CENTER FOR TRANSATLANTIC RELATIONS JOHNS HOPKINS UNIVERSITY | PAUL H. NITZE SCHOOL OF ADVANCED INTERNATIONAL STUDIES







American Chamber of Commerce to the European Union (AmCham EU)

www.amchameu.eu

Avenue des Arts/Kunstlaan, 53 1000 Brussels, Belgium Tel: +32 (0)2 513 68 92 Fax: +32 (0)2 513 79 28 Email: info@amchameu.eu Twitter: @AmChamEU THE

TRANSATLANTIC ECONOMY 2017

Annual Survey of Jobs, Trade and Investment between the United States and Europe

Hamilton, Daniel S., and Quinlan, Joseph P., The Transatlantic Economy 2017: Annual Survey of Jobs, Trade and Investment between the United States and Europe

Washington, DC: Center for Transatlantic Relations, 2017. © Center for Transatlantic Relations, 2017

Center for Transatlantic Relations

The Paul H. Nitze School of Advanced International Studies

The Johns Hopkins University

1717 Massachusetts Ave., NW, 8th floor Washington, DC 20036 Tel: (202) 663-5880 Fax: (202) 663-5879

Email: transatlantic@jhu.edu http://transatlanticrelations.org ISBN 978-0-9907721-6-3

Table of Contents

Preface and Acknowledgements
Executive Summary
Chapter 1: No More "Business as Usual"
Chapter 2: Alternative Fact: Despite the Turmoil, the Transatlantic Economy is Picking Up Steam
Chapter 3: Jobs, Trade and Investment: Revisiting the Ties that Bind
Chapter 4: The Transatlantic Digital Economy
Chapter 5: The 50 U.S. States: European-Related Jobs, Trade and Investment
Chapter 6: European Countries: U.SRelated Jobs, Trade and Investment
Appendix A: European Commerce and the 50 U.S. States: A State-by-State Comparison
Appendix B: U.S. Commerce and Europe: A Country-by-Country Comparison77
Notes on Terms, Data and Sources94
About the Authors

Preface and Acknowledgements

This annual survey offers the most up-to-date picture of the dense economic relationship binding European countries to America's 50 states. The survey consists of six chapters. Chapter One addresses the stunning changes that have rocked the transatlantic partnership over the past year, particularly the British decision to leave the European Union. Chapter Two offers Headline Trends for the transatlantic economy. Chapter Three updates our basic framework for understanding the deeply integrated transatlantic economy via 'eight ties that bind.' Chapter Four explores the transatlantic digital economy, which in many ways has become the backbone of commercial connections across the Atlantic. Chapter Five offers an overview of European commercial ties with the United States, and Chapter Six an overview of U.S. commercial relations with Europe. The appended charts provide the most up-to-date information on European-sourced jobs, trade and investment with the 50 U.S. states, and U.S.-sourced jobs, trade and investment with the 28 member states of the European Union, as well as Norway, Switzerland and Turkey.

This annual survey complements our other writings in which we use both geographic and sectoral lenses to examine the deep integration of the transatlantic economy, and the role of the U.S. and Europe in the global economy, with particular focus on how globalization affects American and European consumers, workers, companies, and governments. In our other new publication, The *Transatlantic Digital Economy 2017*, we expand on chapter 4 in this volume to look at how digital links across the Atlantic are becoming so critical to both U.S. and European economic health.

We would like to thank Katie Cassavell, Lisa Mendelow, Heidi Obermeyer, Lauren Sanfilippo, and Andrew Vasylyuk for their assistance in producing this study.

We are grateful for generous support of our annual survey from the American Chamber of Commerce to the European Union and its member companies, and the American Chambers of Commerce in Ireland, Romania, Spain and Sweden.

The views expressed here are our own, and do not necessarily represent those of any sponsor or institution. Other views and data sources have been cited, and are appreciated.

Daniel S. Hamilton Joseph P. Quinlan

EXECUTIVE SUMMARY

- Despite transatlantic political turbulence, the U.S. and Europe remain each other's most important markets. No other commercial artery in the world is as integrated. Transatlantic gaps in growth, job creation and trade all narrowed in 2016.
- » The transatlantic economy generates \$5.5 trillion in total commercial sales a year and employs up to 15 million workers in mutually "onshored" jobs on both sides of the Atlantic. It is the largest and wealthiest market in the world, accounting for one-third of world GDP in terms of purchasing power.
- » Ties are particularly thick in foreign direct investment (FDI), portfolio investment, banking claims, trade and affiliate sales in goods and services, mutual R&D investment, patent cooperation, technology flows, digital trade, and sales of knowledge-intensive services.

Brexit and the UK/EU, UK/US, US/EU Triangle

- » The UK and EU are critical economic partners for the United States. In 2015 the U.S. exported \$123.5 billion in goods and services to the UK, and imported \$111.5 billion worth of British goods and services. The U.S. is Britain's largest export destination after the EU.
- » U.S.-UK trade is significant. But the real driver of the British-American economy is investment. In 2015, U.S. foreign direct investment in the UK totaled a record \$593.0 billion and UK foreign direct investment in the U.S. totaled \$483.8 billion. Estimated sales of American affiliates in the UK and British affiliates in the U.S. totaled more than \$1.3 trillion. The UK accounted for 22% of overall global U.S. assets outside the United States.
- » U.S. affiliates employ almost 1.4 million workers in the UK while UK affiliates employ roughly 1.1 million Americans. British firms were the #1 source of onshored jobs in 25 of the 50 U.S. states in 2014.
- » America's capital stock in the UK (\$593 billion) is more than double the combined U.S. investment in South America, the Middle East and Africa (\$244 billion). Total U.S. investment stock in China was just 13% of the comparable figure in the United Kingdom in 2015.
- » Many U.S. companies have invested in the UK, however, to gain access to the much bigger EU Single Market. U.S. affiliates based in the UK export more to the rest of Europe than U.S. affiliates based in China export to the rest of the world.
- » The EU is also the UK's most important market. The UK exports almost half of its goods and services to the EU twice as much as to the U.S.
- » As Brexit proceeds, the U.S., UK and EU each have a vital interest to ensure that all three legs of the transatlantic stool remain strong and sturdy.

Transatlantic Investment: Still Driving the Transatlantic Economy

- » Trade alone is a misleading benchmark of international commerce; mutual investment dwarfs trade and is the real backbone of the transatlantic economy. The U.S. and Europe are each other's primary source and destination for foreign direct investment.
- » Together the U.S. and Europe accounted for only 27% of global exports and 31% of global imports in 2015. But together they accounted for 66% of the outward stock and 57% of the inward stock of global FDI. Moreover, each partner has built up the great majority of that stock in the other economy. Mutual investment in the North Atlantic space is very large, dwarfs trade, and has become essential to U.S. and European jobs and prosperity.
- » U.S. foreign affiliate sales in Europe in 2015 topped \$3.1 trillion, greater than total U.S. exports to the world of \$2.3 trillion and half of total U.S. foreign affiliate sales globally.
- » Majority-owned European affiliate sales in the United States (\$2.4 trillion) in 2015 were more than triple U.S. imports from Europe.
- » Foreign investment and affiliate sales drive transatlantic trade. 60% of U.S. imports from the EU consisted of intra-firm trade in 2014 much higher than U.S. intra-firm imports from Pacific Rim countries (43%) and South/Central America (42%), and well above the global average (51%). Percentages are notably high for Ireland (91%) and Germany (70%).
- » Intra-firm trade also accounted for one-third of U.S. exports to Europe and nearly half of total U.S. exports to Belgium, 46% to the Netherlands, 33% to Germany and 24% to the UK.

The U.S. in Europe

- » Over many decades no place in the world has attracted more U.S. FDI than Europe. Since the start of this decade Europe has attracted 58.5% of total U.S. global investment more than in any previous decade.
- » 70% of total U.S. FDI outflows globally went to Europe in 2016. Only 21% went to the Asia-Pacific region.
- Within Europe, however, U.S. FDI is becoming more concentrated. In the first nine months of 2016, five nations accounted for nearly 95% of total U.S. FDI outflows of \$162 billion to Europe. The five nations in ranked order: the Netherlands, attracting \$42.1 billion and 26.0% of total flows to Europe; the UK (\$35.1 billion and 21.6% of the total); Ireland (\$31.3 billion and 19.3%), Luxembourg (\$29.7 billion and 18.3%); and Switzerland (\$15.6 billion and 9.6%). In 2015, these five nations also accounted for over 90% total U.S. FDI outflows to Europe.
- » In 2015 holding companies accounted for \$167 billion, or over half of global U.S. FDI of \$303 billion, and 60% of total U.S. foreign direct investment to the EU of \$179.5 billion.
- » From 2009-2015 Europe still accounted for 46% of total U.S. FDI outflows globally when flows from holding companies are removed from the overall figures. Europe's share was still more than double the share to Asia.
- » U.S. FDI outflows to Europe in 2016 were an estimated \$220 billion, a 12% rise from the levels of 2015 (\$196 billion).
- » Five countries (Finland, Greece, Hungary, Russia and Sweden) have all experienced net outflows of U.S. investment since the start of this decade. After sinking over \$11 billion into Russia in the first decade of this century, U.S. investment in Russia has dried up since 2010.

yi THE TRANSATLANTIC ECONOMY 2017

- » The share of U.S. FDI in both Germany and France has declined sharply thus far in this decade, with France accounting for just 1.2% of U.S. FDI flows to Europe since 2010. Germany's share is slightly higher, 1.6%, but still less than previous decades.
- » Combined U.S. FDI flows to Germany and France totaled just \$4.2 billion in 2016, whereas combined U.S. FDI flows to China (including Hong Kong) and India totaled roughly \$11 billion, a clear signal that more and more U.S. firms are finding better and more favorable market conditions in Asia's largest economies than in Europe's largest economies.
- » In 2015 Europe accounted for roughly 60% \$15.7 trillion of corporate America's total foreign assets globally. Largest shares: the UK (22%, \$5 trillion) and the Netherlands (9%, \$2.7 trillion).
- » America's asset base in Germany (\$784 billion) in 2014 was roughly 20% larger than its asset base in all of South America.
- » America's combined asset base in Poland, Hungary, and the Czech Republic (roughly \$140 billion) was larger than its asset base in India (\$121 billion).
- » America's assets in Ireland alone (\$1.3 trillion in 2014) are light years ahead of those in China (\$360 billion).
- » Total output of U.S. foreign affiliates in Europe (\$748 billion) and of European affiliates in the U.S. (\$576 billion) in 2015 was greater than the output of such countries as the Netherlands, Turkey or Indonesia.
- » Aggregate output of U.S. affiliates globally reached \$1.5 trillion in 2015; Europe accounted for 49% of the total.
- » The UK accounted for 24% of total U.S. affiliate output in Europe.
- » U.S. affiliate output in Europe (\$717 billion) in 2014 was roughly double affiliate output in all of Asia (\$363 billion). U.S. affiliate output in China (\$66 billion) and India (\$26 billion) pale in comparison to U.S. affiliate output in the UK (\$172 billion), Germany (\$96 billion), or even Ireland (\$80 billion).
- » U.S. affiliate sales in Europe topped \$3.1 trillion in 2014 and accounted for half of worldwide U.S. affiliate sales.
- » Sales of U.S. affiliates in Europe in 2014 were almost double the comparable figures for the entire Asian region. Affiliate sales in the UK (\$668 billion) were almost double total sales in South America. Sales in Germany (\$365 billion) were over two-thirds larger than combined sales in Africa and the Middle East.
- » In the first nine months of 2016, U.S. affiliate income from Europe—\$182 billion—was more than combined U.S. affiliate income from Latin America (\$47 billion) and Asia (\$46 billion).
- » U.S. affiliate income in China (\$6.6 billion), however, was more than affiliate income in Spain (\$3.0 billion), Germany (\$2.4 billion), or France (\$1.9 billion).

Europe in the U.S.

- » In 2016 Europe accounted for 72% of global FDI inflows into the U.S. of \$385 billion.
- » In the first nine months of the year, inflows to the U.S. from Europe totaled \$231 billion, with large gains from the UK (\$34.2 billion), Switzerland (\$37.4 billion) and the Netherlands (\$37.4 billion).

- » Europe accounted for roughly 70% of the \$3.1 trillion invested in the United States in 2015 on a historic cost basis. The bulk of the capital was sunk by British firms (with total UK stock amounting to \$484 billion), Luxembourg (\$323 billion), the Netherlands (\$283 billion), Switzerland (\$258 billion), Germany (\$255 billion), and France (\$234 billion).
- » In 2015 total assets of European affiliates in the U.S. were an estimated \$8.4 trillion. The UK ranked first, followed by Germany, Switzerland and France.
- » The U.S. remains the most important market in the world in terms of earnings for many European multinationals. These earnings had recently been falling, but rebounded in the first nine months of 2016, rising 2.2% from the same period a year earlier.
- » European firms earned an estimated \$112 billion in the U.S. in 2016, up 9% from the prior year. Through the first nine months of last year, European affiliate income earned in the U.S. totaled \$84 billion; German affiliates saw a large increase in U.S. income of over 36% in the first nine months of the year, compared to the same period in 2015.
- » The output of British firms in the U.S. in 2015 reached an estimated \$155 billion more than a quarter of the total output of European firms in the U.S. The output of German firms in the U.S. totaled \$103 billion, or about 18% of the total.
- » Beyond European affiliates, only Japan and Canada have any real economic presence in the U.S. In 2014, Japanese affiliate output totaled \$120 billion, Canadian \$68 billion.
- » European companies operating in the U.S. accounted for nearly two-thirds of the \$869 billion contributed by all foreign firms to U.S. aggregate production in 2015.
- » Affiliate sales, not trade, are the primary means by which European firms deliver goods and services to U.S. consumers. In 2015 European affiliate sales in the U.S. (\$2.4 trillion) were more than triple U.S. imports from Europe. Affiliate sales rose roughly 4% in 2015.
- » Sales by British affiliates in the U.S. totaled \$643 billion in 2014, followed by German affiliate sales (\$466 billion) and those by Dutch affiliates (\$258 billion).

Transatlantic Trade

- » The U.S. and the EU are each other's largest trading partners. U.S.-EU merchandise trade totaled roughly \$687 billion during 2016, almost double the level at the start of the new century.
- » The U.S. merchandise trade deficit with the EU declined by \$9 billion (6%) in 2016 to \$146 billion.
- » The U.S. deficit with Germany in 2016 declined by about \$10 billion to \$65 billion, while the trade balance with the UK swung from deficit to surplus.
- » 45 of 50 U.S. states export more to Europe than to China, in many cases by a wide margin.
- » In 2015 Florida exported roughly 8 times more to Europe than to China; New York and Indiana exported over 7 times more; New Jersey and Connecticut exported 6 times more.

VIII THE TRANSATLANTIC ECONOMY 2017

- » Massachusetts and Georgia each exported roughly 4 times as many goods to Europe than to China. Texas, the 2nd largest U.S. state exporter to Europe, sent 3 times as many goods to Europe than to China. So did Ohio. The Pacific coast state of California exported over twice as much to Europe as to China.
- » The UK was the top European export market for 16 U.S. states in 2015. Germany was the top European export market for 12 states, the Netherlands for 7 states and France for 5 states.
- » Foreign firms operating in the United States generated one-fifth of America's goods exports in 2014; more than 54% of these U.S. exports were generated by European companies. The UK and Germany dominate European affiliate exports in the United States, with UK affiliates in America exporting \$73 billion worth of goods from the U.S. and German affiliates exporting \$45 billion in goods from the U.S. German automaker BMW is America's largest exporter of cars to the rest of the world in terms of value.

Transatlantic Services

- » The U.S. and Europe are the two leading services economies in the world. The U.S. is the largest single country trader in services, while the EU is the largest trader in services among all world regions. The U.S. and EU are each other's most important commercial partners and major growth markets when it comes to services trade and investment. Moreover, deep transatlantic connections in services industries, provided by mutual investment flows, are the foundation for the global competitiveness of U.S. and European services companies.
- » Four of the top ten export markets for U.S. services are in Europe. Europe accounted for 37% of total U.S. services exports and for 42% of total U.S. services imports in 2015.
- » U.S. services exports to Europe reached a record \$274 billion in 2015, up more than one quarter from 2009. The U.S. had a \$69 billion trade surplus in services with Europe in 2015, compared with its \$174 billion trade deficit in goods with Europe.
- » European services exports to the United States also hit an all-time high in 2015 of \$206 billion. The UK, Germany, Switzerland, France and Ireland are top services exporters to the U.S.
- » Moreover, foreign affiliate sales of services, or the delivery of transatlantic services by foreign affiliates, have exploded on both sides of the Atlantic over the past few decades and become far more important than exports.
- » Sales of services by U.S. foreign affiliates in Europe rose to \$757 billion in 2014 more than two and a half times U.S. services exports of \$269 billion to Europe.
- The UK alone accounted for 30% of all U.S. affiliate sales in Europe in 2014 \$222 billion, greater than combined U.S. affiliate sales of services in South and Central America (\$135 billion), Africa (\$15 billion) and the Middle East (\$22 billion).
- » On a global basis, Europe accounted for over half of total U.S. affiliate services sales.
- » European affiliate sales of services in the U.S. of \$535 billion in 2014 were more than 30% below U.S. affiliate sales of services in Europe.

- » Nonetheless, European companies are the key provider of affiliate services in the U.S. Foreign affiliate sales of services in the United States totaled \$919 billion in 2014; European firms accounted for 58% of the total. British affiliates led in terms of affiliates sales of services (\$140 billion), followed closely by those from Germany (\$135 billion).
- » European companies operating in the United States generated an estimated \$570 billion in sales in 2015, 2.8 times more than European services exports to the U.S. of \$206 billion.

The Transatlantic Digital Economy

- » The U.S. and Europe are each other's most important commercial partners when it comes to digitally deliverable services. Cross-border data flows between the United States and Europe are by far the highest in the world 50% higher than the data flows between the United States and Asia in absolute terms, and 400% higher on a per capita basis.
- » The U.S. and the EU are also the two largest net exporters of digitally deliverable services to the world.
- » In 2015 the U.S. exported \$184.2 billion in digitally deliverable services to Europe and imported \$113.2 billion from Europe. U.S. exports of digitally deliverable services to Europe were more than double U.S. trade with Latin America and almost double U.S. trade with the entire Asia-Pacific region.
- » In 2014 EU member states exported \$1.2 trillion and imported \$935.1 billion in digitally deliverable services to countries both inside of and outside of the EU.
- » ICT-enabled services trade represented 56% of all EU services exports to non-EU countries and 52% of all services imports from non-EU countries.
- » The U.S. is the EU's #1 non-EU consumer and supplier of ICT-enabled services.
- » Digitally deliverable services are not just exported directly, they are used in manufacturing and to produce goods and services for export. Over half of digitally deliverable services imported by the U.S. from the EU is used to produce U.S. products for export, and vice versa.
- » Even more important than both direct and value-added trade in digitally deliverable services, however, is the delivery of digital services by U.S. and European foreign affiliates.
- » Roughly 65% of U.S. overseas investment in the information industry was in Europe in 2014. The \$428 billion in digitally deliverable services supplied by U.S. affiliates in Europe was 2.3 times greater than U.S. digitally deliverable exports to Europe.
- » The \$270 billion in digitally deliverable services supplied by European affiliates in the U.S. was 2.4 times greater than European digitally deliverable exports to the U.S.

Transatlantic Jobs

- Despite stories about U.S. and European companies decamping for cheap labor markets in Mexico or Asia, most foreigners working for U.S. companies outside the U.S. are European, and most foreigners working for European companies outside the EU are American.
- » European companies in the U.S. employ millions of American workers and are the largest source of onshored jobs in America. Similarly, U.S. companies in Europe employ millions of European workers and are the largest source of onshored jobs in Europe.

X THE TRANSATLANTIC ECONOMY 2017

- » U.S. and European foreign affiliates directly employed 8.7 million workers in 2015, up nearly 5% from the year before. Further modest gains in employment were most likely achieved in 2016.
- » These figures understate the overall job numbers, since they do not include
 - » jobs supported by transatlantic trade flows;
 - » indirect employment effects of nonequity arrangements such as strategic alliances, joint ventures, and other deals; and
 - » indirect employment generated for distributors and suppliers.
- » U.S. affiliates directly employed an estimated 4.7 million workers in Europe in 2015 140,000 more than in 2014.
- » Roughly 33% of the 14 million people employed by U.S. majority-owned affiliates around the world in 2014 lived in Europe; that share is down from 41% in 2008.
- » U.S. affiliates employed more manufacturing workers in Europe in 2014 (1.8 million) than they did in 1990 (1.6 million), and slightly less than in 2000 (1.9 million). Manufacturing employment has declined in some countries but has rebounded in others.
- » Poland has been a big winner: U.S. affiliate manufacturing employment more than doubled between 2000 and 2014, rising from 51,000 to over 113,000.
- » In 2014 the UK, France and Germany accounted for 48% of U.S. affiliate manufacturing employment in Europe. In 1990 they accounted for 67%. Meanwhile, the combined share of U.S. affiliate manufacturing employment in Poland, the Czech Republic and Hungary jumped from virtually zero in 1990 to nearly 11% in 2014, indicative of the eastern spread of U.S. European operations.
- » Manufacturing employment among U.S. affiliates in the UK has declined from 431,000 in 2000 to 311,000 in 2014 and in France from 249,000 to 196,000, but U.S. affiliates added about 20,000 new manufacturing jobs in these two countries in 2014.
- » Manufacturing employment among U.S. affiliates in Germany has rebounded 386,000 jobs in 2014, compared to 388,000 in 2000.
- » U.S. affiliates employ more Europeans in services than in manufacturing and this trend is likely to continue. Manufacturing accounted for 41% of total employment by U.S. affiliates in Europe in 2014. U.S. affiliates employed nearly 392,000 European workers in transportation and 300,000 in chemicals. Wholesale employment was among the largest sources of services-related employment, which includes employment in such areas as logistics, trade, insurance and other related activities.
- The manufacturing workforce of U.S. affiliates in Germany totaled 386,000 workers in 2014 more than the number of manufactured workers employed by U.S. affiliates in India (207,000) and in Brazil (340,000), but only slightly more than half those employed in China (753,000).
- European majority-owned foreign affiliates directly employed roughly 4.1 million U.S. workers in 2014 some 400,000 less workers than U.S. affiliates employed in Europe. The top five European employers in the U.S. in 2014 were firms from the United Kingdom (1.1 million), Germany (672,000), France (574,000), Switzerland (461,000) and the Netherlands (416,000).
- European firms employed roughly two-thirds of all U.S. workers on the payrolls of majority-owned foreign affiliates in 2014.

- » UK affiliates created 38,000 new jobs in the U.S. in 2015, followed by German firms (24,000), French (20,000), and Dutch (15,000).
- » Texas gained 95,300 jobs (40.4% more) directly from European investment between 2006 and 2014. Others with significant gains included California 48,300 (14.0%); Massachusetts 44,500 (37.3%); Pennsylvania 40,400 (22.1%); New York 28,400 (10.1%); Illinois 23,800 (13.9%); North Carolina 20,300 (13.2%); Virginia 19,400 (17.3%); Louisiana 18,300 (57.9%); Georgia 17,700 (15.8%); Minnesota 14,500 (28.6%); Florida 14,000 (8.7%); Ohio 13,600 (10.1%); Missouri 11,000 (17.8%); Rhode Island 10,900 (75.7%); South Carolina 10,600 (12.6%).
- » Only a few states have lost jobs from European investments since 2006, including Wisconsin 6,600 (10%) less; Maryland 2,900 (3.3%) less; Kentucky 2,800 (5.9%) less; Indiana 1,800 (1.8%) less; Montana 1,600 (28.6%) less.
- » The top five U.S. states in terms of jobs provided directly by European affiliates in 2014 were California (393,800), Texas (331,200), New York (310,500), Pennsylvania (222,900) and Illinois (195,100).

The Transatlantic Innovation Economy

- » Bilateral U.S.-EU flows in R&D are the most intense between any two international partners. In 2014 U.S. affiliates invested \$31 billion in research and development in Europe, a record annual total, representing 60% of total global R&D expenditures by U.S. foreign affiliates.
- » R&D expenditures by U.S. affiliates were the greatest in Germany (\$8.3 billion), the United Kingdom (\$6.3 billion), Switzerland (\$4.1 billion), Ireland (\$2.4 billion), France (\$2.4 billion) and the Netherlands (\$1.2 billion). These six nations accounted for 81% of U.S. spending on R&D in Europe in 2014.
- » In the U.S, R&D expenditures by majority-owned foreign affiliates totaled \$57 billion in 2014. R&D spending by European affiliates totaled \$42 billion, representing 75% of all R&D performed by majority-owned foreign affiliates in the United States.
- » Swiss-owned R&D in the U.S. totaled \$10.6 billion in 2014, a quarter of total European affiliate R&D in the United States. British affiliates accounted for 17.3%, German for 16.8% and French for 16%.

xii THE TRANSATLANTIC ECONOMY 2017

NO MORE "BUSINESS AS USUAL"

he refrain "what a difference a year makes" does not even begin to capture the tectonic shifts in the transatlantic economy since our last annual survey. The decision by the United Kingdom to quit the European Union ("Brexit") and the election of Donald Trump, an anti-establishment economic nationalist, as the 45th president of the United States, has rocked the very foundation of the transatlantic partnership at a time when the European Union is besieged by a daunting array of simultaneous challenges, from terrorism and refugee streams to tensions with Russia, turmoil across neighboring North Africa and the Middle East, and populist pressures at home.

The entire global economy has been thrown off kilter by the stunning events of the past year. The liberal economic order of the past seven decades now rests on some uncertain transatlantic foundations.

Brexit and the Transatlantic Triangle

British Prime Minister Theresa May has made it clear that her government intends to take the UK out of the European Union (EU) and to end its participation in the EU's Single Market for goods, services, people and capital as well as from the customs union for goods. She will not pursue partial or associate EU membership, nor will she seek special arrangements similar to those Norway and Switzerland have with the EU.

Next Steps for Britain

The UK must not only negotiate its exit from the EU, it will also have to do three things that will affect U.S. and wider European economic interests. First, it will have to replace the EU's common external tariff with its own customs tariff, and will also need to submit new tariff commitments for both goods and services at the World Trade Organization (WTO). Second, it will negotiate new trade arrangements between the UK and the EU 27. Third, it will want to negotiate new trade arrangements with the United States as well as many other non-EU countries.

Since the UK government does not seek to maintain its participation in the EU's Single Market, it will need to negotiate a new trade and investment agreement with the EU. Given the complicated issues and procedures involved, it is likely that such a new agreement would only take effect sometime in the middle of the next decade. This means there is likely to be a period of transition that could last as much as six years. Both parties will also have to negotiate trade and commercial arrangements for this transitional period.

A future UK-EU trade arrangement is unlikely to simply replicate UK access to the Single Market. The terms are likely to be less advantageous. While tariff-free access for goods is likely, firms based in the UK are likely to face some local content requirements within the EU. It is unlikely that there will be tariff-free access for services. UK financial services in particular are likely to lose their current right to "passport" financial services to the rest of the EU. Each of these provisions — as well as related provisions to be negotiated during the transition period — are likely to affect U.S. companies and banks with affiliates in the UK.

What do these developments mean for the United States and a U.S.-UK deal?

First, EU rules mean that London cannot legally begin negotiating a trade deal with Washington before the UK leaves the EU, which at the earliest will be March 2019. When Washington sets out to negotiate a formal bilateral deal with the UK, it will want to understand the UK's new WTO commitments and the nature of UK-EU transitional arrangements following Brexit, as well as London's end goals with regard to a deal with the UK's largest trade partner, the EU. This will all take time.

However, Washington and London can and are likely to move ahead with two types of discussions. Initially, the two sides intend to start on what the White House and the Prime Minister's office are calling a "trade negotiation agreement" that identifies potential stumbling blocks and scopes what could be done before the UK leaves the EU. Based on these discussions, U.S.-UK "shadow" negotiations could create a basic framework for an agreement once such an agreement can be negotiated

officially, and to understand how UK-EU arrangements would also affect U.S.-UK considerations during what may be a six-year transitional period. That would mean getting a jump start on the negotiations while respecting the Brexit and WTO processes.

Where Does Europe Fit?

The United Kingdom is a critical economic partner for the United States, and the U.S. should ensure that bilateral ties are strengthened, rather than disrupted, by Brexit. But America's significant commercial and financial presence in the UK has been premised in large part on UK membership in the European Union - the largest, wealthiest and most important foreign market in the world to U.S. companies. For decades, the UK has served as a strategic gateway to the European Union for U.S. firms and financial institutions. The primary motivation of many U.S. companies to invest in the UK has not been to serve only the UK market but to gain access to the much bigger EU Single Market. Similarly, many U.S. banks and financial institutions have relied on "passporting" via London to access the Single Market. U.S. affiliates based in the UK export more to the rest of Europe, in fact, than U.S. affiliates based in China export to the rest of the world.

Just as the U.S. has an interest in ensuring that Brexit does not damage its strong commercial interests with other European countries, so too does the United Kingdom. The UK exports almost half of its goods and services to the EU — twice as much as to the U.S.

In short, as the UK and the U.S. pursue their exploratory discussions over a new set of economic arrangements, each is likely to have its own economic relationship with the EU in mind. Since many U.S. companies are based in the UK because of its role as a gateway to the Single Market, U.S. negotiators will want to know how open, wide and strong that gateway will be after Brexit. And while the UK will want to move quickly ahead with a deal with the U.S., it is also likely to condition its efforts on the nature of its parallel negotiations with the EU.

The Negotiations Triangle

Brexit has huge implications for each point on the transatlantic triangle — relations between the UK and the EU, links between the UK and the U.S., and ties between the U.S. and the EU. The data we present in this annual survey underscore the vital interest each of the three major actors has in ensuring that each leg of this transatlantic stool remains strong and sturdy, particularly as the winds of global competition intensify.

What would be the major issues in a U.S.-UK deal?

Agreeing on reductions in traditional trade tariffs is not likely to be very troublesome, since most tariffs are already quite small, with a few notable exceptions, such as agriculture. The much bigger gains from a bilateral deal would come from

- » reducing barriers to services, the "sleeping giant" of the transatlantic economy and where job gains are likely to occur;
- » recognizing that various regulatory procedures in one country essentially conform or are equivalent to those in the other country;
- » pioneering standards in new economic areas that could push the global frontier.

Keeping this in mind, in each of this tracks both the U.S. and the UK have more to gain from achieving some agreement with the EU than simply with each other, each will want to ensure that whatever agreements they reach with each other serve to strengthen, rather than disrupt, their more significant commercial connections with the EU. Similarly, the EU will want to ensure that a U.S.-UK agreement, as well as any separate arrangements it may advance with the U.S. and with the UK, will enhance its own economic ties with two of its most significant economic partners.

The intertwined nature of UK-EU, U.S.-UK, and U.S.-EU negotiations can be best understood by looking at financial services. When the UK leaves the EU, financial services institutions based in the UK will lose their "passport" to provide services across the Single Market. This will not only disrupt the UK financial services industry. Many U.S. banks and other financial services companies established a presence in the UK to take advantage of passporting via the City of London to access the Single Market. Unless similar provisions are incorporated in any new UK-EU arrangements, many of these U.S. firms will probably choose another entry point to access the Single Market in the future. This will make a huge difference with regards to London's role as a financial hub, may accelerate the rise of other European financial centers, for instance Frankfurt, and will reinforce U.S. interest in strong and predictable financial services procedures with the EU. It will also affect the U.S. approach to financial services in any U.S.-UK arrangement. The EU has established an "equivalence" regime that extends limited access rights to non-EU countries, such as the U.S., that have rules that have been deemed "equivalent," but this is a relatively new and somewhat inconsistent approach with rights that are weaker than those granted under full "passporting."

With these considerations in mind, U.S.-UK discussions could productively focus on three lines of discussion/negotiation: market access, regulatory cooperation, and 'rules'.

- » Market access discussions would focus on goods trade and customs duties; services trade; public procurement; and clear, simple and aligned rules of origin.
- » Discussions regarding regulatory cooperation would address issues of regulatory coherence; technical barriers to trade; sanitary and phytosanitary questions; and good practice in a range of sectors, from medical devices and chemicals to vehicles, pharmaceuticals, and financial services.
- » Discussions of "rules" could encompass such issues as intellectual property, digital trade, or state-owned enterprises that could create standards as orientation for many other countries around the world.

U.S.-UK discussions along these three lines would be compatible with the way the UK is likely to conduct its relations with the EU, and would be similar to how the U.S. and the EU have been conducting their own negotiations. In sum, this three-track framework (market access, regulatory cooperation with individual sectoral agreements, rules) could offer common orientation at each point of the transatlantic triangle — U.S.-UK, UK-EU, and U.S.-EU.

A North Atlantic Initiative for Jobs and Growth?

This means that the U.S. and its partners should champion a multi-channel transatlantic economic initiative — a North Atlantic Initiative for Jobs and Growth — that generates synergies rather than competition among a

new U.S.-UK economic relationship and both post-Brexit UK-EU and U.S.-European ties. As the U.S. and UK move forward with their own discussions, the U.S. should also move ahead with a new agenda with its own European allies and partners as well.

To complete the negotiations triangle, the United States and the EU need to assess prospects for their own trade and investment framework. An immediate revival of the U.S.-EU Transatlantic Trade and Investment Partnership (TTIP) is unlikely, given a series of important European elections in 2017 in which trade is likely to be a contentious issue, as well as the fact that the two parties failed to complete negotiations on a Transatlantic Trade and Investment Partnership (TTIP) during President Barack Obama's term, and that President Trump has canceled U.S. participation in the Trans-Pacific Partnership (TPP), initiated efforts to renegotiate NAFTA with Mexico and Canada, and has been cool to ambitious bilateral efforts with the EU, which he calls "the consortium."

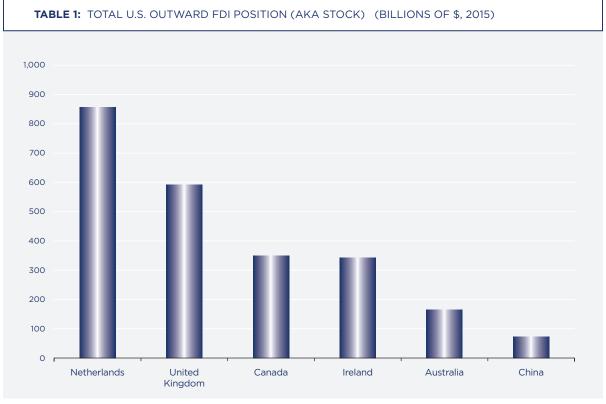
But at an early date the United States and the EU could issue a political statement affirming the value of transatlantic economic ties and a mutual commitment to strengthen the transatlantic economy, and use the Transatlantic Economic Council to move forward in areas where progress has already been registered or is likely.

A multi-channel transatlantic economic initiative that generates synergies rather than competition between a U.S.-UK trade agreement and both post-Brexit UK-EU and U.S.-European ties is ambitious. It will be tough to manage and conclude. But the potential payoff is high, and the geostrategic impact of such an initiative could be as profound as the direct economic benefits.

The Economic Special Relationship

The United Kingdom is a critical economic partner for the United States. Bilateral trade flows are strong. In 2015 the United States exported \$123.5 billion in goods and services to the UK, and imported \$111.5 billion worth of British goods and services. The United States is Britain's largest export destination after the EU.

U.S.-UK trade is significant. But the real driver of the British-American economy is investment. In 2015, U.S. foreign direct investment in the UK totaled a record \$593.0 billion and UK foreign direct investment in the U.S. totaled \$483.8 billion. Estimated sales of American affiliates in the UK and British affiliates in the U.S. totaled more than \$1.3 trillion. The UK accounted for 22% of overall global U.S. assets outside the United States. U.S. investment flows to the UK rose by nearly 30% in the first nine months of 2016, compared with the same period a year ago. UK affiliates domiciled in the United States improved the U.S. trade balance by exporting \$73 billion worth of goods from the U.S. in 2014.

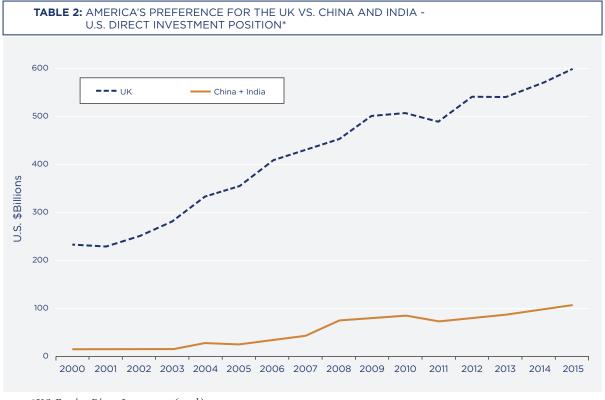


U.S. affiliates employed almost 1.4 million workers in the UK while UK affiliates employed roughly 1.1 million Americans, according to 2015 estimates. British firms were the #1 source of onshored jobs in 25 of the 50 U.S. states in 2014.

After the Netherlands, America's corporate stakes in the United Kingdom are among the deepest in the world (Table 1). Totaling \$593 billion in 2015, the last year of available data, America's capital stock in the UK is more than double the combined U.S. investment in South America, the Middle East and Africa (\$244 billion). Total U.S. investment stock in China was just 13% of the comparable figure in the United Kingdom in 2015.

Even when the U.S. investment position of China and India are combined—roughly \$103 billion in 2015—the figure is just 17% of total U.S. investment in the United Kingdom (Table 2).

Wealthy consumers, respect for the rule of law, the ease of doing business, credible institutions, membership to the European Union—all of these factors, and more, have long made the UK a more attractive place to do business for American firms than either China or India.



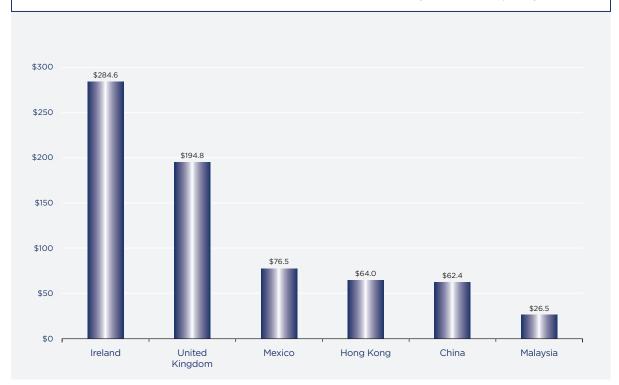
*U.S. Foreign Direct Investment (stock). Source: Bureau of Economic Analysis. Data as of January 2017.

TABLE 3: OPERATIONS OF U.S. FOREIGN AFFILIATES IN THE UK*

	Billions of \$	% of Global Total	Rank
Total Assets	5,392	21.6%	1
Value Added (Output of Affiliates)	172	11.6%	1
R&D	6	12.1%	2
Capital Expenditures	22	9.1%	2
Foreign Affiliate Sales	668	10.4%	2
Employment (thousands of employees)	1,349	9.8%	2
Manufacturing (thousands of employees)	311	5.8%	5

*Data for Majority-Owned Foreign Affiliates, 2014. Source: Bureau of Economic Analysis Data as of January 2017.

TABLE 4: CORPORATE AMERICA'S FAVORITE EXPORT PLATFORMS* (BILLIONS OF \$, 2014)



*Exports of U.S. Foreign Affiliates. Source: Bureau of Economic Analysis. Data as of 2016.

TABLE 5: WHERE THE PROFITS ARE MADE IN THE WORLD: TOP FOREIGN MARKETS FOR U.S. FOREIGN AFFILIATE INCOME

Rank	Country	2000-3Q2016 (\$ Billions)	% of World Total*
1	Netherlands	798.7	17.1%
2	United Kingdom	418.6	9.0%
3	Ireland	410.5	8.8%
4	Switzerland	280.9	6.0%
5	Singapore	255.7	5.5%
6	Japan	147.6	3.2%
7	Mexico	136.8	2.9%
8	Australia	117.2	2.5%
9	China	100.5	2.2%
10	Hong Kong	89.4	1.9%

^{*}Excluding Caribbean and Other Western Hemisphere.

Source: Bureau of Economic Analysis.

Data as of January 2017.

Whatever the metric—total assets, R&D expenditures, foreign affiliate sales and even affiliate employment—the United Kingdom is a key pillar of America's global economic infrastructure and a key hub for the global competitiveness of U.S. firms. Since 2000, the UK has accounted for nearly 9% of the cumulative global income of U.S. affiliates, a proxy for global earnings. The UK ranks number one in the world in terms of U.S. foreign affiliate value added (or output). The output of U.S. affiliates in the UK totaled \$172 billion in 2014, about the same as the entire GDP of Vietnam or Ukraine (Table 3). U.S. affiliates in the UK produced three times more than U.S. affiliates in China.

The bulk of U.S. foreign affiliate sales in the UK, in other words, are for the local market, but the export-propensity of U.S. affiliates in the UK is hardly inconsequential. Indeed, while outranked by nearby Ireland, U.S. affiliate exports from the UK still totaled over \$190 billion in 2014, the last year of available data. That figure is more than double U.S. affiliate exports from Mexico and over three times greater than U.S. affiliate exports from China—two lower-cost nations more closely associated with U.S. affiliate exports (Table 4).

On a standalone basis, what U.S. affiliates export from the UK each year is greater than the total exports of most nations. Such is the export-intensity of U.S. affiliates in the UK; how U.S. firms leverage the UK's access to the European Union is best seen through trade flows.

ALTERNATIVE FACT:

Despite the Turmoil, the Transatlantic Economy is Picking Up Steam

opulist anger on both sides of the Atlantic has uprooted the political establishment of the transatlantic economy. The common denominator is a fierce desire to upend the status quo, to proclaim that "business as usual" just does not cut it anymore. Ironically, these populist leaders have had the most influence in the two countries most often referenced as the standard bearers of open and free trade and investment, and the advocates of the primacy of the free markets—the United States and the United Kingdom. With elections scheduled in the Netherlands, France and Germany this year, the populist wave could spread to other parts of the transatlantic partnership.

It is too early to proclaim that the present era of globalization is over. Retreating yes, but to what extent remains uncertain. More certain is this: globalization—or unfettered cross-border flows of goods, services, people, and data—is not a given any more. Not in a world of rampant political populism-cum-nationalism. A frustrated and moody global electorate has become less supportive and more hostile towards open borders, posing key risks notably to the global architects, champions and primary beneficiaries of the international liberal economic order of the past seven decades: the United States and Europe.

Simply put, without access to each other's resources, many American and European firms would be a fraction of themselves in terms of market capitalization and earnings. The same holds true for many transatlantic economies, and their shareholders.

Take the United States, for instance. Supported by globalization, the U.S. economy has roughly tripled in size since 1990, while manufacturing output has doubled; meanwhile, U.S. exports of goods and services have increased nearly five-fold over the past quarter century. By most metrics, the U.S. has flourished in the age of globalization.

So too has Europe. Open borders and the free movement of goods, labor, and capital have helped to boost growth and prosperity across the continent with a few exceptions. The enlargement process has been largely successful, bringing more and more countries into the European Union and its Single Market, now one of the largest and wealthiest economic entities in the world.

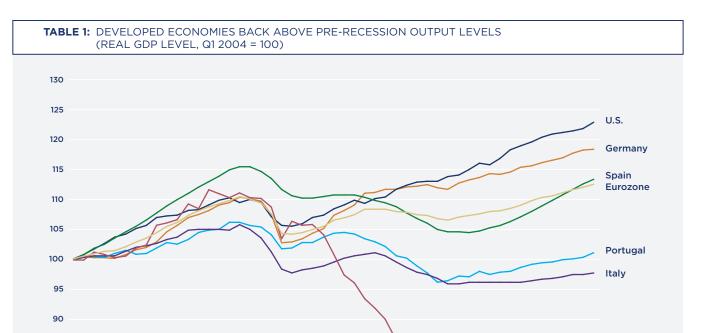
That's not to say that there are not serious flaws to globalization. Widening income inequality, stubbornly high unemployment levels, stagnant wages due to technological advances, fears over immigration—all of these factors have combined to swell the level of economic insecurity in the transatlantic partnership and opened the door for more populist, nationalist politicians. The simple fact that greater cross-border connectivity has made the transatlantic economy larger, more competitive, and wealthier, while boosting the fortunes of stakeholders on both sides of the Atlantic, has all but been forgotten in the alarming and blunt narrative of today.

A Good News Story in a Bad News Environment

Ironically, lost in the political earthquakes of the past year is the counterintuitive reality that the economic prospects for the United States, Europe, and the transatlantic economy overall are improving.

In the United States, one of the longest economic expansions in modern history continues, with the economy expanding by 1.6% for calendar year 2016. The U.S. economy is more than 10% larger than when it emerged from recession in June 2009, while the jobless rate has been cut in half since piercing 10% in 2009.

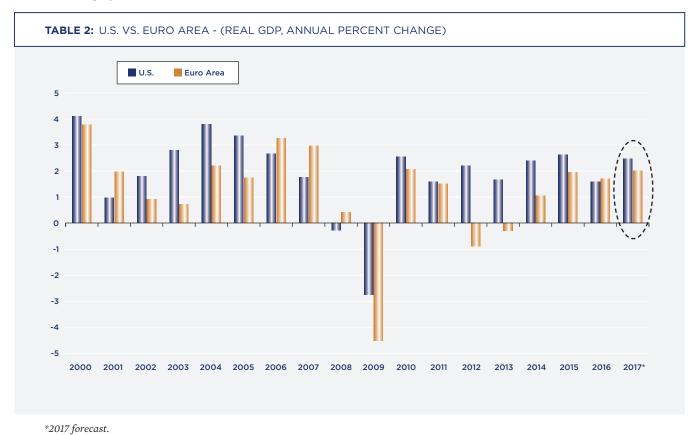
Output across Europe has climbed as well since the crisis, with some notable exceptions, like Greece, mired in recession. In general, Europe ended 2016 on an economic strong note. For 2016 as a whole, growth in the eurozone



Source: Haver Analytics. Data through Q3 2016.

Data as of February 2017.

Sources: IMF; Financial Times; Center for Transatlantic Relations.



Greece

reached 1.7%, slightly outpacing the 1.6% registered by the United States.¹ Initial estimates show the German economy expanding by 1.8% last year, with the United Kingdom (2%), Spain (3.2%) and the Netherlands (2.1%) posting even stronger levels of growth than either the United States or Germany.

Meanwhile, unemployment rates have declined across most of Europe for the past year, with eurozone unemployment dropping below 10%, to 9.8%. That is still high, but a huge improvement from the much higher rates of the post-crisis era. Job creation for the eurozone accelerated to a near nine-year record in January 2017, while the rate of output growth maintained a five and a half-year high.

In fact, despite considerable turbulence, including uncertainties generated by Brexit, the eurozone economy is proving resilient. It has registered 14 consecutive quarters of growth through 2016 and business confidence at the turn of 2017 was at its highest level in six years.

Given all of the above, the transatlantic gaps in growth and employment we highlighted last year have all narrowed in the past year. So too has the U.S.-EU trade gap. After widening six years in a row, the U.S. merchandise trade deficit with the European Union declined by \$9 billion last year to \$146 billion. U.S. exports remained relatively flat at \$270 billion, while U.S. imports slipped 3%, totaling \$417 billion. The upshot: a 6% decline in the merchandise trade deficit with the EU, the first decline of the post-crisis era.

Most of the decline in the U.S. trade deficit in 2016 was driven by a shift in the composition of trade between America and two of Europe's largest export markets: the United Kingdom and Germany. These nations were among the top destinations for U.S. goods exports, with the United

States exporting \$55 billion to the UK and \$49 billion to Germany in 2016. Likewise, U.S. imports from these two countries were the largest of the EU, and have in recent years exceeded the value of U.S. exports. However, over the past year the U.S. deficit with Germany declined by about \$10 billion to \$65 billion, while the trade balance with the UK swung from a deficit in 2015 to a surplus in 2016.

Other notable exporters include France and Ireland, each exporting over \$45 billion worth of goods to the United States last year. However, while Ireland continues to be a top European exporting nation to the United States, U.S. exports to Ireland are relatively small, registering at just \$9.6 billion in 2016. This reflects the significant presence of U.S. multinational companies with operations in Ireland, boosting affiliate sales in Ireland. In 2016 the U.S. trade deficit with Ireland increased by about 18%, with the U.S. importing \$36 billion more goods from Ireland than it exported.

Transatlantic trade still stands as the largest trading relationship, even when compared to America's trade ties with China. Based on the latest available data, both U.S. imports and exports from Europe comprised about 22% of U.S. global trade totals. Meanwhile, Sino-American trade relations are heavily skewed, favoring a Chinese trade surplus, as U.S. imports from China represent 21% of America's total global imports, but U.S. exports to China are only 8% of the global total.

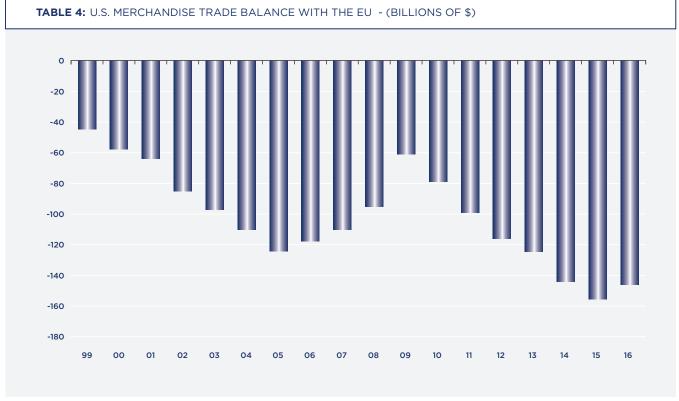
In the end, eight years after the global economic meltdown of 2008-09 the transatlantic economy is gradually healing, albeit slowly. There is still a great deal of work to be done, notably in the face of rising protectionism on both sides of the Atlantic. That said, the transatlantic economy in 2017 remains the largest and wealthiest of the global economy, and home to the largest skilled labor force in the world.

Endnotes

1. Chris Giles, "Eurozone economy quietly outshines the US," Financial Times, February 6, 2017.



*EU average monthly employment rate through November 2016. U.S. data for full year 2016. Source: OECD.



Source: United States Census Bureau.

JOBS, TRADE AND INVESTMENT:

Revisiting the Ties that Bind

he global economy still rests squarely on the shoulders of the transatlantic economy, with the combined output of the United States and the European Union accounting for roughly one-third of world GDP in terms of purchasing power parity in 2016. Even if one excludes the United Kingdom, the figure—31%—is still quite substantial.

The transatlantic economy is not only large, it is wealthy. It is a repository of innovation and technology advancement. And it is at the forefront of global foreign direct investment and global mergers and acquisitions activity. Taken together, U.S. and European exports to the world accounted for 27% of global exports in 2015, the last year of complete data; combined imports represented 31% of the world total. Meanwhile, the United States and Europe together accounted for 57% of inward stock of foreign direct investment (FDI) and a whopping 66% of outward stock of FDI. Each partner has built up the great majority of that stock in the other economy.

In the end, it is the U.S.-European partnership that drives global trade, investment and capital flows. No commercial artery in the world is as large as the investment artery forged between the United States and Europe: total transatlantic foreign affiliate sales topped an estimated \$5.5 trillion in 2015.

Of course, emerging markets are making a big impact on the global economy. Growth rates are still above the global average in many nations populated with young consumers who desire Western goods and services. The technological skill levels of many of these countries are now on par with many developing nations. Rising markets offer new sources of supply (labor) and demand (consumers) for U.S. and European firms. It is only natural for American and European firms to build out their in-country presence in these rising nations.

Nonetheless, notwithstanding all the hype about the "Rest," rather than the "West," it is the emerging markets that are today's laggards—not leaders—of the global economy. For both cyclical and structural reasons, growth has slowed over the past year in Brazil, Turkey, South Africa and even China and India. Russia is just now emerging from recession, as are other commodity-dependent nations.

The simple fact of the matter is that emerging markets are still not capable of driving global growth in a sustainable fashion—which underscores why the transatlantic partnership remains so important to not only the United States and Europe, but also to the world. The U.S.-European partnership is too big and too important to fail, as underscored by Tables 1 and 2.

In general, the "Rise of the Rest" is a healthy dynamic for the global economy. But this dynamic does not signal a retreat on the part of U.S. and European firms from the transatlantic economy. It's more about global rebalancing, with many transatlantic firms working to deepen their footprint in the rising economies, replicating the deep ties that are the hallmark of the U.S.-EU relationship. In fact, U.S. and European firms are using global value chains to integrate the value added other nations can contribute to particular products and services into transatlantic bonds of investment and trade. In the end, however, the geoeconomic base of their global operations remains the United States and Europe, as becomes clear if we look more closely at how companies really operate in the global economy.

The Ties That Bind—Quantifying the Transatlantic Economy

The United States and Europe are bound together by the activities of foreign affiliates – the foot soldiers of the transatlantic partnership who over past decades have built a formidable economic foundation.

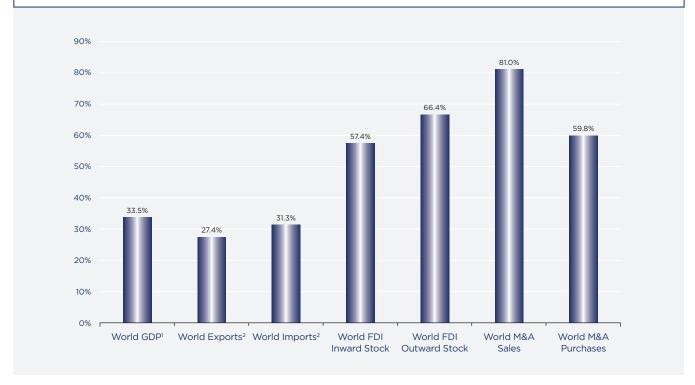


TABLE 1: THE TRANSATLANTIC ECONOMY VS. THE WORLD - SHARE OF WORLD TOTAL

Sources: UN, IMF, figures for 2015.

1. Based on PPP estimates.

2. Excluding intra-EU, Norway, Switzerland and Iceland trade.

In our annual surveys we examine eight key indices that offer a clear picture of the "deep integration" forces binding the U.S. and Europe together. This chapter updates those indices with the latest available data and our estimates. Each metric, in general, has ebbed and flowed with the cyclical swings of transatlantic economic activity, but has nevertheless grown in size and importance over the past decade.

1. Gross Product of Foreign Affiliates

As standalone entities, U.S. affiliates in Europe and European affiliates in the United States are among the largest and most advanced economic forces in the world. For instance, the total output of U.S. foreign affiliates in Europe (an estimated \$748 billion in 2015) and of European foreign affiliates in the U.S. (estimated at \$576 billion) was greater than the total gross domestic product of most nations. Combined, transatlantic affiliate output—\$1.3 trillion—was larger than the output of such nations as the Netherlands, Turkey or Indonesia.

By our estimation, European affiliate output in the United States rose by around 3.7% in 2015, while U.S. affiliate output in Europe rose by a slightly faster 4.3%. European affiliate output in the United States has recovered and

expanded since falling to a cyclical low of \$391 billion in 2009, increasing by around 47% between 2009 and 2015. U.S. affiliate output in Europe has also recovered from its pre-crisis lows.

We expect further gains in U.S. foreign affiliate output in the near term, supported by Europe's improving economic performance over the balance of 2016 and into 2017. European affiliates engaged in the United States are operating in one of the most dynamic nations in the world and are expected to boost their near-term output as well.

On a global basis, the aggregate output of U.S. foreign affiliates reached \$1.5 trillion in 2015, with Europe (broadly defined) accounting for around 49% of the total. The United Kingdom, where U.S. investment ties are deepest, accounted for roughly 24% of total affiliate output in Europe in 2015.

Looking at actual figures for 2014 from the U.S. Bureau of Economic Analysis, U.S. affiliate output in Europe (\$717 billion) was roughly double affiliate output in all of Asia (\$363 billion). While affiliate output in places like China (\$66 billion in 2014) and India (\$26 billion) has increased over the past decade, what U.S. affiliates produce in these

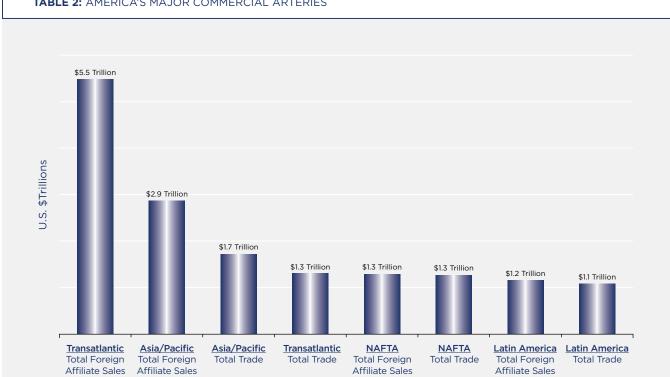
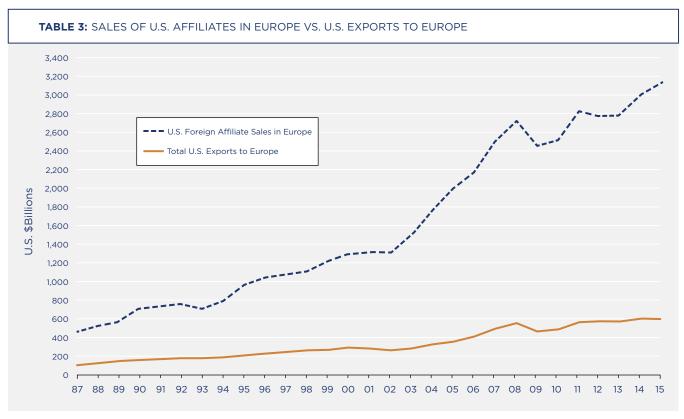
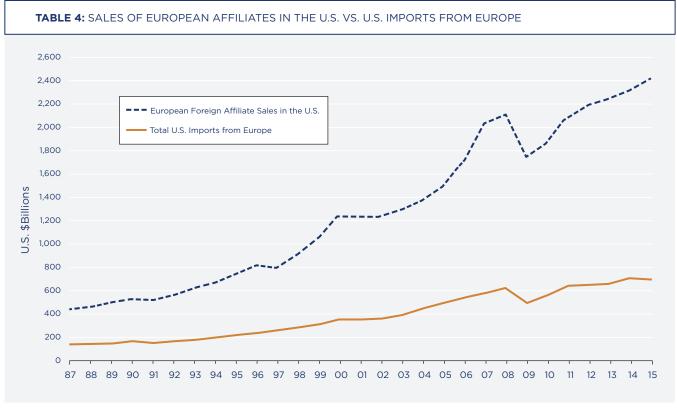


TABLE 2: AMERICA'S MAJOR COMMERCIAL ARTERIES

Foreign Affiliate Sales: Estimates for 2015. Total Trade: Data for goods & services, 2015. Source: Bureau of Economic Analysis.



Source: Bureau of Economic Analysis. Majority-owned non-bank affiliates data: 1987 - 2008. Majority-owned bank and non-bank affiliates: 2009 - 2015. Foreign Affiliate Sales: Estimates for 2015.



Source: Bureau of Economic Analysis Majority-owned non-bank affiliates: 1987 - 2006. Majority-owned bank and non-bank affiliates: 2007 - 2015. Foreign Affiliate Sales: Estimates for 2015.

two emerging Asian giants pales in comparison to affiliate output in the United Kingdom (\$172 billion), Germany (\$96 billion), and Ireland (\$80 billion).

In the U.S., meanwhile, European affiliates are major economic producers in their own right, with British firms of notable importance. The U.S. output of British companies reached an estimated \$155 billion in 2015, more than a quarter of the European total. For the same year, output from German affiliates operating in the United States totaled \$103 billion, or roughly 18% of the total.

Beyond Europe, only Canada and Japan have any real economic presence in the U.S. Japanese affiliate output totaled approximately \$120 billion in 2014, the last year of actual data, while Canadian affiliate output totaled \$68 billion. Overall, U.S. affiliates of foreign multinationals contributed roughly \$869 billion to U.S. aggregate production in 2014, with European affiliates accounting for nearly two-thirds of the total.

2. Assets of Foreign Affiliates

The United States and Europe are each other's largest and most important foreign investor. According to the latest figures from the Bureau of Economic Analysis, U.S. foreign assets in Europe totaled \$15.1 trillion in 2014, representing roughly 60% of the global total.

For 2015, we estimate that U.S. foreign assets in Europe reached \$15.7 trillion, close again to 60% of the global total. Within the region, the bulk of U.S. assets was in the United Kingdom, exceeding \$5 trillion, or around 22% of the global total.

U.S. assets in the Netherlands (around \$2.7 trillion) were the second largest in Europe in 2015. America's significant presence in the Netherlands reflects its strategic role as an export platform/distribution hub for U.S. firms doing business across the continent. More than half of affiliate sales in the Netherlands are for export, namely within the EU.

Meanwhile, America's asset base in Germany (\$785 billion in 2014) was roughly 20% larger than its asset base in all of South America. America's asset base in Poland, the Czech Republic and Hungary (roughly \$140 billion) was much larger than corporate America's assets in India (\$121 billion). America's assets in Ireland (\$1.3 trillion in 2014) are much larger than either those in France (\$405

billion), Switzerland (\$781 billion) and light years ahead of those in China (\$360 billion).

As for foreign-owned assets in the United States, Europe's stakes are sizable and significant. Total assets of European affiliates in the U.S. were valued at roughly \$8.4 trillion in 2015 by our estimates. The United Kingdom ranked first, followed by Germany, Switzerland and French firms. In 2014, the last year of available data, European assets accounted for nearly two-thirds of total foreign assets in the United States.

3. Affiliate Employment

U.S. and European foreign affiliates are the major source of onshored jobs on each side of the Atlantic. In fact, they employ more workers in the United States and Europe than in any other place in the world. Despite political speeches and media anecdotes about U.S. companies decamping for low-cost locales abroad, most foreign workers on the payrolls of U.S. foreign affiliates are employed in developed nations, notably Europe.

U.S. foreign affiliate employment in Europe has increased steadily in this century, with affiliate employment in Europe rising from 3.7 million workers in 2000 to 4.5 million workers in 2014, the last year of available data. That represents a 22.4% increase. By our estimates, we forecast that U.S. foreign affiliates in Europe employed 4.7 million workers in 2015 - 140,000 more than in 2014.

While aggregate job numbers continue to rise, U.S. affiliate manufacturing employment in Europe has fallen since 2000. Even here, however, we have detected a rebound for some countries and some industries.

Since the start of the century, U.S affiliate manufacturing employment dropped from 1.9 million in 2000 to 1.8 million in 2014, a slight drop, but higher than in 2013. The largest employment declines were reported in the United Kingdom, with the total manufacturing work force falling from 431,000 in 2000 to 311,000 in 2014. That 2014 figure, however, is 13,600 more than in 2013. During this same period, U.S. affiliate manufacturing employment in France dropped from 249,000 to 196,000. But here again, the 2014 figure was 10,500 higher than in 2013. Meanwhile, U.S. affiliate manufacturing employment in Germany of 386,000 in 2014 was just slightly below its level of 388,000 in 2000, and almost 60,000 higher than in 2013, reflecting the strong German manufacturing economy. And Poland continues to be profiting significantly from U.S. affiliate operations – U.S. affiliate manufacturing employment in Poland more than doubled between 2000 and 2014, rising from 51,000 to over 113,000, and it continues on an upward trend.

On a global basis, U.S. majority-owned affiliates (including banks and non-bank) employed roughly 14 million workers in 2014, with the bulk of these workers-roughly 33%—toiling in Europe. That share is down from 41% in 2008, with the decline reflecting the cyclical slowdown in Europe over the past few years and the fact that a rising share of U.S. overseas capacity is expanding at a faster pace in the faster-growing emerging markets versus slow-growth developed nations. Another factor at workmore and more U.S. firms are opting to stay home due to competitive wage and energy costs, as opposed to shipping more capacity abroad.

The bulk of affiliate employees in Europe are domiciled in the United Kingdom, Germany and France. Meanwhile, U.S. majority-owned firms are on balance hiring more people in services activities than in manufacturing. The latter accounted for just 41% of total U.S. foreign affiliate employment in Europe in 2014. The top industry in terms of manufacturing employment was transportation, with U.S. affiliates employing nearly 392,000 workers, followed by chemicals (300,000). Wholesale employment was among the largest sources of services-related employment, which includes employment in such activities as logistics, trade, insurance and other related functions.

Although services employment among U.S. affiliates has grown at a faster pace than manufacturing employment over the past decade, U.S. affiliates employed more manufacturing workers in Europe in 2014 (1.8 million) than in 1990 (1.6 million). This reflects the EU enlargement process, and hence greater access to more manufacturing workers, particularly in a large country like Poland, and the premium U.S. firms place on highly skilled manufacturing workers, with Europe one of the largest sources in the world.

While the aggregate number of U.S. manufacturing jobs in Europe has increased over the past decades, the geographic distribution of such jobs has shifted. In general, the shift has been towards low-cost locations like the Czech Republic, Poland and Hungary, at the expense of the UK, Germany and France. The later three nations just mentioned accounted for 67% of total U.S. affiliate manufacturing employment in Europe in 1990. By 2014, however, their collective share had dropped to 48%. The United Kingdom took the biggest hit, with the UK's share of manufacturing employment accounting for just 17% of the total in 2014, versus a share of 29% in 1990. Meanwhile, the combined share of U.S. affiliate manufacturing employment in Poland, the Czech Republic and Hungary jumped from virtually zero to nearly 11% in 2014, indicative of the eastern spread of U.S. European operations.

16

This overall decline of the Big Three in terms of U.S. affiliate manufacturing employment belies the fact, however, that such employment in Germany has stabilized and rebounded, as noted earlier. To provide some perspective, the manufacturing workforce of U.S. affiliates in Germany of 386,000 in 2014 was greater than the number of U.S. affiliate manufacturing workers employed in Brazil (340,000) and India (207,000). Yet it falls short of those employed in China (753,000).

When it comes to affiliate employment, trends in the United States are similar to those in Europe. Despite stories on the continent about local European companies relocating to lower cost locales in central Europe and Asia, most foreign workers of European firms are employed in the United States. Based on the last figures, European majority-owned foreign affiliates directly employed roughly 4.1 million U.S. workers in 2014 — roughly 400,000 workers less than U.S. affiliates employed in Europe. In 2014, the top five European employers in the U.S. were firms from the United Kingdom (1.1 million), Germany (672,000), France (574,000), Switzerland (461,000) and the Netherlands (416,000). European firms employed roughly two-thirds of all U.S. workers on the payrolls of majority-owned foreign affiliates in 2014.

According to our estimates, UK affiliates created 38,000 new jobs and German affiliates 24,000 new jobs in the United States in 2015. French firms added another 20,000 new jobs and Dutch firms 15,000 new jobs in the United States. Italian companies added 4,000 workers and Spanish companies another 2,600 workers in the United States.

In the aggregate, the transatlantic workforce directly employed by U.S. and European foreign affiliates in 2014 was roughly 8.7 million strong, up roughly 5% from the year before. In 2016, modest gains in employment were most likely achieved on both sides of the pond, with employment levels in the United States most likely rising at a faster pace than in Europe. That said, as we have stressed in the past, these figures understate the employment effects of mutual investment flows, since these numbers are limited to direct employment, and do not account for indirect employment effects on nonequity arrangements such as strategic alliances, joint ventures, and other deals. Moreover, foreign employment figures do not include jobs supported by transatlantic trade flows. Trade-related employment is sizable in many U.S. states and many European countries.

In sum, direct and indirect employment remains quite large. We estimate that the transatlantic workforce numbers some 13-15 million workers. Europe is by far the most important source of "onshored" jobs in America, and the United States is by far the most important source of "onshored" jobs in Europe.

4. Research and Development (R&D) of Foreign Affiliates

The United States and Europe no longer have a monopoly on global R&D. As the globalization of R&D has gathered pace this decade, more and more global R&D expenditures are emanating from China, South Korea, and Japan—or Asia in general. There are no boundaries to innovation thanks to the internet and falling global communication costs. Both dynamics have helped to spawn more R&D from the developing nations, with South Korea and China emerging as leaders.

While governments and corporations are the main drivers of R&D spending, foreign affiliates of multinationals are also in the thick of things. In fact, foreign affiliate R&D has become more prominent over the past decades as firms seek to share development costs, spread risks, and tap into the intellectual talent of other nations. Alliances, cross-licensing of intellectual property, mergers and acquisitions, and other forms of cooperation have become more prevalent characteristics of the transatlantic economy in the past decade. The internet, in particular, has powered greater transatlantic R&D. The complexity of scientific and technological innovation is leading innovators to partner and share costs, find complementary expertise, gain access to different technologies and knowledge quickly, and collaborate as part of "open" innovation networks. Crossborder collaboration with foreign partners can range from a simple one-way transmission of information to highly interactive and formal arrangements. Developing new products, creating new processes, and driving more innovation-all of these activities result from more collaboration between foreign suppliers and U.S. and European firms.

That said, bilateral U.S.-EU flows in R&D are the most intense between any two international partners. In 2014, the last year of available data, U.S. affiliates sunk \$31 billion on research and development in Europe, up slightly from the prior year, and a record annual total. On a global basis, Europe accounted for roughly 60% of total U.S. R&D in 2014. R&D expenditures by U.S. affiliates were the greatest in Germany (\$8.3 billion), the United Kingdom (\$6.3 billion), Switzerland (\$4.1 billion), Ireland (\$2.4 billion), France (\$2.4 billion) and the Netherlands (\$1.2 billion). These six nations accounted for 81% of U.S. spending on R&D in Europe in 2014.

TABLE 5: THE U.S. - EUROPEAN EMPLOYMENT BALANCE. THOUSANDS OF EMPLOYEES, 2015'

Country	European Affiliates of U.S. Companies	U.S. Affiliates of European Companies	Employment Balance
Austria	46.2	17.0	-29.2
Belgium	132.1	150.2	18.1
Czech Republic	95.0	0.0	-95.0
Denmark	45.9	35.5	-10.4
Finland	19.3	24.5	5.2
France	491.8	593.8	102.0
Germany	700.8	695.9	-4.9
Greece	18.2	2.5	-15.7
Hungary	71.8	0.1	-71.7
Ireland	125.0	225.0	100.0
Italy	224.0	130.9	-93.0
Luxembourg	21.3	20.9	-0.4
Netherlands	251.9	430.5	178.5
Norway	52.7	6.8	-45.9
Poland	182.6	0.9	-181.6
Portugal	31.5	0.6	-30.8
Romania	57.4	0.0	-57.4
Spain	185.6	77.2	-108.4
Sweden	74.8	210.9	136.1
Switzerland	107.6	473.4	365.8
United Kingdom	1,396.2	1,137.4	-258.9
Europe	4,690.9	4,259.6	-431.4

Note: Employment balance "+" favors the United States Source: Bureau of Economic Analysis

In the United States, meanwhile, expenditures on R&D performed by majority-owned foreign affiliates totaled \$57 billion in 2014, up slightly from the prior year. As in previous years, a sizable share of this R&D spending emanated from world-class leaders from Europe, given their interest in America's highly skilled labor force and world-class university system. Most of this investment took place among European firms in such research-intensive sectors as autos, energy, chemicals, and telecommunications. In 2014, R&D spending by European affiliates totaled \$42 billion, accounting for 74% of total foreign R&D spending in the United States.

By nation, Swiss-owned affiliates were the largest foreign source of R&D in the U.S. in 2014, with Swiss firms pumping some \$10.6 billion in R&D spending in the U.S. Swiss firms accounted for a quarter of the European total. British firms accounted for the second largest percentage of affiliate expenditures, with a 17.3% share in 2014.

Germany's share was close, at 16.8%, followed by France, 16.0%. As Table 6 highlights, some of the world's most innovative companies are domiciled in the U.S. and Europe.

5. Intra-firm Trade of Foreign affiliates

While cross-border trade is a secondary means of delivery for goods and services across the Atlantic, the modes of delivery-affiliate sales and trade-should not be viewed independently. They are more complements than substitutes, since foreign investment and affiliate sales increasingly drive cross-border trade flows. Indeed, a substantial share of transatlantic trade is considered intra-firm or related-party trade, which is cross-border trade that stays within the ambit of the company. Intrafirm or related party-trade occurs when BMW or Siemens of Germany sends parts to BMW of South Carolina or Siemens of North Carolina; when Lafarge or Michelin sends intermediate components to their plants mid-west, or when 3M ships components from its office products or communications sectors from St. Paul to affiliates in Germany or the UK.

The tight linkages between European parent companies and their U.S. affiliates are reflected in the fact that roughly 60% of U.S. imports from the European Union consisted of related-party trade in 2014. That is much higher than the related party imports from the Pacific Rim nations (around 43%) and South/Central America (42%) and well above the global average (51%). The percentage was even higher in the case of Ireland (91%) and Germany (70%).

Meanwhile, roughly one-third of U.S. exports to Europe in 2014 represented related-party trade, but the percentage is much higher for some nations. For instance, more than half of total U.S. exports to Belgium (55%) were classified as related-party trade. The comparable figure for the Netherlands was 46%, Germany was 33% and 24% for the United Kingdom.

6. Foreign Affiliate Sales

U.S. majority-owned foreign affiliate sales on a global basis (goods and services) totaled an estimated \$6.6 trillion in 2015, an increase of \$200 billion from the previous year. Total U.S. exports, in contrast, were \$2.3 trillion in 2015, or roughly one-third of foreign affiliate sales, and stagnant from the prior year. This growing gap underscores the primacy of foreign affiliate sales over U.S. exports. As we have noted many times before, one of the best kept secrets in Washington is how U.S. firms actually deliver goods and services to foreign customers.

As usual, Europe accounted for the bulk of U.S. affiliate sales in 2015. We estimate that U.S. foreign affiliate sales

^{*2015} Estimates. Majority-owned bank and non-bank affiliates.

TABLE 6: THE TOP 20 R&D SPENDERS

R & D Spending

2016	Company	2016, \$ Billions	Change from 2015	Headquarters Location	Industry
1	Volkswagen	13.2	2.7%	Germany	Automotive
2	Samsung	12.7	-3.0%	South Korea	Computing and electronics
3	Amazon	12.5	35.2%	United States	Software and Internet
4	Alphabet	12.3	24.9%	United States	Software and Internet
5	Intel Co	12.1	5.1%	United States	Computing and Electronics
6	Microsoft	12.0	5.8%	United States	Software and Internet
7	Roche	10.0	-3.2%	Switzerland	Healthcare
8	Novartis	9.5	-1.6%	Switzerland	Healthcare
9	Johnson & Johnson	9.0	6.5%	United States	Healthcare
10	Toyota	8.8	5.1%	Japan	Automotive
11	Apple	8.1	33.5%	United States	Computing and Electronics
12	Pfizer	7.7	-8.4%	United States	Healthcare
13	General Motors	7.5	1.4%	United States	Automotive
14	Merck	6.7	-6.6%	United States	Healthcare
15	Ford	6.7	0.0%	United States	Automotive
16	Daimler	6.6	4.5%	Germany	Automotive
17	Cisco	6.2	-1.4%	United States	Computing and Electronics
18	AstraZeneca	6.0	7.5%	Britain	Healthcare
19	Bristol-Myers Squibb	5.9	30.6%	United States	Healthcare
20	Oracle	5.8	4.8%	United States	Software and Internet
		179.4	6.3%		

Source: Bloomberg data, Capital IQ data, Strategy& analysis

in Europe topped \$3.1 trillion, up roughly 4% from the prior year. U.S. affiliate sales in Europe, by our estimates, amounted for roughly half of the global total, also an increase over the prior year.

Sales of U.S. affiliates in Europe were almost double the comparable figures for the entire Asian region in 2014, the last year of available data. Affiliate sales in the United

Kingdom (\$668 billion) were almost double total sales in South America. Sales in Germany (\$365 billion) were over two-thirds larger than combined sales in Africa and the Middle East.

Affiliate sales are also the primary means by which European firms deliver goods and services to customers in the United States. In 2015, for instance, we estimate

TABLE 7: RELATED PARTY TRADE, 2014

	US Imports: "Related Party Trade," as % of Total	US Exports: "Related Party Trade," as % of Total
European Union	60.0	32.1
Germany	69.8	32.5
France	45.0	29.7
Ireland	90.8	35.9
Netherlands	57.2	45.8
United Kingdom	50.8	24.2

Source: U.S. Census Bureau

that majority-owned European affiliate sales in the U.S. (\$2.4 trillion) were more than triple U.S. imports from Europe. Affiliate sales rose by 4% by our estimates. By country, sales of British firms were the largest (\$643 billion) in 2014, followed by Germany (\$466 billion), and the Netherlands (\$258 billion). For virtually all countries in Europe, foreign affiliate sales were easily in excess of their U.S. imports in 2014.

7. Foreign Affiliate Profits

Transatlantic profits have rebounded from the depressed levels of 2009, when the global financial crisis and ensuing

recession triggered a sharp downturn in affiliate income/earnings on both sides of the pond. In 2016, U.S. affiliate income in Europe rose to \$245 billion, close to the record reached in 2014. The figure for 2016 was more than one-third larger than the depressed levels of 2009, when affiliate income earned in Europe plunged to \$179 billion. Meanwhile, European affiliate income earned in the U.S. rose 9% last year, according to estimates.

Soft growth in Europe, along with the weak euro against the U.S. dollar, makes for a challenging earnings backdrop for U.S. foreign affiliates in Europe over the near term. That said, the region still accounts for the bulk of U.S. global foreign affiliate income, with the region accounting for roughly 63% of global income in the first nine months of last year. Europe, in other words, remains a very important market to U.S. multinationals. As a footnote, we define Europe here in very broad terms, including not only the EU28 but also Norway, Switzerland, Russia and smaller markets in central and Eastern Europe.

On a comparative basis, U.S. affiliate income from Europe is simply staggering, with foreign affiliate income in Europe—\$182 billion in the first nine months of 2016—more than the combined affiliate income of Latin America

TABLE 8: U.S. EARNINGS IN EUROPE (U.S. FOREIGN AFFILIATE INCOME FROM EUROPE) \$Billions Ś 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016*

Source: Bureau of Economic Analysis *Data for 2016 is estimate. (\$47 billion) and Asia (\$46 billion). It is interesting to note that combined U.S. affiliate income from China and India in 2015 (\$12.8 billion), the last year of full data, was less than in 2014 and only around 18% of what U.S. affiliates earned/reported in the Netherlands and a fraction of U.S. earnings in such countries as the United Kingdom and Ireland.

Still, there is little doubt that China, India, Brazil and other rising economies are becoming more important earnings engines for U.S. firms. To this point, in the first nine months of 2016, U.S. affiliate income in China alone (\$6.6 billion) was well in excess of affiliate income in Germany (\$2.4 billion), France (\$1.9 billion), and Spain (\$3.0 billion). U.S. affiliates in Brazil earned just \$600 million in the January-September period, less than the same period a year earlier but well more than that earned in many European nations.

All that said, we see rising U.S. affiliate earnings from emerging markets as a complement, not a substitute, to earnings from Europe, which very much remains a key source of prosperity for corporate America.

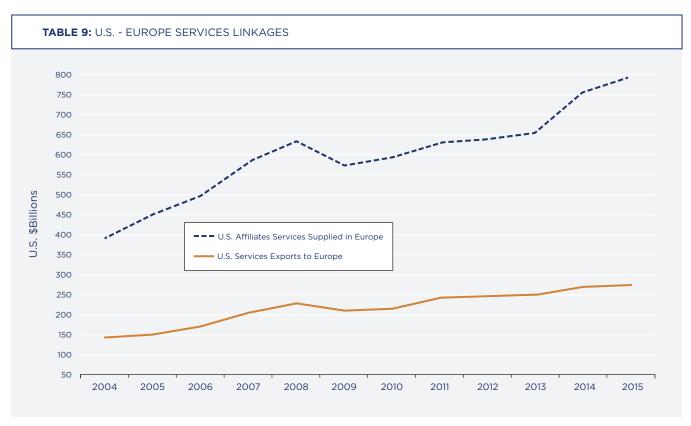
Similarly, the United States remains the most important market in the world in terms of earnings for many European firms. These earnings had recently been falling year-overyear, but showed signs of rebounding in 2016. In the first nine months of 2016, the income of European affiliates in the U.S. rose 2.2% from the same period a year earlier.

8. Transatlantic Services Linkages

Services are the sleeping giant of the transatlantic economy, and a key area offering significant opportunities for stronger and deeper transatlantic linkages.

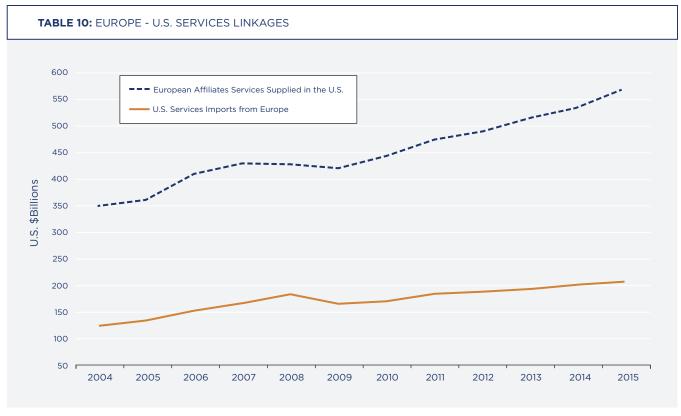
That said, transatlantic ties in services—both in trade and investment—are already quite large. Indeed, the services economies of the United States and Europe have become even more intertwined over the past decade, with cross border trade in services and foreign affiliate sales of services continuing to expand in the post-crisis environment. By sectors, transatlantic linkages continue to deepen in insurance, education, telecommunications, transport, utilities, advertising and computer services. Other sectors such as aviation, e-health and e-commerce are slowly being liberalized and deregulated.

On a regional basis, Europe accounted for 37% of total U.S. services exports and for 42% of total U.S. services imports in 2015. Four out of the top ten export markets for U.S. services in 2015 were in Europe. The United Kingdom



Source: Bureau of Economic Analysis.

Majority-owned bank and non-bank affiliates. Services supplied in Europe estimates for 2015.



Source: Bureau of Economic Analysis.

Majority-owned bank and non-bank affiliates. Services supplied in the U.S. estimates for 2015.

ranked 1st, followed by Ireland (5th), Switzerland (8th), and Germany (9th). Of the top ten services providers to the U.S. in 2015, five were European states, with the United Kingdom ranked first, Germany second, Switzerland eighth, France ninth, and Ireland tenth. U.S. services imports from Europe in 2015 reached an all-time high at \$206 billion, up roughly 25% from the depressed levels of 2009. Still, the U.S. enjoyed a \$69 billion trade surplus in services with Europe in 2015, versus a \$174 billion trade deficit in goods with Europe.

U.S. services exports reached a record \$274 billion in 2015, up more than one-quarter from the cyclical slows of 2009, when exports to Europe plunged 9%. Services exports (or receipts) have been fueled by a number of service-related activities like travel, passenger fares, education and financial services. In terms of transport, the top five export markets in 2015, ranked in order, were Japan, Canada, the UK, China, and Germany. The United Kingdom ranked as one of the largest markets for exports of insurance services; the UK and Belgium-Luxembourg also ranked in the top five in financial services. Ireland was the top export market for U.S. trade in intellectual property—or charges or fees for the use of intellectual property rights. The United Kingdom ranked number one in telecommunications, computer and information services. As for "other business

service exports" or activities like management consulting and R&D, Ireland ranked number one in 2015, followed by Switzerland and the UK.

Beyond services trade, there are the activities of foreign affiliates, with transatlantic foreign affiliate sales of services much deeper and thicker than traditional trade figures suggest. Indeed, sales of affiliates have exploded on both sides of the Atlantic over the past few decades thanks to the internet and falling communication costs. Affiliate sales of services have not only supplemented trade in services but also become the overwhelming mode of delivery. Affiliates sales of U.S. services rose more than 10-fold between 1990 and 2014, exceeding \$1 trillion for the first time in 2007. In 2014, the last year of full data, U.S. affiliate services sales (\$1.5 trillion) were more than double the level of U.S. services exports (\$750 billion).

Sales of services of U.S. foreign affiliates in Europe have increased each year since plunging in 2009 on account of the transatlantic recession. Sales rose to \$757 billion in 2014, up sharply from the depressed levels of 2009. U.S. services exports to Europe in the same year totaled \$269 billion, well below sales of services by affiliates. In other words, like goods, U.S. firms deliver services in Europe (and vice versa) primarily through U.S. foreign affiliates.

TABLE 11: AMERICA'S FDI ROOTS IN EUROPE (BILLIONS OF \$)

Industry	US FDI to Europe	% of Industry Total
European Total	2,949	59%
Manufacturing	310	47%

TABLE 12: EUROPE'S FDI ROOTS IN THE US (BILLIONS OF \$)

Industry	US FDI from Europe	% of Industry Total
Total from Europe	2,163	69%
Manufacturing	955	79%

Note: Historic-cost basis, 2015 Source: Bureau of Economic Analysis

The United Kingdom accounted for roughly 30% of all U.S. affiliate sales in Europe; affiliate sales totaled \$222 billion, a figure greater than total affiliate sales in South and Central America (\$135 billion), Africa (\$15 billion) and the Middle East (\$22 billion). Affiliate sales in Ireland remain quite large—\$107 billion—and reflect strong U.S-Irish foreign investment ties with leading U.S. internet, software and social media leaders. Europe accounted for 50% of total U.S. affiliate services sales worldwide.

We estimate that sales of services of U.S. affiliates in Europe rose by around 5% to \$795 billion in 2015. U.S. services exports to Europe for the same year were \$274 billion, well below sales of affiliates. U.S. affiliate sales in services in Europe continue to exceed sales of services by U.S. affiliates of European firms. In 2014, the last year of complete data, European affiliate services sales in the United States totaled \$535 billion, over 30%

below comparable sales of U.S. affiliates in Europe. That said, European affiliates are the key provider of affiliate services in the United States. Foreign affiliate sales of services in the U.S. totaled \$919 billion in 2014, with European firms accounting for 58% of the total. By country, British affiliates lead in terms of affiliate sales of services in Europe (\$140 billion), followed closely by Germany (\$135 billion).

We estimate that European affiliate service sales in Europe totaled \$570 billion in 2015, well above U.S. services imports from Europe (\$206 billion) in the same year. The difference between affiliate sales and services imports reflects the ever-widening presence of European services leaders in the U.S. economy.

In the end, the United States and Europe each owe a good part of their competitive position in services globally to deep transatlantic connections in services industries provided by mutual investment flows. A good share of U.S. services exports to the world are generated by European companies based in the United States, just as a good share of European service exports to the world are generated by U.S. companies based in Europe.

In sum, these eight indices underscore the depth and breadth of the transatlantic commercial relationship and convey a more complex and complete picture of U.S.-European engagement than simple trade figures. Transatlantic commerce goes well beyond trade, even though cross-border trade is an important ingredient in the U.S.-European relationship. But foreign direct investment and foreign affiliate sales, not trade, represent the backbone of the transatlantic economy.

THE TRANSATLANTIC DIGITAL ECONOMY

igital information, services and products, and the infrastructure that supports them, have become the backbone of the modern global economy. They are transforming how we live, work, play, travel, interact, and do everything in between. Global data flows now contribute more to global growth than global trade in goods. They also underpin and enable virtually every other kind of cross-border flow.

In this chapter we offer some lenses through which we can see more clearly the importance the transatlantic digital economy.² A first step is to understand the tremendously uneven nature of the digital economy. "Digital globalization" evokes the image of a seamless global marketplace in which unbridled data flows drive goods, services and money across national boundaries without friction. Reality is different. Digital connections are "thicker" between some continents and "thinner" between others — and they are "thickest" between the United States and Europe.

Emerging economies trade as intensively as advanced countries, but the latter were nine times more integrated with respect to information flows in 2015.³ And crossborder data flows between the United States and Europe, at about 15 terabits per second, are by far the most intense in the world — 50% higher than data flows between the United States and Asia in absolute terms, and 400% higher on a per capita basis.⁴

The United States and the European Union are each other's most important commercial partner when it comes to digitally deliverable services. Companies on each side of the Atlantic also use the transatlantic economic base to be more effective global competitors, making the United States and the EU the two largest net exporters of digitally deliverable services to the world. They are well positioned to take advantage of the global internet economy, which is projected to grow 8% a year over the next four years in G-20 economies and 18% a year in developing economies, far outpacing just about every traditional economic sector.⁵

Trade in Digitally Deliverable Services

The internet is to trade in services what the advent of container shipping was to trade in goods - a transforming capability that enables faster crossborder delivery of a variety of activities that were once considered nontradable.6 This dynamic is reflected in trade in digitally deliverable services, which are services that can be purchased and delivered online across borders to anyone with internet access. This includes business, professional and technical services, financial and insurance services, telecommunications, software and royalties for intellectual property use. Digitally deliverable services are services "that may be, but are not necessarily, delivered digitally," according to the U.S. International Trade Commission.7 This means that an export of engineering services from Frankfurt, Germany to Hartford, Connecticut could have been delivered online or in person, or some combination of the two. The statistic does not say exactly whether the specific service was delivered online or in person. But it does offer an indication of the potential for digital trade.8 It also underscores the outsized importance of the United States and the EU to the global digital economy.

The transformative impact of digital services is not limited to just the services sector but extends to manufacturing and the traditional bricks-and-mortar economy as well. Digitally deliverable services such as consulting, engineering, software, design and finance are used in manufacturing industries such as transport equipment, electrical equipment and food products. In this regard, digitally deliverable services from the United States have become critical to the manufacturing competitiveness of European manufacturing and retail operations and vice versa. In addition, digitally deliverable services are not just exported directly, they are used in manufacturing and to produce goods and services for export. Over half of digitally deliverable services imported by the U.S. from the EU is used to produce U.S. products for export, and vice versa, thus generating an additional value-added effect on trade that is not easily captured in standard metrics.9

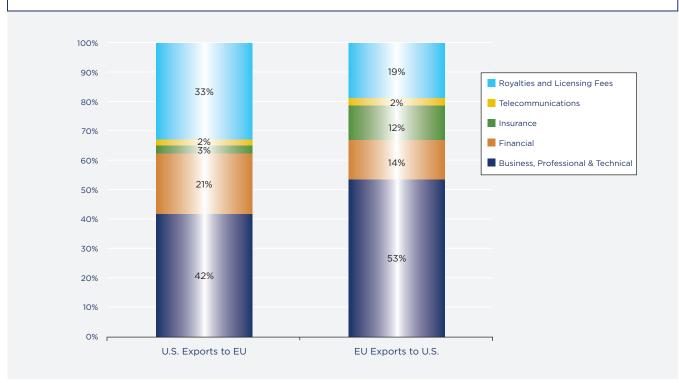
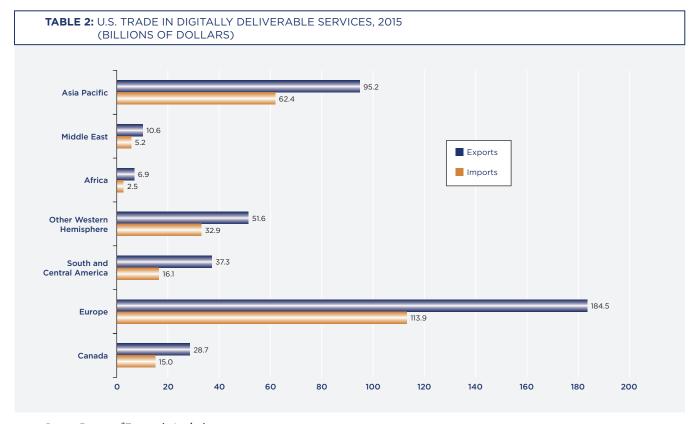


TABLE 1: U.S. - EU DIGITALLY DELIVERABLE SERVICES TRADE BY SECTOR, 2015.

Sources: U.S. Bureau of Economic Analysis. Data as of December 2016.



Source: Bureau of Economic Analysis Data as of September 15, 2016.

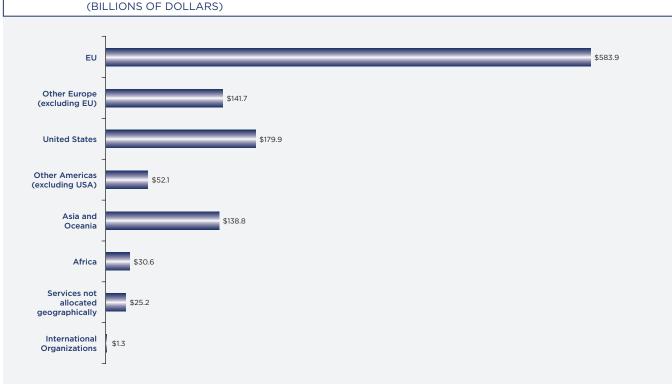


TABLE 3: DESTINATION OF EU EXPORTS OF ICT-ENABLED SERVICES, 2014 (BILLIONS OF DOLLARS)

Source: U.S. Department of Commerce, Office of the Chief Economist using data from the Organization for Economic Cooperation and Development

Table 1 categorizes U.S.-EU digitally deliverable services trade into five sectors. For both economies, the most important exports are represented by business, professional and technical services, which accounted for 53% of digitally deliverable services exports from the EU to the United States and 42% of digitally deliverable services from the United States to the EU in 2015. The second most important category consists of royalties and license fees, most of which are paid on industrial processes and software, underscoring how integral such transatlantic inputs are to production processes in each economy. For the United States, the larger share of royalties and license fees (33%) reflects strong European demand for U.S.-produced television and film.¹⁰ The third largest digitally deliverable services export category for each side is financial services.

In 2015 the United States registered a \$167.0 billion trade surplus in digitally deliverable services with the world. Its main commercial partner was Europe, to which it exported \$184.2 billion in digitally deliverable services and from which it imported \$113.2 billion, generating a trade surplus with Europe in this sector of \$71 billion. U.S. exports of digitally deliverable services to Europe were more than double U.S. trade with Latin America and almost double U.S. trade with the entire Asia-Pacific region (See Table 2).

In 2014, the last year of available data, the 28 EU member states collectively exported \$1.2 trillion and imported \$935.1 billion in digitally deliverable services, to countries both inside of and outside of the EU (See Table 3). Excluding intra-EU trade, EU member states exported \$569.6 billion and imported \$418.0 billion in ICT-enabled services, resulting in a surplus of \$151.6 billion for these services. ICT-enabled services trade represented 56% percent of all services exports to non-EU countries and 52% of all services imports from non-EU countries.¹¹

The EU member states with the largest estimated value of ICT-enabled services exports were the United Kingdom (\$159.0 billion), Germany (\$149.2 billion), France (\$128.0 billion), and the Netherlands (\$115.3 billion). Some member states, like the UK, the Netherlands, and Sweden, transmitted more than half of their ICT-enabled services exports to destinations outside of the EU. Other member states, like Poland, Austria, and Belgium, were more likely to export to other EU member states. The United States purchased 16% percent, or \$179.9 billion, making it the largest non-EU consumer of EU ICT-enabled services exports. 12

In 2014, the EU imported \$935.1 billion in ICT-enabled services, 49% of all EU services imports that year. 55%

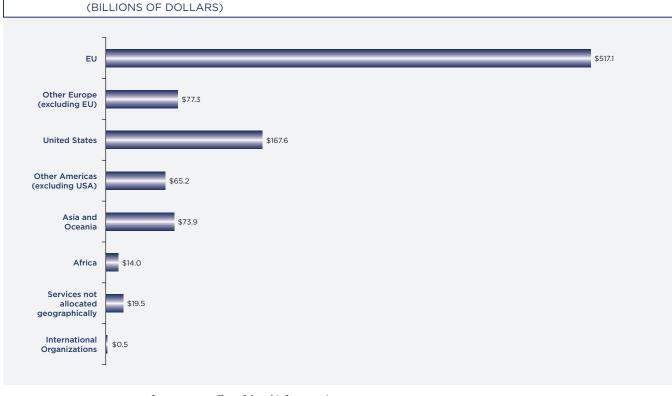


TABLE 4: ORIGIN OF EU IMPORTS OF ICT-ENABLED SERVICES, 2014
(BILLIONS OF DOLLARS)

Source: U.S. Department of Commerce, Office of the Chief Economist using data from the Organization for Economic Cooperation and Development

percent of the ICT-enabled services imports originated from other EU member states. (See Table 4). Another 18% percent came from the United States, making it the largest non-EU supplier of these services.

Digitally Deliverable Services Supplied Through Foreign Affiliates

The digital economy has transformed the way trade in both goods and services is conducted across the Atlantic and around the world. Even more important, however, is the delivery of digital services by U.S. and European foreign affiliates. In fact, affiliate sales of digitally deliverable services has exploded on both sides of the Atlantic in recent years — another indicator reinforcing the importance of foreign direct investment, rather than trade, as the major driver of transatlantic commerce.

Table 5 underscores the relative importance of digitally deliverable services supplied by affiliates of U.S. companies located in Europe and affiliates of European companies in the U.S., versus U.S. and European exports of digitally deliverable services. In 2014 U.S. affiliates in Europe supplied \$428 billion in digitally deliverable services, whereas European affiliates in the United States supplied \$270 billion in digitally deliverable services. Digitally deliverable services supplied by U.S. affiliates in Europe

were 2.3 times greater than U.S. digitally deliverable exports to Europe, and digitally deliverable services supplied by European affiliates in the United States were 2.4 times greater than European digitally deliverable exports to the United States.

The significant presence of leading U.S. service and technology leaders in Europe underscores Europe's position as the major market for U.S. digital goods and services. Table 6 underscores this dynamic. In 2014, Europe accounted for almost two-thirds of the \$228.4 billion in total global information services supplied abroad by U.S. multinational corporations through their majority-owned foreign affiliates. This is not surprising given the massive in-country presence of U.S. firms throughout Europe, with outward U.S. FDI stock in information overwhelmingly positioned in Europe. Roughly 65% of U.S. overseas investment in the "information" industry was in Europe in 2014.

Inter-firm Trade in the Transatlantic Digital Economy

While affiliate sales are a more important means of delivery for digital services than cross-border trade, as we discussed in Chapter 3 the two modes of delivery are more complements than substitutes, since foreign investment

1,800 1,600 Other Services 1,400 Digitally Deliverable 1,200 1,000 800 600 400 200 U.S. Services **U.S. Services U.S. Services** Foreign U.S. Services U.S. Services Services Services Exports Imports Supplied Services Exports to Imports from Supplied by Supplied by Through Supplied Europe Europe U.S. Affiliates European Foreign Affiliates Through Affiliates in in Europe Affiliates in the U.S. theU.S.

TABLE 5: U.S. DIGITALLY DELIVERABLE SERVICES TRADE AND SERVICES SUPPLIED THROUGH AFFILIATES* (BILLIONS OF DOLLARS)

*Trade data are for 2015. Affiliate data are for 2014, the latest available year. Sources: U.S. Bureau of Economic Analysis.

TABLE 6: INFORMATION SERVICES SUPPLIED ABROAD BY U.S. MULTINATIONAL CORPORATIONS THROUGH THEIR MOFAS (MILLIONS OF \$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Canada	3,595	4,140	3,971	5,996	6,316	7,135	7,595	7,401	8,725
Europe	67,270	76,156	85,450	84,117	96,310	110,525	119,123	120,796	147,123
France	4,045	3,794	4,475	4,713	4,582	5,013	4,768	5,258	5,715
Germany	5,260	6,031	6,104	6,456	7,143	7,798	7,970	10,599	12,086
Netherlands	5,925	8,152	9,980	8,674	8,719	9,313	10,196	9,117	10,900
Switzerland	2,871	2,527	3,197	3,747	4,034	4,419	5,243	4,778	6,051
United Kingdom	28,073	30,500	31,479	29,906	24,941	26,446	25,996	23,876	29,326
Latin America and Other Western Hemisphere	7,255	10,845	13,165	13,798	17,578	20,943	21,887	21,751	21,083
Australia	5,722	6,365	6,369	5,961	6,852	6,960	5,531	7,735	8,380
Japan	3,447	(D)	6,224	7,856	4,575	4,828	5,204	5,807	7,505
Other Asia-Pacific and MENA Countries	5,217	(D)	(D)	8,875	10,215	11,947	13,244	15,882	17,500
TOTAL	92,507	(D)	(D)	126,603	141,846	162,338	172,583	179,372	228,396

MOFA: Majority-owned foreign affiliate

(D) indicates that the data in the cell have been suppressed to avoid disclosure of data of individual companies.

Source: Bureau of Economic Analysis

TABLE 7: TOP APP ECONOMY JOBS: EUROPEAN COUNTRIES AND U.S. STATES

		Share of European App Economy jobs	Jobs (thousands)			Share of U.S. App Economy jobs	Jobs (thousands)
1	UK	19.6%	321.2	1	California	22.7%	376.0
2	Germany	16.3%	267.9	2	New York	9.4%	156.2
3	France	14.0%	228.9	3	Texas	7.3%	121.1
4	Netherlands	7.6%	125.2	4	Illinois	5.1%	84.9
5	Italy	6.0%	97.5	5	Massachusetts	4.1%	67.2
6	Poland	5.1%	84.3	6	Florida	3.5%	58.7
7	Spain	4.8%	78.2	7	New Jersey	3.5%	58.7
8	Sweden	4.1%	67.1	8	Virginia	3.3%	55.5
9	Finland	2.9%	47.4	9	Michigan	3.2%	52.8
10	Norway	2.5%	41.6	10	Washington	3.0%	50.1
11	Denmark	2.0%	33.4	11	Ohio	3.0%	49.9
12	Switzerland	1.7%	28.5	12	Georgia	2.9%	48.6
13	Portugal	1.7%	27.4	13	Pennsylvania	2.9%	48.6
14	Belgium	1.4%	23.3	14	North Carolina	2.2%	37.0
15	Czechia	1.2%	19.7	15	Missouri	1.9%	32.1
16	Romania	1.2%	19.3	16	Indiana	1.6%	26.6
17	Hungary	0.9%	15.3	17	Arizona	1.6%	26.5
18	Ireland	0.8%	13.2	18	Maryland	1.6%	26.3
19	Austria	0.7%	11.9	19	Colorado	1.4%	22.4
	30-COUNTRY TOTAL		1,642.0		UNITED STATES		1,670.0

Source: Progressive Policy Institute, Indeed, ILO. Data for Europe January 2016; data for U.S. December 2015. See http://www.progressivepolicy.org/blog/app-economy-jobs-part-2/.

and affiliate sales increasingly drive transatlantic trade flows. The fact that digital services are following this same broad pattern of transatlantic commercial flows reinforces our point that intra-firm trade is critical to the transatlantic economy. Nearly 40% of data flows between the United States and Europe are over business and research networks. Companies rely on cross-border, intra-firm data flows to manage their communications, finances, data centers, human resources and supply chains, access software, and build synergies in research, development and other tasks among affiliates across the transatlantic space. These activities spur innovation and create economic value and are important attributes of the transatlantic digital economy, but are not captured adequately by national statistics.

The Transatlantic App Economy

Digitally deliverable services have also been catalysts for the growth of the App Economy on both sides of the Atlantic.

The Progressive Policy Institute, a U.S. think tank, studied the App Economy in the U.S. and in 30 European countries,

and concluded that as of January 2016 Europe and the United States had each generated similar numbers of App Economy jobs, 1.64 million versus 1.67 million, respectively. This corresponds to 0.7% of all jobs in Europe and 1.2% of all jobs in the United States, still small, but growing fast. The Institute noted that France's 229,000 App Economy jobs were only slightly less than the 289,000 net new jobs generated in the country between 2007 and 2015. 14

By 2020, the app economy could double in size to \$101 billion, according to market researcher App Annie.¹⁵ The European Commission estimates that by 2018, the App Economy will employ 4.8 million people in Europe, contributing €63 billion to the EU economy. Within the ICT sector, the App Economy is becoming more important. The Institute calculates that roughly 9% of ICT jobs in Europe, and roughly 11% of ICT jobs in the United States, are associated with the App Economy.¹⁶ The European Commission concludes that on balance, jobs in the App Economy are good ones.¹⁷

Although most app platforms are American, streaming music services are a notable but niche exception where

TABLE 8: MAJOR INTERCONNECTION HUBS, INTERNATIONAL INTERNET BANDWIDTH (TBPS)

	2016	2012
Frankfurt	48.5	15.7
London	43.1	15.1
Amsterdam	34.6	11.7
New York	14.6	6.1
Singapore	10.5	2.1
Hong Kong	9.2	2.0
Tokyo	7.3	2.3
San Francisco	7.0	2.8
Washington, DC	4.9	2.5

Tbps: Terabits per second.

Source: Jon Hjembo, TeleGeography, The Colocation Sector. Shifting Dynamics and Stable Fundamentals, presentation at Telegeography Workshop, PTC '17, Jan 15-18, 2017.

European companies are holding their own. EU and U.S. app companies each account for 42% of app revenue across the U.S. and EU. Many EU developers are on contract work, or pay app platform fees, to U.S. companies — another indication of the depth of transatlantic linkages in the App Economy.¹⁸

When it comes to overall App Economy jobs, Europe's app economy remains more concentrated than that of the United States. California still leads other states in terms of App Economy jobs, but its lead is diminishing. The Golden State, which accounts for 12% of the U.S. population, accounted for 22.7% of U.S. App Economy jobs in 2015, down from 29% in 2012, whereas states such as New York, Texas, and Illinois quadrupled their App Economy jobs.

When it comes to "app intensity," however, the picture changes. The Progressive Policy Institute compared "app intensity" - i.e. App Economy jobs as a percentage of all jobs — in both European economies and U.S. states. According to their analysis, the United States has an average app intensity of 1.2% and Europe an average app intensity of 0.7%. California, the District of Colombia and Massachusetts rank as the most "app intensive" overall in the transatlantic space. Finland ranks 4th, and tops in Europe, underscoring its role as a small country with a big presence in mobile apps. Norway ranks as the second most "app intensive" European country, just behind the state of New York, followed by the Netherlands and the U.S. state of Washington. New Jersey, Virginia and Sweden round out the top spots. Germany ranks highly on total App Economy jobs but is only average when judged by app intensity. Italy, which is fifth in total App Economy jobs, falls to the bottom of the app intensity listings with 0.4%.

TABLE 9: ICT DEVELOPMENT INDEX - TOP 20 COUNTRIES

Economy	Rank 2015	IDI 2015
Korea (Rep.)	1	8.93
Denmark	2	8.88
Iceland	3	8.86
United Kingdom	4	8.75
Sweden	5	8.67
Luxembourg	6	8.59
Switzerland	7	8.56
Netherlands	8	8.53
Hong Kong	9	8.52
Norway	10	8.49
Japan	11	8.47
Finland	12	8.36
Australia	13	8.29
Germany	14	8.22
United States	15	8.19
New Zealand	16	8.14
France	17	8.12
Monaco	18	8.10
Singapore	19	8.08
Estonia	20	8.05

Source: International Telecommunications Union.

The Hardware of the Transatlantic Digital Economy

The digital economy evokes images of electrons speeding through the ether, but the reality is that undersea cables bring the internet to life. The virtual economy relies on a network of telecommunications cables under the oceans. They transmit 99% of all intercontinental telecommunication traffic — data, phone calls, texts, emails. They can serve as an additional proxy for the ties that bind continents.

Here again, the transatlantic economy is central. Not only do transatlantic cable connections already represent the densest and highest capacity cable routes, with the highest traffic, in the world, commercial and consumer demand is rapidly outpacing supply.²⁰ Telegeography projects that 2 new transatlantic cables will be needed every year between now and 2025 just to keep up with demand.²¹ If all planned systems for just the next 2 years become operational, they will double existing total transatlantic capacity.²² If current transatlantic demand trends, continue, Telegeography estimates a compound annual growth rate of 38% in capacity until 2025.²³

In addition, the United States and Europe are central hubs in the global submarine cable system. For instance, 30% of all internet capacity in 2015 was connected to the United States.²⁴ While emerging economies are becoming more integrated into the submarine cable network, South Americans rely almost exclusively on international interconnections routed through the United States, and Africans and people living in the Middle East are highly dependent on international interconnections routed through Europe.

Europe is the global leader when it comes to major interconnection hubs, with tremendous connected international capacity. Frankfurt, London and Amsterdam substantially outpace North American and Asian cities. Frankfurt's connected capacity, for instance, is over 3 times greater than that of New York and almost 5 times greater than that of Singapore, the Asian leader. Europe has increased its position, while leading Asian cities have surpassed U.S. cities.²⁵

The ICT Sector

Although the digital economy is more than the information and communications technology (ICT) sector, ICT is at the heart of the digital economy.

The ICT Development Index (IDI), a composite index produced by the International Telecommunications Union, compares ICT developments among countries. The Republic of Korea is ranked highest, while 18 of the Top 25 Economies are from Europe or North America, and 8 of the top 10 economies are from Europe (See Table 9).

A Boon to Stakeholders

Taken together, these metrics underscore the importance of the digital economy to healthy transatlantic commerce and to the globally competitive position of the United States and the European Union. The digital economy is opening significant opportunities to key stakeholders across the Atlantic and around the world. Individuals tap global networks to learn, work, play, create, or build personal and business connections. Consumers benefit by easier, faster and cheaper access to products and services. Small and medium-sized businesses and entrepreneurs stand to be major beneficiaries from increased productivity and efficiency, better market intelligence, and greater reach at lower cost.26 While a number of issues have arisen regarding appropriate rules of engagement when it comes to the internet and cross-border flows of massive amounts of data, avoiding a transatlantic digital divide is highly important to the transatlantic partnership.

Endnotes

- 1. James Manyika, Susan Lund, Jacques Bughin, Jonathan Woetzel, Kalin Stamenov, and Dhruv Dhingra, *Digital globalization: The new era of global flows*, McKinsey Global Institute, February 2016, http://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digitalglobalization-the-new-era-of-global-flows.
- 2. We elaborate on these and other metrics in our book *The Transatlantic Digital Economy 2017* (Washington, DC: Center for Transatlantic Relations, 2017).
- 3. Manyika, et al., op. cit.
- 4. Anthony Gardner, "A Transatlantic Perspective on Digital Innovation," September 2015, http://useu.usmission.gov/sp-092015.html.
- 5. BCG Perspectives, "The Internet Economy in the G-20," https://www.bcgperspectives.com/content/articles/media_entertainment_strategic_planning_4_2_trillion_opportunity_internet_economy_g20/?chapter=2.
- See Daniel S. Hamilton, Europe 2020. Competitive or Complacent? (Washington, DC: Center for Transatlantic Relations, 2011, Chapter 2);
 Bradford Jensen and Lori Kletzer, Tradable Services: Understanding the Scope and Impact of Services Outsourcing (Washington, DC: Institute for International Economics), 2005.
- 7. United States International Trade Commission, "Digital Trade in the U.S. and Global Economies, Part 2", Pub.4485, Investigation No.332-540, August 2014, p.47.
- 8. For more, see Joshua P. Meltzer, "The Importance of the Internet and Transatlantic Data Flows for U.S. and EU Trade and Investment," Brookings Institution, Global Economy and Development Working Paper 79, October 2014.
- 9. Ibid.
- 10. Ibid.
- 11. Jessica R. Nicholson, "ICT-Enabled Services Trade in the European Union," ESA Issue Brief #03-16, U.S. Department of Commerce, Economics and Statistics Administration, August 31, 2016, http://www.esa.doc.gov/sites/default/files/ICT-Enabled%20Services%20Trade%20in%20 the%20EU_0.pdf.
- 12. Ibid.
- 13. Growing the Trans-Atlantic Digital Economy," Remarks by Catherine A. Novelli, Under Secretary for Economic Growth, Energy, and the Environment, Lisbon Council, Brussels, Belgium, June 2, 2015, http://www.state.gov/e/rls/rmk/243086.htm.
- 14. See Michael Mandel, "App Economy jobs in the United States (Part 1), and "App Economy Top 25 States (Part 2), January 6, 2016, http://www.progressivepolicy.org/blog/app-economy-jobs-part-2/.
- 15. Dean Takahashi, "The app economy could double to \$101 billion by 2020," Venture Beat, February 10, 2016, http://venturebeat.com/2016/02/10/the-app-economy-could-double-to-101b-by-2020-research-firm-says/.
- 16. Mandel, op. cit.; See also European Commission, "The €63 billion app boom. Nearly 5 million jobs in European app sector by 2018, says EU report," February 13, 2014, http://europa.eu/rapid/press-release_IP-14-145_en.htm.; "Can apps like BlaBlaCar and Deliveroo help cut EU unemployment?" Debating Europe, November 8, 2016, http://www.debatingeurope.eu/2016/11/08/will-growth-app-economy-help-cut-unemployment-europe/#.WH-n5kYzXX4.
- 17. Robin Wauters, "Analysis: an appraisal of the burgeoning European 'app economy', and its growing pains," http://tech.eu/features/540/analysis-app-economy-europe/; Mark Mulligan and David Card, Sizing the EU app economy, Giaom Research, February 2014.
- 18. Internet Economy Foundation/Roland Berger, Fair Play in der digitalen Welt. Wie Europa für Plattformen den richtigen Rahmen setzt, https://www.ie.foundation/content/4-publications/rb_cop_16_011_ief_plattformstudie_de_online.pdf, p. 12.
- 19. David W. Brown, "10 Facts about the Internet's Undersea Cables," Mental Floss, Nov 12, 2015, http://mentalfloss.com/article/60150/10-facts-about-internets-undersea-cables.
- 20. Wayne Nielsen, "North Atlantic Regional Roundup," Presentation to the 2017 Pacific Telecommunications Council, https://www.ptc.org/assets/uploads/papers/ptc17/PTC17_Sun_Submarine%20WS_Nielsen.pdf.; Burrington, "What's Important about Underwater Internet Cables, The Atlantic, November 9, 2015, https://www.theatlantic.com/technology/archive/2015/11/submarine-cables/414942/.
- 21. Tim Stronge, "Submarine Cables: Are We in a New Bubble?", Presentation to the 2017 Pacific Telecommunications Council, http://blog.telegeography.com/ptc-submarine-cable-bubble-presentation-2017-market-summary.
- 22. Nielsen, op. cit.
- 23. Stronge, op. cit.
- 24. Alan Mauldin and Tim Stronge, "Mythbusters: Revenge of the Cable Myths, Part I," June 30, 2016, http://blog.telegeography.com/mythbusters-revenge-of-the-cable-myths-part-i
- 25. Jon Hjembo, TeleGeography, "The Colocation Sector. Shifting Dynamics and Stable Fundamentals," presentation at Telegeography Workshop, PTC '17, Jan 15-18, 2017.
- 26. See European Commission, "Communication on a Digital Single Market Strategy for Europe," May 2015.

THE 50 U.S. STATES:

European-Related Jobs, Trade and Investment

he U.S. economy is in the midst of one of the longest expansions in postwar history, with the economy expanding by roughly 2% in 2016. Since plunging in early 2009, economic output has steadily climbed each year thereafter, with the U.S. economy some 11.5% larger in the third quarter of 2016 than its peak before the crisis. The U.S. unemployment rate has been cut by more than half since topping 10% in October 2009; in January 2017, the unemployment rate stood at 4.8%. As of January 2017, the economy had added roughly 15 million jobs over the past 76 months, the longest streak of total job growth on record. Thanks to the pickup in employment, real gross domestic product per capita fully recovered to its pre-crisis peak in late 2013; meanwhile, real wage growth has been faster in the current cycle than in any since the early 1970s. All in, annualized U.S. growth has hovered around 2% since the recovery commenced in June 2009—an underwhelming rate of growth, for sure, but one that comfortably exceeds the European Union.

This year will be no different. Although the U.S. economic expansion is long in the tooth, the pace of U.S. growth is expected to accelerate in 2017 for a number of reasons, including rising consumer confidence, the reawaking of "animal spirits" among U.S. companies following the presidential election, and increased fiscal spending under the new administration. Both consumer and business confidence have soared since the U.S. election, a dynamic that portends more consumer spending and private capital investment in the year ahead; this, along with U.S. corporate tax reform and a boost in U.S. infrastructure spending, could push U.S. economic growth above 3% for calendar year 2017 — a growth rate the United States hasn't seen since 2005.

Even if the 3% growth comes up short this year, the U.S. economy, as in years past, is still expected to expand at a faster pace than most of Europe and many key emerging markets. According to the latest IMF projections, U.S.

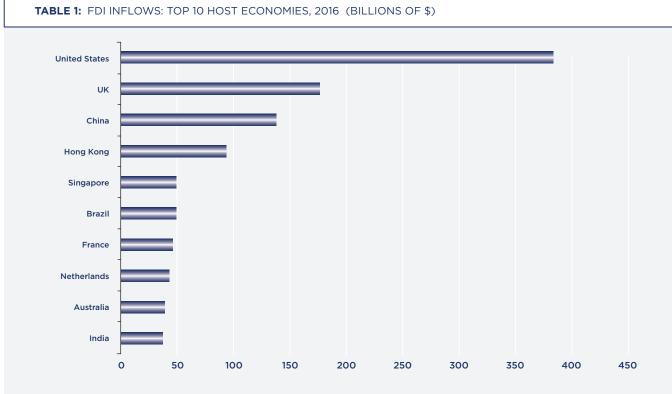
economic growth of 2.3% (a conservative estimate) in 2017 is still expected to outpace that of Germany (1.5%), France (1.3%), Italy (0.7%), and the euro area in general (1.6%). The United Kingdom is projected to expand by 1.5%. Meanwhile, the United States will even outperform many emerging markets, including Mexico (1.7%), Nigeria (0.8%), and Brazil, which is expected to expand by just 0.2% this year according to the IMF.

In other words, America's economy is presently one of the strongest in the world, as well as the most competitive and resilient.

Against this backdrop, it is little wonder that the United States remains one of the most attractive countries in the world for foreign direct investment (FDI). The United States, according to the latest figures from the United Nations, ranked Number One in the world in FDI inflows in 2016, attracting over \$380 billion. Since the start of the century, more than 16% of total global foreign investment has flowed to the United States, with China ranked a distant second, capturing just over 7% of the total.

That the United States remains the top destination of choice among global firms is hardly surprisingly. Key attractions include a large and wealthy market that is home to nearly 325 million people with a per capita income in excess of \$50,000. With less than 5% of the global population, the United States still accounts for roughly one-quarter of global personal consumption expenditures, which is testimony to the purchasing power of American consumers, who are feeling more secure about their jobs and income.

In addition, it is the growth differential between the United States and the rest of the world that makes the United States far more attractive to firms not just from Europe, but from all over the world. Growth matters, and with the U.S. economy in excess of \$18 trillion, no other country comes remotely close in terms of size.



Source: United Nations Conference on Trade and Development (UNCTAD), Global Investment Trends Monitor No. 22.

The United States also boasts of having a hypercompetitive economy, ranked third in the World Economic Forum's latest Global Competitiveness Report, trailing only Singapore and Switzerland. This competitiveness is driven by a strong innovative, risktaking corporate culture and is underpinned by worldclass universities, a strong capacity and culture of

Data as January 2016.

TABLE 2: CUMULATIVE INVESTMENT INFLOWS 1980-2016 RANKINGS

Rank	Country	Cumulative Flows (Billions of U.S. \$)	Percent of World Total
1	United States	4,671.5	17.9%
2	China	1,879.9	7.2%
3	United Kingdom	1,840.9	7.0%
4	Hong Kong	1,189.4	4.5%
5	Canada	873.7	3.3%
6	Germany	868.9	3.3%
7	Brazil	852.8	3.3%
8	Netherlands	844.5	3.2%
9	Belgium	816.4	3.1%
10	France	741.7	2.8%

Source: United Nations Conference on Trade and Development (UNCTAD). Data as of 2017.

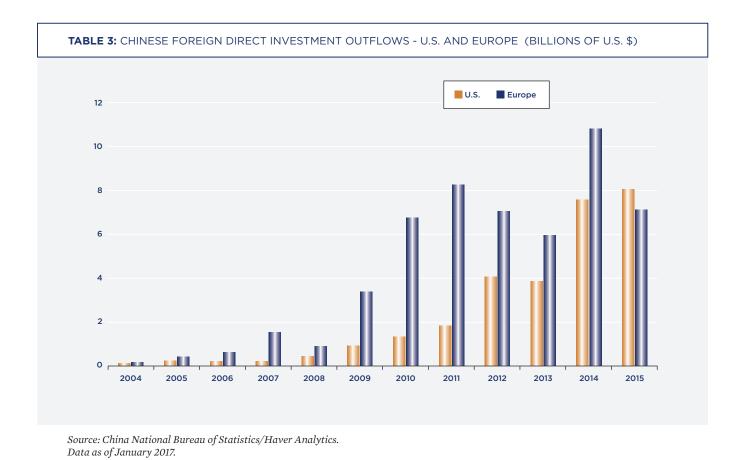
entrepreneurship, and a dense web of university-industry collaboration in R&D.

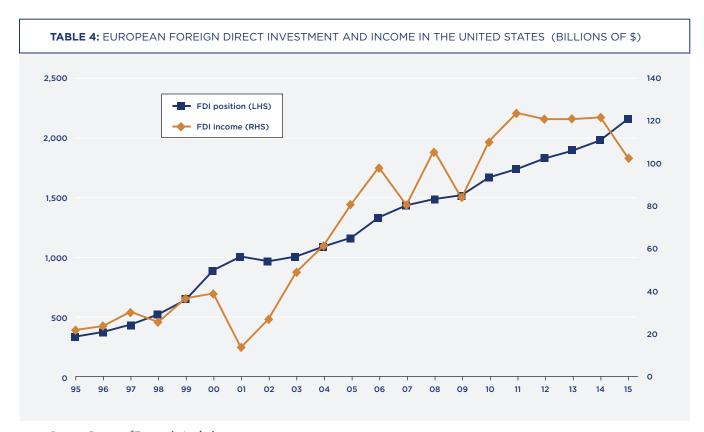
Helping matters, the United States is home to one of the most skilled, flexible and productive labor forces in the world and magnet for foreign skilled labor. In 2015, the last year of available data, U.S. hourly manufacturing costs in the automotive industry were roughly 40% less than those of Germany, 19% lower than those in France, and 8.5% below those in Italy. Meanwhile, the United States is a friendly locale to do business, supported by a transparent rule of law, sophisticated accounting, auditing and reporting standards, and respect for intellectual property rights, among other things. The United States ranked eighth in terms of ease of doing business by the World Bank in 2017.

Taking the long view, Table 2 underscores that, in general, the bulk of global FDI flows are directed at mature, rich developed nations rather than poorer, underdeveloped nations. Of the top ten countries listed on the table, seven are developed nations.

Europe's Stakes in America

European firms maintained their dominant foreign investment position in the United States again last year. Of





Sources: Bureau of Economic Analysis. Data as of 2016.

TABLE 5: RANKING OF TOP 20 STATES BY JOBS SUPPORTED DIRECTLY BY EUROPEAN INVESTMENT (THOUSANDS OF EMPLOYEES)

U.S. State	2012	2013	2014
California	375.0	383.8	393.8
Texas	304.1	319.9	331.2
New York	300.4	302.1	310.5
Pennsylvania	210.9	216	222.9
Illinois	189.8	194.7	195.1
New Jersey	166.2	169.3	174.5
Florida	166.9	173.5	174.3
North Carolina	157.5	166.3	174.1
Massachusetts	144.5	154.1	163.8
Ohio	135.7	144.8	147.6
Michigan	125.5	138.7	141.9
Virginia	119.4	127.7	131.7
Georgia	123.7	131	129.9
Indiana	91.0	93.6	96.1
South Carolina	84.8	92.2	94.8
Maryland	84.6	81.5	83.7
Tennessee	72.3	78.6	81.1
Connecticut	84.1	82.2	80.9
Missouri	64.5	70.5	72.7
Minnesota	61.8	64.3	65.2

Source: Bureau of Economic Analysis

total U.S. inflows of \$385 billion in 2016, 72% were from Europe, with inflows from Europe totaling an estimated \$277 billion for the year. That represents a 4% rise from the prior year, and reflects the strategy of European firms to be "inside" the world's largest and most dynamic market. In the first nine months of the year, inflows to the U.S. from Europe totaled \$231 billion, with large gains from the United Kingdom (\$34.2 billion), Switzerland (\$37.4 billion) and the Netherlands (\$37.4 billion). Outside of Europe, Japan and Canada emerged as significant foreign investors in the U.S. last year.

In terms of foreign capital stock in the United States, Europe, again, leads the way. The region accounted for roughly 70% of the total \$3.1 trillion of foreign capital sunk in the United States in 2015. Total European stock in the United States of \$2.2 trillion was almost four times the level of comparable investment from Asia.

There was no change in terms of leading investors in the United States. The United Kingdom remains by far the largest foreign investor, based on FDI on a historic cost basis, with total FDI stock in the United States totaling \$484 billion in 2015. Luxembourg ranked second (\$328 billion), followed by the Netherlands (\$283 billion),

Switzerland (\$258 billion), Germany (\$255 billion), and France (\$234 billion). Many firms from these countries are just as embedded in the U.S. economy as in their own home markets. And with the U.S. economy expanding at a faster clip than Europe, and with the rising risks of U.S. protectionism under the new U.S. administration, which will spur more foreign firms to be inside the U.S. economy, European firms will continue to deepen and spread their footprint in the United States in the years ahead. Whether Swiss drug firms, German capital goods manufacturers or British transportation firms, their corporate and commercial links to America have been hugely important and beneficial to their bottom line.

Relative to China, while both U.S. and European stakes in China are on the rise, and vice versa, the transatlantic ties that bind the United States and Europe together are much thicker and far deeper than comparable ties with the mainland. The United States represents a large, wealthy market, with a respect for the rule of law and transparent rules and regulations. Ditto for Europe. China, on the other hand, remains relatively poor, with many barriers to entry in various sectors, all wrapped in an opaque regulatory environment that favors local firms or large state-owned enterprises. While Chinese investment in both the United States and Europe has grown sharply over the past few years, it still remains relatively shallow. In addition, there is a growing concern in both the United States and the EU over the lack of reciprocity with China. Chinese investors, for instance, spent four times as much on acquisitions in the EU as European companies in China in 2016. There was also an investment gap in the United States. The result has been a growing backlash against Chinese investment in both the United States and Europe.

European firms earned an estimated \$112 billion in the United States in 2016, up 9% from the prior year. Through the first nine months of last year, European affiliate income earned in the U.S. totaled \$84 billion; German affiliates saw a large increase in U.S. income of over 36% in the first nine months of the year, compared to the same period in 2015. Strong auto sales in the United States among German auto manufacturers helped boost affiliate earnings. Taking the long view, affiliate earning levels for most European firms are significantly higher today than a decade ago. As European firms have built out their U.S. operations, the payoff has been rising affiliate earnings in one of the largest markets in the world.

Table 4 highlights the connection between European investment in the United States and European affiliate earnings. The two metrics are highly correlated—the

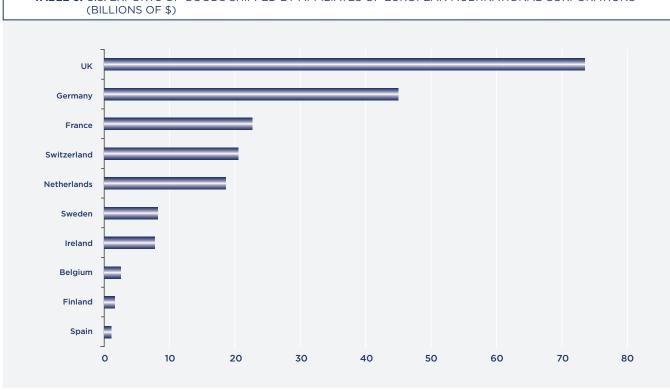


TABLE 6: U.S. EXPORTS OF GOODS SHIPPED BY AFFILIATES OF EUROPEAN MULTINATIONAL CORPORATIONS (BILLIONS OF \$)

Source: Burea of Economic Analysis. Data for 2014.

greater the earnings, the greater the likelihood of more capital investment, and the more investment, the greater the upside for potential earnings and affiliate income. The bottom line is that Europe's investment stakes in the United States have paid handsome dividends over the past decades, notably since the Great Recession, given the growth differential between the United States and Europe. That said, while European investment in the United States has paid off rather well, the benefits have not been one way. The United States has benefitted as well in terms of increased jobs and wages for U.S. workers, and rising exports via European affiliates operating in the United States.

Europe's Stakes in America's 50 States

European investment is widespread across the United States and by industry. Indeed, European firms can be found in all 50 states, and in all sectors of the economy, in manufacturing and services alike.

One of the greatest benefits of this presence is the creation of U.S. jobs. The employment impact of European firms in the United States is quite significant. Table 5 provides a snapshot of state employment provided directly by European affiliates on the ground across the United States. Before getting into the specifics, it is important

to note that the chart underestimates the true impact on U.S. jobs of America's commercial ties to Europe in at least two ways. First, jobs tied to exports and imports of goods and services are not included. Second, many other jobs are created indirectly through suppliers or distribution networks and related activities.

California, New York and Texas—among the largest states in the union—is where employment by European affiliates is highest. Over 1 million U.S. workers were on the payrolls of European affiliates in the three states combined in 2014. Following the 2008/09 recession, European affiliates pared their U.S. labor force, as did many U.S. firms. However, as the economy has recovered over the past few years, so have the payrolls of affiliates, with increased hiring in many states and industries. In 2014, for instance, Pennsylvania, New Jersey, Illinois, and Ohio all experienced increases in employment in 2014 versus 2013, to name just a few states.

In general, the presence of European affiliates in many states and communities across the United States has helped to improve America's job picture. The more European firms embed in local communities around the nation, the more they tend to generate jobs and income for U.S. workers, greater sales for local suppliers and

TABLE 7: RANKING OF TOP 20 U.S. STATES TOTAL GOODS EXPORTS TO EUROPE, BY VALUE (BILLIONS OF \$)

U.S. State	2000	2015	% Change from 2014	% Change from 2000
California	27.9	33.1	-4%	19%
Texas	12.3	31.9	-14%	159%
New York	15.3	28.2	-4%	84%
Washington	13.1	14.2	-3%	9%
Illinois	3.3	12.3	4%	69%
Louisiana	7.3	10.7	-21%	225%
Pennsylvania	6.4	10.5	6%	124%
South Carolina	8.0	9.8	4%	249%
Massachusetts	5.0	9.5	-9%	19%
Indiana	4.7	9.5	5%	202%
Ohio	2.8	9.5	-6%	89%
Florida	4.0	9.0	2%	132%
Georgia	3.1	9.0	-3%	127%
New Jersey	3.9	9.0	-17%	40%
Kentucky	3.1	8.3	6%	170%
North Carolina	4.6	7.0	-2%	51%
Michigan	5.0	6.9	6%	36%
Connecticut	3.5	6.3	-2%	80%
Tennessee	2.7	6.2	0%	130%
Virginia	3.8	5.0	-3%	32%
U.S. Total	187.4	319.7	-4%	71%

Source: Foreign Trade Division, U.S. Census Bureau

businesses, extra revenues for local communities, and more capital investment and R&D expenditures for the United States.

Deep investment ties with Europe have also generated U.S. trade, notably exports. Table 6 illustrates the export potential of European affiliates operating in the United States. As a point of reference, in any given year, foreign affiliate exports typically account for one-fifth of total U.S. merchandise trade, with the bulk of these exports resembling intra-firm trade, or trade between the affiliate and parent company. In 2014, the last year of available data, U.S. exports shipped by all foreign affiliates totaled \$425 billion, with European affiliates accounting for 54% of the total. The United Kingdom and Germany dominate European affiliate exports from the United States, with UK affiliates in America exporting \$73 billion worth of goods in 2014 and German affiliates exporting \$45 billion in goods. By commodity, the largest exports of British-owned affiliates were petroleum and coal products, the largest exports of German-owned affiliates were chemicals and autos. In the end, the more European affiliates export from the United States, the higher the number of jobs for U.S. workers and the greater the U.S. export figures.

Every U.S. state maintains cross-border ties with Europe, with various European countries key export markets for many U.S. states, a dynamic that creates and generates growth in the United States. However, the growth differential between the United States and Europe over the past few years has meant a large U.S. trade deficit with Europe. The U.S. trade deficit (in goods) for 2016 with the European Union totaled \$146 billion, down 6% from the prior year. In 2016, both U.S. exports to and imports from the European Union fell modestly.

U.S. merchandise exports to Europe by state varied in 2015. Table 7 ranks the top 20 state goods exporters to Europe in 2015, with California ranked number one, followed by Texas, New York and Washington. Exports fell in 2015 from the prior year but have jumped sizably since 2000.

Table 8 shows that even in the face of weak European demand, 45 of the 50 states exported more to Europe than China in 2015. Goods exports from California to Europe were double those to China; New York exports to Europe were more than seven times those to China. Exports from Texas to Europe were almost three times larger than exports to China.

Only the Pacific-oriented states of Washington, Hawaii, Alaska, Idaho and Oregon sent more goods to China than Europe in 2015.

In addition, while the figures are significant, they actually underestimate Europe's importance as an export destination for U.S. states because they do not include U.S. state exports of services. This is an additional source of jobs and incomes for U.S. workers, with most U.S. jobs tied to services. Europe is by far the most important market in the world for U.S. services, and the United States consistently records a service trade surplus with Europe. Suffice it to say that if services exports were added to goods exports by state, the European market becomes even more important for individual states.

By destination, key markets in Europe for U.S. states include Germany, the United Kingdom, and the Netherlands. Appendix 1 highlights European-related jobs, trade, and investment for each of the 50 states.

TABLE 8: U.S. STATE EXPORTS TO EUROPE AND CHINA, 2015 (MILLIONS OF \$)

U.S. State	Europe	China	U.S. State	Europe	China
Alabama	4,640	3,115	Montana	208	135
Alaska	860	1,203	Nebraska	921	484
Arizona	4,344	1,266	Nevada	3,102	427
Arkansas	1,200	203	New Hampshire	1,282	282
California	33,113	14,387	New Jersey	8,955	1,537
Colorado	1,771	662	New Mexico	369	117
Connecticut	6,273	1,028	New York	28,161	3,746
Delaware	1,748	387	North Carolina	6,972	2,098
Florida	9,024	1,114	North Dakota	262	17
Georgia	8,978	2,649	Ohio	9,478	3,359
Hawaii	30	78	Oklahoma	956	166
Idaho	382	561	Oregon	2,519	4,823
Illinois	12,333	4,875	Pennsylvania	10,487	2,061
Indiana	9,492	1,265	Rhode Island	626	130
lowa	2,124	1,199	South Carolina	9,758	4,401
Kansas	1,854	986	South Dakota	121	34
Kentucky	8,283	1,929	Tennessee	6,200	2,228
Louisiana	10,684	6,575	Texas	31,851	11,529
Maine	455	208	Utah	4,699	841
Maryland	2,589	487	Vermont	428	220
Massachusetts	9,537	2,053	Virginia	5,041	1,707
Michigan	6,865	3,210	Washington	14,187	19,486
Minnesota	4,562	1,808	West Virginia	1,867	456
Mississippi	1,896	520	Wisconsin	4,207	1,545
Missouri	2,444	868	Wyoming	121	12

Source: U.S. Census Bureau, Foreign Trade Division

EUROPEAN COUNTRIES

U.S.-Related Jobs, Trade and Investment

he unity and cohesion of the European Union are under severe strain, with the June 2016 vote by the British to exit the European Union shaking the very foundations of one of the most important economic entities in the world. More political ruptures could be ahead, with populist candidates gaining ground in key countries slated for elections in 2017 — the Netherlands, France and Germany. Add the ongoing economic stress in Greece and Italy, fears of terrorism across the continent, the Middle East/Africa refugee crisis, tensions and sanctions on Russia over its aggression in Ukraine, and the cold shoulder Donald Trump has given European unity, and you have all the ingredients for a real European stew. Never in the past few decades has the transatlantic partnership rested on such a tender underpinning.

These are trying and historic times for Europe. But the latest economic figures underscore corporate America's enduring commitment to its long-standing transatlantic partner. Europe remains one of the most attractive regions of the world for U.S. foreign investment (FDI).

We estimate that U.S. FDI outflows to Europe in 2016 totaled \$220 billion, a 12% rise from the levels of 2015 (\$196 billion). Since hitting a post-crisis peak of \$235 billion in 2011, U.S. FDI outflows to Europe have increased every year since 2014. On a global basis, U.S. FDI outflows in 2016 rose by just over 4%, totaling an estimated \$316 billion for the year. The upshot: Europe accounted for a larger global share of U.S. FDI outflows in 2016—or nearly 70% of the total, up from 65% in 2015. The Asia-Pacific region represented just 21% of the total, underscoring the bias and preference among U.S. firms for Europe versus Asia.

While Europe remains the top destination for U.S. foreign investment, the headline figures don't tell the whole story. In a nutshell, U.S. investment in Europe—for a variety of reasons, ranging from the cost of labor to country-specific tax rates—is becoming more concentrated, with firms

doing more activities in less locations across the region. In the first nine months of 2016, five nations accounted for nearly 95% of total U.S. FDI outflows of \$162 billion to Europe. The five nations in ranked order: the Netherlands, attracting \$42.1 billion and 26.0% of total flows to Europe; the United Kingdom (\$35.1 billion and 21.6% of the total); Ireland (\$31.3 billion and 19.3%), Luxembourg (\$29.7 billion and 18.3%); and Switzerland (\$15.6 billion and 9.6%). In 2015, these five nations also accounted for over 90% of total U.S. FDI outflows to Europe.

U.S. investment flows to the Netherlands were down 5.5% in the first nine months of 2016 from the same period a year ago. Despite this modest decline, the Netherlands, acting as a strategic bridge to the European hinterland and a favorable tax regime, remains a perennial favorite among U.S. multinationals. The United Kingdom is another favorite destination of U.S. firms, with U.S. flows to the UK rising by nearly 30% in the first nine months of 2016. The numbers are inflated by a one-time surge in inflows in the second quarter (\$25 billion), with third quarter figures less than \$5 billion. That said, it is still too early to assess the results of "Brexit," a topic covered in greater detail in Chapter 1. Total flows to Luxembourg bounced back sharply in 2016, with inflows from the U.S. from January-September 2016 nearly 185% larger than inflows during the same period the prior year.

Ireland and Switzerland remained favored locations for multinationals in 2016, with flows to Ireland rising by nearly 7% in January-September 2016 from the corresponding period a year ago. Over this period, Ireland attracted more U.S. FDI, save the Netherlands and the United Kingdom, than any other nation in Europe, a dynamic that reflects a number of variables, including Ireland's flexible and skilled English-speaking labor force, membership in the European Union, low corporate tax rates, and pro-business policies. Add in Ireland's economic rebound, with the nation among the fastest-growing economies in the world,

TABLE 1: U.S. FDI IN EUROPE: THE LONG VIEW (MILLIONS OF \$, (-) INFLOWS)

	1990-	-1999	2000	-2009	2010-3Q2016	
	\$ Aggregate Total	% of Total	\$ Aggregate Total	% of Total	\$ Aggregate Total	% of Total
EUROPE	465,337		1,149,810		1,244,404	
Austria	2,908	0.6%	501	0.0%	9,228	0.7%
Belgium	12,028	2.6%	40,120	3.5%	11,131	0.9%
Czech Republic	155	0.0%	1,941	0.2%	2,560	0.2%
Denmark	2,798	0.6%	5,782	0.5%	12,643	1.0%
Finland	1,485	0.3%	1,598	0.1%	-1,516	-0.1%
France	29,063	6.2%	42,963	3.7%	14,978	1.2%
Germany	31,817	6.8%	60,363	5.2%	19,408	1.6%
Greece	413	0.1%	943	0.1%	-784	-0.1%
Hungary	2,929	0.6%	1,376	0.1%	-249	0.0%
Ireland	21,369	4.6%	115,085	10.0%	254,685	20.5%
Italy	13,825	3.0%	26,462	2.3%	6,955	0.6%
Luxembourg	15,912	3.4%	126,989	11.0%	227,712	18.3%
Netherlands	70,770	15.2%	295,889	25.7%	363,326	29.2%
Norway	4,198	0.9%	4,997	0.4%	11,535	0.9%
Poland	2,681	0.6%	4,699	0.4%	736	0.1%
Portugal	1,993	0.4%	2,212	0.2%	394	0.0%
Russia	1,555	0.3%	11,289	1.0%	-3,087	-0.2%
Spain	11,745	2.5%	28,371	2.5%	12,847	1.0%
Sweden	10,783	2.3%	16,974	1.5%	-12,119	-1.0%
Switzerland	32,485	7.0%	97,869	8.5%	75,994	6.1%
Turkey	1,741	0.4%	5,994	0.5%	3,933	0.3%
United Kingdom	175,219	37.7%	237,906	20.7%	225,173	18.1%
Other Europe	17,465	3.8%	19,487	1.7%	8,921	0.7%

Source: Bureau of Economic Analysis

and one of Europe's smallest economies has emerged as one of the most attractive anywhere for U.S. firms. Even when adjusting U.S. FDI figures to take account of flows of U.S. holding companies, Ireland still ranks as one of the most attractive places in the world for U.S. businesses.

At the other end of the spectrum are Russia and numerous other European countries, where U.S. FDI inflows have declined over the past few years. U.S. investment in Russia plunged again in 2016, as U.S. companies pulled \$1 billion in investment funds out of the country in the first three quarters of the year. This follows years of decline given the imposition of sanctions on Russia following the Kremlin's annexation of the eastern Ukrainian territory of Crimea

and its military incursions into other areas of Ukraine supporting proxy fighters.

Flows to Austria, Portugal, and Sweden were all lower in the first nine months of 2016 than in the corresponding months of 2015. Disinvestment flows were also reported in the Czech Republic, Portugal and Sweden. Inflows to both Italy and Spain rebounded in 2016, although the figures remain relatively small—just \$754 million to Italy and \$2.4 billion to Spain in the first nine months. In general, weak levels of growth across southern Europe have forced U.S. firms to consolidate and rationalize their European operations, resulting in low levels of investment or outright declines (disinvestment) in many countries.

TABLE 2: TOP 20 U.S. AFFILIATE SALES ABROAD BY DESTINATION* (MILLIONS OF \$)

	1982		1990		2000		2014	
Rank	Country	Value	Country	Value	Country	Value	Country	Value
1	United Kingdom	33,500	United Kingdom	51,350	United Kingdom	94,712	Singapore	293,840
2	Switzerland	27,712	Canada	46,933	Canada	94,296	Ireland	284,577
3	Canada	25,169	Germany	41,853	Germany	69,522	Switzerland	224,510
4	Germany	19,117	Switzerland	38,937	Netherlands	67,852	United Kingdom	194,845
5	Netherlands	15,224	Netherlands	33,285	Singapore	56,961	Netherlands	156,295
6	Belgium	11,924	France	24,782	Switzerland	56,562	Canada	153,749
7	Singapore	11,579	Belgium	21,359	Ireland	51,139	Germany	136,267
8	France	11,255	Singapore	15,074	Mexico	37,407	Belgium	86,009
9	Indonesia	8,289	Hong Kong	9,951	France	35,797	Mexico	76,514
10	Hong Kong	4,474	Italy	9,562	Belgium	32,010	France	65,483
11	Italy	3,993	Ireland	9,469	Hong Kong	22,470	Hong Kong	64,044
12	Australia	3,710	Spain	7,179	Malaysia	16,013	China	62,374
13	Ireland	2,842	Japan	7,066	Sweden	15,736	Australia	36,389
14	United Arab Emirates	2,610	Australia	6,336	Italy	14,370	Brazil	31,079
15	Brazil	2,325	Mexico	5,869	Spain	12,928	Spain	30,933
16	Japan	2,248	Indonesia	5,431	Japan	11,845	Japan	29,213
17	Malaysia	2,046	Brazil	3,803	Australia	9,370	Luxembourg	28,461
18	Panama	1,662	Norway	3,565	Brazil	8,987	Norway	28,182
19	Spain	1,635	Malaysia	3,559	China	7,831	Italy	27,741
20	Mexico	1,158	Nigeria	2,641	Norway	6,238	Malaysia	26,467
	All Country Total	252,274	All Country Total	398,873	All Country Total	857,907	All Country Total	2,473,870

Source: Bureau of Economic Analysis

U.S. foreign direct investment in France and Germany in 2016 was depressed from the robust levels of the prior year. U.S. investment flows in France in the first nine months of 2016 totaled just \$1.3 billion, a 78% decline from the prior year. For all of 2016, we estimate U.S. FDI outflows to France totaled \$1.7 billon, one of the weakest levels of the post-crisis era. It's a similar story for Germany. U.S. FDI flows to Germany totaled \$1.8 billion in the first nine months of 2016, down 60% from the prior year. For the year, inflows amounted to roughly \$2.5 billion.

Combined, U.S. FDI flows to Germany and France, two of Europe's largest economies, totaled just \$4.2 billion in 2016 by our estimates. That is well off the very depressed levels of the past few years, with combined U.S. investment in Germany and France totaling just \$460 million in 2014 and disinvestment of \$963 million in 2013. In contrast, combined U.S. FDI flows to China (including Hong Kong) and India totaled roughly \$11 billion in 2016, a clear signal that more and more U.S. firms are finding better and more favorable market conditions in Asia's largest economies than in

Europe's largest economies. U.S. investment over the past few years in India, which is now growing at a faster pace than China, has been averaging roughly \$3 billion per year, well ahead of U.S. investment in most European countries.

Table 1 highlights the long view of U.S. foreign direct investment in Europe. A few items stand out. First, five countries (Finland, Greece, Hungary, Russia and Sweden) have all experienced net outflows of U.S. investment since the start of this decade. After sinking over \$11 billion into Russia in the first decade of this century, U.S. investment in Russia has dried up since 2010. Second, as mentioned earlier, the share of U.S. FDI in both Germany and France has declined sharply thus far in this decade, with France accounting for just 1.2% of U.S. FDI flows to Europe since 2010. Germany's share is slightly higher, 1.6%, but still off the levels of previous decades. That said, some of these figures need to be used carefully, since some U.S. investment in countries neighboring Germany, for instance the Netherlands, Luxembourg or Belgium, finds its way ultimately to Germany.

^{*}Destination = 3rd Market + Sales to U.S. for majority-owned foreign affiliates.

Just as U.S. firms leverage different states across America, with certain activities sprinkled around the northeast, midwest, the south and west, so U.S. firms deploy the same strategies across Europe, leveraging the specific attributes of each country. Economic activity across the EU is just as distinct and differentiated by country. Different growth rates, differing levels of consumption, varying degrees of wealth, labor force participation rates, financial market development, innovation capabilities, corporate tax rates—all of these factors, and more, determine where and when U.S. firms invest in Europe.

Table 2 underscores this point. The figures show U.S. affiliate sales to other destinations, or the exports of affiliates per nation. Singapore, strategically located at the center of Southeast Asia and ideally positioned between China and India, ranks as the number one export platform in the world for U.S. multinationals and their affiliates. But note that of the top ten export platforms in the world, seven are in Europe, led by Ireland, Switzerland, the UK, the Netherlands, Germany, Belgium and France. The attraction of many of these countries is due in part to each country's role as a strategic beachhead for U.S. multinationals hoping to penetrate the European Union in a competitive and costeffective manner.

For decades, the UK was the traditional export platform for U.S. affiliates to the European mainland. The UK still plays an important role in this regard, as we outline in Chapter 1. U.S. affiliates based in the UK export more to the rest of Europe than U.S. affiliates based in China export to the rest of the world.

Nevertheless, the introduction of the euro, the Single Market and EU enlargement have enticed more U.S. firms to invest directly in the continent itself. The extension of EU production networks and commercial infrastructure throughout a larger pan-continental Single Market has shifted the center of gravity in Europe eastward within the EU, with Brussels playing an important role in economic policies and decision-making.

Switzerland, meanwhile, remains a key export platform and pan-regional distribution hub for U.S. firms, evident by the fact that in 2014, the last year of available data, Switzerland ranked as the third largest export platform in the world for U.S. affiliates; the UK ranked 4th, the Netherlands 5th, Germany 7th, Belgium 8th and France 10th.

That said, of all the nations on the table, Ireland stands out as Corporate America's strategic beachhead to the rest of the European Union. Ireland ranked well down the list as a corporate beachhead for U.S. firms in 1982, ranking 13th in the world in terms of U.S. foreign affiliate exports. Then, U.S. affiliates exports totaled just \$2.8 billion. By 1990 that figure had grown to \$9.5 billion and by 2000, was in excess of \$50 billion. In the first decade of this century, as the industrial and technological capacities of U.S. affiliates in Ireland surged, so did U.S. affiliate exports, soaring nearly six times between 2000 and 2014. Affiliate exports totaled \$285 billion in 2014, trailing only Singapore, but ahead of many others, including Switzerland and the United Kingdom. U.S. firms have leveraged Ireland as an export base to a far greater degree than low-cost locales like Mexico, Hong Kong and China. The latter ranked 12th in 2014. U.S. affiliates export 4.6 times more from Ireland than from China and about 3.7 times more than from Mexico, despite strong NAFTA linkages between the United States and Mexico. On a standalone basis, U.S. affiliates' exports from Ireland are greater than most countries' exports. Such is the export-intensity of U.S. affiliates in Ireland and the strategic importance of Ireland to the corporate success of U.S. firms operating in Europe and around the world.

Of the top twenty global export platforms for U.S. multinationals in the world, eleven are located in Europe, a trend that reflects the intense cross-border trade and investment linkages of the European Union and the strategic way U.S. firms leverage their European supply chains.

Why Europe Still Matters

The secular and structural case for investing in Europe remains relatively positive for a number of reasons. First, while both the United States and China loom large in the hierarchy of the global economy, so does the European Union, still one the largest economies in the world. This fact is often overlooked or ignored by fashionable - and often superficial – political and media consensus, which is more attuned with what's wrong with Europe, as opposed to what's right. In nominal U.S. dollar terms, the European Union (plus Norway, Switzerland, Iceland) accounted for 23.4% of world output in 2016 according to estimates from the International Monetary Fund. Even when the United Kingdom is excluded from the figures, the EU's aggregate output-\$14.9 trillion, or 19.8%-is among the largest in the world. The figure (EU excluding the UK) is slightly less than America's share (24.7%), but in excess of China's—15.1%. Based on purchasing power parity figures, the European Union's share was greater than that of the United States, but slightly less than China's in 2016.

What started out as a loosely configured market of six nations (Belgium, France, West Germany, Italy, Luxembourg and the Netherlands) in the late 1950s is now

TABLE 3: CUMULATIVE U.S. FDI OUTFLOWS (MILLIONS OF \$)

	All Countries	Europe	Europe as a % of World
1950-1959	20,363	3,997	19.6%
1960-1969	40,634	16,220	39.9%
1970-1979	122,721	57,937	47.2%
1980-1989	171,880	94,743	55.1%
1990-1999	869,489	465,336	53.5%
2000-2009	2,056,009	1,149,810	55.9%
2010Q1-2016Q3	2,128,344	1,244,404	58.5%

Source: Bureau of Economic Analysis

an economic behemoth of 28 member states joined together in a Single Market. In other words, the sum of Europe's parts is one of the largest economic entities in the world; as such, Europe remains a key pillar of the global economy and critical component to the corporate success of U.S. firms.

As Table 3 highlights, Europe continues to attract more than half of U.S. aggregate FDI outflows. The region's share of U.S. FDI has remained relatively constant at 58.5% of the total over this decade, which is up from the first decade of this century as well as from the level of the 1990s. When U.S. FDI flows to Caribbean offshore financial centers are subtracted from the total, Europe's share of U.S. investment climbs even higher, to over 65% (see table 4).

Even after adjusting for FDI flows related to holding companies, Europe remains the favored destination of U.S. firms. That Europe remains the favored destination of U.S. firms runs counter to the fashionable narrative that Corporate America prefers low-cost nations like Asia, Latin America and Africa to developed markets like Europe. Reality is different for a host of reasons.

First, investing in emerging markets such as China, India and Brazil remains very difficult, with indigenous barriers to growth (poor infrastructure, dearth of human capital, corruption, etc.) as well as policy headwinds (foreign exchange controls, tax preferences favoring local firms,) reducing the overall attractiveness of these markets to multinationals.

Second, real growth in the emerging markets has downshifted, notably in Brazil, Russia and China. Both

66%
66%
62%
60%
58%
57.6%
599
2000-2009
2010-3Q2016

*Excluding Caribbean and Other Western Hemisphere Source: Bureau of Economic Analysis Data as of December 2016.



TABLE 5: U.S. FOREIGN DIRECT INVESTMENT FLOWS TO CHINA VS. EUROPE - BILLIONS OF \$

*2016 etimate based on 1Q-3Q data. Source: Bureau of Economic Analysis Data as of December 2016.

Russia and Brazil are expected to emerge from recession this year, but growth will remain anemic. Growth prospects in China, meanwhile, have slowed considerably as the nation shifts towards more consumption and service-led growth and away from export- and investment-driven growth. 2016 was yet again a very challenging year for China, and more challenges lie ahead. India's economy is on the rebound but the nation is too poor and too closed to make much of difference to the bottom line of Corporate America. In the end, for both cyclical and structural factors, the BRICs and the emerging markets remain a tough sale, difficult places to do business. Hence the wide divergence between U.S. FDI to the BRICs and U.S. FDI to Europe (see Tables 5 and 6).

Third, economic growth in Europe is on the rebound. Real economic activity is accelerating thanks to the ECB's more accommodating monetary policies; lower oil prices; and the weaker euro. All three variables should help produce growth of 1.5-2% in the European Union in 2017, one of the strongest levels in years. Unemployment in many nations has peaked and is trending lower. Stable oil prices have helped fuel personal consumption, while the weaker euro has boosted export prospects across the region.

Of course, in past years many U.S. companies have been attracted to the super-charged economies of China, Brazil, and India. But these economies are not so "supercharged" anymore. Growth in all three countries, notably Brazil and China, has slowed dramatically over the past several years; the high flyers are now low flyers.

Fourth, in addition to being on the mend and one of the largest economic blocs in the world, Europe is also wealthy, and wealth matters. Wealth is correlated with highly skilled labor, rising per capita incomes, innovation, and a world class R&D infrastructure, among other things. In the aggregate, 15 of the 25 wealthiest nations in the world are European. Per capita income levels in Europe are light years ahead of those in India and China, and all of Africa.

While much has been made of the rise of China, with the mainland's economy now the second largest in the world, the Middle Kingdom remains relatively poor, with China's per capita income totaling just \$8,028 in 2015, according to figures from the World Bank. The Chinese figure ranks 74th in the world and is well below the per capita income levels of Sweden (\$50,580), the Netherlands (\$44,300), Finland (\$42,311), Germany (\$41,313), and the European

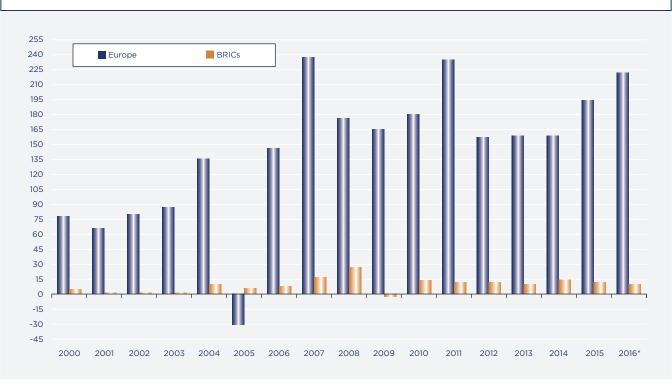


TABLE 6: U.S. FOREIGN DIRECT INVESTMENT OUTFLOWS TO THE BRICs VS. EUROPE' - (BILLIONS OF \$)

¹ Europe does not include flows to Russia. *2016 Estimate based on 1Q-3Q data. Source: Bureau of Economic Analysis. Data as of December 2016.

Union average of around \$32,000. With a miserly per capita income of about \$1,500, India ranks 140th.

Wealth drives consumption, with the EU accounting for nearly 22% of global personal consumption expenditures in 2015, a slightly lower share than that of the United States but well above that of China (roughly 10%) and India (less than 3%) and the BRICs combined (roughly 17%). Gaining access to wealthy consumers is among the primary reasons why U.S. firms invest overseas, and hence the continued attractiveness of wealthy Europe to American companies.

Europe is also attractive because of the ease of doing business in the region. Just as the macroeconomic backdrop influences any business climate, so do micro factors. Country and industry regulations can help or hamper the foreign activities of U.S. multinationals, and greatly influence where U.S. companies invest overseas. Think property rights, the ability to obtain credit, regulations governing employment, the time it takes to start a business, contract enforcements, and rules and regulations concerning cross border trade. These and other metrics influence and dictate the ease of doing business, and on this basis many Europe countries rank as the most attractive in the world.

The World Bank annually ranks the regulatory environment for domestic firms in 190 nations, a ranking which serves as very good proxy for the ease of doing business for domestic and foreign companies alike. And in the 2017 Ease of Doing Business rankings, 16 European economies ranked among the top 25 most business-friendly countries. Denmark ranked 3rd overall, followed by Norway (6th), the United Kingdom (7th), Sweden (9th), Macedonia (10th), Estonia (12th), Finland (13th), Latvia (14th), Georgia (16th), Germany (17th), Ireland (18th), Austria (19th), Iceland (20th), Lithuania (21st), Poland (24th), and Portugal (25th). See Table 7.

Outliers include Russia, ranked 40th, Croatia, ranked 43th, Italy, ranked 50th, and Greece, ranked 61st. Reflecting the challenging business environment of many key emerging markets, China ranked 78th in terms of ease of doing business in the latest rankings, while Brazil ranked 123rd and India clocked in at 130th. These countries are regularly hyped as among the most dynamic in the world, yet strong real GDP growth does not necessarily equate to a favorable environment for business. Other factors need to be factored into the equation, like the rise of state capitalism in many developing nations,

TABLE 7: EASE OF DOING BUSINESS 2017

Rank	Country	Rank	Country
1	New Zealand	16	Georgia
2	Singapore	17	Germany
3	Denmark	18	Ireland
4	Hong Kong	19	Austria
5	Korea	20	Iceland
6	Norway	21	Lithuania
7	United Kingdom	22	Canada
8	United States	23	Malaysia
9	Sweden	24	Poland
10	Macedonia	25	Portugal
11	Taiwan	26	United Arab Emirates
12	Estonia	27	Czech Republic
13	Finland	28	Netherlands
14	Latvia	29	France
15	Australia	30	Slovenia

Source: World Bank, Ease of Doing Business Report 2017.

continued intellectual property right infringements, capital controls, and discriminating domestic policies against foreign firms. These factors have become favorite policy tools in many key emerging markets, further enhancing the attractiveness of Europe in the eyes of U.S. multinationals.

In the end the greater the ease of doing business in a country, the greater the attractiveness of that nation to U.S. firms. The micro climate matters just as much as the macro performance; Europe trumps many developing nations by this standard.

In addition, despite numerous structural challenges in Europe and notwithstanding current market problems, many European economies remain among the most competitive in the world. For instance, in the latest rankings of global competitiveness from the World Economic Forum, six European countries were ranked among the top ten, and seven more among the top twenty-five. Switzerland ranked first, the Netherlands 4th, Germany 5th, Sweden 6th, the United Kingdom 7th and Finland 10th. Meanwhile, Norway ranked 11th, Denmark ranked 12th, Belgium 17th, Austria 19th, Luxembourg 20th, France 21st, and Ireland 23rd (see table 8).

The United States, by way of comparison, ranked 3rd in the latest rankings.

TABLE 8: TRANSATLANTIC ECONOMIES ARE THE MOST COMPETITIVE IN THE WORLD

Global Competityeness Index 2016-2017

Rank	Country	Rank	Country
1	Switzerland	16	United Arab Emirates
2	Singapore	17	Belgium
3	United States	18	Qatar
4	Netherlands	19	Austria
5	Germany	20	Luxembourg
6	Sweden	21	France
7	United Kingdom	22	Australia
8	Japan	23	Ireland
9	Hong Kong	24	Israel
10	Finland	25	Malaysia
11	Norway	26	Korea
12	Demark	27	Iceland
13	New Zealand	28	China
14	Taiwan	29	Saudi Arabia
15	Canada	30	Estonia

Source: World Economic Forum, Global Competitiveness Report 2016-2017

At the other end of the spectrum, a handful of European nations scored poorly, underscoring the fact that Europe's competitiveness is hardly homogenous. A handful of nations did not even score in the top fifty—Slovenia ranked 56th, Romania 62nd, Hungary 69th, Croatia 74th, while Greece ranked 86th in the latest survey, the worst performer among EU members.

The spread between Number One Switzerland and floundering Greece underscores the divergent competitiveness of the EU and highlights the fact that various nations exhibit various competitive strengths and weaknesses. For instance, Greece received low marks for its public institutions and inefficient labor markets, which stands in contrast to Ireland's well-functioning labor force or Norway's highly ranked public institutions.

Belgium was cited for outstanding health indicators and primary education; France was highlighted for its transport links and energy infrastructure, as well as strengths in quality of education, sophistication of business culture, highly developed financial markets, and leadership in innovation. Estonia, Poland and the Czech Republic were cited for their top notch education systems and flexible labor markets; Spain's ranking was hurt by macroeconomic imbalances but scored relatively well in terms of ICT usage. Italy's labor force remains quite rigid but the nation scored well in terms of producing goods high up in the value chain. Finally, Germany ranked highly across many variables:

quality of infrastructure, efficient goods market, R&D spending and domestic market size, among other things.

All of the above is another way of saying that there is a great deal more to Europe than the daily diet of negative headlines. The various countries of Europe offer specific micro capabilities/competencies that are lacking on a relative basis in the United States and critical to the global success of U.S. firms.

Finally, Europe is no slouch when it comes to innovation and knowledge-based activities. Based on the Innovation Union Scoreboard for 2016, Denmark, Finland, Germany, the Netherlands and Sweden rank as innovation leaders in Europe. These are the most innovative states in the EU, performing well above that of the EU 28 average. Hence this group was dubbed "innovation leaders".

So-called "strong innovators" include Austria, Belgium, France, Ireland, Luxembourg, Slovenia and the UK. The performance of Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, and Spain was below that of the EU average; these nations are considered moderate innovators. The laggards, or modest innovators, include Bulgaria and Romania.

While significant discrepancies exist among nations in the EU as to knowledge-based capabilities, the innovation performance of the EU remains ahead of Australia, Canada and all BRIC nations. In addition, based on the latest figures, the EU is closing its performance gap with Japan and the United States.

In that R&D expenditures are a key driver of value-added growth, it is interesting to note that Europe-based companies accounted for roughly 21-22% of total global R&D in 2014 and 2015. That lagged the share of the United States (26.9% in 2014) but exceeded the global share of R&D spending in Japan (9.1%), China (19.1%), and India (3.4%). In 2014, Germany, Sweden, Switzerland, Finland, and Denmark spent more than the United States on R&D as a percentage of GDP.

Led by European industry leaders like Roche, Novartis, Daimler, Sanofi, and GlaxoSmithKline, Europe remains a leader in a number of cutting-edge industries including life sciences, agriculture and food production, automotives, aerospace, nanotechnology, energy, and information and communications. Innovation requires talent and on this basis, Europe is holding its own relative to other

parts of the world. To this point, Europe is among one of the world leaders in producing science and engineering graduates, with the EU, According to the latest data from the U.S. National Science Board's Science and Engineering Indicators, the EU accounted for 12% of global science and engineering graduates. America's share was just 9% of the global total. Of the world's global research pool, the EU housed 1.7 million researchers in 2013 versus 1.3 million in the United States. The EU accounted for about 26% of the global total.

The EU remains notably strong in such high-technology manufacturing industries as pharmaceuticals and scientific instruments and aerospace. Against this backdrop, the EU is the largest exporter of commercial knowledge-intensive services (excluding intra-EU exports).

Finally, in terms of future workers, the U.S. high school graduation rate lags behind most European nations, including states like Austria, Denmark, Finland, Germany, Greece, Hungary, Italy, Iceland, Ireland, Latvia, the Netherlands, Norway, Poland, Portugal, Slovakia, and Slovenia. The U.S. graduation rate was 82% in 2013-14 versus an OECD average of 85%.

While U.S. universities remain a top destination for foreign students, the UK, Germany and France are also notable attractions. In the end, Europe remains among the most competitive regions in the world in terms of science and technology capabilities. The U.S. National Science Board has explicitly recognized EU research performance as strong and marked by pronounced EU-supported, intra-EU collaboration.

Adding It All Up

Europe, long the weak link of the global economy, is in recovery mode and remains a formidable economic entity. While the global brand of Europe has been battered over the past few years, the region remains quite large, wealthy, richly endowed, open for business, and technologically out in front in many key global industries.

Due to all of the above, Europe will remain a critical and indispensable geographic node in the global operations of U.S. companies. Remember: U.S. multinationals increasingly view the world through a tri-polar lens—a world encompassing the Americas, Europe and Asia, along with attendant offshoots. In this tri-polar world, U.S. companies are not about to give up on or decamp from one of the largest segments of the global economy.

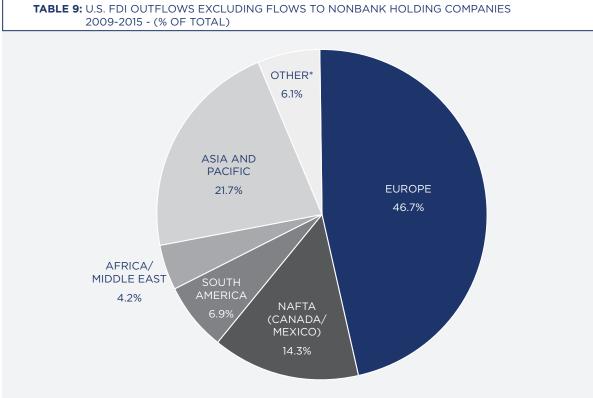
U.S. FDI Outflows to Europe Adjusted for Flows of Holding Companies

Holding companies account for a growing share of total U.S. FDI outflows to Europe. This has generated considerable political and media attention, and is important to understand in order to get a full picture of transatlantic commercial linkages.

In 2015, the last year of available data, holding companies accounted for \$167 billion, or over half of global U.S. FDI of \$303 billion, and 60% of total U.S. foreign direct investment to the European Union of \$179.5 billion. As the U.S. Bureau of Economic Analysis notes, "The growth in holding-company affiliates reflects a variety of factors. Some holding-company affiliates are established primarily to coordinate management and administration activities—such as marketing, distribution, or financing—worldwide or in particular geographic region. In addition, the presence of holding-company affiliates in countries where the effective income tax rate faced by affiliates is relatively low suggests tax considerations may have also played a role in their growth. One consequence of the increasing use of holding companies has been a reduction in the degree to which the U.S. Direct Investment Abroad position (and related flow) estimates reflect the industries and countries in which the production of goods and services by foreign affiliates actually occurs."

Against this backdrop, total U.S. FDI flows to Europe over the past few years have been driven in part by holding companies. In 2009, for instance, holding companies accounted for 51% of total U.S. FDI flows to the Europe. In 2010 and 2011, the shares were 73% and 62%, respectively. Holding companies accounted for 57% of total U.S. outflows to Europe in 2012, 67% in 2013, 62% in 2014, and 59% in 2015. The countries attracting the most investment of holding companies, not surprisingly, are those with some of the lowest corporate tax rates in Europe — Luxembourg, the Netherlands, the UK and Ireland.

The bottom line: when FDI related to holding companies is stripped from the numbers, U.S. FDI outflows are not as large as typically reported by the Bureau of Economic Analysis. Nonetheless, Europe remains the top destination of choice among U.S. firms even after the figures are adjusted. As shown in Table 9, between 2009 and 2015, Europe still accounted for over 46% of total U.S. FDI outflows when flows from holding companies are removed from the aggregate. Europe's share was still more than double the share to Asia, underscoring the deep and integrated linkages between the United States and Europe.



*Includes Central America (excluding Mexico) and Other Western Hemisphere.

Source: Bureau of Economic Analysis.

Data as of February 2017.

APPENDIX A

EUROPEAN COMMERCE AND THE 50 U.S. STATES:

A State-by-State Comparison



Alabama & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

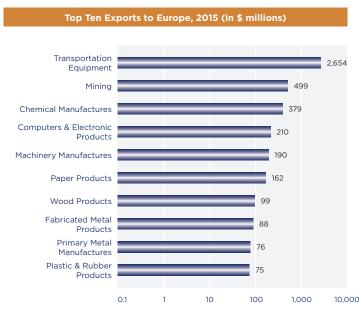
European investment in Alabama supported 50,800 jobs in 2014, 8,700 (20.7%) more than in 2006.

Sources of Employment within Alabama, 2014		
Country	Employment	
Japan	17,900	
Germany	12,600	
United Kingdom	11,400	
Canada	7,100	
France	7,000	

Trade

In 2015, Europe purchased \$4.6 billion worth of goods from Alabama. 57% of total exports represented transportation equipment, reflecting the state's linkages with European auto manufacturers.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	2,478	
United Kingdom	610	
France	448	
Netherlands	212	
Belgium	197	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

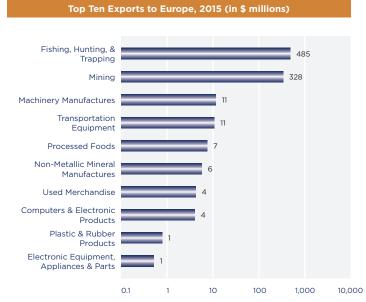
European investment in Alaska supported 7,000 jobs in 2014, 2,000 (40.0%) more than in 2006.

Sources of Employment within Alaska, 2014		
Country	Employment	
United Kingdom	4,900	
Canada	4,600	
Japan	3,000	
France	600	
Germany	300	

Trade

In 2015, Europe purchased \$860.4 million worth of goods from Alaska. The bulk of exports consists of primary commodities.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	279	
Spain	150	
Netherlands	119	
Finland	57	
Italy	57	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Arizona & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Arizona supported 51,400 jobs in 2014, 4,200 (8.9%) more than in 2006.

Sources of Employment within Arizona, 2014		
Country	Employment	
Canada	15,600	
United Kingdom	13,300	
Germany	8,200	
Japan	8,100	
France	7,900	

Trade

In 2015, Europe purchased \$4.3 billion worth of goods from Arizona. More than one-third of the state's exports consists of transportation equipment.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
United Kingdom	1,066	
Germany	830	
France	464	
Netherlands	424	
Italy	345	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Arkansas & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Arkansas supported 31,100 jobs in 2014, 7,400 (31.2%) more than in 2006.

Sources of Employment within Arkansas, 2014		
Country	Employment	
United Kingdom	7,100	
Japan	5,800	
France	5,700	
Switzerland	4,900	
Canada	3,200	

Trade

In 2015, Europe purchased \$1.2 billion worth of goods from Arkansas. Transportation equipment was the top export to Europe.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
France	465	
United Kingdom	170	
Belgium	135	
Netherlands	119	
Germany	103	



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



California & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

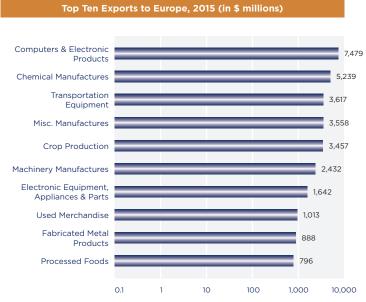
European investment in California supported 378,800 jobs in 2013, 33,300 (9.6%) more than in 2006.

Sources of Employment within California, 2014		
Country	Employment	
Japan	120,500	
United Kingdom	98,200	
Germany	69,600	
Switzerland	68,300	
France	68,000	

Trade

In 2015, Europe purchased \$33.1 billion worth of goods from California. 23% of Californian exports to Europe consists of high-tech goods.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Netherlands	5,634	
Germany	5,344	
United Kingdom	5,150	
Belgium	2,942	
France	2,685	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Colorado & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Colorado supported 55,300 jobs in 2014, 8,200 (17.4%) more than in 2006.

Sources of Employment within Colorado, 2014	
Country	Employment
United Kingdom	15,700
Canada	11,000
France	7,600
Japan	7,300
Germany	6,600

Trade

In 2015, Europe purchased \$1.8 billion worth of goods from Colorado. 25% of the state's exports consists of high-tech goods like computers & electronic products.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	290
Germany	262
United Kingdom	261
Switzerland	250
Belgium	162

Top Ten Exports to Europe, 2015 (in \$ millions)



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$





Connecticut & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Connecticut supported 80,900 jobs in 2014, 3,600 (4.7%) more than in 2006.

Sources of Employment within Connecticut, 2014	
Country	Employment
United Kingdom	20,000
Netherlands	19,700
Germany	12,600
Japan	7,400
France	7,300

Trade

In 2015, Europe purchased \$6.3 billion worth of goods from Connecticut. Exports are heavily skewed towards transportation equipment.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
France	1,942	
Germany	1,653	
United Kingdom	885	
Netherlands	477	
Belgium	266	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Delaware & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Delaware supported 20,800 jobs in 2014, 2,100 (11.2%) more than in 2006.

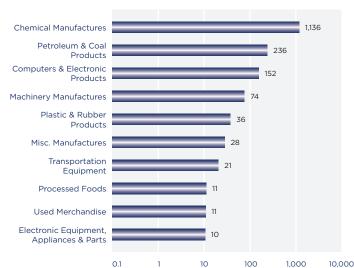
Sources of Employment within Delaware, 2014	
Country	Employment
United Kingdom	8,700
Germany	3,000
Canada	2,600
Japan	2,600
Switzerland	2,000

Trade

In 2015, Europe purchased \$1.7 billion worth of goods from Delaware. Chemicals are Delaware's primary export to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	882
Germany	263
Netherlands	220
Belgium	132
Sweden	37





Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Florida supported 174,300 jobs in 2014, 14,000 (8.7%) more than in 2006.

Sources of Employment within Florida, 2014	
Country	Employment
United Kingdom	51,400
Canada	34,300
Germany	27,700
France	26,800
Japan	24,200

Trade

In 2015, Europe purchased \$9 billion worth of goods from Florida. Transportation Equipment accounts for about 25% of total exports to Europe.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	1,797	
Switzerland	1,455	
United Kingdom	1,176	
Netherlands	852	
France	752	



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Georgia & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Georgia supported 129,900 jobs in 2014, 17,700 (15.8%) more than in 2006.

Sources of Employment within Georgia, 2014	
Country	Employment
Japan	31,000
United Kingdom	29,000
Canada	25,300
Germany	24,300
Netherlands	21,000

Trade

In 2015, Europe purchased \$9 billion worth of goods from Georgia. More than one-third of exports consists of transportation equipment.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	1,808
Germany	1,482
Netherlands	811
Belgium	744
Italy	658



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

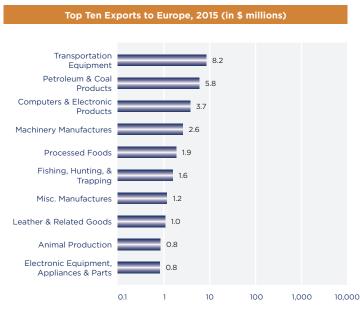
European investment in Hawaii supported 15,500 jobs in 2014, 7,000 (82.4%) more than in 2006.

Sources of Employment within Hawaii, 2014	
Country	Employment
Japan	17,100
France	6,300
United Kingdom	2,700
Canada	1,100
Germany	1,000

Trade

In 2015, Europe purchased \$30 million worth of goods from Hawaii. Transportation equipment accounts for 27% of total exports.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Switzerland	7	
United Kingdom	5	
Malta	4	
Germany	2	
Netherlands	2	



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Idaho & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

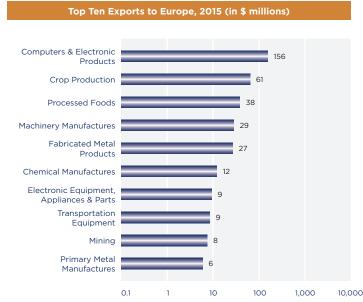
European investment in Idaho supported 10,900 jobs in 2014, 200 (1.9%) more than in 2006.

Sources of Employment within Idaho, 2014		
Country	Employment	
Canada	2,900	
United Kingdom	2,600	
France	2,500	
Germany	1,900	
Japan	1,200	

Trade

In 2015, Europe purchased \$382 million worth of goods from Idaho. Exports are mostly concentrated in computers & electronic products.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
United Kingdom	121	
Netherlands	72	
France	45	
Germany	43	
Spain	22	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Illinois & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

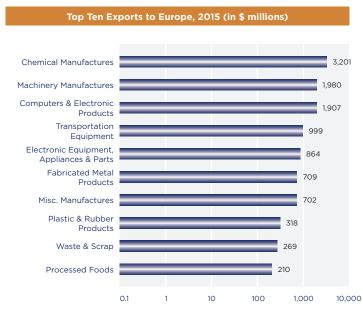
European investment in Illinois supported 195,100 jobs in 2014, 23,800 (13.9%) more than in 2006.

Sources of Employment within Illinois, 2014		
Country	Employment	
United Kingdom	59,300	
Japan	41,300	
Germany	38,400	
France	26,200	
Canada	23,400	

Trade

In 2015, Europe purchased \$12.3 billion worth of goods from Illinois. Chemicals and machinery are key exports, followed by computers & electronic products and transportation equipment.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	3,129	
Netherlands	1,920	
United Kingdom	1,747	
Belgium	1,611	
France	797	



 $Source: Bureau\ of\ Economic\ Analysis, Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

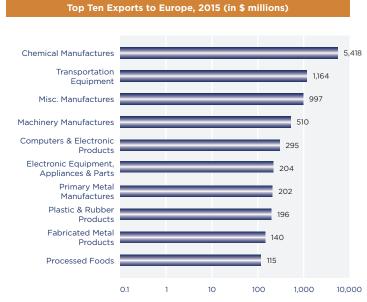
European investment in Indiana supported 96,100 jobs in 2014, 1,800 (-1.8%) less than in 2006.

Sources of Employment within Indiana, 2014		
Country	Employment	
Japan	47,400	
United Kingdom	31,800	
Canada	16,900	
France	15,200	
Germany	14,900	

Trade

In 2015, Europe purchased \$9.5 billion worth of goods from Indiana. Exports are heavily skewed toward chemicals.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
France	1,478	
Germany	1,436	
United Kingdom	1,238	
Italy	1,124	
Netherlands	961	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

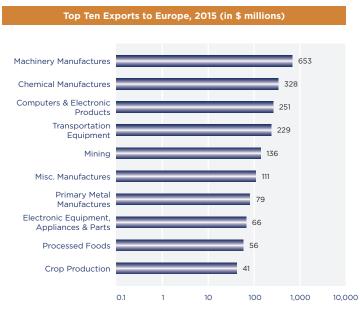
European investment in Iowa supported 34,800 jobs in 2014, 4,000 (13.0%) more than in 2006.

Sources of Employment within Indiana, 2014	
Country	Employment
United Kingdom	7,800
Netherlands	6,500
Japan	5,800
Germany	4,800
France	4,500

Trade

In 2015, Europe purchased \$2.1 billion worth of goods from Iowa. Machinery manufactures account for 31% of total exports.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	493	
France	330	
United Kingdom	289	
Netherlands	202	
Ireland	120	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Kansas & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Kansas supported 32,700 jobs in 2014, 4,000 (13.9%) more than in 2006.

Sources of Employment within Kansas, 2014	
Country	Employment
Canada	21,100
Japan	10,700
United Kingdom	7,400
Switzerland	6,500
Germany	5,400

Trade

In 2015, Europe purchased \$1.9 billion worth of goods from Kansas. Almost half of the state's exports consist of transportation equipment and chemicals.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	433
Germany	308
France	249
Netherlands	129
Italy	122





Kentucky & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

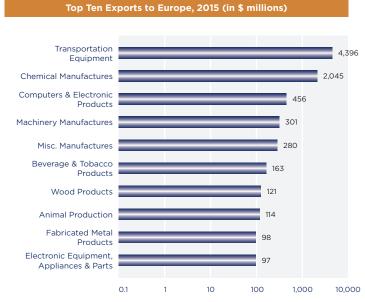
European investment in Kentucky supported 44,900 jobs in 2014, 2,800 (-5.9%) less than in 2006.

Sources of Employment within Kentucky, 2014	
Country	Employment
Japan	40,000
Canada	10,800
Germany	9,300
United Kingdom	8,400
France	7,500

Trade

In 2015, Europe purchased \$8.3 billion worth of goods from Kentucky. Reflecting the large presence of automobile manufacturers in the state, Kentucky's top export to Europe is transportation equipment.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
United Kingdom	2,558	
France	1,773	
Germany	945	
Netherlands	942	
Austria	577	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Louisiana & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

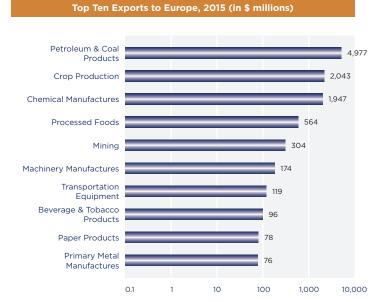
European investment in Louisiana supported 49,900 jobs in 2014, 18,300 (57.9%) more than in 2006.

Sources of Employment within Louisiana, 2014	
Country	Employment
United Kingdom	18,300
Netherlands	9,900
France	7,500
Canada	7,200
Germany	5,600

Trade

In 2015, Europe purchased \$10.7\$ billion worth of goods from Louisiana. The majority of the state's exports consists of a mix of petroleum & coal products, agricultural products and chemicals.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	2,209
France	1,498
United Kingdom	1,341
Belgium	1,312
Germany	996





Maine & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

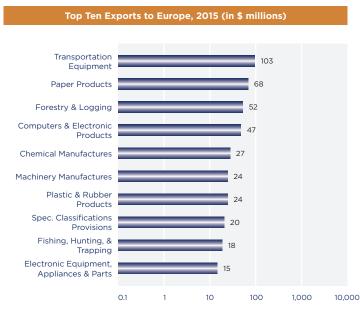
European investment in Maine supported 20,900 jobs in 2014, 1,900 (10.0%) more than in 2006.

Sources of Employment within Maine, 2014	
Country	Employment
Canada	8,200
Switzerland	2,400
United Kingdom	2,100
Germany	1,700
Japan	1,300

Trade

In 2015, Europe purchased \$455 million worth of goods from Maine. Transportation equipment and paper products are the state's top exports to Europe.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
Germany	104	
Italy	69	
United Kingdom	55	
Netherlands	52	
Belgium	47	



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

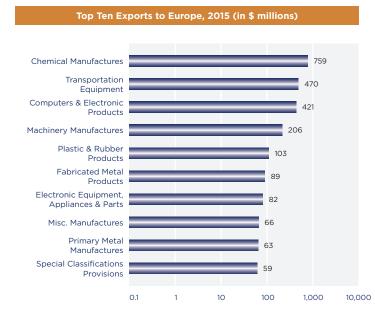
European investment in Maryland supported 83,700 jobs in 2014, 2,900 (-3.3%) less than in 2006.

Sources of Employment within Maryland, 2014	
Country	Employment
Netherlands	22,000
United Kingdom	20,400
France	9,800
Canada	8,700
Germany	7,900

Trade

In 2015, Europe purchased \$2.6 billion worth of goods from Maryland. Top exports are chemicals, transportation equipment, and computers & electronic products.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	567
Netherlands	436
Germany	378
Belgium	341
France	227





Massachusetts & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

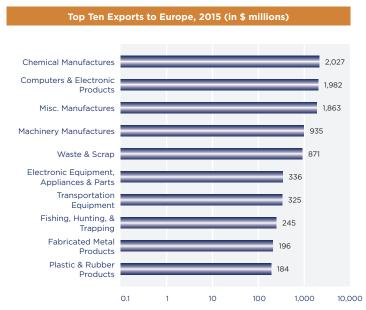
European investment in Massachusetts supported 163,800 jobs in 2014, 44,500 (37.3%) more than in 2006.

Sources of Employment within Massachusetts, 2014	
Country	Employment
United Kingdom	40,600
Netherlands	38,900
France	25,800
Canada	20,000
Germany	18,600

Trade

In 2015, Europe purchased \$9.5 billion worth of goods from Massachusetts. Computers & electronic products and chemicals each account for 21% of exports.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	1,911
Netherlands	1,399
United Kingdom	1,179
Switzerland	1,025
Ireland	843



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Michigan & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

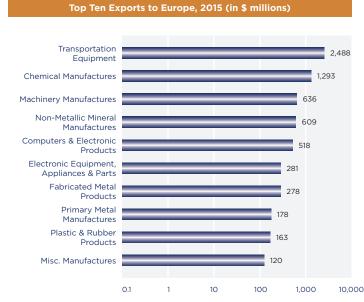
European investment in Michigan supported 141,900 jobs in 2014, 1,000 (0.7%) more than in 2006.

Sources of Employment within Michigan, 2014	
Country	Employment
Germany	33,500
Japan	31,200
Canada	24,100
United Kingdom	24,000
France	16,500

Trade

In 2015, Europe purchased \$6.9 billion worth of goods from Michigan. Not surprisingly, transportation equipment makes up 36% of Michigan's exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	1,919
Italy	1,056
United Kingdom	778
Belgium	687
France	456





Minnesota & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

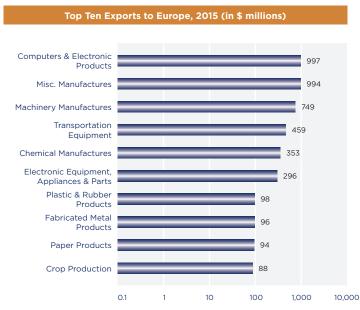
European investment in Minnesota supported 65,200 jobs in 2014, 14,500 (28.6%) more than in 2006.

Sources of Employment within Minnesota, 2014	
Country	Employment
Canada	22,500
United Kingdom	16,800
Germany	14,800
France	7,500
Japan	7,100

Trade

In 2015, Europe purchased \$4.6 billion worth of goods from Minnesota. Computers & electronic products account for 22% of Minnesota's exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	835
Belgium	825
United Kingdom	533
Ireland	390
Netherlands	340



 $Source: Bureau\ of\ Economic\ Analysis, Foreign\ Trade\ Division, U.S.\ Census\ Bureau$



Mississippi & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

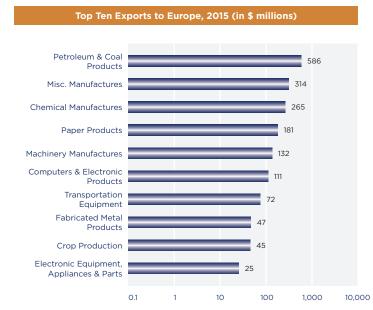
European investment in Mississippi supported 19,000 jobs in 2014, 6,500 (52.0%) more than in 2006.

Sources of Employment within Mississippi, 2014	
Country	Employment
Japan	8,700
France	4,200
Germany	3,900
United Kingdom	3,600
Canada	2,400

Trade

In 2015, Europe purchased \$1.9 billion worth of goods from Mississippi. Petroleum & coal products, miscellaneous manufactured commodities, chemicals and paper products rank as the top exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Belgium	337
Germany	283
Netherlands	283
United Kingdom	168
Turkey	77





Missouri & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Missouri supported 72,700 jobs in 2014, 11,000 (17.8%) more than in 2006.

Sources of Employment within Missouri, 2014	
Country	Employment
United Kingdom	23,100
Germany	12,400
Canada	10,200
Japan	9,500
Switzerland	9,100

Trade

In 2015, Europe purchased \$2.4 billion worth of goods from Missouri. Top exports to Europe from Missouri are chemicals and machinery manufactures.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	485
Belgium	480
United Kingdom	364
Ireland	203
France	142



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Montana & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

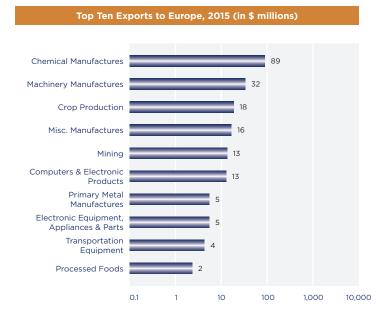
European investment in Montana supported 4,000 jobs in 2014, 1,600 (-28.6%) less than in 2006.

Sources of Employment within Montana, 2014	
Country	Employment
United Kingdom	1,400
Japan	1,000
France	900
Canada	800
Switzerland	300

Trade

In 2015, Europe purchased \$208 million worth of goods from Montana. Exports are relatively small and skewed towards chemicals and machinery manufacturers.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Belgium	41
Germany	31
Netherlands	29
United Kingdom	24
Italy	18





Nebraska & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

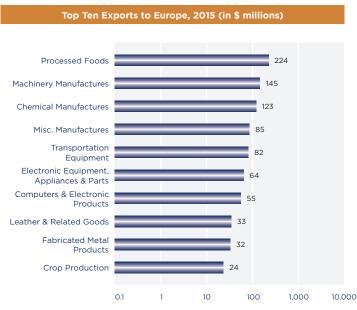
European investment in Nebraska supported 16,200 jobs in 2014, 5,100 (45.9%) more than in 2006.

Sources of Employment within Nebraska, 2014	
Country	Employment
Japan	4,900
United Kingdom	4,100
France	3,000
Switzerland	2,300
Canada	2,100

Trade

In 2015, Europe purchased \$921 million worth of goods from Nebraska. Top exports are processed foods, machinery and chemicals.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	205
Germany	164
Belgium	93
France	81
Italy	73



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Nevada & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

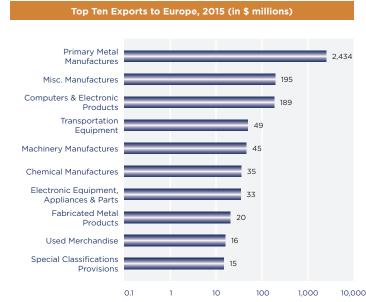
European investment in Nevada supported 25,600 jobs in 2014, 4,700 (22.5%) more than in 2006.

Sources of Employment within Nevada, 2014	
Country	Employment
Canada	13,100
Germany	7,400
United Kingdom	5,800
France	4,300
Japan	3,400

Trade

In 2015, Europe purchased \$3.1 billion worth of goods from Nevada. Primary metal manufactures account for 78% of total exports.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Switzerland	2,426
United Kingdom	111
Belgium	102
Germany	96
Netherlands	84





New Hampshire & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

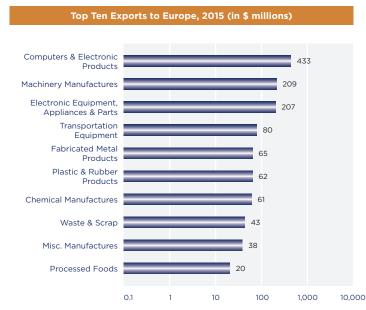
European investment in New Hampshire supported 29,200 jobs in 2014, the same amount of jobs as in 2006.

Sources of Employment within New Hampshire, 2014	
Country	Employment
United Kingdom	10,200
Canada	5,200
Japan	5,200
France	3,700
Switzerland	3,600

Trade

In 2015, Europe purchased \$1.3 billion worth of goods from New Hampshire. Computers, machinery and electrical equipment are the top exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	265
Germany	181
Netherlands	170
Ireland	148
France	123



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



New Jersey & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in New Jersey supported 174,500 jobs in 2014, 3,700 (2.2%) more than in 2006.

Sources of Employment within New Jersey, 2014	
Country	Employment
United Kingdom	40,000
Switzerland	32,900
France	29,500
Japan	27,700
Germany	24,900

Trade

In 2015, Europe purchased \$9 billion worth of goods from New Jersey. Top exports consist of chemical manufactures and computers & electronic products.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	2,117
Netherlands	1,306
Germany	1,100
France	1,056
Belgium	787





New Mexico & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

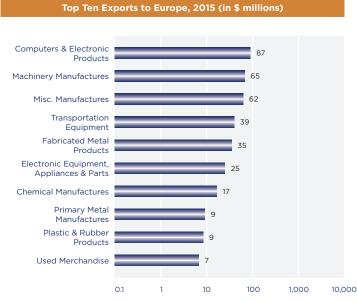
European investment in New Mexico supported 12,300 jobs in 2014, 4,500 (57.7%) more than in 2006.

Sources of Employment within New Mexico, 2014	
Country	Employment
Germany	5,400
Canada	4,600
United Kingdom	2,700
Japan	2,400
France	1,100

Trade

In 2015, Europe purchased \$369 million worth of goods from New Mexico. Exports are relatively small and are skewed toward computers & electronic products and machinery manufactures.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Belgium	78
Germany	65
Ireland	52
United Kingdom	33
Netherlands	24



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



New York & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

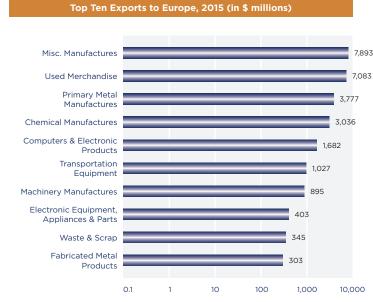
European investment in New York supported 310,500 jobs in 2014, 28,400 (10.1%) more than in 2006.

Sources of Employment within New York, 2014	
Country	Employment
United Kingdom	103,700
France	51,000
Canada	39,200
Switzerland	38,600
Japan	36,700

Trade

In 2015, Europe purchased \$28.2 billion worth of goods from New York. Miscellaneous manufactures, used merchandise and primary metal manufactures are the top exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Switzerland	8,315
United Kingdom	5,876
Belgium	4,473
Germany	2,169
France	2,027





North Carolina & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

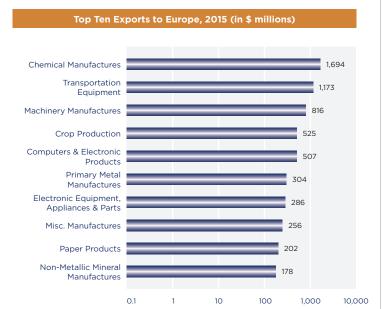
European investment in North Carolina supported 165,400 jobs in 2013, 11,600 (7.5%) more than in 2006.

Sources of Employment within North Carolina, 2014	
Country	Employment
United Kingdom	32,100
Germany	29,700
Japan	21,600
Switzerland	19,300
France	13,300

Trade

In 2014, Europe purchased \$7.1 billion worth of goods from North Carolina. Chemical manufactures account for about a fifth of total exports to Europe.

Top European Export Markets, 2015		
Country	Exports (\$ Millions)	
France	1,133	
United Kingdom	1,010	
Germany	1,002	
Belgium	782	
Netherlands	722	



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



North Dakota & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in North Dakota supported 5,800 jobs in 2014, 1,800 (45.0%) more than in 2006.

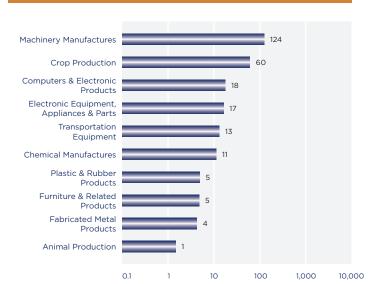
Sources of Employment within North Dakota, 2014	
Country	Employment
United Kingdom	1,700
Canada	1,300
Japan	1,300
France	600
Germany	400

Trade

In 2015, Europe purchased \$262 million worth of goods from North Dakota. 47% of the state's exports consist of machinery manufactures.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Czech Republic	70
Germany	43
Italy	42
Spain	20
United Kingdom	19







EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Ohio supported 147,600 jobs in 2014, 13,600 (10.1%) more than in 2006.

Sources of Employment within Ohio, 2014	
Country	Employment
Japan	63,000
United Kingdom	42,100
Germany	30,600
Canada	22,800
France	18,300

Trade

In 2015, Europe purchased \$9.5 billion worth of goods from Ohio. Transportation equipment, chemicals and machinery are the state's top exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
France	1,920
United Kingdom	1,788
Germany	1,493
Netherlands	658
Switzerland	565



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Oklahoma & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Oklahoma supported 29,600 jobs in 2014, 8,100 (37.7%) more than in 2006.

Sources of Employment within Oklahoma, 2014	
Country	Employment
Canada	7,100
United Kingdom	7,100
France	6,800
Germany	3,900
Switzerland	3,600

Trade

In 2015, Europe purchased \$1 billion worth of goods from Oklahoma. Top exports include transportation equipment, machinery, and computers.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	279
Netherlands	161
United Kingdom	112
Belgium	46
France	45







Oregon & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

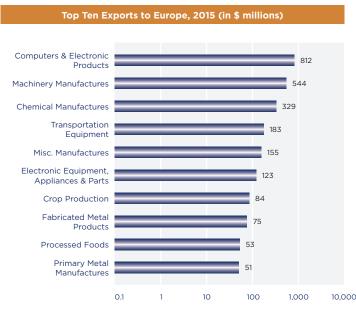
European investment in Oregon supported 36,000 jobs in 2014, 5,700 (18.8%) more than in 2006.

Sources of Employment within Oregon, 2014	
Country	Employment
United Kingdom	9,500
Germany	8,800
Japan	6,900
Canada	6,000
Switzerland	4,600

Trade

In 2015, Europe purchased \$2.5 billion worth of goods from Oregon. 32% of Oregon's exports to Europe consists of computers and related products.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	377
Germany	359
Netherlands	303
Ireland	285
Switzerland	204



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Pennsylvania & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Pennsylvania supported 222,900 jobs in 2014, 40,400 (22.1%) more than in 2006.

Sources of Employment within Pennsylvania, 2014	
Country	Employment
United Kingdom	60,100
Netherlands	44,000
Germany	40,700
Japan	25,700
France	23,200

Trade

In 2015, Europe purchased \$10.5 billion worth of goods from Pennsylvania. Exports are relatively diverse, ranging from chemicals to transportation equipment, primary metals, machinery and computers & electronic products.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	2,342
Germany	1,576
Netherlands	1,404
Belgium	1,289
France	643







Rhode Island & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

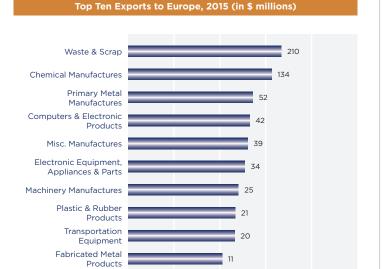
European investment in Rhode Island supported 25,300 jobs in 2014, 10,900 (75.7%) more than in 2006.

Sources of Employment within Rhode Island, 2014	
Country	Employment
United Kingdom	10,000
France	2,900
Japan	2,000
Germany	1,200
Canada	1,000

Trade

In 2015, Europe purchased \$626 million worth of goods from Rhode Island. Waste & scrap account for 33% of exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Turkey	132
Germany	108
Ireland	93
Italy	78
United Kingdom	59



10

100

1,000

10,000

Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



South Carolina & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

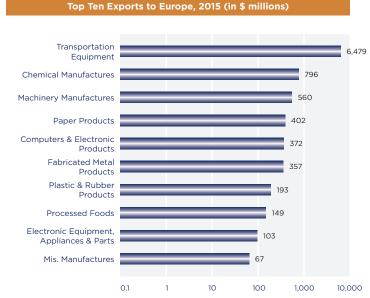
European investment in South Carolina supported 94,800 jobs in 2014, 10,600 (12.6%) more than in 2006.

Sources of Employment within South Carolina, 2014	
Country	Employment
Germany	25,800
France	19,300
Japan	16,300
United Kingdom	11,900
Canada	9,500

Trade

In 2015, Europe purchased \$9.8 billion worth of goods from South Carolina. 66% of the state's exports consists of transportation equipment.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Germany	3,908
United Kingdom	2,842
Belgium	670
France	424
Netherlands	405





South Dakota & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

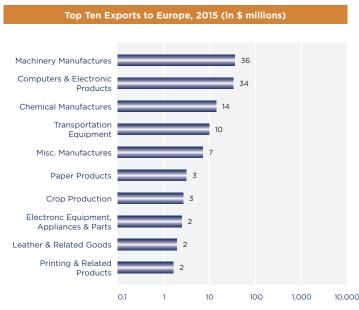
European investment in South Dakota supported 5,200 jobs in 2014, 2,000 (62.5%) more than in 2006.6.

Sources of Employment within South Dakota, 2014	
Country	Employment
Canada	2,300
United Kingdom	1,600
France	1,300
Japan	800
Germany	700

Trade

In 2015, Europe purchased \$121 million worth of goods from South Dakota. Machinery manufactures are the state's top export to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Belgium	23
Germany	15
Switzerland	14
France	10
United Kingdom	9



 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



Tennessee & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

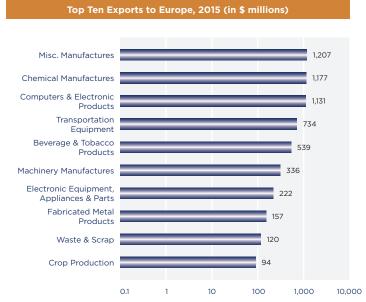
European investment in Tennessee supported 81,100 jobs in 2014, 6,400 (8.6%) more than in 2006.

Sources of Employment within Tennessee, 2014	
Country	Employment
Japan	40,100
United Kingdom	20,200
Germany	16,100
France	11,000
Netherlands	10,000

Trade

In 2015, Europe purchased \$6.2 billion worth of goods from Tennessee. Miscellaneous and chemical manufactures as well as computers & electronic products make up the bulk of exports.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Belgium	1,276
Netherlands	1,125
United Kingdom	956
Germany	921
France	338





Texas & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

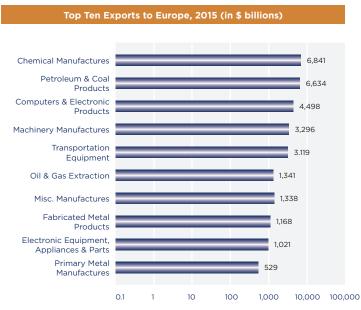
European investment in Texas supported 331,200 jobs in 2014, 95,300 (40.4%) more than in 2006.

Sources of Employment within Texas, 2014	
Country	Employment
United Kingdom	107,200
Japan	47,900
France	46,000
Canada	45,100
Germany	43,000

Trade

In 2015, Europe purchased \$31.9 billion worth of goods from Texas. Exports are relatively diverse ranging from chemicals and petroleum to computers and machinery manufactures.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	6,709
Belgium	4,613
United Kingdom	4,293
Germany	3,285
France	2,625



 $Source: Bureau\ of\ Economic\ Analysis, Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$





Utah & Europe

Employment

European investment in Utah supported 27,500 jobs in 2014, 600 (2.2%) more than in 2006.

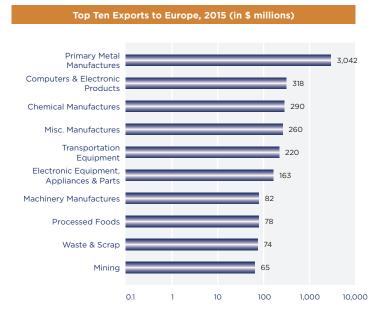
EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Sources of Employment within Utah, 2014	
Country	Employment
United Kingdom	6,800
France	4,600
Germany	4,300
Switzerland	3,500
Japan	3,300

Trade

In 2015, Europe purchased \$4.7 billion worth of goods from Utah. Primary metals dominate the state's exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	3,037
Netherlands	364
Germany	266
Switzerland	219
Italy	167





Vermont & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

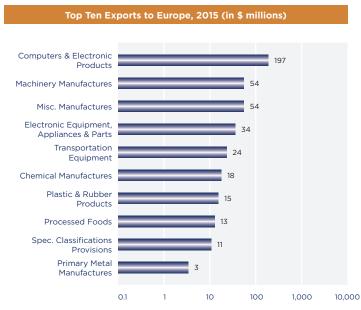
European investment in Vermont supported 8,100 jobs in 2014, 1,400 (20.9%) more than in 2006.

Sources of Employment within Vermont, 2014	
Country	Employment
Canada	2,200
United Kingdom	1,400
France	1,200
Switzerland	1,200
Netherlands	800

Trade

In 2015, Europe purchased \$428 million worth of goods from Vermont. Computers & electronic products are the top export to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	108
United Kingdom	87
Germany	60
France	52
Italy	23



Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau





Virginia & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

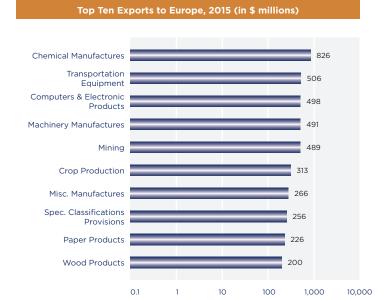
European investment in Virginia supported 131,700 jobs in 2014, 19,400 (17.3%) more than in 2006.

Sources of Employment within Virginia, 2014	
Country	Employment
United Kingdom	31,900
Netherlands	17,700
Japan	16,600
Germany	15,200
France	13,100

Trade

In 2015, Europe purchased \$5 billion worth of goods from Virginia. Top exports include chemicals, transportation equipment, computers and machinery manufactures.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	1,040
Germany	844
Belgium	556
Netherlands	556
Italy	282





Washington & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Washington supported 59,700 jobs in 2014, 3,300 (5.9%) more than in 2006.

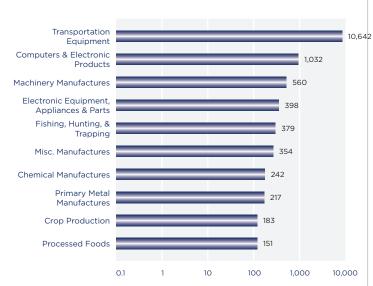
Sources of Employment within Washington, 2014	
Country	Employment
Canada	18,500
United Kingdom	18,100
Japan	14,600
Germany	13,200
France	7,200

Trade

In 2015, Europe purchased \$14.2 billion worth of goods from Washington. Transportation equipment dominates Washington's exports to Europe, making up 74% of total exports.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	2,541
Turkey	1,922
Germany	1,851
Netherlands	1,679
Russia	1,597





 $Source: Bureau\ of\ Economic\ Analysis,\ Foreign\ Trade\ Division,\ U.S.\ Census\ Bureau$



West Virginia & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in West Virginia supported 14,500 jobs in 2014, 2,200 (17.9%) more than in 2006.

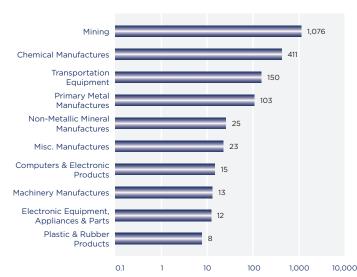
Sources of Employment within West Virginia, 2014	
Country	Employment
United Kingdom	4,600
Japan	4,500
Canada	3,600
Germany	1,600
Switzerland	1,500

Trade

In 2014, Europe purchased \$2.9 billion worth of goods from West Virginia. Minerals & ores are the state's top export to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
Netherlands	401
United Kingdom	212
Belgium	211
Germany	190
Italy	177

Top Ten Exports to Europe, 2015 (in \$ millions)





Wisconsin & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Wisconsin supported 57,500 jobs in 2014, 6,600 (-10.3%) less than in 2006.

Sources of Employment within Wisconsin, 2014	
Country	Employment
Canada	Canada
United Kingdom	United Kingdom
Germany	Germany
Switzerland	Switzerland
France	France

Trade

In 2015, Europe purchased \$4.2 billion worth of goods from Wisconsin. Machinery and computers & electronic equipment are the state's top exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	825
Germany	701
France	457
Belgium	431
Netherlands	393





Source: Bureau of Economic Analysis, Foreign Trade Division, U.S. Census Bureau



Wyoming & Europe

EMPLOYMENT, INVESTMENT AND TRADE LINKAGES

Employment

European investment in Wyoming supported 4,500 jobs in 2014, 400 (-8.2%) less than in 2006.

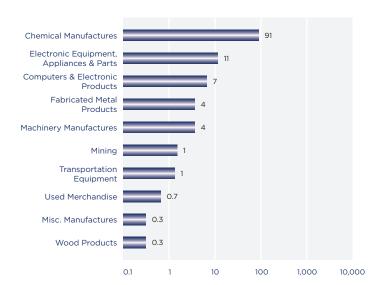
Sources of Employment within Wyoming, 2014	
Country	Employment
United Kingdom	1,600
Japan	700
Canada	600
France	600
Germany	500

Trade

In 2015, Europe purchased \$121 million worth of goods from Wyoming. Chemicals account for 75% of exports to Europe.

Top European Export Markets, 2015	
Country	Exports (\$ Millions)
United Kingdom	53
Netherlands	20
Belgium	16
Germany	15
France	9





APPENDIX B

U.S. COMMERCE AND EUROPE:

A Country-by-Country Comparison



Austria & the United States

INVESTMENT AND TRADE FIGURES

Investment

Not surprisingly, America's direct investment position in Austria exceeds Austria's investment stakes in the United States. American affiliates employed roughly three times as many workers in Austria than Austrian firms employed in the U.S., according to 2015 estimates.

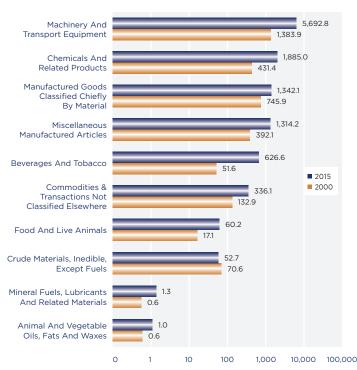
Austria - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Austria	Austria in U.S.
Foreign Direct Investment*	17.3	7.1
Total Assets of Affiliates	40.4	7.7
Foreign Affiliate Sales	22.7	8.3
Value Added of Affiliates	6.1	1.8
Affiliate Employees	46,184	16,974

^{*} Based on a historic-cost basis.

Trade

On a global basis, the U.S. received \$11.3 billion worth of goods from Austria, or 6.3% of the total goods Austria exported to the world in 2015. The share going to the U.S. rises to 21.2% of the global total after excluding intra-EU trade, the highest since 2006, but down from a high of 23.7% in 2004. Imports of U.S. goods constituted \$4.0 billion, or 2.6% of the total amount Austria imported from the world in 2015 and 11.0% when intra-EU imports were removed from the global total, well below its share of 21.0% in 2000.

Top Ten U.S. Imports from Austria, 2015 (in \$ millions)



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Belgium & the United States

INVESTMENT AND TRADE FIGURES

Investment

U.S. direct investments in Belgium are increasingly made in the services sector, but the manufacturing sector still accounts for about half of U.S. foreign affiliate employment in Belgium. Belgian affiliates employed nearly 20,000 more workers in the U.S. than U.S. affiliates in Belgium, according to 2015 estimates. However, value added by U.S. affiliates in Belgium totaled an estimated \$28.0 billion in 2015, 32% more than that of Belgium's affiliates in the U.S.

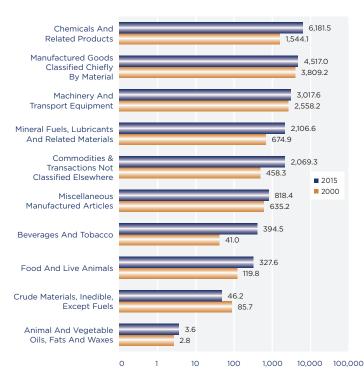
Belgium - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Belgium	Belgium in U.S.
Foreign Direct Investment*	45.1	80.1
Total Assets of Affiliates	395.2	198.8
Foreign Affiliate Sales	146.8	55.6
Value Added of Affiliates	28.0	21.3
Affiliate Employees	132,126	150,200

^{*} Based on a historic-cost basis.

Trade

The U.S. imported \$19.5 billion worth of goods from Belgium, accounting for 6.0% of total exports from Belgium in 2015. The share of total exports rises to 21.4% when intra-EU trade is excluded, down from a high of 31.9% in 2002. Chemicals, manufactured goods, and machinery and transport equipment led the way as the top export categories. Regarding imports, the U.S. supplied 8.7% of total Belgian imports in 2015, or \$32.6 billion, but the share nearly triples to 23.3% after omitting intra-EU trade.

Top Ten U.S. Imports from Belgium, 2015 (in \$ millions)



^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Bulgaria & the United States

INVESTMENT AND TRADE FIGURES

Investment

America's investment base in Bulgaria is rather small with assets totaling just \$4.7 billion in 2015, according to estimates. U.S. affiliates in Bulgaria employed an estimated 10,241 workers in 2015, a considerable rise since 2014, placing Bulgaria 6th among the EU13 in terms of employment.

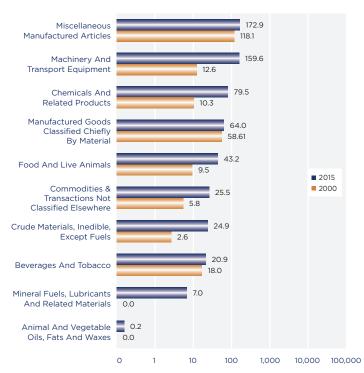
Bulgaria - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Bulgaria	Bulgaria in U.S.
Foreign Direct Investment*	0.4	0.042
Total Assets of Affiliates	4.7	0.001
Foreign Affiliate Sales	2.2	0.000
Value Added of Affiliates	0.9	0.002
Affiliate Employees	10,241	-

^{*} Based on a historic-cost basis.

Trade

The U.S. imported approximately \$600 million worth of goods from Bulgaria in 2015, accounting for just 1.6% of Bulgaria's total exports; the percentage rises to just 4.6% when intra-EU trade is excluded from the total, down from a high of 14.4% in 2001. Imports from the U.S. are rather small, totaling just \$268 million in 2015, only 2.5% of Bulgaria's extra-EU imports.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Croatia & the United States

INVESTMENT AND TRADE FIGURES

Investment

U.S. firms have a small investment base in Croatia, with just \$830 million of assets in 2015, but a considerable rise from their \$578 million in assets in 2014. U.S. foreign affiliates in Croatia employed an estimated 1,400 workers in 2015, ranking 11th among the EU13 countries.

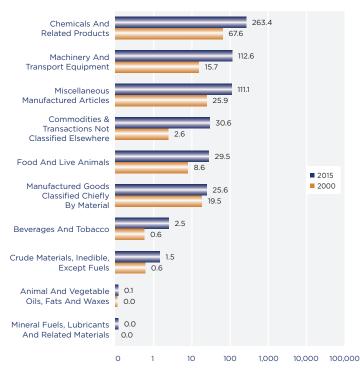
Croatia - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Croatia	Croatia in U.S.
Foreign Direct Investment*	0.1	-0.007
Total Assets of Affiliates	0.8	0.004
Foreign Affiliate Sales	0.6	-
Value Added of Affiliates	0.3	0.002
Affiliate Employees	1,400	-

^{*} Based on a historic-cost basis

Trade

The U.S. received \$575 million in goods from Croatia in 2015, or 2.4% of the total goods Croatia exported to the world in 2015 and 7.0% excluding intra-EU trade. Croatia's main exports to the U.S. consist of chemicals and related products, machinery and transport equipment, and miscellaneous manufactured articles. Imports of U.S. goods totaled \$183 million, or 0.9% of the total amount Croatia imported from the world in 2015 and 4.1% when intra-EU imports were removed from the global total.

Top Ten U.S. Imports from Croatia, 2015 (in \$ millions)



^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Cyprus & the United States

INVESTMENT AND TRADE FIGURES

Investment

Given the country's small market, Cyprus has not attracted much U.S. foreign direct investment relative to other EU members; however, investment reached a peak of \$2.1 billion in 2014. Although FDI has slightly declined in 2015 to \$2.0 billion, the U.S. investment position in Cyprus is now almost eight times larger than it was a decade ago. Cyprus's FDI in the U.S. totaled \$2.5 billion in 2015. U.S. foreign affiliate sales in Cyprus were at a record high of \$1.7 billion, according to 2015 estimates.

Cyprus - U.S. Global Linkages, 2015** (\$ billions) U.S. in Cyprus Cyprus in U.S. Foreign Direct Investment* 2.0 2.5 Total Assets of Affiliates 26.2 4.6 Foreign Affiliate Sales 17 24 Value Added of Affiliates 0.4 0.3Affiliate Employees 1,967 3,105

Trade

Cyprus's supply of goods to the United States is relatively insignificant at \$32 million, with exports to the U.S. registering just 1.7% of its total world exports in 2015. The U.S. share of Cyprus's extra-EU exports is 3.2%, down from 6.4% the previous year. Cyprus's imports from the U.S. were also unsubstantial, totaling just \$44 million, or 0.8% of Cyprus's total imports from the world.

Top Ten U.S. Imports from Cyprus, 2015 (in \$ millions)



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Czech Republic & the United States

INVESTMENT AND TRADE FIGURES

Investment

America's investment base in the Czech Republic is small and has been somewhat volatile; U.S. foreign direct investment in the country has more than doubled over the past ten years to \$5.8 billion in 2015, but declined from \$7.2 billion in 2014. Value added by U.S.-owned foreign affiliates totaled an estimated \$5.6 billion. Estimated affiliate employment in the Czech Republic is among the highest in eastern Europe, with American firms employing an estimated 95,013 workers in 2015, 6,000 more than the year before. In contrast, the Czech Republic's investment in the U.S. is rather small.

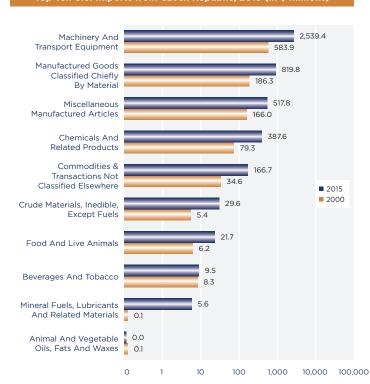
Czech Republic - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Czech Republic	Czech Republic in U.S.
Foreign Direct Investment*	5.8	O.11
Total Assets of Affiliates	32.0	0.003
Foreign Affiliate Sales	19.4	0.001
Value Added of Affiliates	5.6	0.001
Affiliate Employees	95,013	-

^{*} Based on a historic-cost basis

Trade

Exports of goods from the Czech Republic to the U.S. have more than doubled since 2009, accounting for 14.2% of the Czech Republic's extra-EU exports in 2015. U.S. imports from the Czech Republic totaled \$4.5 billion in 2015 and mainly consisted of machinery, transportation equipment and manufactured goods. Czech imports from the U.S. declined 16% to \$2.1 billion in 2015, or 6.4% of Czechia's extra-EU imports.





^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Denmark & the United States

INVESTMENT AND TRADE FIGURES

Investment

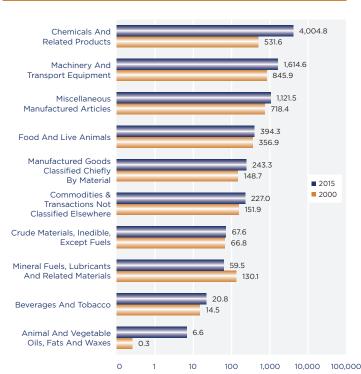
Bilateral investment between the U.S. and Denmark was relatively equal in 2015, with the U.S. investing only \$120 million more in Denmark than what Denmark invested in the United States. Affiliate sales in the U.S. market were an estimated \$24.2 billion in 2015 while U.S. foreign affiliate sales in Denmark were \$26.5 billion. The affiliate employment balance favors Denmark, with U.S. affiliates in Denmark employing approximately 10,000 more people than Danish affiliates in the U.S., according to estimates.

Denmark - U.S. Global Linkages, 2015** (\$ billions) U.S. in Denmark Denmark in U.S. Foreign Direct Investment* 14 4 14.3 Total Assets of Affiliates 91.1 21.2 Foreign Affiliate Sales 24.2 26.5 Value Added of Affiliates 11.3 5.1 Affiliate Employees 45,851 35,501

Trade

The U.S. imported \$7.7 billion worth of goods from Denmark in 2015. While exports to the U.S. accounted for 8.4% of Denmark's total global exports, if intra-EU trade is excluded, the share of exports to the U.S. increases to 21.5%. Danish imports from the U.S. totaled \$2.2 billion the same year, or 2.6% of the global total and 8.5% excluding intra-EU trade. Chemicals, machinery and transportation equipment, and miscellaneous manufactured articles dominate U.S. imports from the country.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Estonia & the United States

INVESTMENT AND TRADE FIGURES

Investment

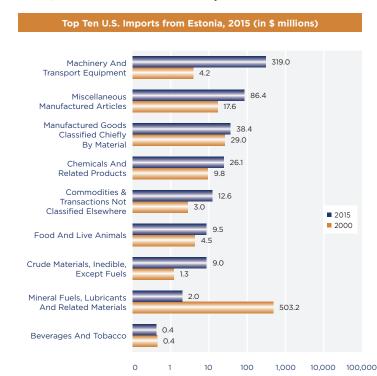
America's direct investment base in Estonia is one of the smallest of the EU13. U.S. affiliates employed an estimated 3,519 people in 2015, placing Estonia 8th among the EU13 in terms of employment. Expectations that U.S. investment in Estonia would increase as the Baltic states emerge as a key gateway to eastern Europe and beyond have not yet materialized, in part due to chilly relations with Russia, including Western sanctions and Russian counter-sanctions. But Estonia's digital economy holds some attraction for U.S. companies.

Estonia - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Estonia	Estonia in U.S.
Foreign Direct Investment*	0.1	-0.005
Total Assets of Affiliates	0.7	0.002
Foreign Affiliate Sales	0.6	0.000
Value Added of Affiliates	0.3	0.000
Affiliate Employees	3,519	0

^{*} Based on a historic-cost basis

Trade

Exports of goods from Estonia to the U.S. declined 33% from the previous year and accounted for just 3.1% of Estonia's total global exports in 2015. However, this share increases to 12.6% when excluding intra-EU trade. Of the \$500 million in total goods the U.S. imports from Estonia, Machinery and Transport Equipment has been the largest and fastest growing product group, rising by roughly \$315 million from 2000 to 2015. Meanwhile, mineral fuels, lubricants and related materials comprised roughly 90% of U.S. imports from Estonia in 2000 at \$503 million but have plummeted to \$2.0 million in 2015. Estonia imports very little from the U.S. at just \$195 million, which is 7.4% of total extra-EU imports.



^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Finland & the United States

INVESTMENT AND TRADE FIGURES

Investment

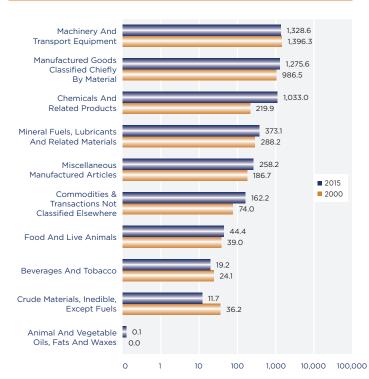
The direct investment balance favors the United States, with Finnish investment in the U.S. totaling \$9.8 billion in 2015 versus just \$1.2 billion of U.S. investment in Finland. The affiliate employment balance also favors the U.S. by 5,200 jobs.

Finland - U.S. Global Linkages, 2015** (\$ billions) U.S. in Finland Finland in U.S. Foreign Direct Investment* 1.2 9.8 Total Assets of Affiliates 37.0 53.8 Foreign Affiliate Sales 11.2 15.1 Value Added of Affiliates 2.3 6.5 Affiliate Employees 19 300 24.500

Trade

The U.S. received \$4.5 billion of goods from Finland, or 7.0% of the total goods Finland exported to the world in 2015, but the share going to the U.S. rises to 16.9% of the global total after excluding intra-EU trade. Finland's imports of U.S. goods in 2015 constituted \$1.5 billion, or 2.4% of the total amount imported from the world and 8.9% when intra-EU imports are removed from the global total, down from a high of nearly 22% in 1998.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



INVESTMENT AND TRADE FIGURES

Investment

The direct investment balance favors the U.S., with U.S. investment in France (\$78.3 billion) just 33% of total French investment in the U.S. in 2015 (\$233.8 billion). The U.S. is a significant market for French firms, with U.S. affiliates of French firms recording an estimated \$278 billion in sales during 2015. U.S. and French affiliates combined employed over 1 million workers, with the employment balance favoring the U.S. by about 100,000 jobs, according to 2015 estimates. The Paris region is the 2nd largest source of onshored jobs to America of all European metro regions.

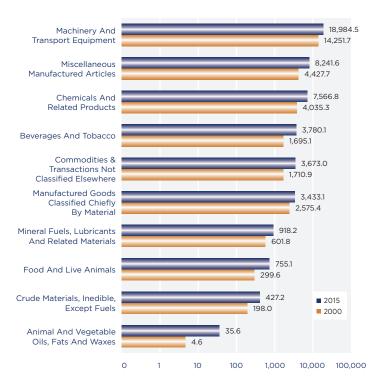
France - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in France	France in U.S.
Foreign Direct Investment*	78.3	233.8
Total Assets of Affiliates	418.7	1,307.9
Foreign Affiliate Sales	226.6	277.6
Value Added of Affiliates	57.1	72.2
Affiliate Employees	491,832	593,826

^{*} Based on a historic-cost basis

Trade

The U.S. imported \$47.8 billion of goods from France, accounting for 7.2% of total French exports in 2015, but a share of 17.5% of total exports when intra-EU trade is excluded. Products exported to the U.S. ran the gamut, from heavy machinery and transportation equipment to chemicals and agricultural products. Regarding imports, the U.S. supplied 5.5% of total imports by France in 2015, worth \$31.5 billion, but the share rises to 17.4% after excluding intra-EU trade. Still, the U.S. share of Estonia's total extra-EU imports is well below its high of 25.2% in 1999.

Top Ten U.S. Imports from France, 2015 (in \$ millions)



^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Germany & the United States

INVESTMENT AND TRADE FIGURES

Investment

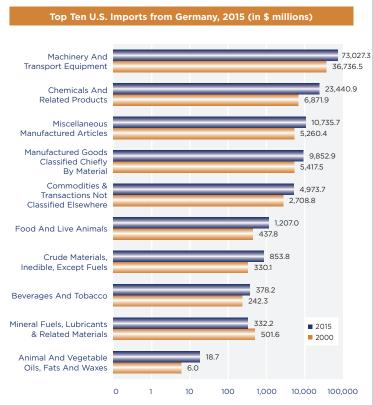
The investment balance favors the U.S., with U.S. investment in Germany totaling \$108.1 billion in 2015, less than half the size of Germany's \$255.5 billion investment in the U.S. Germany's asset base in the U.S. was nearly double America's total asset base in Germany. The value added by U.S. affiliates operating in Germany (\$99.2 billion) was only slightly less than that of German affiliates in the U.S., according to estimates. The employment picture is balanced, with affiliates of both countries employing a combined total of over 1.3 million workers, according to 2015 estimates, and U.S. affiliates adding 75,000 new workers to their payrolls in Germany in 2015.

Germany - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Germany	Germany in U.S.
Foreign Direct Investment*	108.1	255.5
Total Assets of Affiliates	813.0	1,473.2
Foreign Affiliate Sales	378.3	482.7
Value Added of Affiliates	99.2	102.8
Affiliate Employees	700,799	695,934

^{*} Based on a historic-cost basis

Trade

Germany is the largest European exporter to the U.S., with the U.S. importing \$124.1 billion worth of goods in 2015. Although Germany's total exports to the world declined 11.1% in 2015, exports to the U.S. remained stable, causing the U.S. share of total German exports to rise to 9.6%. The share of German exports to the U.S. is 22.7% ex. intra-EU trade. German imports from the U.S. were \$49.6 billion in 2015—that equates to 4.7% of total German imports or 13.8% ex. intra-EU trade. Roughly 77% of U.S. imports from Germany consist of machinery and transportation equipment and chemicals.



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Greece & the United States

INVESTMENT AND TRADE FIGURES

Investment

Greece's continued economic woes are reflected in its transatlantic commercial links. America held a negative investment position of \$600 million in Greece according to 2015 estimates. The U.S. asset base in Greece is roughly six times that of Greece's assets in the U.S. However, estimated U.S. affiliate sales of just \$6.4 billion in 2015 ranked among the lowest in the EU.

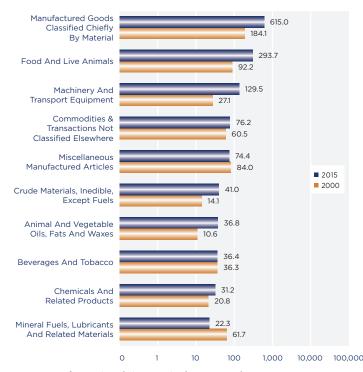
Greece - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Greece	Greece in U.S.
Foreign Direct Investment*	-0.6	-
Total Assets of Affiliates	8.8	1.5
Foreign Affiliate Sales	6.4	1.0
Value Added of Affiliates	2.9	0.3
Affiliate Employees	18,209	2,484

^{*} Based on a historic-cost basis

Trade

The U.S. received from Greece \$1.4 billion worth of goods in 2015, as Greek exports to the U.S. surged 29% after falling 14% in 2014. Meanwhile, imports from the U.S. fell 25% in 2015 to \$659 million, which near the level of U.S. imports from 2013. The U.S. accounted for 4.8% of total exports from Greece, and 10.5% excluding intra-EU exports. Greece's imports from the U.S. were 1.4% of total imports from the world in 2015 and just 2.9% excluding intra-EU imports.

Top Ten U.S. Imports from Greece, 2015 (in \$ millions)



^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Hungary & the United States

INVESTMENT AND TRADE FIGURES

Investment

America's investment base in Hungary amounted to \$6.4 billion on a historic-cost basis in 2015, down from its peak position of \$7.5 billion in 2012. Value added by U.S.-owned affiliates totaled an estimated \$3.8 billion. Estimated affiliate employment in Hungary ranked third among EU13 countries. Hungarian investment in the U.S. was \$13.2 billion in 2015, far below its peak of \$70.7 billion in 2009.

Hungary - U.S. Global Linkages, 2015** (\$ billions) U.S. in Hungary Hungary in U.S. Foreign Direct Investment* 64 13.2 Total Assets of Affiliates 43.8 0.1 Foreign Affiliate Sales 23.6 Value Added of Affiliates 0.001 3.8 Affiliate Employees 71,829 104

Trade

The U.S. imported \$5.7 billion worth of goods from Hungary, with the U.S. share of Hungary's total exports registering at 2.8% in 2015. The bulk of U.S. imports from Hungary consist of machinery and transport equipment, miscellaneous manufactured articles, as well as chemicals. Hungary bought \$1.7 billion worth of U.S. goods in 2015, or 7.9% of the country's extra-EU imports.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



INVESTMENT AND TRADE FIGURES

Investment

The investment balance favors Ireland, with U.S. investment in Ireland totaling some \$343.4 billion in 2015 versus \$13.5 billion of Ireland's investment in the U.S. Value added by U.S. affiliates totaled an estimated \$90.0 billion in 2015. Affiliate employment favored the United States, with Ireland's affiliates employing over 100,000 more people than affiliates of U.S. firms, according to estimates.

Ireland - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Ireland	Ireland in U.S.
Foreign Direct Investment*	343.4	13.5
Total Assets of Affiliates	1,280.0	400.0
Foreign Affiliate Sales	376.0	95.0
Value Added of Affiliates	90.0	37.0
Affiliate Employees	125,000	225,005

^{*} Based on a historic-cost basis.

Trade

Cross-border trade between the two countries continues to recover following Ireland's struggles with a property bubble, fiscal austerity, and a dangerously high unemployment rate. Irish exports to the U.S. grew by 9.6% last year, while imports from the U.S. grew 30.5%. The U.S. continues to be a key trade partner for Ireland; the U.S. accounted for 50.6% of Ireland's extra-EU exports and 41.7% of its extra-EU imports in 2015. U.S. imports from Ireland were \$39.4 billion and consisted primarily of chemicals and related products. In contrast, Ireland bought approximately \$10 billion worth of goods from the U.S. in 2015.





^{*} Based on a historic-cost basis.

^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Italy & the United States

INVESTMENT AND TRADE FIGURES

Investment

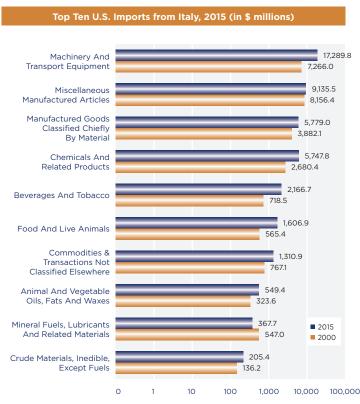
The investment balance is relatively even, with Italy having the edge in most categories. Although Italian investment in the U.S. was \$6.1 billion higher than U.S. investment in Italy in 2015, Italy benefited more with regards to affiliate sales, assets, value added and employment. U.S. investment was mostly concentrated in manufacturing, wholesale trade, information, and finance and insurance. Value added by U.S. foreign affiliates in Italy was almost twice the value added of Italian affiliates in the U.S., according to estimates. With U.S. foreign affiliates employing an estimated 223,974 workers in 2015, which was roughly 14,000 more than in the previous year, the employment balance clearly favors Italy.

Italy - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Italy	Italy in U.S.
Foreign Direct Investment*	22.5	28.6
Total Assets of Affiliates	184.6	135.2
Foreign Affiliate Sales	122.2	104.5
Value Added of Affiliates	34.7	19.3
Affiliate Employees	223,974	130,928

^{*} Based on a historic-cost basis.

Trade

The U.S. accounted for 8.7% of total exports from Italy in 2015, and 19.3% of total exports after excluding intra-EU trade. Machinery and transportation goods made up 39% of the total \$44 billion of U.S. imports from Italy. Regarding imports, the U.S. supplied 3.9% of total imports by Italy in 2015, amounting to \$15.7 billion, although the share rises to 9.3% after excluding intra-EU imports.



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Latvia & the United States

INVESTMENT AND TRADE FIGURES

Investment

The small country of roughly 2 million people has yet to attract significant foreign direct investment from the United States. However, investment linkages are expected to gradually expand over the next decade. U.S. affiliates supported 1,242 jobs according to 2015 estimates. Although U.S. affiliate employment in Latvia is the second lowest among EU13 countries, jobs supported by American firms have increased 77% since 2013.

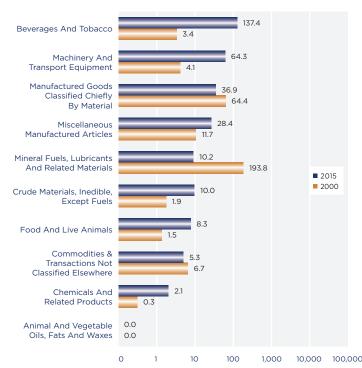
Latvia - U.S. Global Linkages, 2015** (\$ billions)		
	U.S. in Latvia	Latvia in U.S.
Foreign Direct Investment*	0.0	-
Total Assets of Affiliates	0.2	-
Foreign Affiliate Sales	0.3	-
Value Added of Affiliates	-	-
Affiliate Employees	1,242	-

^{*} Based on a historic-cost basis.

Trade

U.S. imports from Latvia reached \$302 million in 2015, with beverages and tobacco imports accounting for almost half of the total. Latvia exported 1.4% of total global exports to the U.S. in 2015, which is just 4.5% of extra-EU exports. The U.S. is a small supplier to Latvia as well. Latvia imported \$97 million of U.S. goods in 2015, which is just 3.3% of Latvia's extra-EU imports.

Top Ten U.S. Imports from Latvia, 2015 (in \$ millions)



^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Lithuania & the United States

INVESTMENT AND TRADE FIGURES

Investment

Lithuania has yet to attract significant levels of U.S. foreign direct investment. U.S. affiliates employed 1,100 workers in Lithuania in 2015, 600 less than in 2014, according to estimates.

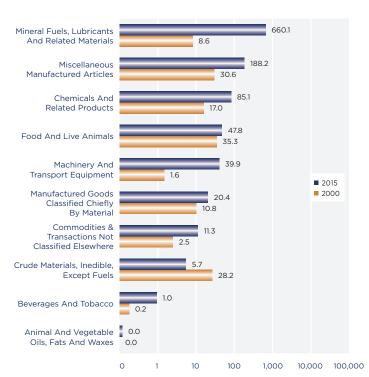
Lithuania - U.S. Global Linkages, 2015** (\$ billions)					
	U.S. in Lithuania Lithuania in U.S.				
Foreign Direct Investment*	0.1	-			
Total Assets of Affiliates	0.5	0.001			
Foreign Affiliate Sales	0.4	0			
Value Added of Affiliates	-	-			
Affiliate Employees	1,100	0			

^{*} Based on a historic-cost basis

Trade

U.S. imports from Lithuania were \$1.1 billion in 2015. Lithuania has been affected by Russian counter-sanctions limiting or blocking imports from Western countries. Given Lithuania's economic ties to Russia, this has hit Lithuanian exports. As a result, total Lithuanian exports to the world decreased by a full 21.2% in 2015. Lithuanian exports to the U.S. also declined by 6.5%, causing the U.S. share of Lithuanian extra-EU exports to rise to 11.4%. Mineral fuels, miscellaneous manufactured articles and chemicals are the country's top exports to the U.S. Lithuanian imports from the U.S. totaled \$401 million in 2015, or only 4.3% of the country's extra-EU imports.

Top Ten U.S. Imports from Lithuania, 2015 (in \$ millions)



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Luxembourg & the United States

INVESTMENT AND TRADE FIGURES

Investment

Investment between the U.S. and Luxembourg is skewed in favor of Luxembourg. Estimated U.S. foreign affiliate sales in Luxembourg were about fifteen times greater than sales of Luxembourg affiliates in the U.S. Mutual employment is relatively balanced at roughly 21,000 in each country, according to 2015 estimates. The amount of jobs in Luxembourg supported by U.S. firms has rapidly increased in the past two years to 21,254, up 45% since 2013.

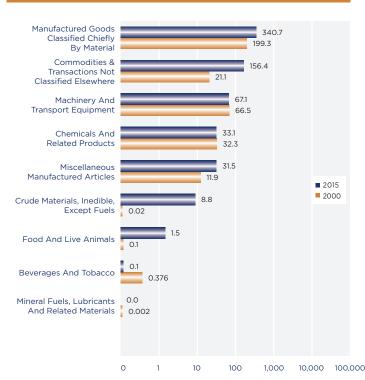
Luxembourg - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Luxembou Luxembourg in U.					
Foreign Direct Investment*	503.0	328.4			
Total Assets of Affiliates	18.8				
Foreign Affiliate Sales 65.7					
Value Added of Affiliates 4.1					
Affiliate Employees	21,254	20,900			

^{*} Based on a historic-cost basis.

Trade

The U.S. imported \$640 million worth of goods from Luxembourg. Luxembourg's exports to the U.S. represented 15.0% of the country's extra-EU exports in 2015. Manufactured goods make up more than half of U.S. imports, followed by commodities. Imports from the U.S. rose slightly in 2015 to \$2.0 billion, or 8.4% of the country's total imports and a staggering 30.3% of extra-EU imports.





^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Malta & the United States

INVESTMENT AND TRADE FIGURES

Investment

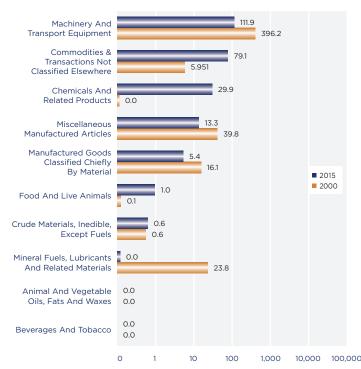
Despite the country's tiny population (just 429,000 people), Malta has attracted a relatively large amount of foreign direct investment from the U.S. The investment position of the U.S. in Malta amounted to \$0.7 billion in 2015. In addition, American investment supported jobs for roughly 2,187 workers, according to estimates.

Malta - U.S. Global Linkages, 2015** (\$ billions) U.S. in Malta Malta in U.S. 0.7 Foreign Direct Investment* 1.0 Total Assets of Affiliates 43.9 0.01 Foreign Affiliate Sales 0.6 Value Added of Affiliates 0.3 Affiliate Employees 2 187 629

Trade

Trade between the two countries remains rather small. U.S. imports from Malta in 2015 amounted to just \$240 million in 2015 and were primarily concentrated in machinery and transport equipment, followed by commodities. U.S. imports of chemicals from Malta have increased from under \$3,000 in 2000 to \$29.9 million in 2015. Malta's imports from the U.S. totalled \$202 million in 2015, or 3.5% of total imports and 10.1% excluding intra-EU imports.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Netherlands & the United States

INVESTMENT AND TRADE FIGURES

Investment

Investment between the U.S. and the Netherlands is skewed toward the latter, with America's investment stake in the Netherlands over three times the amount of Dutch investment in the U.S. Still, the U.S. is a prime foreign destination for Dutch firms, who recorded an estimated \$262.0 billion in affiliate sales in the U.S. during 2015. The employment balance clearly favors the U.S. with the gap as wide as 178,537 jobs, according to estimates. Amsterdam-North Holland is the 3rd largest source of onshored jobs to America of all European metro regions.

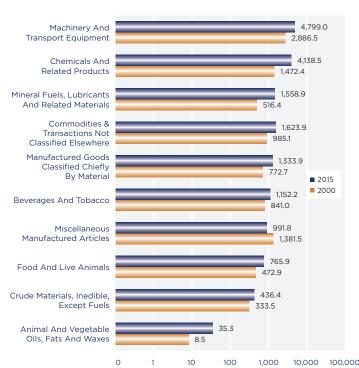
Netherlands - U.S. Global Linkages, 2015** (\$ billions)					
	U.S. in Netherla Netherlands in				
Foreign Direct Investment*	858.1	282.5			
Total Assets of Affiliates	2,729.3	688.5			
Foreign Affiliate Sales	278.5	262.0			
Value Added of Affiliates	35.9	46.9			
Affiliate Employees	251,919	430,457			

^{*} Based on a historic-cost basis

Trade

The U.S. imported \$16.8 billion worth of goods from the Netherlands and accounted for 3.7% of the country's total exports in 2015. This represents a share of 15.0% of total exports when intra-EU trade is excluded. Top exports were diversified across several capital-intensive industries. Regarding imports, the U.S. supplied \$40.9 billion worth of goods, or 8.1% of total imports by the Netherlands in 2015, but the share rises to 14.8% after accounting for intra-EU trade.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.

THE TRANSATI ANTIC ECONOMY 2017

^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Norway & the United States

INVESTMENT AND TRADE FIGURES

Investment

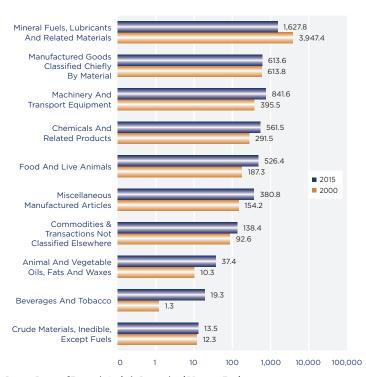
The investment balance favors Norway, with U.S. direct investment totaling \$33.6 billion in 2015, over 60% more than Norwegian direct investment in the U.S. The employment balance is heavily skewed in favor of Norway, with U.S. foreign affiliates employing over 52,000 Norwegian workers, according to 2015 estimates, a significant increase of 9,000 new workers on the payrolls of U.S. companies in Norway.

Norway - U.S. Global Linkages, 2015** (\$ billions) U.S. in Norway Norway in U.S. Foreign Direct Investment* 33.6 20.8 Total Assets of Affiliates 163.5 57.0 Foreign Affiliate Sales 58.3 26.7 Value Added of Affiliates 28.7 3.6 Affiliate Employees 52,710 6,800

Trade

U.S. imports of goods from Norway amounted to \$4.7 billion in 2015 and were skewed toward mineral fuels (i.e. petroleum products). Norwegian exports to the U.S. made up 4.5% of the country's global total in 2015, while the share rises to 23.4% after excluding Norway's trade with the EU. Norwegian imports from the U.S. totaled \$4.8 billion—that equates to 6.6% of total Norwegian imports or 18.0% excluding trade with the EU.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Poland & the United States

INVESTMENT AND TRADE FIGURES

Investment

As one of the largest markets in central Europe, Poland has attracted significant sums of market-seeking U.S. foreign direct investment. At \$68.6 billion, the U.S. asset base in Poland is significantly larger than America's asset base in small developed nations (Finland, Portugal, Greece, Austria) according to 2015 estimates. The estimated U.S. affiliate work force of roughly 183,000 workers ranks number one among EU13 countries by a wide margin, and with U.S. companies adding another 12,000 Polish workers to their payrolls in 2015. Polish affiliates in the U.S. have yet to make significant investments in the country.

Poland - U.S. Global Linkages, 2015** (\$ billions)				
	U.S. in Poland	Poland in U.S.		
Foreign Direct Investment*	11.0	1.5		
Total Assets of Affiliates	68.6	-		
Foreign Affiliate Sales	42.6	-		
Value Added of Affiliates	14.7	-		
Affiliate Employees	182,574	932		

^{*} Based on a historic-cost basis

Trade

Poland's exports to the U.S., which now account for 10.8% of extra-EU exports, have increased sharply over the past several years. U.S. imports run the gamut—from heavy machinery, to chemicals, to agricultural products—and totaled \$5.6 billion in 2015. Poland's imports from the U.S. have decreased slightly to \$3.6 billion in 2015, accounting for 6.2% of extra-EU imports.





^{*} Based on a historic-cost basis.

^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Portugal & the United States

INVESTMENT AND TRADE FIGURES

Investment

The investment balance is heavily favored towards Portugal. U.S. direct investment in Portugal totaled \$2.0 billion in 2015, which is largely concentrated in manufacturing, wholesale trade and finance and insurance. U.S. affiliates employed an estimated 31,464 Portuguese workers in 2015 compared to Portugal's affiliate employment of just 621 Americans. Portugal's direct investment in the U.S. has increased every year since 2008 and is at a record high of \$937 million.

Portugal - U.S. Global Linkages, 2015** (\$ billions) **U.S. in Portugal** Portugal in U.S. Foreign Direct Investment* 20 09 Total Assets of Affiliates 24.0 12.7 Foreign Affiliate Sales 10.0 0.8 Value Added of Affiliates 3.7 0.5 Affiliate Employees 31,464 621

Trade

Portuguese exports to the U.S. increased by 1.7% in 2015, after rising 5.4% in 2014, to account for 18.4% of Portugal's extra-EU exports. U.S. imports from Portugal varied from manufactured goods to mineral fuels, machinery, and transport equipment—with total imports adding up to \$3.3 billion in 2015. Portugal's imports from the U.S. in 2015 were \$1.1 billion, or 1.6% of total imports from the world and 6.8% excluding intra-EU imports, a significantly lower share than the 13% average in the 1990s.





Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Romania & the United States

INVESTMENT AND TRADE FIGURES

Investment

U.S. companies are discovering Romania. While America's asset base in Romania is rather small, with assets totaling an estimated \$14.4 billion in 2015, it rose almost 40 percent in 2015. U.S. affiliates added 8,000 Romanian workers to their payrolls in 2015, employing an estimated 57,446 employees and placing Romania 4th among the EU13 countries in terms of jobs supported.

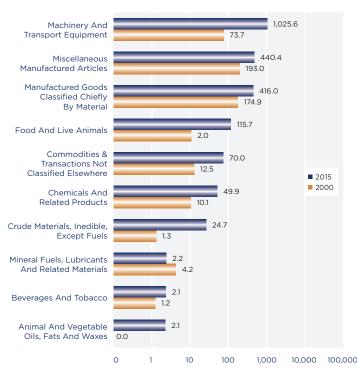
Romania - U.S. Global Linkages, 2015** (\$ billions)					
	U.S. in Romania Romania in U.S.				
Foreign Direct Investment*	2.6	0.08			
Total Assets of Affiliates	tal Assets of Affiliates 14.4 C				
Foreign Affiliate Sales	9.7	-			
Value Added of Affiliates	1.8	0.001			
Affiliate Employees	57,446	-			

^{*} Based on a historic-cost basis

Trade

Romania's exports to the U.S. represented just 1.9% of the country's total world exports and 7.3% of extra-EU exports. Machinery and transport equipment made up roughly half of the \$2.1 billion total U.S. imports from Romania. Manufactured goods were also a significant import for the U.S. The U.S. is a rather small supplier to Romania, with imports from the U.S. totaling just \$753 million, a 16.1% decrease from 2014. The U.S. accounted for just 1.1% of the nation's total imports and 4.7% excluding intra-EU trade.

Top Ten U.S. Imports from Romania, 2015 (in \$ millions)



^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Slovakia & the United States

INVESTMENT AND TRADE FIGURES

Investment

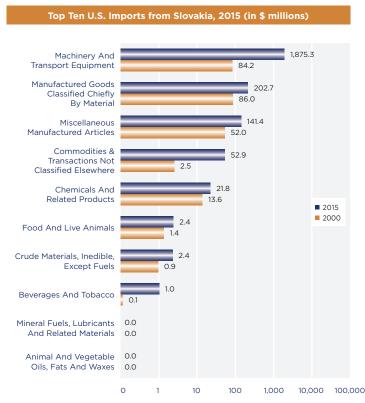
America's asset base in Slovakia is small but expanding — total assets of U.S. affiliates amounted to \$9.9 billion in 2015, while foreign affiliate sales reached \$11.2 billion, according to estimates. In the heart of central Europe, the nation is well positioned to capture U.S. investment in areas such as distribution, transportation, wholesale trade and other service-like activities. U.S. foreign affiliates added almost 6,000 Slovak workers to their payrolls in 2015, employing 47,333 workers overall, the 5th largest among the EU13 countries, according to estimates.

Slovakia - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Slovakia Slovakia in U					
Foreign Direct Investment*	0.8	0.02			
Total Assets of Affiliates	0.001				
Foreign Affiliate Sales	11.2	0.001			
Value Added of Affiliates	2.4	0.000			
Affiliate Employees	47,333	-			

^{*} Based on a historic-cost basis.

Trade

In 2015, Slovakia's exports to the U.S. accounted for 2.2% of the country's total exports to the world. The share of exports to the U.S. increases to 14.9% after excluding intra-EU trade. U.S. imports from Slovakia were \$2.3 billion in 2015, and were concentrated in Machinery and Transport equipment. Imports from the U.S. were relatively small at just \$425 million in 2015, or 2.7% of the country's total extra-EU imports.



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Slovenia & the United States

INVESTMENT AND TRADE FIGURES.

Investment

Slovenia has experienced a gradual rise in U.S. foreign investment over the past several years. Total assets of U.S. foreign affiliates totaled \$1.0 billion in 2015, according to estimates. U.S. affiliates employed 6,393 workers in 2015, placing Slovenia 7th out of the EU13 countries in terms of employment, according to estimates.

Slovenia - U.S. Global Linkages, 2015** (\$ billions)						
	U.S. in Slovenia Slovenia in U.S					
Foreign Direct Investment*	0.5	-				
Total Assets of Affiliates 1.0						
Foreign Affiliate Sales	1.1	0.003				
Value Added of Affiliates 0.5						
Affiliate Employees	6,393	-				

^{*} Based on a historic-cost basis.

Trade

Exports from Slovenia to the U.S. have increased 29.1% since 2012 and currently make up 7.4% of the country's extra-EU exports. U.S. imports from Slovenia totaled roughly \$700 million, and the top imports included machinery and transport equipment, chemicals, and various other manufactured goods. Only \$452 million of goods came from the U.S. in 2015. This represents 1.5% of Slovenia's total imports, or 5.0% excluding intra-EU trade.

Top Ten U.S. Imports from Slovenia, 2015 (in \$ millions)



^{***}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Spain & the United States

INVESTMENT AND TRADE FIGURES

Investment

Since 2011, the investment balance shifted in favor of the U.S., as Spain's economy was squeezed by a severe recession and resulting austerity measures. U.S. direct investment in Spain was \$35.8 billion in 2015, up from \$28.0 billion in 2012, which was the lowest level since 2000. On the contrary, the U.S., originally not a strategic priority to Spanish firms, has seen foreign direct investment stock grow eight-fold over the last ten years. Spanish investment in the U.S. has increased every year since since 2002. U.S. affiliates based in Spain added 11,000 workers to their payrolls in 2015. U.S. affiliates in Spain employ about 2.5 times as many workers as Spanish affiliates in the United States, according to estimates.

Spain - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Spain Spain in U.S.					
Foreign Direct Investment*	35.8	61.9			
Total Assets of Affiliates 178.2					
Foreign Affiliate Sales 89.8					
Value Added of Affiliates 17.3					
Affiliate Employees	185,576	77,211			

^{*} Based on a historic-cost basis.

Trade

The U.S. received approximately \$14.1 billion worth of goods from Spain, or 4.5% of Spain's total exports in 2015. This increases to a share of 12.7% of exports when intra-EU trade is excluded. The U.S. supplied only 3.6% of total imports by Spain in 2015, or \$11.3 billion, although the share rises to 9.2% after excluding intra-EU imports.



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.



Sweden & the United States

INVESTMENT AND TRADE FIGURES

Investment

The investment balance favors the U.S., with Swedish direct investment in the U.S. totaling \$46.9 billion, while U.S. firms invested \$25.0 billion in Sweden in 2015. Sweden's value added of affiliates also exceeded that of U.S. foreign affiliates. The employment balance is heavily in favor of the United States, according to 2015 estimates. The Stockholm area ranks as the ninth most important source of onshored jobs to America of all European metro regions. But U.S. FDI and U.S.-affiliate employment in Sweden has been declining.

Sweden - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Sweden Sweden in U.S					
Foreign Direct Investment*	25.0	46.9			
Total Assets of Affiliates 144.7 150					
Foreign Affiliate Sales 38.5					
Value Added of Affiliates 11.2 18					
Affiliate Employees	74,800	210,944			

^{*} Based on a historic-cost basis

Trade

U.S. imports of Swedish goods were \$9.8 billion in 2015. The U.S. accounted for 7.7% of Sweden's total exports and 18.4% of the total after excluding intra-EU trade. Sweden imported \$3.8 billion from the U.S. in 2015, accounting for 2.7% of Sweden's total imports; the share rises to 9.1% after excluding intra-EU imports.

Top Ten U.S. Imports from Sweden, 2015 (in \$ millions)



^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



Switzerland & the United States

INVESTMENT AND TRADE FIGURES

Investment

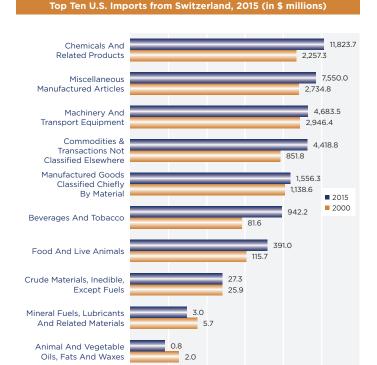
The investment balance favors the U.S.—direct investment in Switzerland totaled \$155.2 billion in 2015 versus \$257.9 billion of Swiss investment in the U.S. Switzerland has one of the largest asset bases in the U.S. of any nation at \$1.4 trillion (mainly in services like insurance and financial services), according to 2015 estimates. Estimates show the employment balance significantly favors the United States, and that both U.S. affiliates in Switzerland and Swiss affiliates in the U.S. each added thousands of additional workers to their payrolls in 2015.

Switzerland - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Switzerland in G					
Foreign Direct Investment*	155.2	257.9			
Total Assets of Affiliates 807.8					
Foreign Affiliate Sales	331.6	234.2			
Value Added of Affiliates	57.5	75.2			
Affiliate Employees	107,640	473,394			

^{*} Based on a historic-cost basis.

Trade

The U.S. imported approximately \$31.5 billion worth of goods from Switzerland in 2015. Exports to the U.S. represent 10.6% of total exports, and 18.7% when taken as a share of exports to regions outside the EU. Switzerland imported American goods worth \$20.3 billion, accounting for 8.1% of the country's global total imports; yet, when imports from the EU were excluded, U.S. goods comprised 22.8% of Swiss imports.



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.





Turkey & the United States

INVESTMENT AND TRADE FIGURES

Investment

The investment balance favors Turkey — the U.S. had \$3.7 billion of foreign direct investment in Turkey in 2015 versus Turkey's \$625 million investment in the U.S. According to 2015 estimates, affiliates of U.S. multinationals had assets of \$21.9 billion in Turkey compared to Turkey's affiliate asset base of only \$3.7 billion. In 2015, U.S. affiliates employed a record 51,440 workers in Turkey, according to estimates.

Turkey - U.S. Global Linkages, 2015** (\$ billions)					
U.S. in Turkey Turkey in					
Foreign Direct Investment*	3.7	0.6			
Total Assets of Affiliates	21.9	3.7			
Foreign Affiliate Sales	26.9	0.6			
Value Added of Affiliates	10.2	0.2			
Affiliate Employees	51,440	-			

^{*} Based on a historic-cost basi

Trade

Turkey supplied the U.S. with approximately \$7.8 billion worth of goods. Exports to the U.S. accounted for 4.5% of total Turkish exports and 8.0% when intra-EU exports are excluded. Top exports to the U.S. include manufactured goods and machinery and equipment. Turkish imports from the U.S. have almost tripled since 2000, reaching a high of \$16.0 billion in 2011, but falling to \$11.1 billion in 2015, accounting for 8.7% of imports excluding Turkey's trade with the EU.

Top Ten U.S. Imports from Turkey, 2015 (in \$ millions)



Sources: Bureau of Economic Analysis; International Monetary Fund; Office of Trade and Economic Analysis.

10.000

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.



United Kingdom & the United States

INVESTMENT AND TRADE FIGURES

Investment

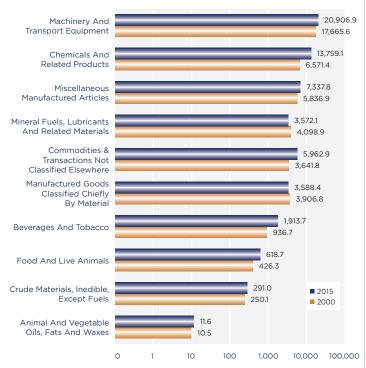
The U.S.-UK investment balance is fairly even. U.S. foreign direct investment in the UK totaled a record \$593.0 billion in 2015, and the UK's foreign direct investment in the U.S. increased slightly to \$483.8 billion. Estimated sales of American and British affiliates totaled more than \$1.3 trillion, with over 100,000 workers added to the payrolls in each country. U.S. affiliates employed almost 1.4 million workers in the UK; UK affiliates employed roughly 1.1 million Americans, according to 2015 estimates. London is the top source of onshored jobs to America of all European metro regions, and Oxford-Gatwick-South East ranks 8th.

United Kingdom - U.S. Global Linkages, 2015** (\$ billions) U.S. in **United Kingdom United Kingdom** in U.S. 483.8 Foreign Direct Investment* 593.0 Total Assets of Affiliates 5,580.8 2,148.2 Foreign Affiliate Sales 691.2 662.7 Value Added of Affiliates 178.5 154.7 Affiliate Employees 1,396,215 1,137,362

Trade

Bilateral trade flows are strong. Exports to the U.S. made up 14.6% of total exports from UK and 26.2% ex. intra-EU exports. Total U.S. imports from the UK were \$57.8 billion in 2015, with heavy machinery, chemical products, and manufactured goods ranking as the top three imports. UK imports from the U.S. of \$57.6 billion accounted for 19.7% of imports ex. intra-EU trade. The U.S. and UK are also each other's most important cross-border e-commerce markets: 70% of UK e-commerce shoppers use U.S. ecommerce sites, while 49% of Americans buy from UK sites.

Top Ten U.S. Imports from United Kingdom, 2015 (in \$ millions)



^{*} Based on a historic-cost basis.

^{**}Assets, sales, value added and employees data are estimates. All data are for majority-owned bank and nonbank affiliates.

Notes on Terms, Data and Sources

EMPLOYMENT, INVESTMENT, AND TRADE LINKAGES FOR THE 50 U.S. STATES AND EUROPE

Data for investment as well as investment-related jobs are from the U.S. Commerce Department's Bureau of Economic Analysis. Investment data measure gross property, plant, and equipment of affiliates. Europe includes Belgium, France, Germany, Italy, Netherlands, Sweden, Switzerland, and the United Kingdom. Trade data are from the International Trade Administration's Office of Trade and Industry Information at the U.S. Commerce Department. Europe includes Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Cyprus, Denmark, Estonia, Faeroe Islands, Finland, France, Germany, Georgia, Gibraltar, Greece, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Svalbard, Sweden, Switzerland, Tajikistan, Turkey, Ukraine, United Kingdom, Vatican City. The top ten exports to Europe bar chart employs a logarithmic scale to facilitate cross state comparisons.

INVESTMENT AND TRADE FOR THE EU 28, NORWAY, SWITZERLAND, TURKEY AND THE U.S.

Investment data are from the Bureau of Economic Analysis. Data for the top ten U.S. imports bar charts are from the Office of Trade and Industry Information of the International Trade Administration. They employ logarithmic scales to facilitate cross-country comparisons. Data on imports and exports were extracted from the IMF Direction of Trade Statistics database, among other sources. IMF exports are valued on a Free on Board (F.O.B) basis, while imports are reported at Cost Including Insurance and Freight (C.I.F). Free on Board indicates that the buyer bears all costs and risks of loss or damage to the goods from the point of shipment. C.I.F. means that the seller has to pay all costs and freight until the goods are delivered to the importing country. Therefore, import values, which include insurance and transportation charges, may differ from the export values referenced in this report.

TERMS

Throughout this report, the term "EU" refers to all 28 member states of the European Union. The term EU15 refers to the older EU member states: the United Kingdom, Ireland, Belgium, Luxembourg, the Netherlands, Austria, Spain, Italy, Greece, France, Germany, Portugal, Sweden, Finland, and Denmark. The term EU12 refers to the newer EU member states: Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Malta, Cyprus, Romania and Bulgaria. EU12 data does not include Croatia, which on July 1, 2013 became the 28th member state of the European Union. EU13 refers to the EU12 plus Croatia.

In addition to the above, the term "Europe" in this report refers to the following: all 28 members of the European Union plus Russia, Turkey, Switzerland, Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Gibraltar, Greenland, Iceland, Kazakhstan, Kyrgyzstan, Macedonia, Malta, Moldova, Monaco, Montenegro, Serbia, Tajikistan, Turkmenistan, Union of Soviet Socialist Republics, Uzbekistan.

About the Authors

DANIEL S. HAMILTON and JOSEPH P. QUINLAN have been producing *The Transatlantic Economy* annual survey since 2004. They have authored and edited a series of award-winning books and articles on the modern transatlantic economy, including *The Transatlantic Digital Economy* (2017); *Atlantic Rising: Changing Commercial Dynamics in the Atlantic Basin* (2015); *Germany and Globalization* (2009); *France and Globalization* (2009); *Globalization and Europe: Prospering in a New Whirled Order* (2008); *Sleeping Giant: Awakening the Transatlantic Services Economy* (2007); *Protecting Our Prosperity: Ensuring Both National Security and the Benefits of Foreign Investment in the United States* (2006); *Deep Integration: How Transatlantic Markets are Leading Globalization* (2005); *and Partners in Prosperity: The Changing Geography of the Transatlantic Economy* (2004). Together they were recipients of the 2007 Transatlantic Leadership Award by the European-American Business Council and the 2006 Transatlantic Business Award by the American Chamber of Commerce to the European Union.

DANIEL S. HAMILTON is the Austrian Marshall Plan Foundation Professor and Director of the Center for Transatlantic Relations at the Paul H. Nitze School of Advanced International Studies, Johns Hopkins University. For 15 years he served as Executive Director of the American Consortium on EU Studies, designated by the European Commission as the EU Center of Excellence Washington, DC. He has been a consultant for Microsoft and an advisor to the U.S. Business Roundtable, the Transatlantic Business Dialogue, and the European-American Business Council. Recent books include Rule-Makers or Rule-Takers? Exploring the Transatlantic Trade and Investment Partnership, edited with Jacques Pelkmans; Forward Resilience: Protecting Society in an Interconnected World; The Geopolitics of TTIP; Global Flow Security; The Eastern Question: Russia, the West, and Europe's Grey Zone; Transatlantic 2020: A Tale of Four Futures, and Europe 2020: Competitive or Complacent? He has served in a variety of senior positions in the U.S. State Department, including as Deputy Assistant Secretary of State.

JOSEPH P. QUINLAN is Senior Fellow at the Center for Transatlantic Relations, with extensive experience in the U.S. corporate sector. He is a leading expert on the transatlantic economy and well-known global economist/strategist on Wall Street. He specializes in global capital flows, international trade and multinational strategies. He lectures at New York University, and his publications have appeared in such venues as *Foreign Affairs*, the *Financial Times* and the *Wall Street Journal*. He is the author of *The Last Economic Superpower: The Retreat of Globalization, the End of American Dominance, and What We Can Do About It* (New York: McGraw Hill, 2010).

DANIEL S. HAMILTON AND JOSEPH P. QUINLAN

TRANSATLANTIC ECONOMY **2017**

Annual Survey of Jobs, Trade and Investment between the United States and Europe

The Transatlantic Economy 2017 annual survey offers the most up-to-date set of facts and figures describing the deep economic integration binding Europe and the United States. It documents European-sourced jobs, trade and investment in each of the 50 U.S. states, and U.S.-sourced jobs, trade and investment in each member state of the European Union and other European countries. It reviews key headline trends and helps readers understand the distinctive nature of transatlantic economic relations.

Questions loom over the transatlantic economy in 2017. The very foundations of the transatlantic partnership have been rocked by the UK's decision to quit the European Union (Brexit) and the advent of a new U.S. Administration at a time when both sides of the Atlantic are besieged by a daunting array of challenges. "Business as usual" will not be an adequate response. Nonetheless, key sectors of the transatlantic economy are integrating as never before, underpinning a multi-trillion dollar economy that generates millions of jobs on both sides of the Atlantic.

The Transatlantic Economy 2017 explains what Brexit means for the transatlantic economy, how the digital economy is becoming a driver of the economic relationship, and suggests how decision-makers can address current opportunities and challenges.

The Transatlantic Economy 2017 provides key insights about the United States and Europe in the global economy, with often counterintuitive connections with important implications for policymakers, business leaders, and local officials.















SUPPORTING PARTNERS











Center for Transatlantic Relations
The Paul H. Nitze School of Advanced International Studies
The Johns Hopkins University
1717 Massachusetts Ave., NW, 8th floor
Washington, DC 20036
Tel: (202) 663-5880
Fax: (202) 663-5879
Email: transatlantic@jhu.edu
http://transatlanticrelations.org

