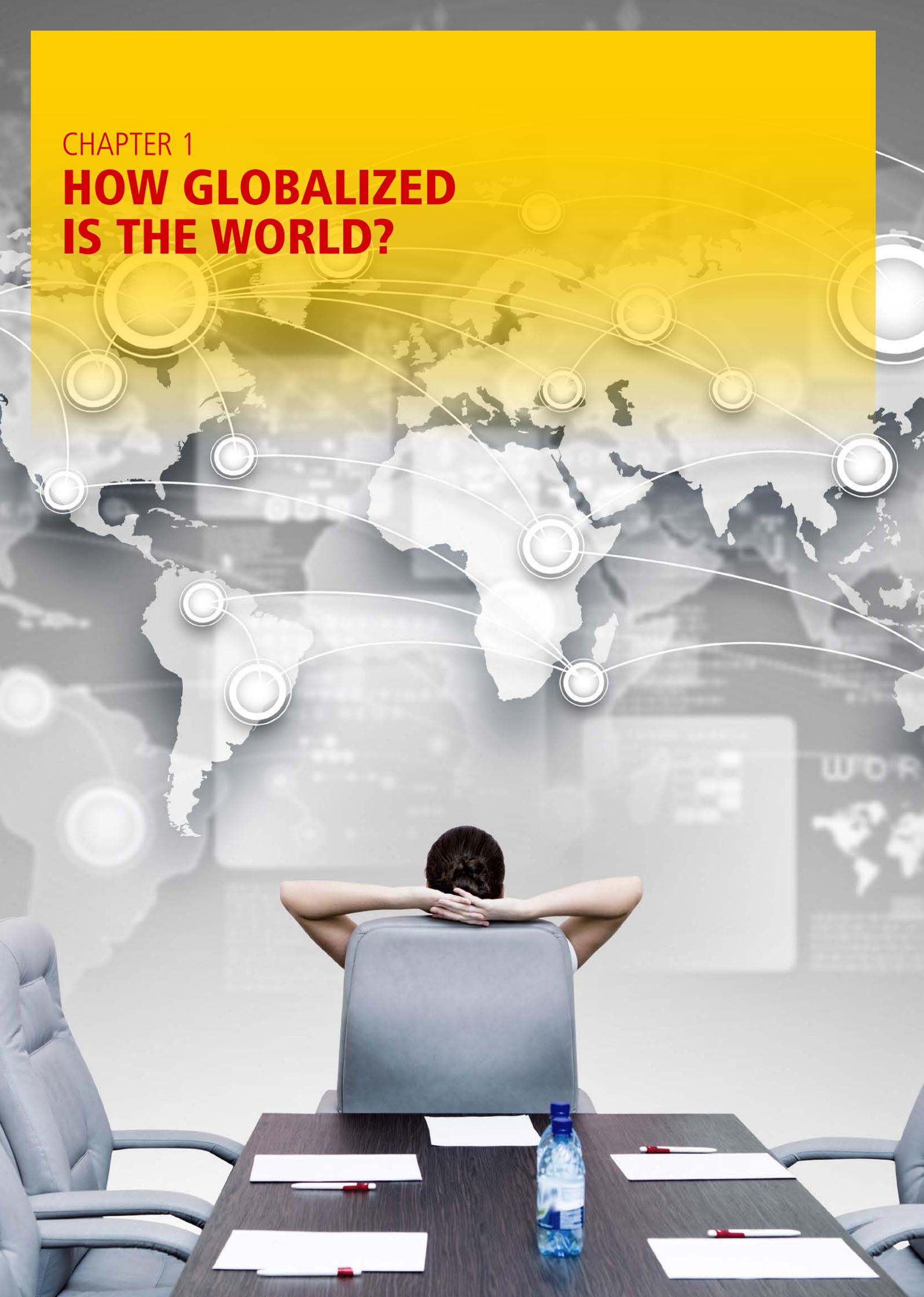


CHAPTER 1

# HOW GLOBALIZED IS THE WORLD?



The trajectory of globalization, since we released the last edition of this report in 2016, has been shaped by a tug of war between generally favorable macroeconomic conditions and policy threats. In 2017, sustained growth across much of the world proved the more powerful force, propelling the DHL Global Connectedness Index to a record level. Positive policy developments for globalization, while less dramatic than the threats, also helped to support international flows.

In 2018, however, major policy threats turned from rhetoric to reality. Disputes between the United States and its largest trade partners prompted sharp tariff increases and raised doubts about the future of the global trading system. Foreign acquisitions were subjected to heightened scrutiny, countries advanced data localization policies, and restrictions on immigration were tightened. All four “pillars” of the DHL Global Connectedness Index—trade, capital, information, and people—were touched by a wave of economic nationalism.<sup>1</sup>

Supporters of open markets, nonetheless, also tallied major victories in 2018. In March, 11 countries signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and 44 signed the African Continental Free Trade Agreement (AfCFTA). In July, the European Union and Japan finalized an Economic Partnership Agreement. In October, the United States, Canada, and Mexico agreed on a new trilateral trade deal. Meanwhile, China continued to advance its Belt and Road Initiative aimed at strengthening linkages between Asia, Europe and Africa.

The path forward for globalization remains uncertain and highly dependent on the choices of leaders around the world. In this context, sound international business and public policy decisions require timely and accurate measures of the state and trajectory of globalization, which are what this report aims to provide. This chapter

examines globalization at the global level and highlights differences between advanced and emerging economies. It sets the stage for Chapter 2, in which we cover the global connectedness of individual countries and regions.

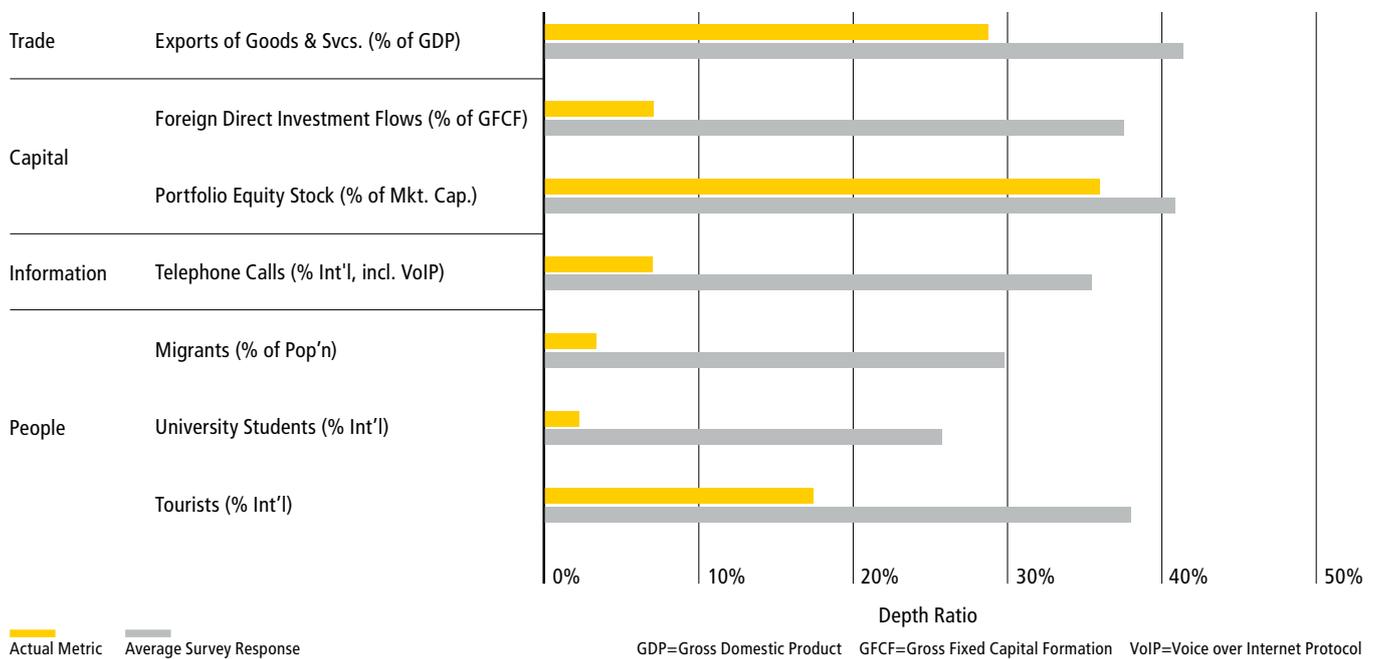
We begin this chapter with an overview of current levels of globalization—contrasted with perceived levels, followed by a summary of global trends since 2001. Then, we dig deeper into trends on each of the four pillars of the index. Finally, we conclude with a discussion of implications of this research for companies as well as countries.

### The State of Global Connectedness

An intense debate is underway in many countries about how deeply and broadly to connect to economies and societies beyond their own borders, prompting multinational corporations to reexamine foundational assumptions of their international strategies. While some leaders, such as L’Oréal Chairman and CEO Jean-Paul Agon and World Economic Forum President Børge Brende still expect globalization to continue,<sup>2</sup> many now view the international order that supports global flows as highly vulnerable. The week after US President Donald Trump’s inauguration, *The Economist* ran a cover story titled “The Retreat of the Global Company.”<sup>3</sup> Some even argue that globalization peaked with the 2008 global financial crisis and is already receding.<sup>4</sup>

Surprisingly, one commonality between globalization’s supporters and its critics is that both tend to believe the world is *already* far more globalized than it really is. Because it is only meaningful to think about a phenomenon increasing or decreasing relative to an accurate sense of its current level, we focus this section on measuring the present state of global connectedness. We return to analysis of how global connectedness is trending in the next section.

FIGURE 1.1 //  
**GLOBAL DEPTH MEASURES VERSUS MANAGERS' PERCEPTIONS**



International trade, capital, information, and people flows are much smaller than most managers presume them to be. Most types of flows that could take place either domestically or internationally are still domestic.

*Global Connectedness* is measured in this report based on the *depth* and *breadth* of countries' integration with the rest of the world as manifested by their participation in international flows of products and services (trade), capital, information, and people.<sup>5</sup> In this section, given the challenges imposed by the present environment on multinational firms, we complement macro-level globalization metrics drawn from the DHL Global Connectedness Index itself with additional measures focused on the activities of multinational corporations.

Consider, first, the depth of globalization. *Depth* measures how much of a given type of activity that could take place either within or across national borders is international rather than domestic. **Figure 1.1** reports global depth metrics drawn from across the four pillars of the DHL Global Connectedness Index.

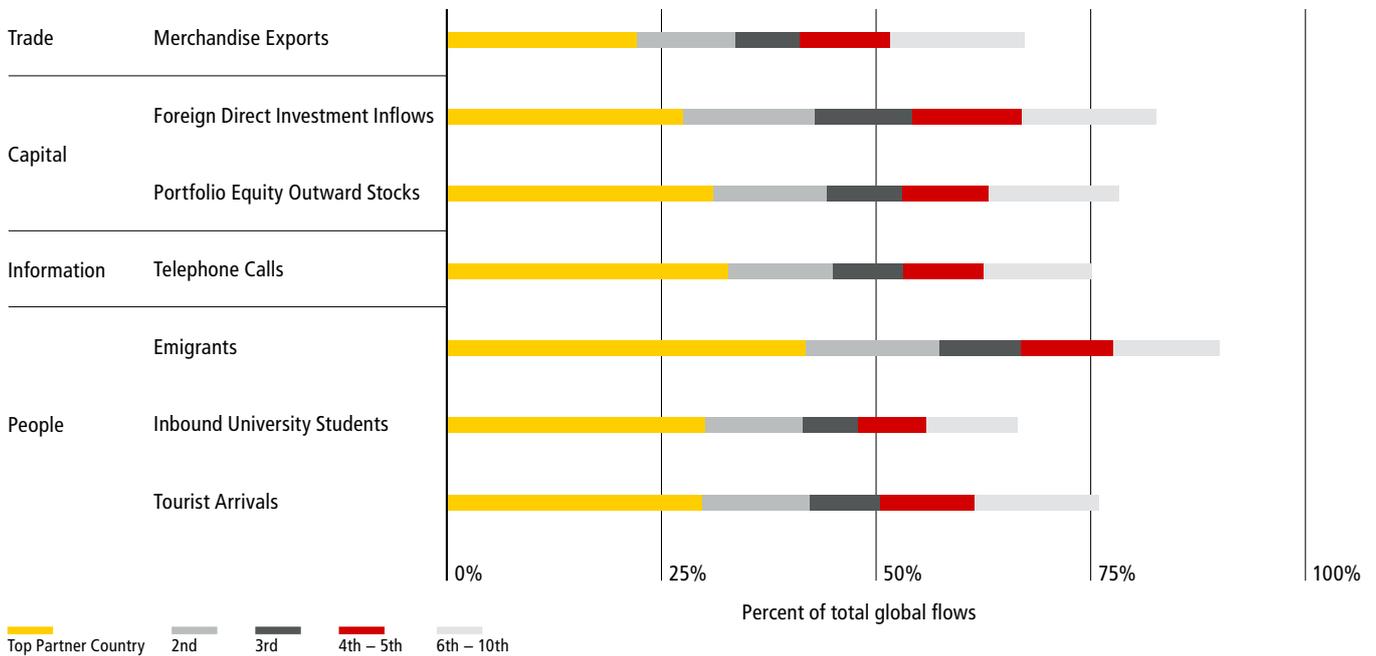
On all of the metrics reported in Figure 1.1, international activity is smaller than domestic activity. For example, gross exports of goods and services added up to 29% of GDP in 2017, flows of foreign direct investment equaled 7% of gross fixed capital formation, about 7% of telephone calls (including calls over the internet) were international, and just 3% of people lived outside the countries where they were born. We will elaborate upon these depth metrics

and others and discuss how they are trending later in this chapter, but for now, the key point is that most trade, capital, information, and people flows are domestic rather than international.

Figure 1.1 also highlights how managers tend to greatly overestimate measures of the depth of globalization. The actual levels are juxtaposed on the graph against perceived levels from a survey of 6,035 managers across three advanced economies (Germany, the UK, and the US) and three emerging economies (Brazil, China, and India) that we conducted in 2017.<sup>6</sup> On average, the managers guessed that the world was five times more deeply globalized than it really is! In fact, their perceptions were no more accurate than those of students surveyed across 138 countries<sup>7</sup> or members of the general public in the United States.<sup>8</sup> And CEOs and other senior executives had even *more* exaggerated perceptions than did junior and middle managers—perhaps because their own lives tend to be far more global than those of their employees and customers.

The managers we surveyed also had exaggerated perceptions of multinational business. The combined output of all multinational firms outside of their home countries added up to only 9% of global economic output in 2017, and just 2% of all employees around the world worked in the

**FIGURE 1.2 //**  
**PROPORTION OF INTERNATIONAL FLOWS WITH COUNTRIES' TOP PARTNER COUNTRIES**



Most countries maintain strong connections to only a small number of partner countries. Flows between countries and their single largest partners make up nearly one-quarter of all merchandise trade and more than one-quarter of all of the other flows analyzed.

international operations of multinational firms.<sup>9</sup> In part, those statistics reflect the fact that most companies are still domestic. Less than 0.1% of all firms have foreign operations and about 1% export.<sup>10</sup> Small firms are, on average, much less international than large ones, and most companies are small. But even among the *Fortune* Global 500, the world's largest firms by revenue, domestic sales still exceed international sales.<sup>11</sup>

Turning to the *breadth* dimension of global connectedness, it is convenient at the global level to analyze breadth using simple metrics such as the concentration of international flows across partner countries and the geographic distance they traverse. In the trend analysis that follows in the next section and in the country-level content in Chapter 2, we turn to a more sophisticated type of breadth measure: We compare the geographic distribution of a country's international flows with the global distribution of those flows in the opposite direction.<sup>12</sup> Measured thusly, the breadth dimension of the DHL Global Connectedness Index accounts for how potential flows vary across components of the index.<sup>13</sup>

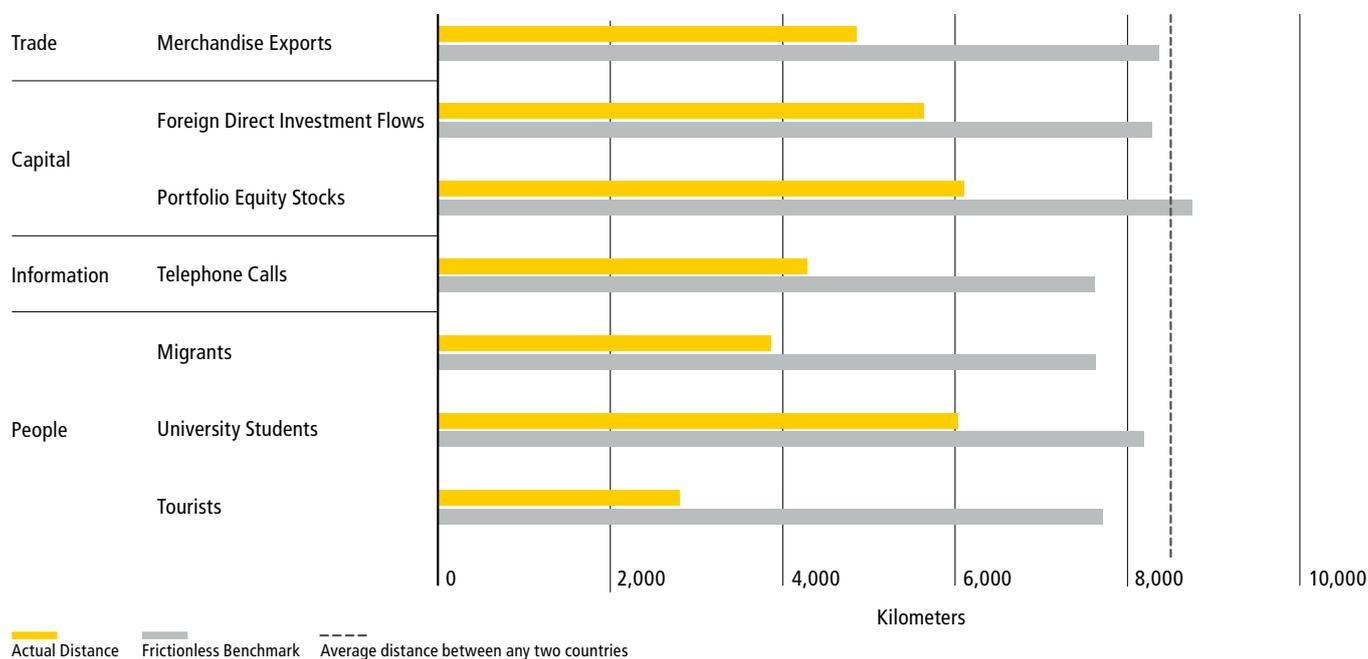
Most countries' international flows are so highly concentrated with key partner countries (usually neighbors) that it hardly makes sense to think of them as global at all. In fact,

flows between countries and their single largest partners (e.g. export destinations for trade) make up nearly one-quarter of all merchandise exports and more than one-quarter of all of the other flows on the breadth dimension of the DHL Global Connectedness Index (see **Figure 1.2**). Migration is the most concentrated on this basis, with 42% of all migrants having moved to where their birth country has its largest diaspora population.<sup>14</sup>

Expanding the same analysis beyond only countries and their single largest partners, more than half of all flows except merchandise exports and inbound students take place between countries and their top three partners, and 75% or more are between countries and their top 10 partners. Even in the case of merchandise trade, more than half takes place between countries and their top five export destinations. Most countries simply do not maintain strong connections to a large number of other countries.

Geographic distance, along with cultural, administrative/political, and economic differences go a long way toward explaining the distributions of countries' flows across locations. For example, if one pair of countries is half as distant as another otherwise similar pair of countries, greater physical proximity alone would be expected to increase the merchandise trade between the closer pair by more than

FIGURE 1.3 //  
**GLOBAL AVERAGE DISTANCE VERSUS BENCHMARKS WITHOUT DISTANCE EFFECTS**



International flows – even “weightless” flows such as portfolio equity investment and phone calls – diminish with geographic distance as well as other cross-country differences. On average, the flows covered on the breadth dimension of the DHL Global Connectedness Index traverse 5,005 km, about 60 percent as far as would be expected in a world where borders and distance had ceased to matter.

three times and to more than double the stock of foreign direct investment (FDI) between them. And to highlight a cultural commonality, sharing a common official language roughly doubles both trade and foreign direct investment.<sup>15</sup>

Thus, despite the widespread perception that advances in transportation and telecommunications technologies are rendering distance irrelevant, international activity continues to be more intense among proximate countries. The average distance between two countries around the globe is roughly 8,500 km, but the flows covered on the breadth dimension of the DHL Global Connectedness Index averaged a distance of only 5,005 km in 2017.<sup>16</sup> **Figure 1.3** compares the distance traversed by specific types of flows to how far those flows would be expected to travel if distance and cross-country differences had ceased to matter.<sup>17</sup> On average, this sample of flows went only about 60% as far as they would in a “flat” world.

The same pattern of limited breadth prevails at the firm level as well. Among the world’s 100 largest corporations ranked by foreign assets, the average firm earns roughly 60% of its revenue in just four countries (home plus three international markets).<sup>18</sup> And considering the *Fortune*

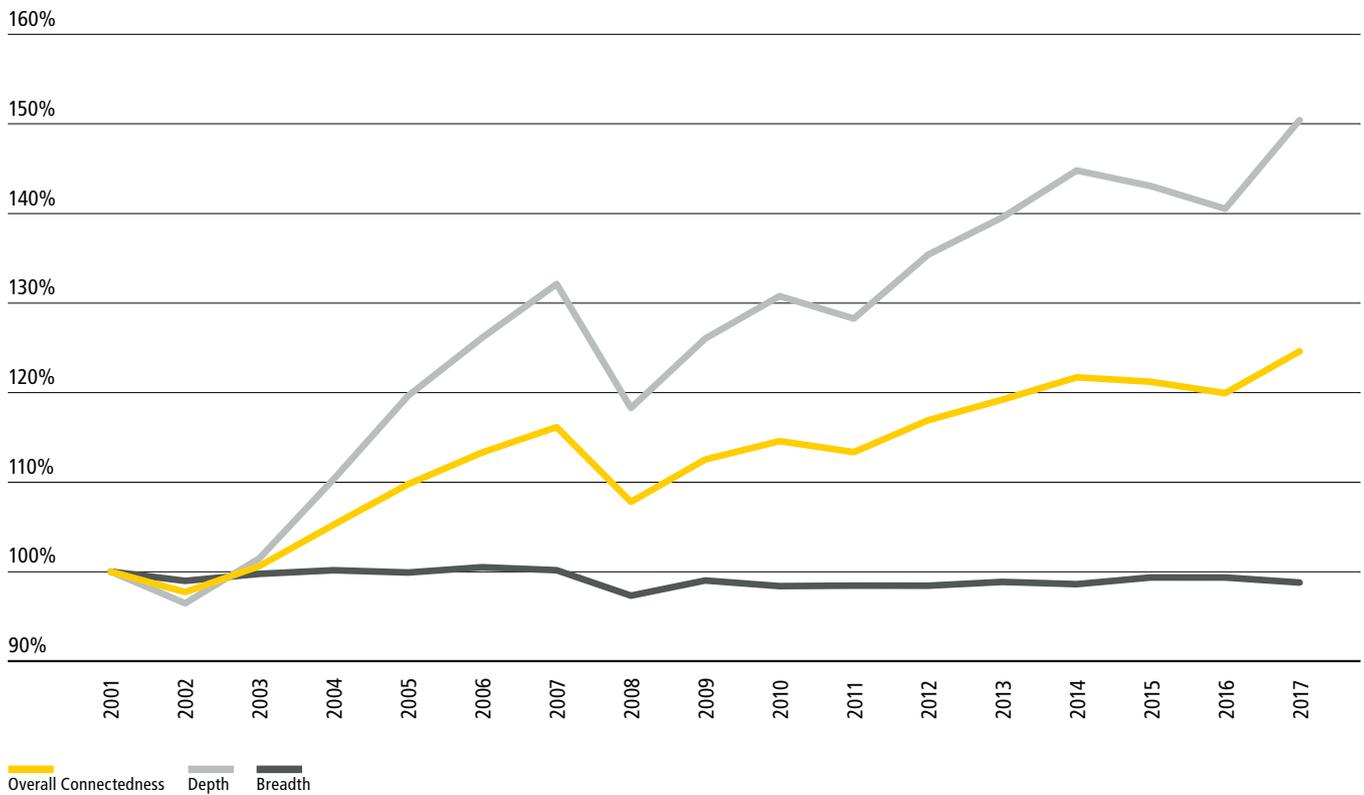
Global 500, just about 10% of this sample of corporate giants earn at least 20% of their revenues in each of the three “broad triad” regions of Europe, North America, and Asia-Pacific.<sup>19</sup> The managers who answered our six-country survey estimated that 44% of the *Fortune* Global 500 have such broad revenue distributions.

To summarize, the depth and breadth of trade, capital, information, and people flows—as well as the international business activity of multinational firms—fall far short of levels that are commonly presumed. National borders and the distances and differences between countries still have large dampening effects on international activity. We return to implications of these findings for business and public policy in the conclusion of this chapter. Next, we turn to how levels of global connectedness have been trending.

#### Global Connectedness Trends: 2001–2017

The world’s overall level of global connectedness—taking into account the depth and breadth of trade, capital, information, and people flows—reached a new record high in 2017. **Figure 1.4** tracks the evolution of the overall DHL Global Connectedness Index as well as its depth and breadth dimensions from 2001 through 2017. (For

FIGURE 1.4 //  
**GLOBAL CONNECTEDNESS, DEPTH, AND BREADTH, 2001–2017**



The DHL Global Connectedness Index rose to a new peak level in 2017. Steady increases before the 2007–08 global financial crisis have given way to a volatile expansion trend.

background on how these trends were calculated, refer to the box titled **Global vs. Country Level Calculation Methods** on page 16.)<sup>20</sup>

We observe distinct patterns before, during, and after the 2007–08 global financial crisis. Before the crisis, global connectedness was increasing steadily, driven by strong gains on the depth dimension of the index. International flows were intensifying, while their breadth remained stable. Then, the crisis itself brought sharp declines in both depth and breadth. Post-crisis, depth resumed its rising trend but became much more volatile and breadth stabilized slightly below its pre-crisis level.

The post-crisis resumption of an increasing trend on the depth dimension of the index is a positive development since higher depth has been associated with faster economic growth.<sup>21</sup> It is important in this context, however, to recall that the depth of global connectedness—as discussed in the previous section—is still much lower than many presume it to be. Despite recent gains, the world could still become

much more connected if public concerns about globalization are addressed.

Recent stability on the breadth dimension of the index fits with the pattern that breadth is usually less volatile than depth. While flow volumes can expand or contract sharply due to macroeconomic or other shifts, the patterns of which countries connect particularly intensively with each other tend to change more slowly due, in part, to the persistent effects of countries' geographic locations.

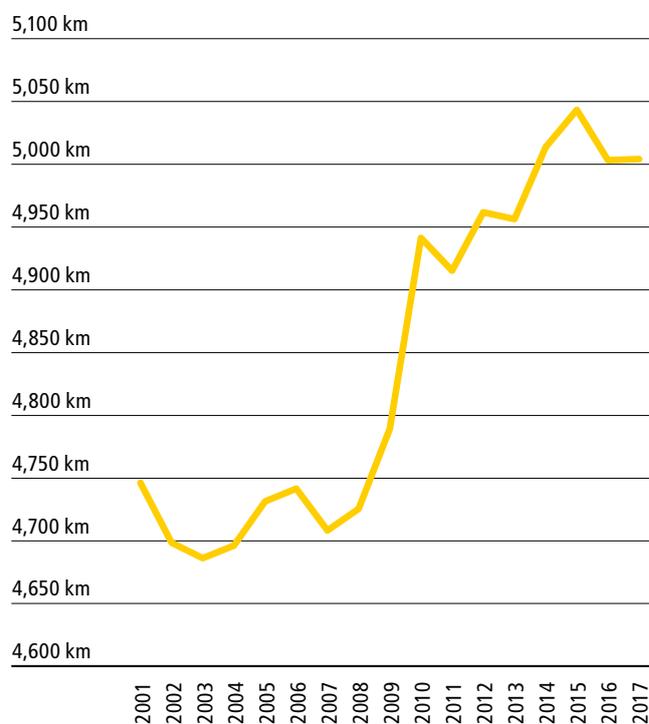
### Global vs. Country Level Calculation Methods

In order to provide the clearest and timeliest depiction of changes in the worldwide level of globalization, the trends presented in this section reflect four methodological differences relative to the country-level analysis that follows in Chapter 2 and in the country profiles in Part II of this report:

- The global trends analysis measures changes relative to a 2001 baseline *without* applying the percentiles normalization used at the country level.<sup>22</sup> Percentiles normalization is important at the country-level to improve handling of outliers, but this is not necessary at the global level.
- We do not smooth capital flows over three years in the calculation of global trends in order to make these trends more sensitive to year-to-year fluctuations in investment patterns. Smoothing at the country level, on the other hand, helps to reduce short-lived swings in countries' ranks due to volatile capital flows.
- We use our preferred internet and phone calls depth metrics here even though the same metrics are not available at the country level. Specifically, at the global level, we estimate the international proportion of total telephone call minutes (including calls over the internet) instead of using international telephone call minutes per capita, as we do at the country level. And we generate a rough global estimate of the international proportion of total internet traffic instead of relying on international internet bandwidth per internet user.
- We do not limit repetition of values to fill data gaps to ensure the global trends are not affected by changes in countries' data availability over time. At the country level, however, we impose a five-year limit on the repetition of values to fill data gaps.

For discussion of how our method of calculating global trends contrasts with the method employed by the KOF Globalization Index and how these differences affect the results, refer to page 75.

**FIGURE 1.5 // AVERAGE DISTANCE TRaversED BY FLOWS COVERED ON THE BREADTH DIMENSION OF THE DHL GLOBAL CONNECTEDNESS INDEX, 2001 – 2017**

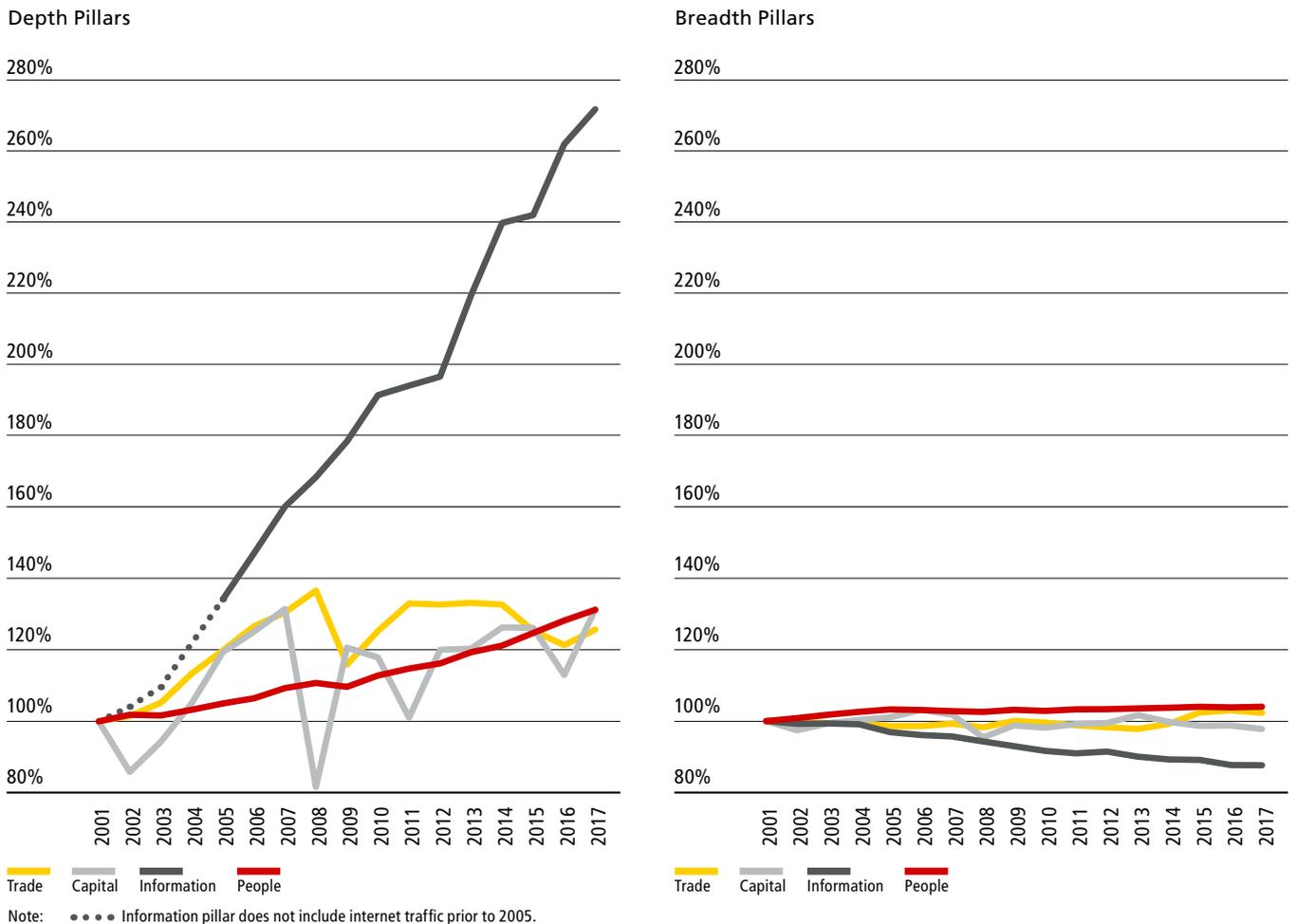


After 2007, the average distance traversed by international flows has tended to increase, peaking at 5,045 km in 2015. It is too soon to say whether the declines recorded since 2015 mark the beginning of a reversal of this trend.

Additional perspective on breadth trends is provided in **Figure 1.5**, which tracks the average distance traversed by the flows covered on the breadth dimension of the index. It highlights, again, distinct pre-crisis and post-crisis trends. Between 2001 and 2007, average distance hovered around 4,700 km, without a clear rising or falling trend. During and after the crisis, a rising trend emerged, with the average distance traversed by these flows increasing to 5,045 km in 2015. Emerging economies (which tend to interact over greater distances) boosted their shares of global flows, and advanced economies sought to tap into growth farther away from home. Given the limitations of the most recent data, we cannot yet determine whether the decline back to 5,005 km in 2017 represents normal volatility or a reversal of this trend.

At the pillar level, as shown in **Figure 1.6**, the aspect of global connectedness with the strongest growth over the period studied has been information flows depth. People flows depth exhibits a more modest rising trend. Trade and capital flows depth have been much more volatile, but both

**FIGURE 1.6 // PILLAR LEVEL GLOBAL CONNECTEDNESS TRENDS, 2001–2017**



Depth increased across all four pillars of the DHL Global Connectedness Index in 2017. Increases in the depth of information flows have been the largest driver of the expansion of global connectedness since 2001.

increased in 2017, reversing declines in 2016. Thus, all four depth pillars increased significantly during 2017, a pattern last observed in 2007.

Turning to breadth, we can see from the same figure that information pillar breadth has exhibited a notable declining trend whereas people pillar breadth has followed a more modest rising trend.<sup>23</sup> The trade and capital pillar breadth trends are more volatile, but neither has exceeded the declines on the information pillar nor the increases on the people pillar. The crisis-era dip in global breadth was driven by the capital pillar, while the uptick from 2014 to 2015 came primarily from the trade pillar.

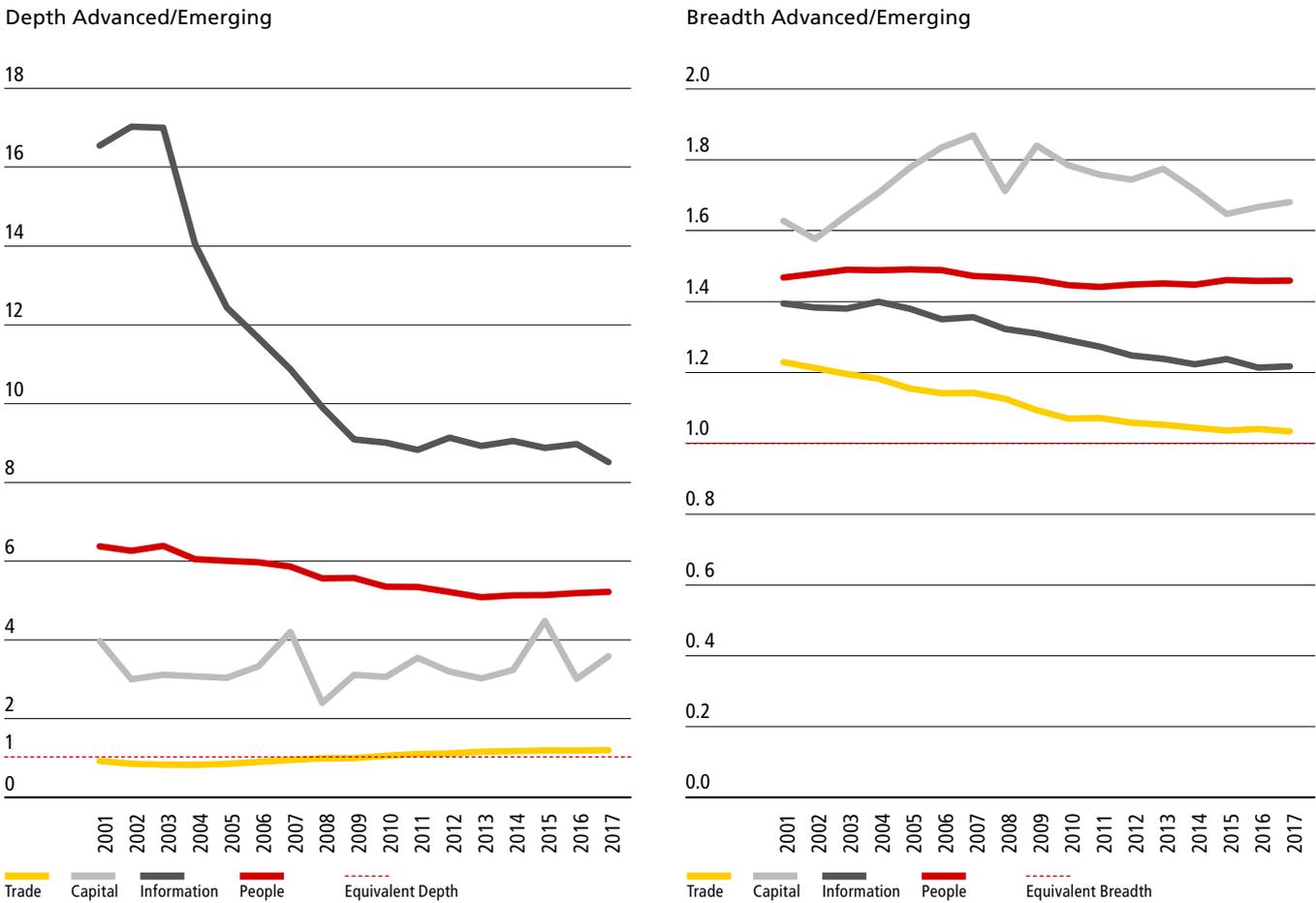
**Advanced Versus Emerging Economies**

Leaders from large emerging economies have become increasingly vocal supporters of globalization, prompting a sense in some quarters that the “engine of globalization has

shifted from developed to emerging economies.”<sup>24</sup> There is indeed a stark contrast between, for example, US President Donald Trump’s 2018 proclamation to the United Nations General Assembly that “We reject the ideology of globalism” and the robust defenses of globalization at Davos in 2017 and 2018 by Chinese President Xi Jinping and Indian Prime Minister Narendra Modi.<sup>25</sup>

Based on actual international flows, however, advanced economies are still much more globalized than emerging economies. **Figure 1.7** tracks ratios of advanced over emerging economies’ connectedness scores. Ratios (above one) on these charts quantify how much more connected advanced economies are than emerging economies. On trade depth, advanced and emerging economies are roughly at parity, but advanced economies are about three times as deeply integrated into international capital flows, five times on people flows, and nine times with respect to information

**FIGURE 1.7 //**  
**PILLAR LEVEL TRENDS, ADVANCED VS. EMERGING ECONOMIES, 2001–2017**



Emerging economies roughly match advanced economies on the depth and breadth of their trade flows, but lag well behind on capital, people, and information flows.

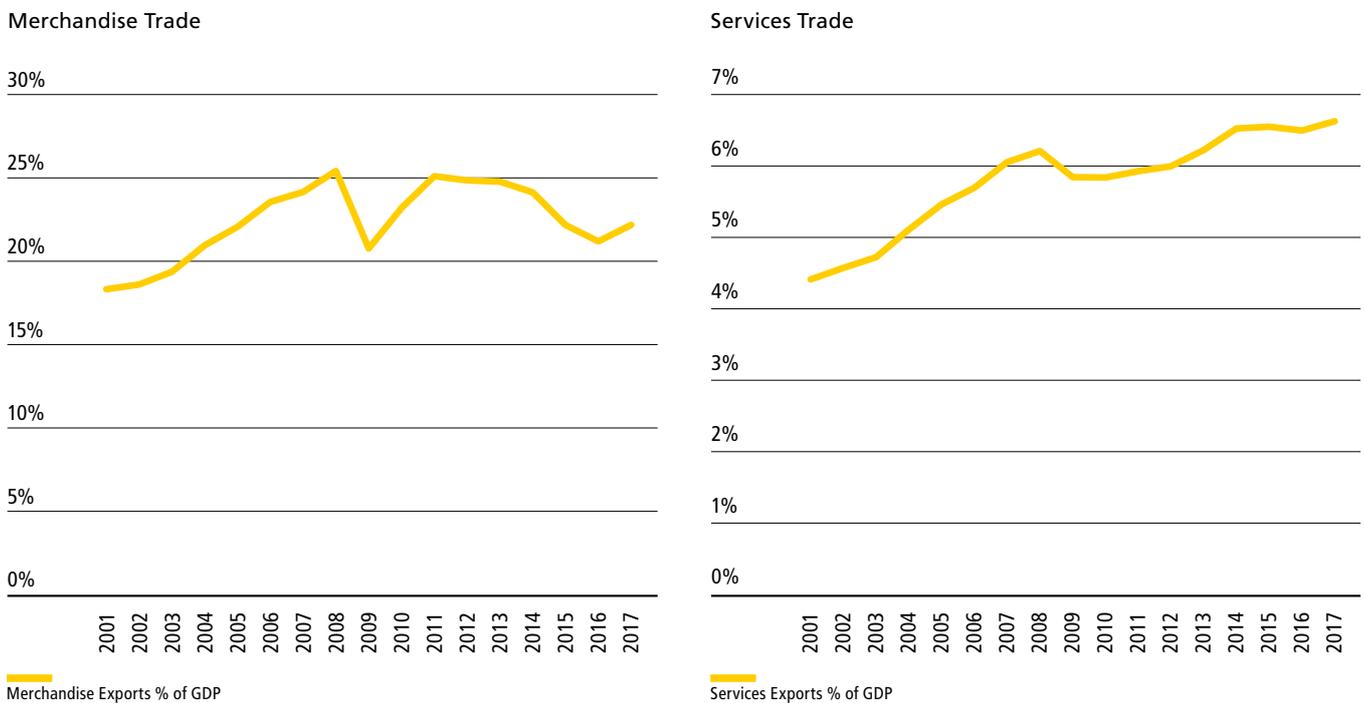
flows. On breadth, the differences are smaller, but again emerging economies are closest to parity with respect to trade. They lag progressively further behind on information, people, and capital breadth.

Another important message from Figure 1.7 is that emerging economies’ progress toward closing the gap with advanced economies on globalization depth stalled around the 2008 global financial crisis. A pre-crisis catch-up trend on information flows depth slowed sharply in 2009 and a smaller trend on people flows depth ended in 2013. Meanwhile, emerging economies have been losing ground relative to advanced economies on trade depth since 2004. This resulted, in part, from strides China has made in reducing its reliance on export markets. Merchandise exports as a proportion of China’s GDP have fallen from 35% in 2006 to 19% in 2017.

Emerging economies’ lower levels of connectedness have actually combined with their rising shares of global economic activity to significantly *dampen* the growth of the world’s overall level of connectedness. As emerging economies grow faster than advanced economies, their lower levels of connectedness pull down the world’s overall (weighted) average level of connectedness more than they did when they were smaller. If, hypothetically, countries’ levels of globalization had changed as they did since 2008 but their shares of the world economy remained fixed at their 2008 levels, the world’s overall level of connectedness would have grown roughly 85% more than it actually did by 2017.

Emerging economies could, however, still power a new wave of globalization moving forward. If their connectedness levels start (again) to converge toward those of advanced economies as they grow, this would provide a powerful boost to the world’s level of global connectedness.

**FIGURE 1.8 //**  
**TRADE PILLAR DEPTH RATIOS, 2001–2017**



Depth on the trade pillar of the DHL Global Connectedness index snapped a three-year declining trend in 2017, powered by increases in the intensity of trade in both goods and services.

Whether such a realignment actually takes place will depend on public policy choices and macroeconomic trends in both sets of economies.

The next four sections of this chapter provide a more detailed examination of levels of connectedness within each of the pillars, including discussion of recent developments and future prospects. They focus on depth rather than breadth because depth is the more volatile dimension of the index and it is associated with faster economic growth.

### The Trade Pillar

Depth on the trade pillar of the DHL Global Connectedness Index snapped a three-year declining trend in 2017, powered by increases in the intensity of trade in both goods and services. The proportion of world output traded across national borders, however, remains below its pre-crisis peak as well as the levels recorded between 2011 and 2014. And trade disputes underway as of this writing and associated policy uncertainty appear to have already slowed the growth of both trade and economic output in 2018.<sup>26</sup>

The value of merchandise trade expanded 10.7% in US dollar terms in 2017, reflecting growth in the quantity of goods traded as well as higher commodity prices. Stripping

out pricing effects, merchandise trade grew 4.7% in volume terms, the fastest growth reported on that metric since 2011.<sup>27</sup> Strong macroeconomic growth spurred demand for imports, while major threats to raise tariffs remained largely contained to the realm of rhetoric rather than actual policy. Merchandise exports closed out 2017 at 22% of world GDP. Services trade depth also resumed a long-term rising trend in 2017, after registering a small decline in 2016. Services exports equaled 7% of world GDP in 2017.

While the total value of global exports in 2017, incorporating both merchandise and services, added up to 29% of world output, this traditional metric overstates the proportion of output that is traded because the same content can cross borders more than once in multi-country production chains. In 2017, roughly 30% of the value of gross exports of goods and services was foreign value added (value from a country other than where the exports were registered). This implies that exports really account for closer to 20% of global value added rather than nearly 30%.<sup>28</sup> Adjusting for multi-country supply chain effects also brings into clearer focus the deeper trade in goods as compared to services. Exports account for about 40% of value added in goods-producing sectors (agriculture and industry) but only 15% in the service sector.<sup>29</sup>

While 2017 was a strong year for trade growth, some of the trade-restricting policies that were threatened in 2016 and 2017 have subsequently been put into place.<sup>30</sup> Between October 2017 and May 2018, the World Trade Organization (WTO) reported that G20 economies introduced trade-restricting policy measures at twice as fast a pace as they did between May and October of 2017.<sup>31</sup> And between May 2018 and October 2018, the value of imports covered by new G20 trade-restricting measures increased sixfold. Most of the latter increase was due to US tariffs imposed on a variety of products from China and retaliatory tariffs imposed by China on US products.<sup>32</sup> The Global Trade Alert database also indicates that the number of policy interventions negatively affecting trade increased in 2018.<sup>33</sup>

Trade forecasts have been revised downward in light of this more adverse policy environment as well as weakening macroeconomic conditions. Between April and October of 2018, the International Monetary Fund (IMF) cut its world trade volume forecast (including both goods and services) twice. For 2018, forecast growth was revised from 5.1% in April to 4.8% in July and 4.2% in October. Similarly, the 2019 forecast started at 4.7% in April, moving to 4.5% in July and 4.0% in October.<sup>34</sup> Other forecasters have also substantially downgraded their expectations in light of the tensions.<sup>35</sup> Nevertheless, these forecasts consistently project faster trade volume growth than output growth, implying that trade depth might continue to increase, albeit at a slower rate.

Such forecasts are limited, however, in that they reflect only the trade restrictions that have already been implemented, or in some cases those considered likely to be imposed. If all threatened measures are implemented, trade growth could be much weaker. Considering a worse trade conflict scenario, the World Bank's modeling indicates that if all countries were to raise their tariffs to their legally bound rates under WTO rules, global output would fall 0.8% and world trade would fall 9%—a drop in world trade similar to that during the 2008-09 global financial crisis.<sup>36</sup> Similarly, an IMF model suggests that with all threatened tariffs taking place, as well as reduced firm confidence and financial market reactions, global output could fall about 0.8% by 2020.<sup>37</sup>

Further evidence of a weakening environment for global trade comes from the WTO's World Trade Outlook Indicator, which aims to identify turning points in the trajectory of trade growth. The indicator declined in each quarter of 2018 and fell below 100 (the breakpoint between positive and negative momentum) in the fourth quarter.<sup>38</sup> Similarly,

the DHL Global Trade Barometer stood at a two-year low in November 2018, indicating positive growth but at a slower pace.<sup>39</sup>

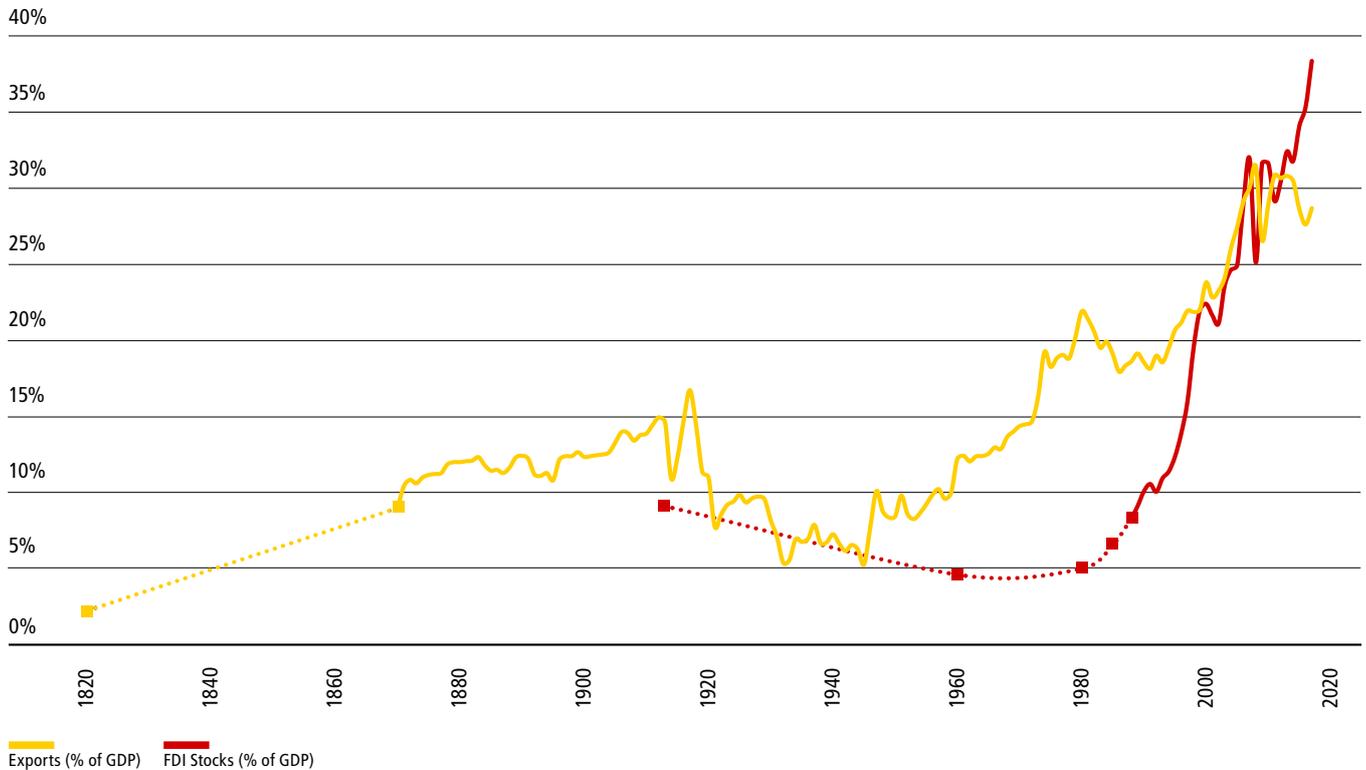
It is important, however, not to overlook positive policy developments for world trade that have taken place over the past year. While many doubted the future of the Trans-Pacific Partnership (TPP) after the US withdrew on President Trump's third day in office, the remaining countries forged ahead and signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in March 2018. In the same month, 44 countries signed an agreement to create an African Continental Free Trade Agreement (AfCFTA).<sup>40</sup> The European Union is pressing forward with several trade agreements and, most significantly, signed an Economic Partnership Agreement with Japan in July 2018. Meanwhile, the Regional Comprehensive Economic Partnership (RCEP) continues to advance, holding the potential to link the 10 member countries of the Association of Southeast Asian Nations (ASEAN) together with China, Japan, South Korea, India, Australia, and New Zealand. If the talks succeed, RCEP would become the world's largest trade pact.

There are also important initiatives underway to boost the efficiency of international trade. The WTO's Trade Facilitation Agreement, which came into force in February 2017, aims to simplify, modernize, and harmonize countries' import and export procedures. As of late 2018, 60.5% of all commitments under the agreement had been implemented.<sup>41</sup> Full implementation could cut global trade costs by 14% and increase international trade by \$1 trillion per year.<sup>42</sup> Additionally, China's Belt and Road Initiative could boost trade as well as capital, information, and people flows between Asia, Europe, and Africa.<sup>43</sup>

Longer term, more complex changes in trade patterns are likely to affect trade depth and breadth. Of particular interest are data pointing to a modest reversal in the growth of international value chains. One way to measure value chains is to consider foreign value added as a proportion of exports (i.e. imported inputs incorporated into exports). This proportion rose from 24% in 1990 up to 31% in 2010. By 2017, it had slipped back to 30%.<sup>44</sup>

Technological and economic trends will also affect the future of trade, although the ultimate balance of positive and negative influences cannot yet be discerned. Starting on the positive side of the ledger for trade growth, blockchain-based technologies could reduce trade costs by accelerating the digitization of trade documentation

FIGURE 1.9 //  
**LONG-RUN EXPORTS AND FDI STOCKS DEPTH TRENDS, 1820–2017<sup>47</sup>**



While trade depth in 2017 was below its 2008 peak, this pullback is relatively small compared to the dramatic growth of trade intensity since the mid-20th century. The deepening of FDI stocks is a more recent phenomenon and reached a record level in 2017.

and enabling smart contracts, while also improving supply chain traceability and access to trade finance. Artificial intelligence could also be applied to expanding opportunities for trade and reducing trade costs. And the growth of cross-border e-commerce represents another positive for trade. Forrester Research forecasts that the international proportion of online shopping revenues will reach 20% by 2022, up from about 15% in 2016.<sup>45</sup>

On the other hand, trade growth might be slowed by developments that would reduce the attraction of trade motivated by labor cost arbitrage. Automation and 3-D printing could potentially reduce the attraction of offshoring to access low labor costs. And macroeconomic trends imply some narrowing of the scope for such trade as well. One very rough measure of the potential for labor cost arbitrage across countries is the GDP-weighted average of the ratios of countries' per capita incomes (higher over lower). As large emerging economies (especially China) have become richer, this ratio has already fallen from 8 in 2001 to 5.6 in 2017, and projections from Oxford Economics suggest it will continue falling (more slowly) to about

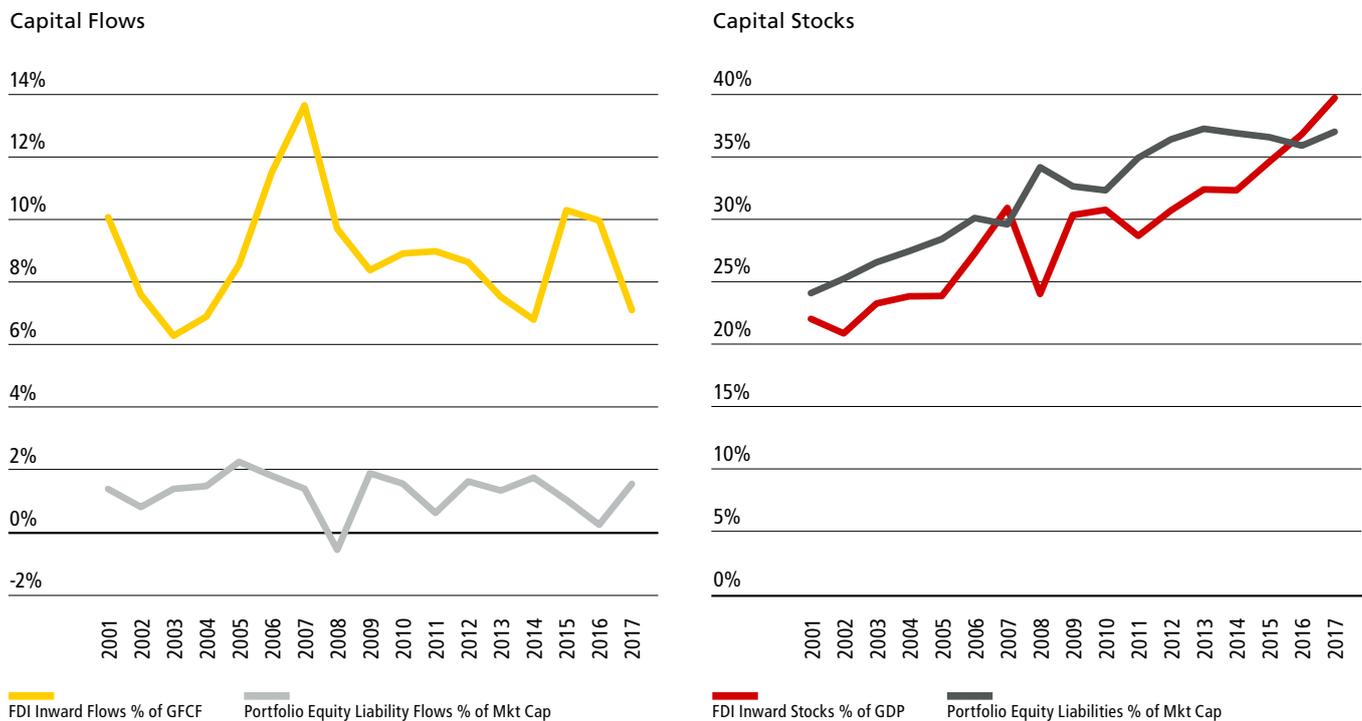
4 by 2050. While wage arbitrage will continue to motivate trade, exports of labor-intensive products from emerging economies may become a smaller driver of trade growth than in the recent past.

Finally, in the context of such ambiguity about future trade growth, it is useful to reflect briefly on how much trade has already grown and how much headroom remains available. Taking into account both goods and services, the simple ratio of gross exports to GDP has soared from 12% in 1960 to its present level of 29% and is only down marginally from its 2008 peak of 32% (See **Figure 1.9**). And theoretical benchmarking points to a great deal of room for additional growth.<sup>46</sup>

#### The Capital Pillar

International capital flows tend to be volatile, and the capital pillar was the largest contributor to both the decline in overall global connectedness in 2016 and its expansion in 2017. The capital pillar measures stocks and flows of foreign direct investment (FDI) and portfolio equity investment. The distinction between the two is that FDI gives the

FIGURE 1.10 //  
CAPITAL PILLAR DEPTH RATIOS, 2001–2017



The most dramatic development on the capital pillar was a sharp drop in portfolio equity flows from 2014 to 2016, followed by a strong rebound in 2017. The depth of FDI flows declined, but the depth of FDI stocks rose to a record level.

investor (typically a multinational corporation) a voice in the management of a foreign enterprise, whereas portfolio equity investment does not. For statistical purposes, if the investor owns at least 10% of the foreign company, it is normally classified as FDI; below 10% it is deemed portfolio investment.<sup>48</sup>

Sharp swings in portfolio equity flows have made them the primary driver of movements in the capital pillar in recent years. Worldwide portfolio equity inflows collapsed from \$1.1 trillion in 2014 to a post-crisis low of \$162 billion in 2016, before rebounding to a new record high of \$1.2 trillion in 2017.<sup>49</sup> It is important, however, not to read too much into such year-to-year fluctuations. Despite the gyrations in portfolio equity flows depth shown in **Figure 1.10**, the same figure also depicts relative stability after a strong rising trend in the depth of portfolio equity stocks.

The increases in portfolio equity stocks depth since the beginning of the 21<sup>st</sup> century have been striking, even as borders and distance continue to constrain stock market investment. Worldwide portfolio equity liabilities increased from 24% of world market capitalization in 2001 to 37% in 2017. This fits with research indicating that equity investors, particularly in advanced economies, have become less

“home biased” over time, opting for greater international diversification.<sup>50</sup>

Portfolio equity depth, nonetheless, remains well below the roughly 80% that would be expected if investors allocated their equity portfolios across countries in proportion to the value of countries’ stock markets. Most investors could still reduce risk without sacrificing expected returns by increasing international diversification. The benefits of international diversification, however, do vary over time, rising when correlations of stock market returns across countries decline. According to one study, the five-year moving average of correlations across national stock markets in 20 countries rose from about 20% in the late 1990s to roughly 70% in 2011 before declining below 55% by 2017.<sup>51</sup>

Proceeding from portfolio equity to FDI, there was a sharp decline in FDI inflows in 2017 from 10% of gross fixed capital formation down to 7%. A more detailed examination of FDI trends, however, suggests the end of a temporary spike rather than the beginning of a new downward trend. FDI flows were elevated in 2015 and 2016 due to a wave of (mainly US) corporate inversions. In such deals, a corporation relocates its legal domicile to a country with lower taxes, often upon acquiring or merging with a foreign



firm. This wave of corporate inversions ended when the US treasury announced a third crackdown on the practice in April 2016, and FDI inflows into the US fell 40% from 2016 to 2017.

The 2017 decline in FDI flows also reflected the absence of M&A megadeals analogous to those that took place in 2016. One transaction alone, the \$100 billion purchase of UK-based SAB Miller by Belgium-based AB Inbev concluded in October 2016, equaled about 5% of that year's worldwide FDI flows.

More concerning than the overall decline in FDI flows is that the key component of FDI flows that is *not* affected by corporate inversions and other M&A transactions—greenfield FDI involving firms setting up or expanding their operations abroad—also declined (this component of FDI fell 14% in 2017, as compared to 22% for international M&A). Declining growth in the foreign sales, assets, and employment of multinational enterprises corroborate the sense of a slowdown in the expansion of multinational activity. As potential causes for these patterns, the UN Conference on Trade and Development (UNCTAD) points to “digital” multinationals with lighter foreign asset footprints and declining rates of return on FDI (driven by

declines in commodity prices and narrowing cost arbitrage spreads).

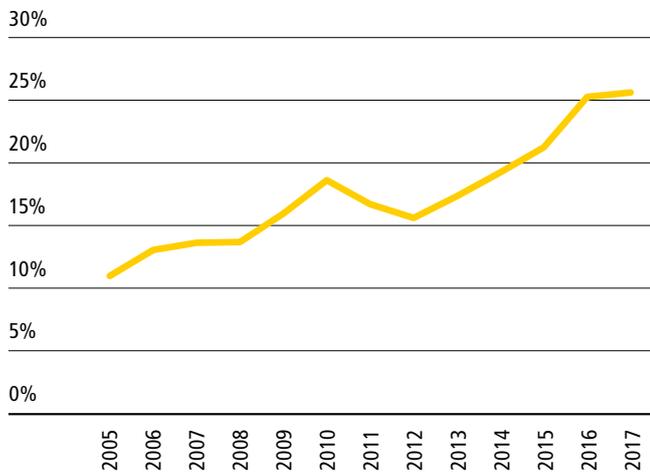
In June 2018, UNCTAD projected a 5% increase in FDI flows for 2018, but the latest data as of October 2018 show a decline of 41% during the first half of the year.<sup>52</sup> The largest driver of the decline, however, is a temporary one: repatriation of foreign earnings by US-based multinationals prompted by US tax reforms enacted at the end of 2017.<sup>53</sup> Such tax-driven flows are also expected to weigh on global FDI stocks, which grew to record level of 39% of GDP in 2017.

Public policy changes more generally—and uncertainty about future policies—also appear to be weighing on the growth of FDI flows. The majority of countries' changes to their investment policies continue to favor increasing FDI, but the share of pro-FDI policy changes has declined. Between January and October 2018, 70% of national investment policy changes liberalized or promoted FDI, the lowest proportion since 2010.<sup>54</sup>

Countries have tightened screening of foreign investments for potential national security risks. In August, the United States passed the Foreign Investment Risk Review

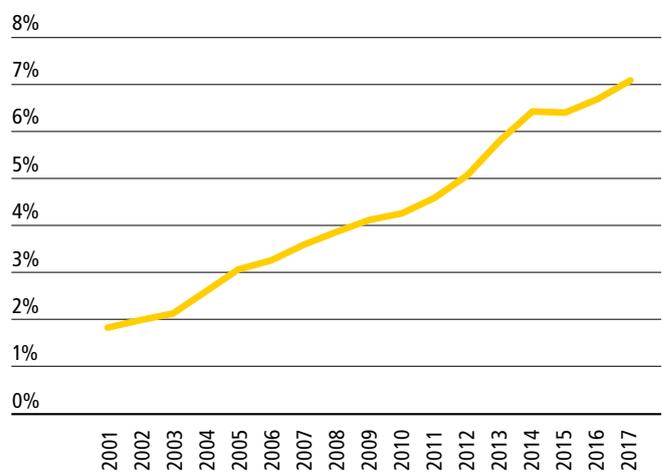
FIGURE 1.11 //  
**INFORMATION PILLAR DEPTH RATIOS, 2001–2017**

#### Internet Traffic



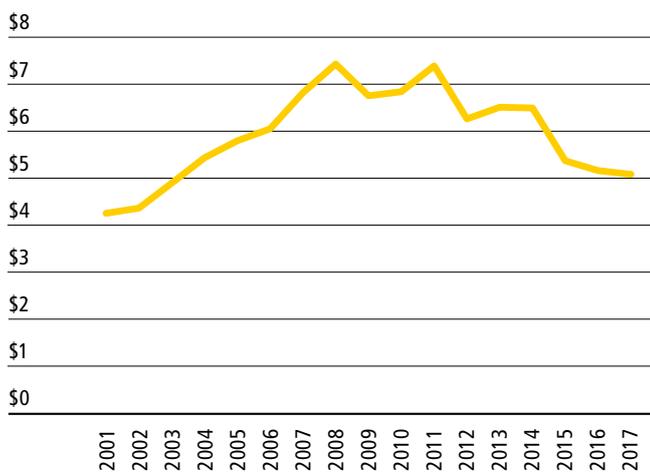
Internet Traffic % Intl

#### Telephone Calls



International Phone Calls % of Total

#### Printed Publications Trade



Printed Publications Exports per Capita

The rapid expansion of international internet bandwidth has powered large increases in the international proportion of internet traffic and telephone calls. The rise of digital alternatives is also, presumably, behind a declining trend in the intensity of trade in printed publications.

Modernization Act of 2018, strengthening its legal framework for screening inbound FDI. Meanwhile, European Union legislation on a coordinated investment screening framework proposed in 2017 continues to advance. And even before such legislative developments, heightened scrutiny of foreign investments on national security grounds appears to have already dampened FDI flows. Broadcom's \$117 billion bid for Qualcomm, blocked by the US in March 2018, would have been the largest technology sector acquisition to date.

Finally, the growth of capital flows—like trade—tends to be correlated with global macroeconomic growth. Slowing global growth makes macroeconomic conditions less favorable for both FDI and portfolio equity flows.

#### The Information Pillar

International information flows have expanded swiftly since 2001, powered by a 55-fold increase in the international internet bandwidth available per internet user. Domestic connectivity, however, has also multiplied over the same period, prompting us to focus our analysis of data flows over the internet on rough estimates of the proportion of internet traffic that crosses national borders rather than the international bandwidth per internet user metric we use in our country level analysis. As shown in **Figure 1.11**, the proportion of internet traffic crossing national borders has risen from roughly 11% in 2005 (the earliest year for which we can estimate this metric) to 26% in 2017.<sup>55</sup>



International internet traffic, thus, appears to have expanded more than twice as fast as domestic internet traffic over the period studied, but the larger story is that digitization is powering a tremendous expansion of data flows both domestically and internationally. The internet is still used primarily for domestic rather than international communications, a pattern that holds both for aggregate data flows as well as several more specific types of online activity. We have already noted that an estimated 15% of e-commerce was international in 2016. About 15% of friendships on Facebook cross national borders,<sup>56</sup> 20% of trending videos on YouTube ranked among the top 10 videos in more than one country,<sup>57</sup> and about 25% of Twitter followers are located in different countries from the people they follow.<sup>58</sup>

The expansion of international internet bandwidth has also supported a large increase in the depth of international telephone calls by dramatically reducing the cost of such calls. The international proportion of all call minutes (including calls over internet-based services) has increased from 2% in 2001 to roughly 7% in 2017.<sup>59</sup> A major contributor to this growth has been the rise of calls placed via internet calling applications, which typically provide free calls to other users of the same application and low-cost calls to standard telephone numbers. According to TeleGeography, more international calls are now placed via applications such as Skype, WeChat, and WhatsApp than over the networks of

all of the world's telecommunications carriers combined.<sup>60</sup> And strong growth in the use of such applications is expected to continue.<sup>61</sup>

While the international proportion of telephone call minutes has more than tripled since 2001, most people still have very little telephone contact with people in other countries. In 2017, the average person around the world still spent just about three hours per year talking to people in other countries. Limited depth is also evident on the final component of the information pillar, trade in printed publications.<sup>62</sup> There was only \$5.08 (USD) of such material exported per person in 2017. The depth of printed publications trade is on a declining trend, presumably due to the increasing substitution of digital alternatives.

The rapid expansion of international data flows has prompted governments to enact regulations aimed at managing them. The objectives of such policies vary widely, with many countries seeking to improve cybersecurity and address privacy or law enforcement concerns, some seeking to stimulate their domestic technology sectors, and others censoring access to particular types of information.

The measures that most directly target the depth of information flows are data localization laws. China and Russia have broad policies requiring data on their citizens

to be stored domestically, and many other countries have narrower data localization requirements or are developing them.<sup>63</sup> According to the European Commission, data localization requirements are on the rise globally and within Europe, and removing existing measures would boost the EU's annual output by €8 billion. Data localization, for example, forces the development of redundant data centers and complicates the adoption of cloud computing.<sup>64</sup>

In response, efforts are underway in some parts of the world to slow or reverse the growth of data localization regulations. The EU is close to finalizing a ban on localization requirements for non-personal data.<sup>65</sup> Additionally, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the US-Mexico-Canada Agreement (USMCA) are the first multilateral trade agreements to incorporate restrictions on data localization policies.<sup>66</sup> It remains to be seen whether these recent developments will prompt a slowing or potentially even a reversal of the present trend toward a more fragmented internet.

### The People Pillar

The most striking development on the people pillar in 2017 was a 7% increase in international tourist arrivals, the fastest growth in international tourism in seven years.<sup>67</sup> Strong macroeconomic conditions enabled more people to travel abroad, and countries have tweaked their visa policies to welcome more tourists. Several countries have expanded visa-on-arrival and “e-visa” programs to make visa processes less burdensome. In 2008, 77% of the world's population, on average, would have been required to obtain a traditional visa before traveling to a foreign country.<sup>68</sup> By 2015, that proportion had fallen to 61%, and more recent data from alternative sources indicate that tourist visa requirements continue to decline.<sup>69</sup>

Tourism represents a short-term people flow (typically days or weeks rather than years) and is therefore measured based on the number of international tourist arrivals during a given year (excluding “excursionists” who do not stay overnight). The most recent available data on the international proportion of tourism are still from 2015, when 17-19% of all tourist arrivals were international.<sup>70</sup> Business travelers are included in these statistics, although the number of people traveling abroad for leisure or to visit friends and family far outstrips the number traveling for business purposes.<sup>71</sup>

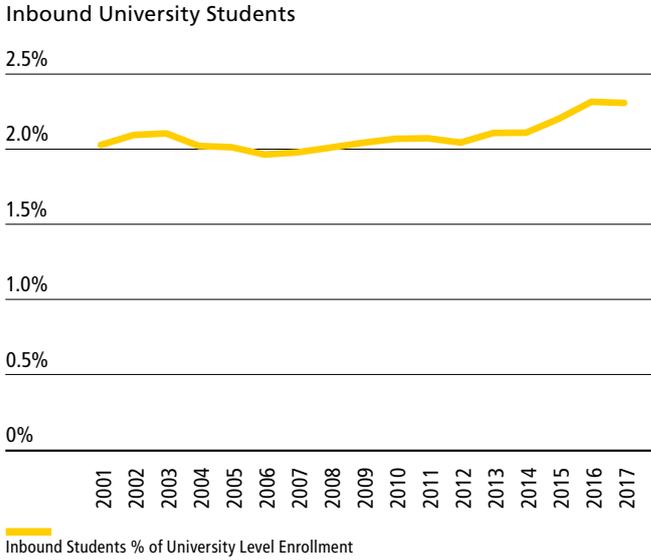
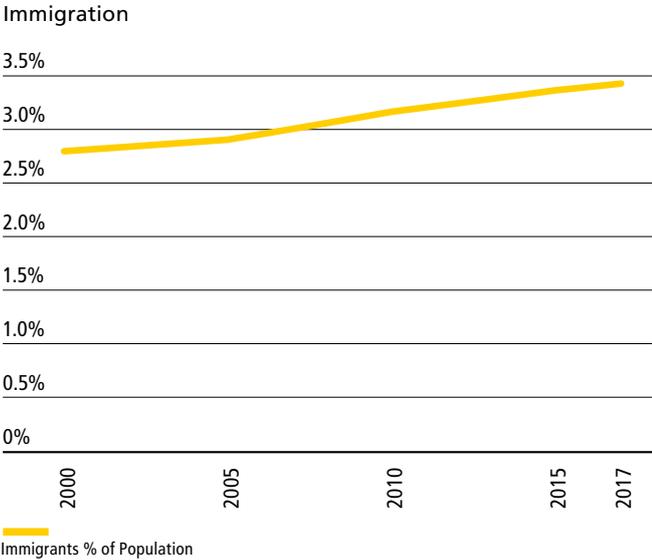
We do not have sufficient data to construct a time series based on the international proportion of total tourist arrivals. We do so, therefore, using international tourist arrivals per capita as an alternative indicator. Measured on a per capita basis, international tourism has grown significantly over the period studied: from 0.11 international trips per person in 2001 to 0.18 in 2017 (see **Figure 1.12**). These data imply that the average person around the world now travels outside his or her home country once every six years. And this metric is expected to continue rising, as international tourist arrivals are projected to outpace population growth. The United Nations World Tourism Organization forecasts that international tourist arrivals will grow at a pace of 4-5% in 2018.<sup>72</sup> By contrast, the world's population is growing about 1% per year.

For a medium-term perspective on people movements, we track the number of university students enrolled in degree programs outside their home countries as a proportion of total university-level enrollment. This metric had been declining prior to 2006 due, in large part, to fast growth of universities in emerging economies that primarily serve domestic students. From 2006 to 2016, international education was on an increasing trend, rising from 2.0% to 2.3%. Its growth, however, appears to have stalled in 2017.

Other international education data also point to a deceleration as well as geographic shifts. The British Council predicts the number of international students worldwide to grow by only 1.7% annually from 2016 to 2027, as compared to 5.7% between 2000 and 2015, primarily due to the growth of high quality educational institutions in students' home countries but also due to visa restrictions and safety concerns.<sup>73</sup> Additionally, students' preferred destinations appear to be changing, with enrollments having declined in the United States and plateaued in the United Kingdom but expanded at double-digit rates in Australia and Canada. Growth also continues in smaller English-speaking countries and in continental Europe.<sup>74</sup>

Immigration continues to be a very sensitive political issue in many countries, and it has been ranked by voters as the most important issue in 2018 elections in Italy, Sweden, and the United States.<sup>75</sup> Immigration also outranked terrorism as Europeans' top concern on a March 2018 Eurobarometer survey.<sup>76</sup> On a global basis, migration is on a rising trend, but a very modest one. Since migration is a long-term people flow, we measure it based on the number of people living abroad rather than how many people move in a given

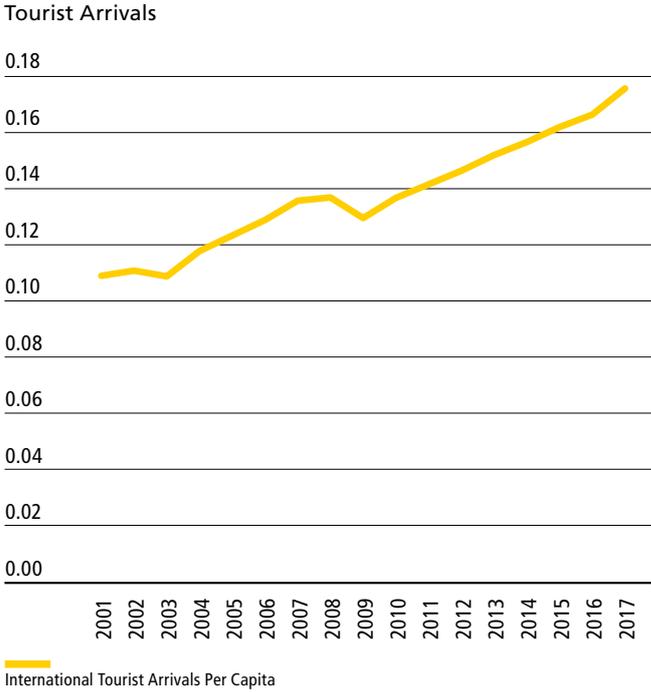
FIGURE 1.12 // PEOPLE PILLAR DEPTH RATIOS, 2001 – 2017



year. The proportion of people living outside of the countries where they were born has risen from 2.8% in 2001 to 3.4% in 2017. Both of those values, however, still round to 3%—the same level that global migration depth has approximated for more than a century!<sup>77</sup>

The modest global increase in international migration, however, masks significant increases that have taken place in some countries. In advanced economies, the share of immigrants in the population increased from 9% in 2001 to 13% in 2017. In the United States, 2017 was noteworthy as the year that the proportion of immigrants in the population first surpassed its 1910 peak level.<sup>78</sup>

While policy reforms aimed at fortifying borders and curbing immigration have dominated the news in many countries, there are some important exceptions to this trend. In March 2018, 27 countries signed on to the African Union’s Free Movement Protocol, which would first eliminate visa requirements and then establish rights to reside and work in any participating country.<sup>79</sup> And as of November 2018, Japan’s Diet (legislature) was debating a plan to bring in 345,000 foreign workers to address labor shortages.<sup>80</sup>



The growth of international tourism accelerated in 2017 to its fastest pace in seven years. Meanwhile, the proportion of people living abroad continued to expand at a more modest pace while the proportion of university students enrolled abroad leveled off in 2017.

## 1. HOW GLOBALIZED IS THE WORLD? – CONCLUSION

# BUSINESS AND PUBLIC POLICY IMPLICATIONS

The world is both *more globalized* than ever before and *less globalized* than most people perceive it to be. The intriguing possibility embodied in that conclusion is that companies and countries have far larger opportunities to benefit from global connectedness *and* more tools to manage its challenges than many decision-makers recognize.

An essential starting point for policymaking amid the present turbulence is a clear recognition of the stark discrepancies that can emerge between the rhetoric and the reality of globalization. Just as earlier declarations of a “flat” world and the “death of distance” were greatly exaggerated, so too are recent proclamations of the “end of globalization.”<sup>81</sup>

Globalization faces escalating threats, but there is no evidence (at least not yet) of a collapse of international flows. Furthermore, even if international flows do start to diminish—as they have done many times in the past—they would still be much too large for prudent policymakers to ignore them. For the foreseeable future, we will continue to live in what Pankaj Ghemawat has called a “semiglobalized” world, in which international opportunities and threats matter even as most business activity remains domestic.<sup>82</sup>

In such a complex world of imperfectly integrated markets, international opportunities are usually much more difficult to tap than domestic ones, but those same challenges increase the rewards available to those who find ways to overcome them. In business, the limited depth and breadth of globalization imply that one-size-fits-all strategies are seldom the best choice. Substantial adaptation to cross-country differences is usually required, and our research indicates that managers who overestimate the depth of globalization more than others do are more likely to overlook such adaptation requirements.

We also find that people—both managers and the public at large—who have more exaggerated perceptions of the depth of globalization worry more about harmful side effects. They are more likely to believe that globalization is a major contributor, for example, to increases in inequality, even though domestic public policy and technological change appear to have had much larger effects on countries’ income distributions.<sup>83</sup>

Correcting exaggerated perceptions of the depth of globalization could help calm fears about it. On a 2018 survey, respondents who were told the correct proportions of immigrants in their countries’ populations were 10% more likely to say immigration is not a problem than respondents in a control group that was not given this information.<sup>84</sup> Additionally, on a 2014 study, informing respondents about actual immigration levels cut the the proportion saying there are too many immigrants by about one-third across European countries and by almost one-half in the United States.<sup>85</sup>

The limited depth of globalization also implies that policymakers have more scope to address public concerns than is commonly realized. Countries can and do adopt very different choices with regard to public investment, social safety nets, labor market regulation, and so on. At present levels of globalization, the constraints that international markets place on countries’ policy flexibility are often exaggerated. Firms operating in imperfectly competitive markets can also have more flexibility than commonly presumed to make decisions about their own pay policies, environmental standards, etc.

A clearer recognition of the limited breadth of globalization can also help improve policy choices. It implies that where you are coming from still has a very large influence on where you should go abroad. In business, except when arbitraging cross-country differences, com-



panies can reduce the costs and risks of international expansion by prioritizing proximate or similar markets before moving on to more distant or different ones. In public policy, the limited breadth of globalization highlights the continued logic for strengthening ties to neighboring countries, e.g., via regional agreements.

Strategies and policies grounded in more accurate perceptions of the depth and breadth of globalization can improve outcomes regardless of whether threats to globalization continue to escalate or not. As the outlook for global flows continues to change, however, proportional responses will be required. Higher barriers to international flows would shift the playing field for countries and companies. Leaders need to have a clear sense of the threats—as well as the opportunities—that a hardening of national borders would imply for their organizations. For some companies, now may be the time to revisit the benefits of more agile supply chains. Others may need to review their contingency planning.

At a broader strategic level, it is important to remember that stronger and more competitive firms can overcome higher barriers than weaker firms can. If the threats to globalization continue to escalate, the firms whose international operations would suffer the most are those with marginal competitive positions abroad. The country-level corollary to this basic point about

competitiveness is that the attractiveness of a country's domestic business environment can have an even larger influence on its trade and capital flows than its policies in areas such as tariffs and the regulation of foreign direct investment.<sup>86</sup> After addressing immediate exposures and contingencies, a focus on the fundamental drivers of competitiveness may be the smartest path through near-term turbulence to longer-term prosperity.

# 1. HOW GLOBALIZED IS THE WORLD?

## NOTES

- 1 The most recent year for which the available data permit us to compute the DHL Global Connectedness Index is 2017, so we cannot yet report the impact of these policy changes on the index. Nonetheless, narrower measures do suggest they have begun to weigh on the growth of international flows.
- 2 “Xinhua Headlines: China’s import expo gathers consensus on globalization,” Xinhua, November 6, 2018; “Globalization Cannot Be Stopped – but It Can and Should Be Better,” World Economic Forum press release, November 11, 2018.
- 3 “The Retreat of the Global Company,” *The Economist*, January 28, 2017.
- 4 See, for example, Patrick Watson, “Technology, Tariffs, and Peak Globalization,” Maudlin Economics, Connecting the Dots, November 13, 2018.
- 5 For a detailed explanation of how the DHL Global Connectedness Index measures globalization, refer to Chapter 3. The data sources employed are listed in Appendix B.
- 6 Online survey of managers conducted between March 21 and April 6, 2017. The surveys were completed by at least one thousand respondents in each country. Respondents all held decision-maker or director/manager roles in companies with at least 100 employees.
- 7 Pre-course survey of students enrolled in Pankaj Ghemawat’s MOOC (massive open online course) “Globalization of Business Enterprise” on the Coursera platform.
- 8 Survey of 1720 members of the US general public conducted for Pankaj Ghemawat via the SurveyMonkey platform.
- 9 Based on data from UNCTAD World Investment Report 2018 and International Labor Organization Key Indicators of the Labor Market (accessed August 2018).
- 10 Pankaj Ghemawat, *The New Global Road Map: Enduring Strategies for Turbulent Times*, Harvard Business Review Press, 2018, Figure 1–5.
- 11 Ibid.
- 12 To illustrate this measure – as well as the importance of measuring breadth, which is a unique feature of the DHL Global Connectedness Index – consider tourism in Macau. While Macau ranks first in terms of the number of inbound tourists per capita (a depth metric), more than 80% of those tourists come from Mainland China and Hong Kong. Thus, while the depth of inbound tourism in Macau is very high, its breadth is limited, especially when one notes that less than 10% of outbound international tourists worldwide come from Mainland China and Hong Kong. From the standpoint of scoring breadth, if Macau attracted tourists from all around the world in proportion to where the world’s outbound tourists come from, it would have the highest possible breadth score. In contrast, if all of Macau’s tourists came from just one country that sends tourists nowhere else, it would receive the lowest possible score.
- 13 This breadth measure also avoids biasing countries’ results due to their geographic locations, a concern that would arise if we measured country-level breadth using average distances traversed.
- 14 The concentration of international flows among top partner countries is even more striking if the analysis is conducted country-by-country rather than using aggregate global flows, as we did in Figure 1.2. For an average country, on a simple average basis, 30–51% of the international flows on Figure 1.2 involve just one partner country and 64–85% involve just five partner countries.
- 15 Estimates generated based on a standard gravity model of multiple types of economic activity. See Pankaj Ghemawat, *The New Global Road Map: Enduring Strategies for Turbulent Times*, Harvard Business Review Press, 2018, Figure 1-8.
- 16 Weighted average based on pillar and component weights described in Chapter 3.
- 17 Under frictionless benchmark assumptions, each country consumes imports from every other country in proportion to every other country’s share of world output. While this type of benchmark was developed originally for trade analysis, we construct analogous benchmarks here for other flows based on the denominators of their depth ratios: gross fixed capital formation for FDI flows, market capitalization for portfolio equity, population for telephone calls, migration, and tourism, and tertiary education enrollment for students. For additional background, refer to 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.
- 18 Pankaj Ghemawat, *The New Global Road Map: Enduring Strategies for Turbulent Times*, Harvard Business Review Press, 2018. Calculation based on data from S&P Global Capital IQ and company annual reports. The sample employed is the 33 companies on UNCTAD’s list of the 100 largest transnational corporations that have sufficient data available to perform this calculation.
- 19 Ibid. Note that Alan Rugman and Alain Verbeke introduced this way of measuring firm-level globalization, drawing on Kenichi Ohmae’s work on “triad power.” For background, refer to Alan M. Rugman and Alain Verbeke, “A Perspective on Regional and Global Strategies of Multinational Enterprises,” *Journal of International Business Studies* 35, no. 1 (2004) and Kenichi Ohmae, *Triad Power: The Coming Shape of Global Competition* (London: The Free Press, 1985), 165.
- 20 The 2017 results, in particular, should be treated as preliminary since data gaps and restatements of previously reported metrics are common in the most recent year. Refer to tables 3.4 and 3.5 for lists of variables for which no 2017 data were yet available at the time we conducted this analysis. The methods employed for handling these and other data gaps are explained in detail in Chapter 3.
- 21 Refer to Chapter 4 of the 2011 edition of this report for analysis relating the depth dimension of global connectedness to country-level economic growth.
- 22 Percent changes versus 2001 are first computed at the component level and then higher levels of aggregation (overall index, depth and breadth dimensions, and pillars) are calculated as weighted averages of the component-level percent changes (using the weights reported in Chapter 3).

- 23 Consistent with the patterns discussed in the next subsection regarding advanced versus emerging economies, these pillar level breadth trends reflect how growth in emerging economies has changed the composition of global flows. The largest increase in emerging economies' share of total flows was on the information pillar, and since emerging economies have narrower information flows, this has exerted downward pressure on global information pillar breadth. In contrast, the increase in emerging economies' share of people flows was the smallest among the four pillars.
- 24 Wang Wen, "Emerging markets are set to lead globalisation," *Financial Times*, April 10, 2017.
- 25 Trump addressed the UN General Assembly on September 25, 2018 (full text at <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-73rd-session-united-nations-general-assembly-new-york-ny/>). Xi addressed the World Economic Forum in Davos on January 17, 2017 ([http://www.china.org.cn/node\\_7247529/content\\_40569136.htm](http://www.china.org.cn/node_7247529/content_40569136.htm)) and Modi addressed the same forum on January 23, 2018 (<https://www.mea.gov.in/Speeches-Statements.htm?dtl/29378/Prime+Ministers+Keynote+Speech+at+Plenary+Session+of+World+Economic+Forum+Davos+January+23+2018>).
- 26 OCED Interim Economic Outlook, September 2018.
- 27 WTO Press Release, "Strong trade growth in 2018 rests on policy choices," April 12, 2018.
- 28 UNCTAD World Investment Report 2018.
- 29 Pankaj Ghemawat, *The New Global Road Map: Enduring Strategies for Turbulent Times*, Harvard Business Review Press, 2018. Calculation based on comparison of trade in value added from the 2013 UNCTAD World Investment Report (p. 137) with sectoral composition of GDP data from World Bank World Development Indicators database.
- 30 It is also useful to consider these adverse developments for trade in broader historical context. According to the Heritage Foundation's Trade Freedom indicator, which tracks tariffs and non-tariff barriers to trade, countries were steadily removing trade barriers between 1995 and 2007 but additional trade liberalization since the global financial crisis has been much more limited. The world average trade freedom score rose from 58.5% in 1995 to 72.9% in 2007, but has subsequently risen only to 76.4% in 2018.
- 31 WTO, "Report on G20 Trade Measures," July 4, 2018. Note that trade-facilitating policy changes still covered a slightly larger proportion of exports, but the scope of such positive measures for trade shrunk while the scope of trade-restricting measures grew.
- 32 WTO, "Report on G20 Trade Measures," November 22, 2018. For additional details and updates, readers may wish to refer to the convenient timeline of trade disputes involving the United States provided by Chad Bown and Melina Kolb of the Peterson Institute for International Economics at <https://piie.com/blogs/trade-investmentpolicy-watch/trump-trade-war-china-date-guide>.
- 33 As of November 21, 2018, Global Trade Alert reported 934 harmful interventions for trade in 2018 and 319 liberalizing interventions. In 2017, the same database indicates 622 harmful interventions and 242 liberalizing interventions. See [https://www.globaltradealert.org/global\\_dynamics/day-to\\_1121/flow\\_all](https://www.globaltradealert.org/global_dynamics/day-to_1121/flow_all).
- 34 IMF, "World Economic Outlook Update: Less Even Expansion, Rising Trade Tensions," July 16, 2018. IMF, "World Economic Outlook October 2018: Challenges to Steady Growth," October 2018.
- 35 The OECD Economic Outlook revised its world trade growth projections (which include both goods and services) down by 0.8 percentage points for both 2018 and 2019 between their May and November 2018 releases. The World Trade Organization downgraded its 2018 merchandise trade growth forecast by 0.5 percentage points and its 2019 forecast by 0.3 percentage points between April and September. The Economist Intelligence Unit revised its trade in goods growth forecast for 2018 down by 0.3 percentage points and its 2019 forecast by 0.5 percentage points between March and December.
- 36 Zornitsa Kutlina-Dimitrova and Csilla Lakatos, "The Global Costs of Protectionism," World Bank Policy Research Working Paper 8277, December 2017.
- 37 IMF, "World Economic Outlook: Challenges to Steady Growth," October 2018.
- 38 WTO, "Strong trade growth continues but momentum may soften in Q2, trade indicator suggests," May 17, 2018; WTO, "WTOI suggests trade momentum softening further in third quarter of 2018," August 9, 2018; WTO, "World Trade Outlook Indicator signals further loss of momentum in trade growth into Q4," November 26, 2018.
- 39 DHL, "DHL Global Trade Barometer – World," November 2018. <https://www.logistics.dhl/content/dam/dhl/local/global/core/documents/pdf/g0-core-gtb-one-pager-world-Nov18.pdf>
- 40 African Union press release, "AU Member Countries Create History by massively signing the AfCFTA Agreement in Kigali," March 21, 2018.
- 41 WTO Trade Facilitation Database, <https://www.tfadatabase.org/>, accessed November 21, 2018.
- 42 WTO, "World Trade Report 2015: Speeding up trade: benefits and challenges of implementing the WTO Trade Facilitation Agreement," 2015.
- 43 For a review of how the Belt and Road Initiative has expanded beyond its initial focus on international infrastructure development, refer to Deloitte's February 2018 report, "Embracing the BRI Ecosystem in 2018: Navigating Pitfalls and Seizing Opportunities." This initiative, however, has faced increased resistance recently. See, for example, Go Yamada, "Is China's Belt and Road working? A progress report from eight countries," *Nikkei Asian Review*, March 28, 2018.
- 44 UNCTAD World Investment Report, 2018.
- 45 Forrester Research analysis, as reported in Marcia Kaplan, "The explosive growth of cross-border ecommerce," *Practical Ecommerce*, July 12, 2017.
- 46 If national borders and cross-country distances ceased to have any dampening effects at all on trade, more than 90% of world output might be exported. See Keith Head and Thierry Mayer, "What separates us? Sources of resistance to globalization," *Canadian Journal of Economics/Revue canadienne d'économique* 46(4), November 2013.
- 47 Figure 1.9 Data Sources: Exports 1820: Angus Maddison, *Monitoring the World Economy 1820–1992* (Paris: OECD, 1995); exports 1870–1949: Mariko J. Klasing and Petros Milionis, "Quantifying the Evolution of World Trade, 1870–1949," *Journal of International Economics* 92, no. 1 (2014); exports 1950–1959: Penn World Tables 9.0; exports 1960–1979: World Bank World Development Indicators; exports 1980–2017: World Trade Organization, Statistics Database, and International Monetary Fund, World Economic Outlook; foreign direct investment (FDI) 1913–1985: United Nations Conference on Trade and Development (UNCTAD), World Investment Report 1994 (Geneva: United Nations, 1994); FDI 1990–2017: UNCTAD, World Investment Report 2017 and 2018 (Geneva, United Nations: 2018), and International Monetary Fund, World Economic Outlook.
- 48 Note that the capital pillar of the DHL Global Connectedness Index focuses on equity capital; it excludes most forms of debt. As discussed further in Chapter 3, this is because international equity investment is generally viewed as beneficial for countries whereas high levels of international indebtedness can be harmful.
- 49 Based on IMF data reported in the World Bank's World Development Indicators database. Alternative data from the UN Conference on Trade and Development indicate that worldwide portfolio equity inflows were negative in 2016, reflecting new purchases falling short of sales of prior holdings.
- 50 For discussion of the equity "home bias" puzzle in international economics and data comparing trends in advanced versus emerging economies, refer to Nicolas Coeurdacier and Hélène Rey, "Home bias in open economy financial macroeconomics," *Journal of Economic Literature* 51, no. 1, March 2013.
- 51 Jeffrey Kleintop, "An important benefit to global investors is back after 20 years," Charles Schwab Market Commentary, July 24, 2017.

- 52 UNCTAD World Investment Report 2018; UNCTAD World Investment Trends Monitor, October 2018.
- 53 Repatriation of retained earnings by US companies results in negative FDI outflows for the US and negative FDI inflows for other countries. However, the two do not move in lockstep because of the large amount of funds that flow through offshore financial centers.
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- 55 Rough estimate based on data from Cisco Visual Networking Index and Telegeography. The values reported in the text include all IP traffic (fixed internet, managed IP, and mobile data) in the denominator of the depth ratio. If the denominator is restricted to fixed internet traffic only the international share rises to 14% in 2005 and 38% in 2017.
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