, 2018.
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- 60 Using the modified index, it ranks 75th overall.
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- 62 Excluding market size, where it ranked 26th.
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- 64 ASEAN, "Regional Comprehensive Economic Partnership (RCEP) Agreement to Enter into Force on 1 January 2022," November 3, 2021.
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## NOTES SECTION V

### OUTLOOK

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- 6 For additional historical background, see Chapter 1 of Pankaj Ghemawat, *World 3.0: Global Prosperity and How to Achieve It*, Harvard Business Review Press, 2011.
- 7 Think, for example, of the perspective of investors evaluating long-term investments that depend on open markets.

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## **Imprint**

Publisher:

Deutsche Post DHL Group, Headquarters

Responsible:

Monika Schaller,

Head of Group Communications,

Sustainability & Brand

53250 Bonn, Germany

Project Leadership Deutsche Post DHL Group:

Anita Gupta, Irene Casanova, Johannes Oppolzer

Editorial Design:

Dirk Hrdina, Antje Schäbethal

The views expressed in this study are the views of the authors and do not necessarily reflect the views or policies of Deutsche Post DHL Group.

**[dhl.com/gci](https://www.dhl.com/gci)**

valid: November 2021

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**On the tenth anniversary of the DHL Global Connectedness Index, this special report highlights lessons in a variety of areas:**

- The power of a connected world to expand prosperity
- How to make globalization work better
- Five key policy drivers of global connectedness
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- Future outlook for globalization

### **Five Key Policy Factors for Global Connectedness**

1. *Peace and security* are fundamental building blocks for global connectedness.
2. An attractive *domestic business environment* may boost a country's global connectedness even more than traditional pro-globalization policies.
3. Policies directly increasing *openness to international flows* can also be very effective, and they can be tailored to target specific types of trade, capital, information and people flows.
4. *Regional integration* powerfully supports global connectedness, since about half of all international flows take place inside major world regions.
5. Building *societal support* for global connectedness is crucial to sustaining the benefits of a more open world.

### **Five Country Case Studies**

