THE TRANSATLANTIC ECONOMY 2018

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

Daniel S. Hamilton and Joseph P. Quinlan





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Hamilton, Daniel S., and Quinlan, Joseph P., *The Transatlantic Economy 2018: Annual Survey of Jobs, Trade and Investment between the United States and Europe*Washington, DC: Center for Transatlantic Relations, 2018.
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Dedicated to Andreas Galanakis

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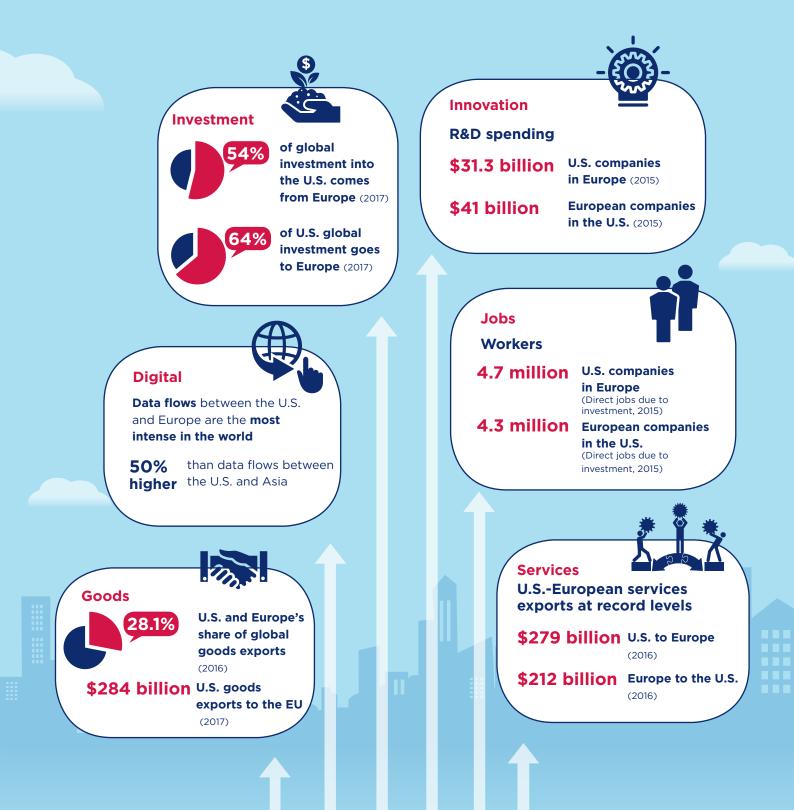
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Thriving Together

No two other regions in the world are as deeply integrated as the U.S. and Europe

Preface and Acknowledgements



Daniel S. Hamilton



Joseph P. Quinlan

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 five chapters. Chapter One underscores how the transatlantic economy today is cyclically strong yet structurally and politically challenged. Chapter Two updates our basic framework for understanding the deeply integrated transatlantic economy via 'eight ties that bind.' Chapter Three explores the transatlantic digital economy, which in many ways has become the backbone of commercial connections across the Atlantic. Chapter Four offers an overview of European commercial ties with the United States, and Chapter Five 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.

One new publication, *Creating a North Atlantic Marketplace: Three Paths, One Detour, A U-Turn, and the Road to Nowhere,* expands on chapter 1 in this volume to chart ways the United States and Europe could take their economic partnership forward, despite current uncertainties. In the Center's publication *The Transatlantic Digital Economy 2017,* we expand on chapter 3 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 Mimosa Giamanco, Timo Haivala, Seva Karpauskaite, Lisa Mendelow, Jason Moyer, and Maria Tilander 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 the Czech Republic, Ireland, Romania 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.

Executive Summary

- Despite transatlantic political turbulence, the U.S. and Europe remain each other's most important markets. Eurozone growth of 2.5% in 2017 exceeded U.S. growth of 2.3%, and both economies are set to maintain robust growth in 2018. Transatlantic trade gaps have narrowed.
- 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 onethird of world GDP in terms of purchasing power and half of total global personal consumption.
- Ties are particular 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, and sales of knowledge-intensive services.

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 28.1% of global exports and nearly 33% of global imports in 2016. But together they accounted for 64% of the outward stock and 56% 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 of \$3 trillion in 2016 were greater than total U.S. exports to the world of \$2.2 trillion and almost half of total U.S. foreign affiliate sales globally.
- Foreign investment and affiliate sales drive transatlantic trade. 60% of U.S. imports from the EU consisted of intra-firm trade in 2016 much higher than U.S. intra-firm imports from Asia-Pacific nations (around 40%) and well above the global average (49%). Percentages are notably high for Ireland (85%) and Germany (69%).

• Intra-firm trade also accounted for 36% of U.S. exports to Europe and 52% to the Netherlands, 35% to Germany and 28% to France.

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 57.9% of total U.S. global investment – more than in any previous decade.
- Aggregate US investment in Europe totaled more than €2 trillion in 2017, directly supports more than 4.7 million services and manufacturing jobs in Europe, and generates billions of euros annually in income, trade and research and development.
- 64% of U.S. global FDI outflows went to Europe and only 16% to the Asia-Pacific region in 2017.
- Within Europe, however, U.S. FDI is becoming more concentrated. In the first nine months of 2017, five nations accounted for over 90% of total U.S. FDI outflows of \$165 billion to Europe: the Netherlands, attracting \$48.8 billion and 29.5% of total flows to Europe; Ireland (\$41.9 billion and 25.3%); Switzerland (\$26.4 billion and 16.0%); the UK (\$16.8 billion and 10.2%); and Luxembourg (\$16.4 billion and 9.9%). That said, some of these investment flows ultimately make their way to neighboring countries, so they likely misrepresent the ultimate destination of U.S. direct investment.
- In 2016 nonbank holding companies accounted for \$142 billion, or over half of global U.S. FDI outflows of \$281 billion, and 54% of total U.S. foreign direct investment to the EU of \$183 billion.
- From 2009-2016 Europe still accounted for 48% 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 2017 were an estimated \$204 billion, a 12% increase from 2016 (\$183 billion). After hitting a post-crisis peak of \$235 billion in 2011, U.S. FDI outflows to Europe retreated, but since 2014 have increased every year.
- 2018 is the Brexit crunch year when it comes to UK-EU negotiations, and there is little to expect in the way of upside surprises. U.S. FDI flows to the UK

plunged by over 50% in the first three quarters of 2017, and U.S. affiliate income earned in the UK was flat, whereas for the EU as a whole it was up 6%.

- Nonetheless, America's capital stock in the UK (\$682 billion in 2016) is more than double combined U.S. investment in South America, the Middle East and Africa (\$235 billion). Total U.S. investment stock in China was just \$92 billion in 2016, only about 14% of U.S. investment stock in the UK. U.S. investment presence in China and India combined – totaling \$125 billion in 2016 – is just 18% of total U.S. investment in the UK.
- The UK still plays an important role for U.S. companies as an export platform to the rest of Europe. U.S. firms based in the UK export more to the rest of Europe than U.S. firms based in China export to the world.
- U.S. FDI flows of over \$10 billion to Germany and France in the first three quarters of 2017 were higher than during the entire year in 2016, but still weak compared to U.S. FDI flows to China (including Hong Kong) and India, which totaled \$14 billion over the same period.
- In 2016 Europe accounted for roughly 60% \$15.7 trillion - of corporate America's total foreign assets globally. Largest shares: the UK (19%, \$5 trillion) and the Netherlands (11%, \$2.8 trillion).
- America's asset base in Germany (\$794 billion in 2015) was roughly one-quarter larger than its asset base in all of South America and double its assets in China.
- America's combined asset base in Poland, the Czech Republic and Hungary (roughly \$164 billion) was larger than its asset base in India (\$131 billion).
- America's assets in Ireland alone (\$1.4 trillion in 2015) were much larger than either those in France (\$387 billion), or Switzerland (\$835 billion), and light years ahead of those in China (\$392 billion).
- Ireland has also become the number one export platform for U.S. affiliates in the entire world.
 Exports from U.S. affiliates based in Ireland reached \$298 billion in 2015, almost five times more than U.S. affiliate exports from China and about four times more than from Mexico.
- Total output of U.S. foreign affiliates in Europe (\$720 billion) and of European affiliates in the U.S. (\$584 billion) in 2016 was greater than the output of such countries as the Netherlands, Turkey or Indonesia.

- Aggregate output of U.S. affiliates globally reached \$1.4 trillion in 2016; Europe accounted for 50% of the total.
- U.S. affiliate output in Europe (\$686 billion) in 2015 was roughly double affiliate output in all of Asia (\$335 billion). U.S. affiliate output in China (\$66 billion) and India (\$26 billion) pale in comparison to U.S. affiliate output in the UK (\$173 billion), Germany (\$87 billion), or even Ireland (\$87 billion).
- Sales of U.S. affiliates in Europe were two-thirds larger than the comparable figures for the entire Asian region in 2015. Affiliate sales in the UK (\$623 billion) were almost double total sales in South America. Sales in Germany (\$357 billion) were over double the combined sales in Africa and the Middle East.
- We estimate that U.S. affiliate income in Europe reached a record \$255 billion in 2017. Europe accounted for roughly 56% of U.S. global foreign affiliate income in the first nine months of 2017.
- U.S. affiliate income from Europe of \$191 billion in the first nine months of 2017 was 1.5 times more than U.S. affiliate income in Latin America (\$62 billion) and Asia (\$63 billion) combined.
- U.S. affiliate income in China (\$10 billion), however, was more than affiliate income in Germany (\$4.5 billion), and income in India (\$4.3 billion) was more than in Spain (\$2.7 billion) or France (\$2 billion).

Europe in the U.S.

- In 2017 Europe accounted for 54% (\$168 billion) of global FDI inflows into the U.S. of \$311 billion.
- In the first nine months of the year, inflows to the U.S. from Europe totaled \$126 billion, less than half of the comparable figure from a year earlier, largely because of lower investment from four key markets: Ireland, Luxembourg, the Netherlands, and Switzerland.
- Europe accounted for roughly 70% of the \$3.7 trillion invested in the United States in 2016 on a historic cost basis. Total European stock in the U.S. of \$2.6 trillion was more than four times the level of comparable investment from Asia.
- The bulk of the capital was sunk by British firms (with total UK stock amounting to \$556 billion), Luxembourg (\$417 billion), the Netherlands (\$355 billion), Switzerland (\$311 billion), Germany (\$292 billion), and France (\$253 billion).

- In 2016 total assets of European affiliates in the U.S. were an estimated \$8.2 trillion. The UK ranked first, followed by Germany, Switzerland and France.
- In 2015 European assets accounted for nearly 60% of total foreign assets in the United States.
- European affiliate income earned in the United States in 2017 (estimated at \$113 billion) was relatively flat from the year before (\$115 billion).
- The output of British firms in the U.S. in 2015 reached \$136 billion roughly a quarter of the total output of European firms in the U.S. The output of German firms in the U.S. totaled \$109 billion, or about 20% of the total.
- Beyond European affiliates, only Japan and Canada have any real economic presence in the U.S. In 2015, Japanese affiliate output totaled nearly \$123 billion, Canadian \$74 billion.
- European companies operating in the U.S. accounted for nearly two-thirds of the \$895 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 2016 European affiliate sales in the U.S. (\$2.4 trillion) were more than triple U.S. imports from Europe. Affiliate sales rose an estimated 9% in 2016.
- Sales by British affiliates in the U.S. totaled \$514 billion in 2015, followed by German affiliate sales (\$465 billion) and those by Dutch affiliates (\$292 billion).

Transatlantic Trade

- U.S. merchandise exports to the EU rose by an estimated 5% in 2017 to a record \$284 billion. Notably strong export markets included Germany (U.S. exports up 8% in the first eleven months of 2017), France (+10%), and Ireland (+9%).
- The U.S. annual merchandise trade deficit with the EU, estimated at \$146 billion in 2017, was down 6% from the peak deficit of 2015. The U.S. deficit with China is more than double the U.S. deficit with the EU.
- The U.S. and the EU are each other's largest trading partners. In the first eleven months of 2017, U.S. goods exports to the EU (\$259 billion) were more than double U.S. goods exports to China (\$117 billion).

- 45 of 50 U.S. states export more to Europe than to China, in many cases by a wide margin.
- In 2016 New York exports to Europe were more than 9 times those to China, those from Connecticut and Florida 8 times more, Indiana and Kentucky 5 times more, and Texas and Georgia 3 times more. California exported more than twice as much to Europe as to China.
- Germany was the top European export market for 17 U.S. states and the UK for 15 in 2016.
- Foreign firms operating in the United States generated one-fifth of America's goods exports in 2015; 52% of these U.S. exports were generated by European companies.

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 2016.
- U.S. services exports to Europe reached a record \$279 billion in 2016, up more than one third from 2009. The U.S. had a \$67 billion trade surplus in services with Europe in 2016, compared with its \$167 billion trade deficit in goods with Europe.
- European services exports to the U.S. also hit an alltime high in 2016 of \$212 billion, up 27% from 2009. The UK, Germany, Switzerland, Ireland, France and Italy 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.
- We estimate that sales of services of U.S. affiliates in Europe rose by around 5%, to \$790 billion, in 2016, almost 3 times more than U.S. services exports to Europe of \$279 billion.

- The UK alone accounted for 31% of all U.S. affiliate sales in Europe in 2015 \$231 billion, greater than combined affiliate sales in South and Central America (\$127 billion), Africa (\$14 billion) and the Middle East (\$21 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 \$538 billion in 2015 were about 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 U.S. totaled \$952 billion in 2015; European firms accounted for 56% of the total. British affiliates lead in terms of affiliate sales of services (\$135 billion), followed closely by Germany (\$132 billion).
- European companies operating in the U.S. generated an estimated \$559 billion in services sales in 2016, 2.6 times more than European services exports to the U.S. of \$212 billion.

The Transatlantic Digital Economy

- Cross-border data flows between the U.S. and Europe are by far the most intense in the world – 50% higher than data flows between the U.S. and Asia in absolute terms, and 400% higher on a per capita basis.
- The U.S. and Europe are each other's most important commercial partners when it comes to digitally-enabled services. The U.S. and the EU are also the two largest net exporters of digitallyenabled services to the world.
- In 2016, digitally-enabled services accounted for 54% of all U.S. services exports, 48% of all services imports, and 64% of the U.S. global surplus in trade in services.
- In 2016 the U.S. exported over \$185 billion in digitally-enabled services to Europe and im-ported \$111 billion from Europe, generating a trade surplus with Europe in this area of at least \$74 billion. U.S. exports of digitally-enabled services to Europe were more than double U.S. exports to Latin America and almost double U.S. exports to the entire Asia-Pacific region.
- In 2014 EU member states exported \$1.2 trillion and imported \$935.1 billion in digitally-enabled services to countries both inside of and outside of the EU.

- Excluding intra-EU trade, EU member states exported \$569.6 billion and imported \$418.0 billion in digitally-enabled services, resulting in a surplus of \$151.6 billion for these services.
- Digitally-enabled services trade represented 56% of all services exports to non-EU countries and 52% of all services imports from non-EU countries.
- The U.S. accounted for 32% of the EU's digitallyenabled business services exports to non-EU countries, and 47% of EU research and development services exports.
- The U.S. purchased 15%, or \$179.9 billion, making it the largest non-EU consumer of EU digitallyenabled services exports, accounting for more EU exports than the rest of non-EU Europe (\$141.7 billion), and more than all digitally-enabled services exports from the EU to Asia and Oceania (\$138.8 billion).
- EU member states with the largest estimated value of digitally-enabled services exports were the United Kingdom (\$159.0 billion), Germany (\$149.2 billion), France (\$128.0 billion), and the Netherlands (\$115.3 billion).
- Digitally-enabled services are not just exported directly, they are used in manufacturing and to produce goods and services for export. Over half of digitally-enabled services imported by the U.S. from the EU is used to produce U.S. products for export, and vice versa.
- In 2014, the EU imported \$935.1 billion in digitally-enabled services, 49% of all EU services imports that year. 55% of the digitally-enabled services imports originated from other EU member states. Another 18% (\$167.6 billion) came from the U.S., making it the largest supplier of these services. The EU imported more of these services from the U.S. than from EU member states Germany (\$74.8 billion) and the UK (\$56.6 billion) combined.
- Even more important than both direct and valueadded trade in digitally-enabled services, however, is the delivery of digital services by U.S. and European foreign affiliates.
- In 2015 U.S. affiliates in Europe supplied \$391 billion in digitally-enabled services; European affiliates in the U.S. supplied \$233 billion in digitally-enabled services. Digitally-enabled services supplied by U.S. affiliates in Europe were 2.1 times greater than U.S. digitally-enabled exports to Europe, and digitallyenabled services supplied by European affiliates

in the U.S. were 2.1 times greater than European digitally-enabled exports to the U.S.

- The U.S. is the number one e-customer for German and UK-based companies, and is among the top five for companies based in Sweden, Italy, France and Denmark. U.S. companies are the number one e-suppliers for customers in the UK and Turkey and among the top five for customers in Germany, France, Italy, the Netherlands, Poland and Spain.
- The UK is the top foreign e-market in the world for U.S. companies, accounting for almost a quarter of all U.S. e-commerce exports. Germany is the 4th largest e-supplier to the U.S.
- The U.S. and UK are each other's most important cross-border B2C e-commerce markets. In 2016 49% of all U.S. digital shoppers buying across borders purchased from UK-based companies. U.S. companies are the most important foreign online sellers to UK and German consumers. 70% of all UK digital shoppers, and 48% of all German digital shoppers, buying across borders purchased from U.S.-based companies.

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.
- U.S. and European foreign affiliates directly employed 9 million workers in 2015, up 2% from the year before. Further modest gains in employment were most likely achieved in 2016 and 2017.
- These figures understate the overall job numbers, since they do not include
- o jobs supported by transatlantic trade flows;
- o indirect employment effects of nonequity arrangements such as strategic alliances, joint ventures, and other deals; and
- o indirect employment generated for distributors and suppliers.
- U.S. affiliates directly employed an estimated 4.8 million workers in Europe in 2016 over 25% more than in 2000.

- Roughly 33% of the 14.1 million people employed by U.S. majority-owned affiliates around the world in 2015 lived in Europe; that share is down from 41% in 2008.
- U.S. affiliates employed more manufacturing workers in Europe in 2015 (1.9 million) than they did in 1990 (1.6 million), and about the same as 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 2015, rising from 51,000 to over 122,000, and continuing upwards.
- In 2015 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 12% in 2015, 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 312,000 in 2015 and in France from 249,000 to 195,000.
- Manufacturing employment among U.S. affiliates in Germany is near levels seen at the start of the century – 385,000 jobs in 2015, 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 40% of total employment by U.S. affiliates in Europe in 2015.
 U.S. affiliates employed nearly 376,000 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 385,000 workers in 2015 – more than the number of manufactured workers employed by U.S. affiliates in Brazil (313,000) and India (219,000) but well below China (756,000).
- European majority-owned foreign affiliates directly employed 4.3 million U.S. workers in 2015 – some 165,000 more workers than in 2014, although roughly 334,000 workers less than U.S. affiliates employed in Europe.

- French, Irish and UK firms largely accounted for the boost in U.S. employment by European companies between 2014 and 2015, with companies from the three countries employing over 115,000 more U.S.-based workers in 2015 than in 2014.
- In 2015, the top five European employers in the U.S. were firms from the United Kingdom (1.1 million), France (677,000), Germany (674,000), Switzerland (468,000) and the Netherlands (460,000).
- European firms employed roughly two-thirds of all U.S. workers on the payrolls of majority-owned foreign affiliates in 2015.
- Texas gained 119,600 jobs (50.7% more) directly from European investment between 2006 and 2015. Others with significant gains included California 61,400 (17.8%); New York 45,800 (16.2%); Illinois 43,700 (25.5%); Massachusetts 40,800 (34.2%); Pennsylvania 38,100 (20.9%) Florida 30,800 (19.2%); North Carolina 24,600 (16.0%); New Jersey 24,000 (14.1%) Virginia 20,200 (18.0%) Georgia 19,100 (17.0%) Minnesota 17,800 (35.1%) and Tennessee 17,100 (22.9%).
- The top five U.S. states in terms of jobs provided directly by European affiliates in 2015 were California (406,900), Texas (355,500), New York (327,900), Pennsylvania (220,600) and Illinois (215,000).

The Transatlantic Innovation Economy

- Bilateral U.S.-EU flows in R&D are the most intense between any two international partners. In 2015 U.S. affiliates invested \$31.3 billion in research and development in Europe, representing 57% of total global R&D expenditures by U.S. foreign affiliates.
- R&D expenditures by U.S. affiliates were the greatest in Germany (\$8.0 billion), the UK (\$6.2 billion), Switzerland (\$3.9 billion), Ireland (\$3.0 billion), France (\$2.2 billion) and the Netherlands (\$1.2 billion). These six nations accounted for 78% of U.S. spending on R&D in Europe in 2015.
- In the U.S, R&D expenditures by majority-owned foreign affiliates totaled \$57 billion in 2015. R&D spending by European affiliates totaled \$41 billion, representing 72% of all R&D performed by majorityowned foreign affiliates in the United States.
- Swiss-owned R&D in the U.S. totaled \$9.7 billion in 2015, nearly a quarter of total European affiliate R&D in the United States. British affiliates accounted for 19.5%, German for 17.6% and French for 13.1%.

1

The Transatlantic Economy in 2018: Cyclically Strong, but Structurally and Politically Challenged





The transatlantic economy is powering ahead

Economics trumped politics in 2017. Transatlantic trade and investment ties thickened over the past year, despite a whirlwind of political uncertainty, ranging from unsettling presidential tweets and frosty "Brexit" negotiations to protracted coalition negotiations in Germany and the growing divide between the European Union and its eastern member states Poland and Hungary. Political drama and charges of "fake news" have stolen the headlines. But the real news is that the transatlantic economy is powering ahead.

The transatlantic economy enters 2018 amidst a synchronized global economic expansion. For the first time in roughly a decade, since the 2008 financial crisis, all major economic regions of the world are expanding – including the perennial global laggard, the European Union (EU). According to figures from Eurostat, economic growth in the euro area accelerated to 2.5% in 2017 from 1.8% in 2016, with most nations across Europe experiencing an uptick in activity over the past twelve months. Even Greece emerged from recession, posting year-overyear growth of 1.3% in Q3 2017. Both Germany and the Netherlands posted healthy growth figures, while the United Kingdom, in the shadows of "Brexit," lagged behind. The UK was the outlier to Europe's improving economic backdrop last year, while, in contrast, the bulk of nations in the EU benefited from easy monetary policies, a rebound in consumption, accelerating capital expenditures, and solid export growth. This forward momentum has carried over to 2018, with the IMF projecting +2% or higher growth in the eurozone again this year.

In the United States, one of the longest economic expansions in modern history continues, with the economy expanding by 2.3% in 2017. This figure, however, masks the fact that in Q2 and Q3 of 2017, the economy expanded at annualized growth rates in excess of 3%. The notion of "secular stagnation," or the United States remaining stuck in a subpar 2% slow growth mode, is being rethought. As 2018 began, the U.S. economy was firing on all cylinders, with growth underpinned by solid consumer spending, a revival in capital spending, rising exports due to stronger global demand and a weaker U.S. dollar, and reflationary policies (i.e., tax reform) coming out of Washington.

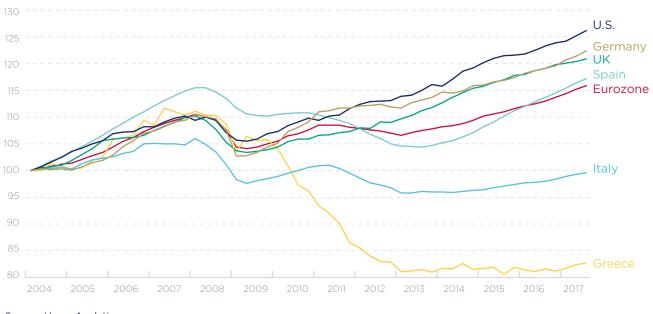


Table 1 Most Developed Economies Back Above Pre-Recession Output Levels (Real GDP level, Q1 2004 = 100)

Source: Haver Analytics. Data through Q3 2017.



Transatlantic gaps in growth, employment and trade have narrowed

Given all of the above, the U.S. economy has broken free from secular stagnation and is expected to expand by 2.5-3% this year, one of the strongest levels of growth in years. Against this backdrop, the U.S. unemployment rate is expected to drop below 4% this year, with rising wages against a tight labor market a key challenge for U.S. firms. Labor shortages have also emerged in parts of Europe (most notably Germany), with the eurozone unemployment rate dropping to 8.7% in November 2017, one of the lowest levels in years. In Germany, the level of unemployment stands at a multiple year low (3.6%). Across the EU last year, there was a discernible decline in national unemployment rates, with further improvements expected in 2018.

Thanks to accelerating economic growth on both sides of the pond, the transatlantic gaps in growth and employment we highlighted in last year's survey have narrowed. So too, to a degree, has the U.S.-EU trade gap. After widening significantly over most of the post-crisis era, the U.S. merchandise trade gap with the European Union in 2017 narrowed slightly from the prior year. U.S. merchandise exports to the European Union—after declining in 2015 and 2016 rose by an estimated 5% for the year, to a record \$284 billion. Notably strong export markets for U.S. goods in 2017 included Germany, with U.S. exports up 8% in the first eleven months of the year, France (+10%), and Ireland (+9%). U.S. imports from the EU rose by less than exports, or by 3.3% for the year, helping to narrow (albeit slightly) the U.S. annual merchandise trade deficit with the EU. Last year's gap, estimated at \$146 billion for all of 2017, was down 6% from the peak deficit of 2015.

Here's the key point: while far from being anywhere near equilibrium, transatlantic trade is in the process of being rebalanced, thanks in large part to a weaker U.S. dollar and the cyclical rebound in EU economic growth.

Meanwhile, transatlantic trade still stands as one of the largest such relationships in the world, even when compared to America's trade ties with China. In the first eleven months of 2017, U.S. goods exports to the EU (\$259 billion) were more than double U.S. goods exports to China (\$117 billion). Only Canada, due to NAFTA, consumed slightly more U.S. exports than the EU (also about \$259 billion in the first eleven months of 2017). Moreover, it is important to keep in mind that U.S.-China trade relations are heavily skewed, favoring a Chinese merchandise trade surplus that hit a record \$371 billion in 2017,

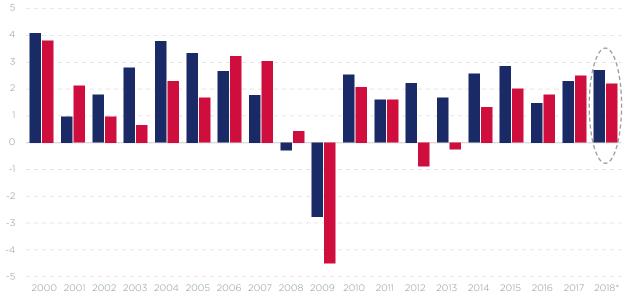


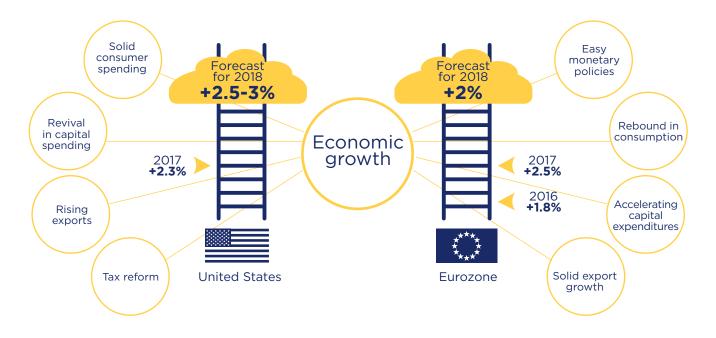
Table 2 U.S. vs. Euro Area Real GDP, Real GDP, Annual Percent Change

U.S. Euro Area

* 2018 forecast. Data as of January 2018.

Sources: International Monetary Fund; Eurostat; Bureau of Economic Analysis.

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according to estimates, more than double America's merchandise trade deficit with the European Union.

In sum, nearly a decade after the global economic meltdown of 2008/09, the transatlantic economy is not only on the mend, it is gathering strength and momentum. Nonetheless, not only is there still a great deal of work to be done to strengthen bilateral ties, there is considerable uncertainty as to where the partnership is headed. Globalization—or the unfettered cross-border flows of goods, services, people, and data—is no longer a given. Each side of the Atlantic is facing strong currents of populist nationalism that could undermine support for open borders and trade, as well as for the primary institutions of the post-war era, including the WTO, the IMF and other multilateral institutions. The challenge for policy makers is to make the most of today's economic good times to create a more supportive and sustainable transatlantic economic partnership for the future.

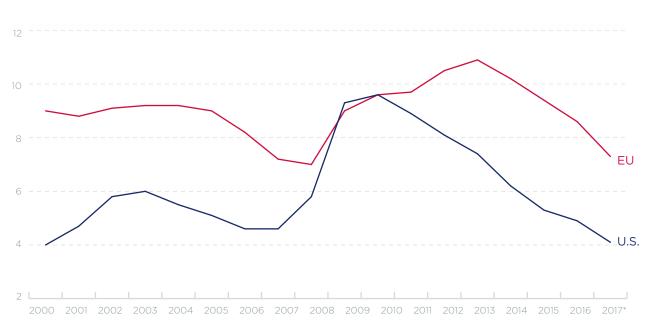


Table 3 U.S. vs. EU Unemployment Rate Harmonized Unemployment Rate (%)

*2017 EU data is for November 2017, U.S. data is for December 2017. Source: OECD.

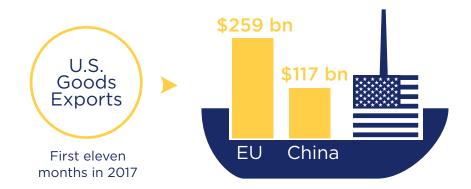
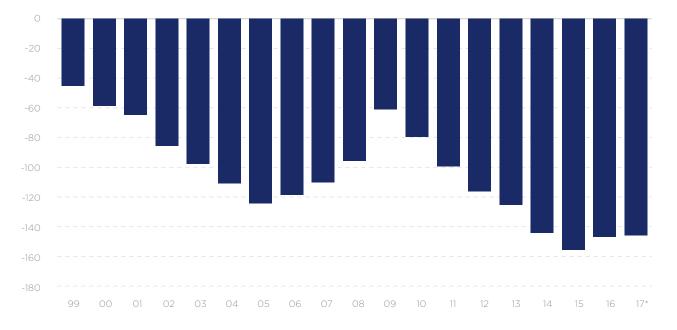


Table 4 U.S. Merchandise Trade Balance with the EU (Billions of \$)



*2017 Estimate. Source: United States Census Bureau.

Brexit: Crunch Time

The transatlantic economy remains strong but has fault lines, with the decision by the United Kingdom to quit the European Union ("Brexit") among the largest and most dangerous. It is unclear whether or not the two parties will settle for a "hard" or "soft" Brexit, but some knock-on effects of the impending divorce are already apparent. For instance, in contrast to much of Europe, the British economy slowed markedly in 2017, weighed down by weaker private consumption owing in part to the pound's depreciation and the attendant rise in inflation and loss of real disposable income. Meanwhile, EU institutions based in the UK have announced plans to decamp for other parts of Europe. Real estate prices have weakened, while U.S. foreign direct investment flows to the UK plunged by over 50% in the first three quarters of 2017 versus the same period a year earlier.

The cloud of uncertainty that hangs over the United Kingdom is depressing business and consumer confidence. 2018 is the Brexit crunch year when it comes to UK-EU negotiations, and there is little to expect in the way of upside surprises. Brexit is due to happen on March 30, 2019, which means an agreement on the separation must be in place by late 2018, if not sooner. Negotiations on many key parts of the divorce have yet to start, which implies a great deal of headline risk between the UK and EU this year.

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 goods and services at the World Trade Organization. Second, it will negotiate new trade arrangements between

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the UK and the EU27. Third, it will want to negotiate new trade arrangements with the United States and Canada, as well as many other non-EU states.

As we have noted in the past, a future UK-EU trade framework is unlikely to simply replicate UK access to the Single Market. The terms are likely to be less advantageous and more burdensome. While tarifffree access for goods is a possibility, firms based in the UK are likely to face some local content requirements within the EU. Tariff-free access to services is unlikely as well, which represents a blow to the UK's service-based economy. All of this poses considerable risk for UK financial, transportation, logistics and insurance companies.

Meanwhile, EU rules mean that London cannot legally begin negotiating a trade deal with Washington before the UK leaves the EU, which at the earliest is March 2019. In addition, with U.S.-UK relations notably strained under the Trump administration, no deal is likely anytime soon, which portends more U.S. disinvestment from the one-time prime location for U.S. multinationals doing business in the EU.

After the Netherlands, America's corporate stakes in the United Kingdom are among the deepest in the world. Totaling \$682 billion in 2016, 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 (\$235 billion). Total U.S. investment stock in China was just \$92 billion in 2016, only about 14% of U.S. investment stock in the United Kingdom. Even when the U.S. investment presence in China and India are combined—totaling \$125 billion in 2016—the figure is just 18% of total U.S. investment in the UK.

Wealthy consumers, respect for the rule of law, the ease of doing business, credible institutions, membership in the European Union—all of these factors, and more, have long made the UK a more attractive place to do business for American firms. Whatever the metric—total assets, R&D expenditures, foreign affiliate sales, employment, trade, etc.— the United Kingdom has been a long-time pillar of America's global economic infrastructure and a key hub for the global competitiveness of U.S. companies. Since 2000, the UK has accounted for nearly 10% of the cumulative global income of U.S. affiliates, a proxy for global earnings. In the first nine months of 2017, however, U.S. affiliate income earned in the UK was flat from the same period a year earlier, whereas for the EU as a whole it was up 6%.

In the end, Brexit is likely to prove costly to the United Kingdom. Very early signs suggest that the impending separation will weigh on real economic growth, diminish consumer and business confidence, spur disinvestment from foreign investors, and trigger bouts of political instability as the May government navigates this tumultuous backdrop. That said, the cost to U.S. multinationals remains unclear. Firms are hedging their positions in the UK by exploring alternative locations in the European Union, with Germany, France and Ireland among the favored locations for post-UK investment.

A deeper issue for U.S. and European firms alike, however, is the future nature of the transatlantic economy and the future path of the transatlantic partnership. Political bonds are fraying on both sides of the North Atlantic, portending tougher times when it comes to promoting deeper transatlantic investment and trade ties. "We used to operate under the idea that Western markets are politically stable, while we accepted that frontier markets were risky," notes Martin Scheepbouwer, chief executive officer of the OLX Group. "Nowadays, with Brexit in Europe and the presidency of the United States, there's a new level of instability looming over the economy. That's something that concerns us."¹

In Box 1 we chart potential ways to navigate the turbulence.

Box 1. Navigating Transatlantic Turbulence

For decades the partnership between North America and Europe has been a steady anchor in a world of rapid change. Today, however, even as the transatlantic economy revives, the transatlantic political partnership has become unsettled and uncertain.

Moreover, despite some economic bright spots, voters across the United States and many parts of Europe have grown skeptical of open markets. Concerns about stagnant wages, widening income inequality, and pockets of stubbornly high unemployment have combined with fears of automation, digitization and immigration to swell economic insecurities on each side of the Atlantic.

This state of division and mutual inwardness threatens the prosperity and ultimately the position of North America and Europe in the global economy and the broader global security system.

Opportunities may still be within reach. U.S. President Donald Trump has campaigned hard against what he calls "disastrous trade deals" in Asia and North America. When it comes to economic negotiations with Europe, however, the Trump Administration has been cautiously positive. European officials have been equally tentative, yet open, to resuming negotiations with the United States on an ambitious transatlantic economic compact, "when the time is right."

Different options could be considered.² Each of them offers both gains and pains. The time to choose may not yet be at hand, but, most importantly, they provide opportunities to think through some of the ways forward for the United States and Europe.

Deep Freeze: The Road to Nowhere

One option is to keep transatlantic negotiations where they are now: in the deep freeze. This approach would simply recognize that for the foreseeable future the obstacles are too high, and the incentives too low, for either side of the Atlantic to invest much political capital in any major transatlantic economic initiative. Small single-issue deals might emerge, but nothing substantial. Given current inertia and mutual distractions on each side of the Atlantic, this is likely to be the default scenario for the relationship going forward.

Cherry-Picking

The United States and the EU could choose a middle path between the Deep Freeze and ambitious negotiations. Under this path, the two parties would abandon efforts to strike a comprehensive TTIP deal in favor of "cherry-picking" wins on issues where both sides were already close to agreement within the TTIP framework, or on other issues where agreement seems high and opposition seems low. Three possible examples of such areas are:

- The United States and the EU could commit to work jointly towards a tariff-only free trade agreement, eliminating all duties on traded industrial and agricultural products.
- · Both sides have already identified steps to reduce unnecessarily burdensome requirements and delays at each other's borders, which could support small companies on both sides.
- In the area of regulatory cooperation, U.S. and EU officials have already found common ground on a number of important good regulatory practices and could be further explored.

TTIP 2.0

A possible third option would be to resume TTIP negotiations, albeit with some modifications and improvements. The economic and strategic rationale for an agreement between the world's two largest advanced industrial economies has only grown stronger since TTIP negotiations began in 2013. TTIP has the potential to increase the trade and investment flows that fuel economies and support high-quality jobs on both sides of the Atlantic. It would be the largest mega-regional agreement in history. It would not be just another free trade agreement, it would pioneer new ways the two major democratic actors in the global economy could address costly frictions generated via their deep commercial integration by aligning regulations, opening services, and setting benchmarks for high-quality global norms and rules.

An Alternative Path: The North Atlantic Marketplace

Under this path, leaders would set forth a more compelling narrative about the need to create a North Atlantic Marketplace that boosts jobs and growth in ways that can ensure that the North Atlantic remains a rule-maker, rather than a rule-taker, for the global economy. The North Atlantic Marketplace would advance an activist agenda instead of falling prey to "deep freeze" inertia. It would be high-profile politics, not low-profile "cherry picking."

The goal of a North Atlantic Marketplace by 2025 would not be to negotiate yet another preferential "free trade agreement;" it would be framed by a more politically relevant series of bilateral Jobs And Growth Agreements (JAGA), a discrete set of principles and tailored contractual undertakings, agreed by sovereign signatory parties, to advance strategies, together or in parallel, to promote jobs and growth. Instead of focusing primarily on complicated and drawn-out processes of regulatory convergence, JAGA signatories would seek out practical areas where progress could be made in relatively short time. JAGAs could include, but go beyond, U.S.-EU arrangements to also encompass non-EU countries such as (soon) the UK, as well as Norway, Switzerland, and Turkey.

Endnotes

1 Cited in Peter S. Goodman, "Every One of the World's Big Economies is Now Growing," New York Times, January 27, 2018. 2 For greater detail, see Daniel S. Hamilton, Creating a North Atlantic Marketplace for Jobs and Growth: Three Paths, One Detour, A U-Turn, and the Road to Nowhere (Washington, DC: Center for Transatlantic Relations, 2018).



Jobs, Trade and Investment: Examining the Ties that Bind



9 - THE TRANSATLANTIC ECONOMY 2018

The transatlantic economy remains a key pillar of the global economy. The combined output of the United States and the European Union accounted for roughly one-third of world GDP in terms of purchasing power parity in 2017. Excluding the United Kingdom, the figure – 31% – is still quite substantial, and still higher than the combined output of China and India (one-quarter of world GDP).

The transatlantic economy is not only larger than the twin giants of Asia, it is also significantly wealthier. And because wealth matters, it's little wonder that American and European consumers easily outspend their counterparts in China and India. Combined, the United States and the EU accounted for nearly 51% of global personal consumption in 2016. Combined, China and India accounted for 13%.

In addition to the above, the transatlantic economy is a repository of innovation and technology advancement, and 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 28.1% of global exports in 2016, the last year of complete data; combined imports represented nearly 33% of the world total. Meanwhile, the U.S. and Europe together accounted for 64% of the outward stock and 56% of the inward stock of global foreign direct investment (FDI) in 2016. 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.

In the end, it is the U.S.-EU partnership that drives and dictates global trade, investment and capital flows, with no commercial artery in the world as large as the investment artery forged between the United States and Europe. Total transatlantic foreign affiliate sales totaled an estimated \$5.5 trillion in 2016, easily ranking as the top artery in the world on account of the thick investment ties between the two parties. That said, the burgeoning middle class of the developing nations represent new sources of supply (labor) and demand (consumers) for U.S. and European firms. Those firms are building out their in-country presence in the developing nations, and for good reason. Growth rates are still above the global average in most nations, populated with young consumers who desire Western goods and services. In addition, the technological skill levels of many developing nations are now on par with many developing nations. China, for instance, is rapidly emerging as an innovative superpower; India lags behind but is advancing. It all makes perfect sense for U.S. and European firms to invest outside the transatlantic economy. Rising powers are resetting the global economy, notably as China increasingly looks outward and the United States has turned inward.

In short, global growth is being rebalanced. This can be a positive global trend for both U.S. and European multinationals, which are working to deepen their respective footprints in developing nations, and 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 added value other nations can contribute to particular products and services into transatlantic bonds of investment and trade. The rise of the "Rest" is a natural economic progression, and more of a complement to, rather than a substitute for, the transatlantic economy.

Within this construct, the transatlantic partnership remains important not only to the United States and Europe, but also to the world. The U.S.-European partnership is too big and too important to fail, as made all too clear in the accompanying exhibits. 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. In the end, the core of their global operations – and the foundation of the global economy – center on the United States and Europe. This becomes clear when one dissects the activities of foreign affiliates on both sides of the pond.



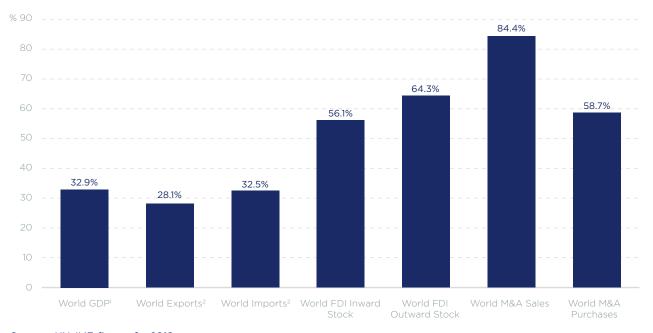


Table 1 The Transatlantic Economy vs. The World (Share of World Total)

Sources: UN, IMF, figures for 2016.

1. Based on PPP estimates.

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

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 the past half century have constructed a formidable economic foundation.

Over the past years we have outlined and examined eight key indices that offer a clear picture of the "deep integration" forces binding the United States 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

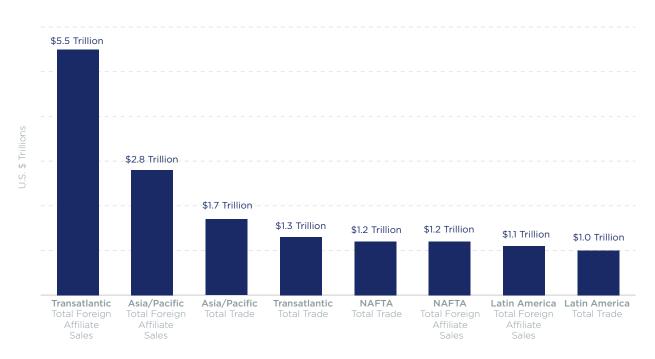
As standalone entities, U.S. affiliates in Europe and European affiliates in the United States are among the largest and most advanced economic forces in the world. For instance, the total output of U.S. foreign affiliates in Europe (an estimated \$720 billion in 2016) and of European foreign affiliates in the U.S. (estimated at \$584 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 U.S. rose by around 4.5% in 2016, while U.S. affiliate output in Europe rose by a slightly faster pace, 5%. European affiliate output in the U.S. has recovered and expanded since falling to a cyclical low of \$391 billion in 2009. 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 2017 and into 2018. In the United States, European affiliates 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 \$1.4 trillion in 2016, with Europe (broadly defined) accounting for around 50% of the total. The United Kingdom, where U.S. investment ties are deepest, accounted for roughly one-quarter of total affiliate output in Europe in 2016.







Foreign Affiliate Sales: Estimates for 2016. Total Trade: Data for goods & services, 2016. NAFTA represents U.S. trade and sales linkages with NAFTA member countries, excluding trade and affiliate sales ties between Mexico and Canada. Source: Bureau of Economic Analysis.

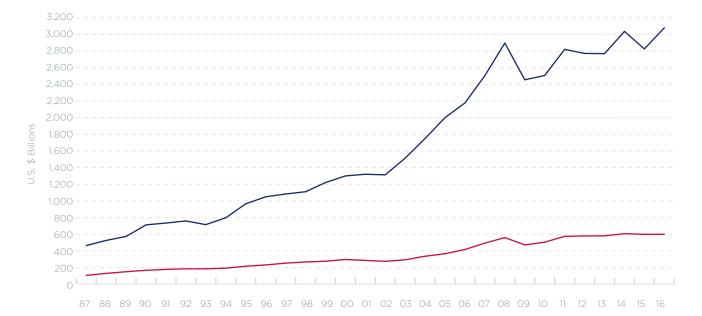


Table 3 Sales of U.S. Affiliates in Europe vs. U.S. Exports to Europe

Source: Bureau of Economic Analysis. Majority-owned non-bank affiliates data: 1987 - 2008. Majority-owned bank and non-bank affiliates: 2009 - 2016. Foreign Affiliate Sales: Estimates for 2016.

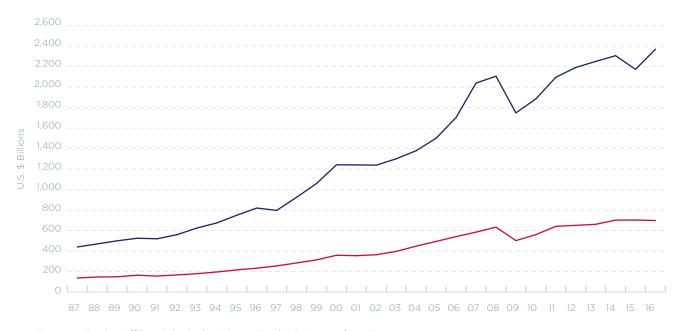


Table 4 Sales of European Affiliates in the U.S. vs. U.S. Imports from Europe

---- European Foreign Affiliate Sales in the U.S. ---- Total U.S. Imports from Europe

Source: Bureau of Economic Analysis.

Majority-owned non-bank affiliates: 1987 - 2006. Majority-owned bank and non-bank affiliates: 2007 - 2016. Foreign Affiliate Sales: Estimates for 2016.

Looking at actual figures for 2015 from the U.S. Bureau of Economic Analysis, U.S. affiliate output in Europe (\$686 billion) was roughly double affiliate output in all of Asia (\$335 billion). While affiliate output in places like China (\$66 billion in 2015) and India (\$26 billion) has increased over the past decade, what U.S. affiliates produce in these two emerging Asian giants pales in comparison to affiliate output in Germany (\$87 billion), Ireland (\$87 billion), and the United Kingdom (\$173 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 \$136 billion in 2015, roughly a quarter of the European total. For the same year, output from German affiliates operating in the United States totaled \$109 billion, or roughly 20% of the total.

Beyond Europe, only Canada and Japan have any real economic presence in the U.S. Japanese affiliate output totaled nearly \$123 billion in 2015, the last year of actual data, while Canadian affiliate output totaled \$74 billion. Overall, U.S. affiliates of foreign multinationals contributed roughly \$895 billion to U.S. aggregate production in 2015, with European affiliates accounting for nearly two-thirds of the total.

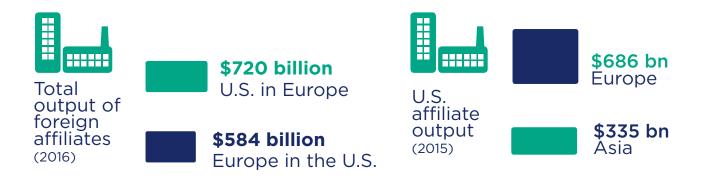
2. Assets of Foreign Affiliates

The global footprint of Corporate America and Corporate Europe is second to none, with each party each other's largest foreign investor. According to the latest figures from the Bureau of Economic Analysis, U.S. foreign assets in Europe totaled \$15.2 trillion in 2015, representing roughly 60% of the global total.

For 2016, 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 were in the United Kingdom, with U.S. assets in excess of \$5 trillion, or around 20% of the global total.

\$15.2 trillion U.S. foreign assets in Europe





U.S. assets in the Netherlands (around \$2.8 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 (\$794 billion in 2015) was roughly one-quarter larger than its asset base in all of South America. America's asset base in Poland, the Czech Republic and Hungary (roughly \$164 billion) was much larger than corporate America's assets in India (\$131 billion). America's assets in Ireland (\$1.4 trillion in 2015) are much larger than either those in France (\$387 billion), or Switzerland (\$835 billion), and light years ahead of those in China (\$392 billion).

As for foreign-owned assets in the United States, Europe's stakes are sizable and significant. Total assets of European affiliates in the United States were valued at roughly \$7.8 trillion in 2015, and by our estimates topped \$8 trillion in 2016, or \$8.2 trillion. The United Kingdom ranked first, followed by Germany, Switzerland and French firms. In 2015, the last year of available data, European assets accounted for nearly 60% of total foreign assets in the United States.

3. Affiliate Employment

U.S. and European foreign affiliates are the major source of onshored jobs for each side of the Atlantic. Affiliates of both U.S. and European parent companies employ more workers in the United States and Europe than in other places in the world. Most foreign workers on the payrolls of U.S. foreign affiliates are employed in the developed nations, notably Europe.

U.S. foreign affiliate employment in Europe has increased steadily over the past decade and a half, with affiliate employment in Europe rising from 3.7 million workers in 2000 to 4.7 million workers in

2015, the last year of available data. That represents a 25% increase. We forecast that U.S. foreign affiliates in Europe employed 4.8 million workers in 2016.

While aggregate employment levels continue to rise, U.S. affiliate manufacturing employment has plateaued since 2000. U.S affiliate manufacturing employment totaled 1.9 million in 2000 and a similar amount in 2015. However, while the overall number has stayed the same, the country composition has changed. The largest employment declines were reported in the United Kingdom, with the total manufacturing work force falling from 431,000 in 2000 to 312,000 in 2015. Employment in France dropped from 249,000 to 195,000, while a slight decline from 388,000 to 385,000 was reported in Germany between 2000 and 2015. In terms of net gains, not losses in manufacturing jobs, Poland has been a significant winner, with U.S. affiliate manufacturing employment more than doubling between 2000 and 2015, rising from 51,000 to over 122,000 in 2015, and continuing on an upward trend.

On a global basis, U.S. majority-owned affiliates (including banks and non-bank enterprises) employed 14.1 million workers in 2015, 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 work - more 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 sweeping overhaul of the U.S. corporate tax code, which significantly lowers America's tax rate relative to many in Europe, will also spur more investment to come home or stay in the United States.

Most employees of U.S. affiliates in Europe live 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 40% of total U.S. foreign affiliate employment in Europe in 2015. The key industry in terms of manufacturing employment was transportation, with U.S. affiliates employing nearly 376,000 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 2015 (1.9 million) than in 1990 (1.6 million). This reflects the EU enlargement process, and hence greater access to more manufacturing workers, 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 lowcost locations like the Czech Republic, Poland and Hungary, at the expense of the UK, Germany and France. The latter three nations just mentioned accounted for 67% of total U.S. affiliate manufacturing employment in Europe in 1990. By 2015, 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 2015, 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 12% in 2015, indicative of the eastern spread of U.S. European operations.

Even given these changes, the manufacturing workforce of U.S. affiliates in Germany totaled 385,000 in 2015 – greater than the number of manufactured workers employed in Brazil (313,000) and India (219,000) but well below China (756,000).

When it comes to affiliate employment, trends in the United States are similar to those in Europe. In other words, 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 U.S. Based on the last figures, European majority-owned foreign affiliates directly employed 4.3 million U.S. workers in 2015 – some 165,000 more workers than in 2014, although roughly 334,000 workers less than U.S. affiliates employed in Europe. In 2015, the top five European employers in the U.S. were firms from the United Kingdom (1.1 million), France (677,000), Germany (674,000), Switzerland (468,000) and the Netherlands (460,000). French, Irish and UK firms largely accounted for the boost in U.S. employment by European companies between 2014, with companies from the three countries employing over 115,000 more U.S.-based workers in 2015 than in 2014. European firms employed roughly two-thirds of all U.S. workers on the payrolls of majority-owned foreign affiliates in 2015.

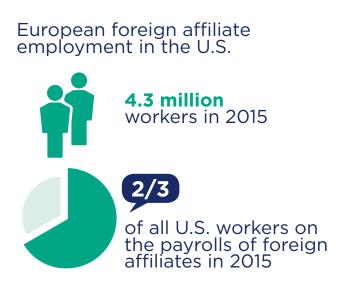
Country	European Affiliates of U.S. Companies	U.S. Affiliates of European Companies	Employment Balance
Austria	50.8	17.0	-33.8
Belgium	129.6	153.4	23.8
Czech Republic	96.1	0.0	-96.1
Denmark	41.6	38.0	-3.6
Finland	26.0	24.2	-1.8
France	488.0	691.1	203.1
Germany	717.3	687.4	-29.9
Greece	16.9	2.6	-14.4
Hungary	68.6	O.1	-68.5
Ireland	127.3	274.0	146.7
Italy	217.2	76.8	-140.4
Luxembourg	23.6	7.1	-16.4
Netherlands	251.2	469.6	218.4
Norway	49.3	7.1	-42.1
Poland	189.2	0.7	-188.5
Portugal	30.3	0.7	-29.6
Romania	66.4	0.0	-66.4
Spain	181.6	83.3	-98.2
Sweden	73.0	214.8	141.8
Switzerland	102.4	477.6	375.2
United Kingdom	1,444.0	1,162.8	-281.2
Europe	4,751.1	4,405.6	-345.5

Table 5 The U.S. - European Employment BalanceThousands of employees, 2016*

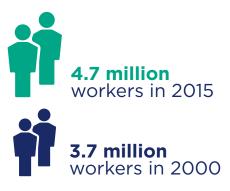
Note: Employment balance «+» favors the United States. Source: Bureau of Economic Analysis.

*2016 Estimates. Majority-owned bank and non-bank affiliates.

In the aggregate, the transatlantic workforce directly employed by U.S. and European foreign affiliates in 2015 was roughly 9 million strong, up 4% from the year before. In 2017, modest gains in employment were most likely achieved on both sides of the pond, with employment levels in the U.S. most likely rising at a faster pace than in Europe. Employment







growth is expected to be solid again in 2018. 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 non-equity 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 U.S. 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 Asia in general, and China in particular. As mentioned earlier, China is rapidly emerging as an innovative superpower, with Beijing unrelentingly focused on being a global leader in artificial intelligence, quantum computing, space exploration, cyber security, life sciences, electric vehicles, supercomputing, semiconductors and 5G wireless devices. To wit, innovation is at the core of the 13th Five-Year Plan (2016-2020), with the stated objective of making China an "innovative nation" by 2020; an "international innovation leader" by 2030; and a "world powerhouse of scientific and technological innovation" by 2050.

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. Cross-border 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 2015, the last year of available data, U.S. affiliates sank \$31.3 billion on research and development in Europe, down slightly from the prior year. On a global basis, Europe accounted for roughly 57% of total U.S. R&D in 2015. R&D expenditures by U.S. affiliates were the greatest in Germany (\$8.0 billion), the United Kingdom (\$6.2 billion), Switzerland (\$3.9 billion), Ireland (\$3.0 billion), France (\$2.2 billion) and the Netherlands (\$1.2 billion). These six nations accounted for 78% of U.S. spending on R&D in Europe in 2015. In the United States, meanwhile, expenditures on R&D performed by majority-owned foreign affiliates totaled \$57 billion in 2015, 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 2015, R&D spending by European affiliates totaled \$41 billion, accounting for 72% 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 United States in 2015, with Swiss firms pumping some \$9.7 billion in R&D spending in the United States. Swiss firms accounted for nearly a quarter of the European total. British firms accounted for the second largest percentage



R&D spending of foreign affiliates (2015)

U.S. in Europe: **\$31.3 billion** Europe in the U.S.: **\$41 billion**

of affiliate expenditures, with a 19.5% share in 2015. Germany's share was close, at 17.6%, followed by France, 13.1%. As Table 6 highlights, some of the world's most innovative companies are domiciled in the United States and Europe.

Table 6 The Top 20 R&D Spenders

		R & D Spending			
2017	Company	2017, \$U.S. Billions	Change from 2016	Country	Industry
1	Amazon	16.1	28.3%	United States	Software and Internet
2	Alphabet	13.9	13.6%	United States	Software and Internet
3	Intel	12.7	5.0%	United States	Computing and Electronics
4	Samsung	12.7	-0.1%	South Korea	Computing and Electronics
5	Volkswagen	12.1	-7.7%	Germany	Auto
6	Microsoft	12.0	-0.5%	United States	Software and Internet
7	Roche Holding	11.4	14.0%	Switzerland	Healthcare
8	Merck	10.1	51.0%	United States	Healthcare
9	Apple	10.0	24.5%	United States	Computing and Electronics
10	Novartis	9.6	0.6%	Switzerland	Healthcare
11	Toyota	9.3	5.7%	Japan	Auto
12	Johnson & Johnson	9.1	0.5%	United States	Healthcare
13	General Motors	8.1	8.0%	United States	Auto
14	Pfizer	7.9	2.4%	United States	Healthcare
15	Ford	7.3	9.0%	United States	Auto
16	Daimler	6.9	3.3%	Germany	Auto
17	Oracle	6.8	17.8%	United States	Software and Internet
18	Cisco	6.3	1.4%	United States	Computing and Electronics
19	Honda	6.2	13.3%	Japan	Auto
20	Facebook	5.9	22.9%	United States	Software and Internet
		194.5	9.4%		

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

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 send intermediate components to their Midwest plants, or when 3M ships components from its office products or communications sectors from the Midwest 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 2016. That is much higher than the related-party imports from the Asia-Pacific nations (around 40%) and well above the global average (49%). The percentage was even higher in the case of Ireland (85%) and Germany (69%).

Country	U.S. Imports: "Related Party Trade," as % of Total	U.S. Exports: "Related Party Trade," as % of Total
European Union	59.9	35.9
Germany	68.7	35.4
France	46.6	28.0
Ireland	85.4	30.0
Netherlands	51.7	51.9
United Kingdom	52.3	30.0

Table 7 Related Party Trade, 2016

Source: U.S. Census Bureau.

Meanwhile, nearly 36% of U.S. exports to Europe in 2016 represented related-party trade, but the percentage is much higher for some nations. For instance, more than half of total U.S. exports to the Netherlands (52%) were classified as related-party trade. The comparable figure for Germany was 35% and 28% for France.

6. Foreign Affiliate Sales

U.S. majority-owned foreign affiliate sales of goods and services on a global basis totaled an estimated \$7 trillion in 2016, having rebounded from the decline in 2009 caused by the global recession. Total U.S. exports, in contrast, were \$2.2 trillion in 2016, or roughly 30% of foreign affiliate sales. This 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 2016. We estimate that U.S. foreign affiliate sales in Europe were \$3 trillion, up roughly 9% from the prior year. U.S. affiliate sales in Europe, by our estimates, amounted for almost half of the global total.

Reflecting the primacy of Europe when it comes to U.S. foreign affiliate sales, sales of U.S. affiliates in Europe were two-thirds larger than the comparable figures for the entire Asian region in 2015, the last year of available data. Affiliate sales in the United Kingdom (\$623 billion) were almost double total sales in South America. Sales in Germany (\$357 billion) were over double the 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 2016, for instance, we estimate 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 9% by our estimates. By country, and using the last year of available data, sales of British firms were the largest (\$514 billion) in 2015, followed by Germany (\$465 billion), and the Netherlands (\$292 billion). For virtually all countries in Europe, foreign affiliate sales were easily in excess of their U.S. imports in 2015.



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 a record \$243 billion, and by another 5% in 2017 by our estimate. 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. Income earned last year was another record, estimated at \$255 billion. Meanwhile, European affiliate income earned in the United States in 2017 (estimated at \$113 billion) was relatively flat from the year before (\$115 billion).

Accelerating growth in Europe, along with a weaker U.S. dollar versus the euro, made for a very benign earnings backdrop for U.S. foreign affiliates in Europe in 2017. Owing in part to these dynamics, the region still accounts for the bulk of U.S. global foreign affiliate income, with the region accounting for roughly 56% of global income in the first nine months of 2017. 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 - \$191 billion in the first nine months of 2017 - more than the combined affiliate income of Latin America (\$62 billion) and Asia (\$63 billion). It is interesting to note that combined U.S. affiliate income from China and India in 2016 (\$16 billion), the last year of full data, was a fraction of what U.S. affiliates earned/reported in the Netherlands, the United Kingdom and Ireland.

Still, there is little doubt that the likes of China, India and Brazil are becoming more important earnings engines for U.S. firms. To this point, in the first nine months of 2017, U.S. affiliate income in China alone (\$10 billion) was well in excess of affiliate income in Germany (\$4.5 billion), France (\$2 billion), and Spain (\$2.7 billion). U.S. affiliates in India earned \$4.3 billion in the January-September period, well more than that earned in many European nations.

All that said, we see rising U.S. affiliate earnings from the emerging markets as a complement, not a substitute, to earnings from Europe. The latter 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. Profits of European affiliates

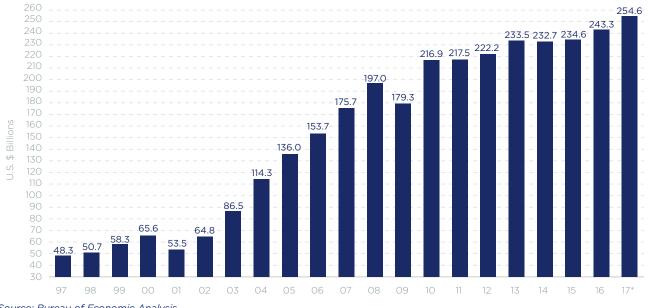


Table 8 U.S. Earnings from Europe Hitting New Highs (U.S. foreign affiliate income from Europe)

Source: Bureau of Economic Analysis. *Data for 2017 is estimate.

in the United States plunged 21.3% in 2009 before rebounding in 2010 and 2011. In the first nine months of 2017, the income of European affiliates in the U.S. was basically flat from the same period a year ago.

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.¹

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. service exports and for 42% of total U.S.

services imports in 2016.

Four out of the top ten export markets for U.S. services in 2016 were in Europe. The United Kingdom ranked first, followed by Ireland (ranked 4th), Switzerland (6th), and Germany (8th). Of the top ten service providers to the U.S. in 2016, five were European states, with the United Kingdom ranked first, Germany second, Switzerland seventh, Ireland eighth, and France ninth. The U.S. enjoyed a \$67 billion trade surplus in services with Europe in 2016, versus a \$167 billion trade deficit in goods with Europe.

U.S. services exports to Europe reached a record \$279 billion in 2016, up more than one-third from the cyclical lows of 2009, when exports to Europe plunged 9%. Service exports (or receipts) have been fueled by a number of services-related activities like travel, passenger fares, education and financial services. In terms of transport, the top five export markets in 2016, ranking order, were Japan, the UK, Canada, China, and Germany. The United Kingdom ranked as the largest market for exports of insurance services; the UK and 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

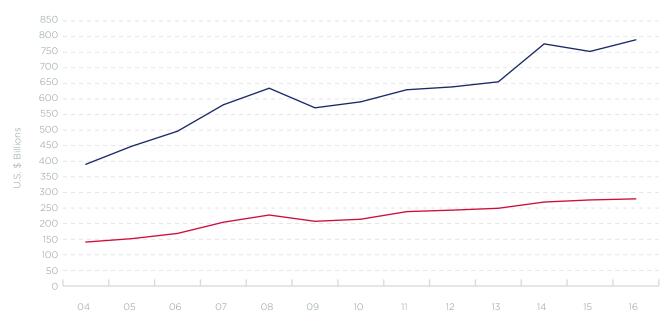


Table 9 U.S. - Europe Services Linkages

Source: Bureau of Economic Analysis.

Majority-owned bank and non-bank affiliates. Services supplied in Europe estimates for 2016.

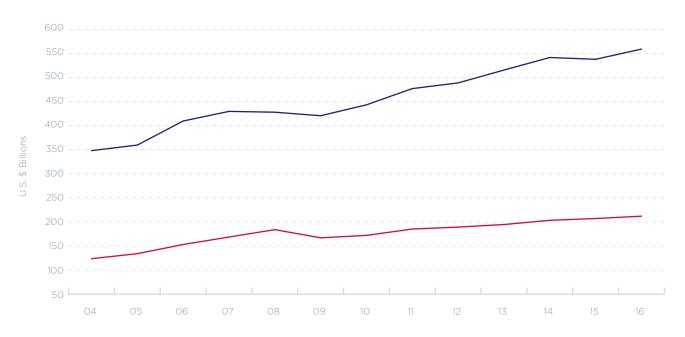


Table 10 Europe - U.S. Services Linkages

— European Affiliates Services Supplied in the U.S. — U.S. Services Imports from Europe Source: Bureau of Economic Analysis.

Majority-owned bank and non-bank affiliates. Services supplied in the U.S. estimates for 2016.

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 2016, followed by Switzerland and the UK.

As for U.S. services imports from Europe, figures for 2016 were at all-time highs. U.S. services imports from Europe totaled \$212 billion, up 27% from the depressed levels of 2009. The United Kingdom, Germany, Switzerland, Ireland, France and Italy all rank as top service exporters to the United States.

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 falling communication costs and the proliferation of the internet. Affiliate sales of services have not only supplemented trade in services but also have become the overwhelming mode of delivery in a rather short period of time. Worldwide affiliate sales of U.S. services almost doubled in the ten years from 2005 to 2015, exceeding \$1 trillion for the first time in 2007. In 2015, the last year of full data, U.S. affiliate services sales (\$1.5 trillion) were roughly double the level of U.S. services exports (\$753 billion).

Sales of services of U.S. foreign affiliates in Europe retreated slightly in 2015 to \$752 billion, but have risen 30% since 2009, when services sales plunged on account of the transatlantic recession. U.S. services

exports to Europe in the same year totaled \$276 billion, well below sales of services by affiliates. In other words, like goods, U.S. firms deliver services in Europe (and vice versa) primarily by U.S. foreign affiliates. The United Kingdom accounted for roughly 31% of all U.S. affiliate services sales in Europe; affiliate sales totaled \$231 billion, a figure greater than total affiliate sales in South and Central America (\$127 billion), Africa (\$14 billion) and the Middle East (\$21 billion). Affiliate sales in Ireland remain quite large – \$115 billion – and reflect strong U.S.-Irish foreign investment ties with leading U.S. internet, software and social media leaders. On a global basis, Europe accounted for over 50% of total U.S. affiliate service sales.

We estimate that sales of services of U.S. affiliates in Europe rose by around 5%, to \$790 billion in 2016. U.S. services exports to Europe for the same year were \$279 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 2015, the last year of complete data, European affiliate services sales in the United States totaled \$538 billion, about 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 \$952 billion in 2015, with European firms accounting for 56% of the total. By country, British affiliates lead in terms of affiliate sales of services in Europe (\$135 billion), followed closely by Germany (\$132 billion).

We estimate that European affiliate services sales in the U.S. totaled \$559 billion in 2016, well above U.S. services imports from Europe (\$212 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 U.S. 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 services exports to the world are generated by U.S. companies based in Europe.

In sum, these eight indices convey a more complex and complete picture of U.S.-European engagement. Transatlantic commerce goes well beyond trade but cross-border in and of itself is an important ingredient of the U.S.-European relationship. Foreign direct investment and foreign affiliate sales, not trade, represent the backbone of the transatlantic economy. The eight variables just highlighted underscore the depth and breadth of the transatlantic commercial relationship.

Table 11 America's FDI Roots in Europe (Billions of \$)

Industry	U.S. FDI to Europe	Europe's % of Total U.S. FDI
European Total, all industries	3,175	60%
Manufacturing	319	48%

Note: Historic-cost basis. 2016.

Source: Bureau of Economic Analysis.

Table 12 Europe's FDI Roots in the U.S. (Billions of \$)

Industry	U.S. FDI from Europe	Europe's % of Total U.S. FDI
Total from Europe, all industries	2,606	70%
Manufacturing	1,196	78%

Note: Historic-cost basis, 2016. Source: Bureau of Economic Analysis.



Foreign direct investment and foreign affiliate sales, not trade, represent the **backbone of the transatlantic economy**

Endnotes

1 See Daniel S. Hamilton and Joseph Quinlan, eds., Sleeping Giant: Awakening the Transatlantic Services Economy (Washington, DC: Center for Transatlantic Relations, 2007).



The Transatlantic Digital Economy



23 - THE TRANSATLANTIC ECONOMY 2018



Global data flows now contribute more to global growth than global trade in goods

Digital 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.¹ They also underpin and enable virtually every other kind of cross-border flow.

Moreover, despite these incredible transformations, we're still in what Scott Cook of Intuit calls "the first minutes of the first day" of the digital revolution. The Internet of Things, 5G technologies, big data analytics, quantum computing, energy storage, precision agriculture, aquaponics, artificial intelligence and other innovations will further accelerate digital growth around the world. Table 1 charts the digital frontier. We have moved into an age in which digitization is not just affecting our businesses and our personal lives, it is transforming all sectors of the economy. New enterprises are seizing digital opportunities in goods and services, property, transportation, financial services and a host of other areas ranging from healthcare and education to manufacturing and energy. Moreover, there are many signs that our current "Digitization Age" will soon give way to a "Bio-Cognitive Age," yet another transformative period in which revolutionary advances in digitization, biology, nanotechnology, behavioral and cognitive sciences will combine to affect not only our economic and social lives, but life itself.

BIO-COGNITIVE AGE: conversational economy, cognitive commerce, augmented reality, remote ? ? intelligence, telerobotics, telemedicine, telepresence, Impact: molecular nanotechnology, from economic synthetic biology to biological and cognitive transformation DIGITIZATION AGE: GOODS SERVICES PROPERTY smart devices and sensors, IOT, big data, AI, 5G, platform (e.a. Kiiiii (e.g. Deliveroo (e.g. AirBnB Gumtree) TaskRabbit) Buzzmove) economy Impact from limited business and personal impact to transformation of all economic sectors SMARTPHONE AGE: smartphones, APIs, social media, apps Impact digital advertising and marketing, multiple devices per person, TRANSPORTATION individuals as content creators (e.g. Uber, autonomou 7 vehicles, BlaBlaCar) INFORMATION AGE: mobile phones, laptops, 2G/3G, GPS, WiFi FINANCIAL Impact: SERVICES remote work, connected anytime and ? (e.g. Kickstarter, TransferWise) everywhere PC AGE: Desktop and personal computing, PC software, OTHERS Internet technologies healthcare education, energy, ? Impact: manufacturing e-commerce, e-mail, chat, efficiency, automated utilities (e.g. MOOCs business processes Mendeley, Firstbeat) 1990s-2000 2000s-2010 2020s-Future 1980s-1990 2010s-2020

Table 1 The Expanding Digital Frontier

Sources: GSMA Intelligence; McKinsey Global Institute; Author's own estimates

Digital Globalization: Still Uneven

"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. The digital revolution is global in its reach but uneven in its effects.

Digital connections are "thicker" between some continents and "thinner" between others – and they are "thickest" between the United States and Europe. In this chapter we offer five metrics through which we can see more clearly the importance of transatlantic digital connections.²

1. Digital Services and Digitally-Enabled Services

To get a clearer picture of transatlantic connections in digital services, we can use two metrics.

A narrow view can be had by looking at cross-border information and communications technology (ICT) services, or *digital* services as shorthand, which are services used to facilitate information processing and communication.³

A broader view can be taken by looking at digitallyenabled services: services that can be, but not necessarily are, delivered remotely over ICT networks. These include digital services as well as "activities that can be specified, performed, delivered, evaluated and consumed electronically."⁴ Identifying potentially ICT-enabled services does not tell us with certainty whether the services are actually traded digitally.⁵ But the U.S. Commerce Department notes that "these service categories are the ones in which digital technologies present the most opportunity to transform the relationship between buyer and seller from the traditional in-person delivery mode to a digital one,"⁶ which means a digital transaction is likely and thus can offer a rough indication of the potential for digital trade.7

The transformative impact of each of these types 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-enabled 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-enabled services from the United States have become critical to the competitiveness of European manufacturing and retail operations, and vice versa.

In addition, digitally-enabled services are not just exported directly, they are used in manufacturing and to produce goods and services for export. Over half of digitally-enabled services imported by the United States 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.⁸

In 2016, digitally-enabled services accounted for 54% of all U.S. services exports, 48% of all services imports, and 64% of the U.S. global surplus in trade in services.⁹

In 2016 the United States registered a \$159.5 billion trade surplus in digitally-enabled services with the world. Its main commercial partner was Europe, to which it exported over \$185 billion in digitally-enabled services and from which it imported \$111 billion, generating a trade surplus with Europe in this area of at least \$74 billion. U.S. exports of digitally-enabled services to Europe were more than double U.S. exports to Latin America and almost double U.S. exports to the entire Asia-Pacific region (Table 2).

Digitally-enabled services are not just exported directly, they are used in manufacturing and to produce goods and services for export

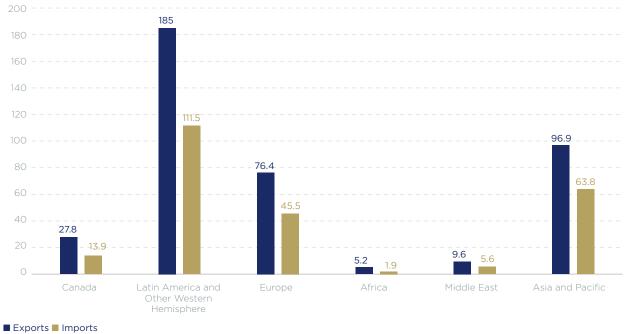


Table 2 U.S. Trade in Digitally-Enabled Services by Major Area, 2016 (\$Billions)

Source: Bureau of Economic Analysis.

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-enabled services, to countries both inside and outside the EU (See Table 3 and Table 4). Excluding intra-EU trade, EU Member States exported \$569.6 billion and imported \$418.0 billion in digitally-enabled services, resulting in a surplus of \$151.6 billion for these services. Digitally-enabled services trade represented 56% of all services exports to non-EU countries and 52% of all services imports from non-EU countries.¹⁰

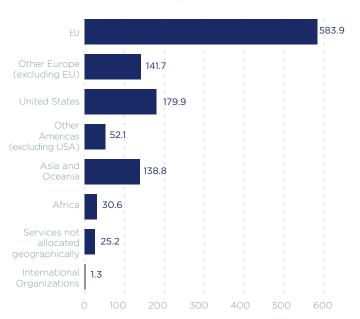
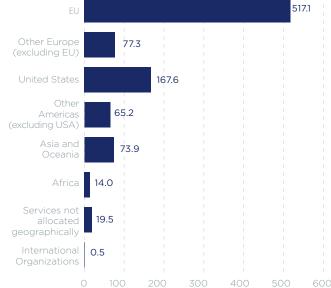


Table 3 Destination of EU Exports of Digitally-Enabled Services, 2014 (\$Billions)

Table 4 Origin of EU Imports of Digitally-Enabled Services, U.S. - EU (\$Billions)



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

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

The United States accounted for 32% of the EU's digitally-enabled business services exports to non-EU countries, and 47% of EU research and development services exports.¹¹ The EU Member States with the largest estimated value of digitally-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 digitally-enabled services exports to destinations outside the EU. Overall, however, more than half of EU Member State exports stayed within the EU. Member States like Poland, Austria, and Belgium were more likely to export to other EU member states than to non-EU states. The United States purchased 15%, or \$179.9 billion, making it the largest non-EU consumer of EU digitally-enabled services exports, accounting for more EU exports than the rest of non-EU Europe (\$141.7 billion), and more than all digitally-enabled services exports from the EU to Asia and Oceania (\$138.8 billion).12

In 2014, the EU imported \$935.1 billion in digitallyenabled services, 49% of all EU services imports that year. 55% of the digitally-enabled services imports originated from other EU Member States (See Table 4). Another 18% (\$167.6 billion) came from the United States, making it the largest supplier of these services. The EU imported more of these services from the United States than from EU member states Germany (\$74.8 billion) and the UK (\$56.6 billion) combined. Of the \$90.7 billion of charges for the use of intellectual property from non-EU countries, the United States supplied 41% (\$37.0 billion). The United States also supplied almost one-third (\$71.3 billion) of the \$223.0 billion in selected other business services originating from outside the EU.¹³

Table 5 categorizes U.S.-EU digitally-enabled services trade into five sectors. For both economies, the most important exports are represented by business, professional and technical services, which accounted

The United States is the largest non-EU consumer of EU digitally-enabled services

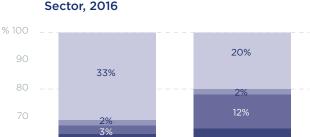


Table 5 EU Digitally-Enabled Services Trade by Sector, 2016



Telecommunications
 Insurance

Financial

Business, Professional & Technical

Sources: U.S. Bureau of Economic Analysis. Data as of January 2018.

for 53% of digitally enabled services exports from the EU to the United States and 44% of digitallyenabled service exports from the United States to the EU in 2016. 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.¹⁴ The third largest digitally-enabled services export category for each side is financial services.

Digitally-Enabled 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-enabled services have 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 6 underscores the relative importance of digitally-enabled services supplied by affiliates of U.S. companies located in Europe and affiliates of European companies in the United States, versus U.S. and European exports of digitally-enabled services. In 2015 U.S. affiliates in Europe supplied \$391 billion in digitally-enabled services, whereas European affiliates in the United States supplied \$233 billion in digitally-enabled services. Digitally-enabled services supplied by U.S. affiliates in Europe were 2.1 times greater than U.S. digitally-enabled exports to Europe, and digitally-enabled services supplied by European affiliates in the United States were 2.1 times greater than European digitally-enabled exports to the United States.

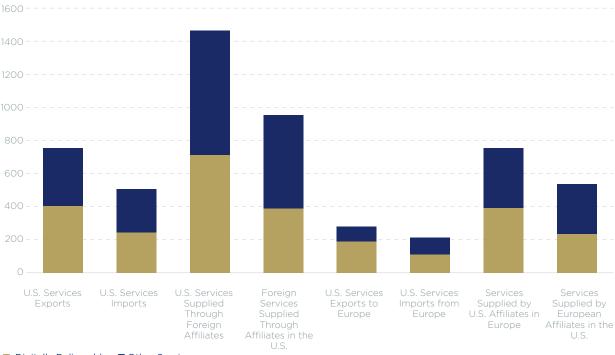


Table 6 Digitally-Enabled Services Trade and Services Supplied through Affiliates (\$Billions)

Digitally Deliverables Other Services

Trade data are for 2016. Affiliate data are for 2015, the latest available year. Source: U.S. Bureau of Economic Analysis. The significant presence of leading U.S. services and technology leaders in Europe underscores Europe's position as the major market for U.S. digital goods and services. Table 7 underscores this dynamic. In 2015, Europe accounted for two-thirds of the \$244.1 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 66% of U.S. overseas direct investment in the "information" industry was in Europe in 2016.¹⁵

 Table 7 Information Services Supplied Abroad by U.S. Multinational Corporations Through Their MOFAs

 (\$Millions)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Canada	3,595	4,140	3,971	5,996	6,316	7,135	7,595	7,401	8,487	8,856
Europe	67,270	76,156	85,450	84,117	96,310	110,525	119,123	120,796	157,811	161,877
France	4,045	3,794	4,475	4,713	4,582	5,013	4,768	5,258	6,085	5,932
Germany	5,260	6,031	6,104	6,456	7,143	7,798	7,970	10,599	12,018	11,182
Netherlands	5,925	8,152	9,980	8,674	8,719	9,313	10,196	9,117	12,686	13,157
Switzerland	2,871	2,527	3,197	3,747	4,034	4,419	5,243	4,778	(D)	5,480
United Kingdom	28,073	30,500	31,479	29,906	24,941	26,446	25,996	23,876	30,228	33,368
Latin America and Other Western Hemisphere	7,255	10,845	13,165	13,798	17,578	20,943	21,887	21,751	22,457	20,536
Australia	5,722	6,365	6,369	5,961	6,852	6,960	5,531	7,735	7,045	6,275
Japan	3,447	(D)	6,224	7,856	4,575	4,828	5,204	5,807	7,796	7,825
Other Asia- Pacific and MENA Countries	5,217	(D)	(D)	8,875	10,215	11,947	13,244	15,883	36,477	38,714
TOTAL	92,507	(D)	(D)	126,603	141,846	162,338	172,583	179,372	240,073	244,084

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.



of U.S. overseas **direct investment in the "information" industry** is in Europe (2016)

2. E-Commerce

Another way to measure transatlantic digital connections is to look at electronic commerce. This complements our lens of digitally-enabled services, because most digital sales and purchases are delivered physically or in person – not digitally.¹⁶

Here again we run into some definitional and data challenges. Most estimates of e-commerce do not distinguish whether such commerce is domestic or international. In addition, many metrics do not make it clear whether they cover all modes of e-commerce or only the leading indicators of business-to-business (B2B) and business-to-consumer (B2C) e-commerce. Finally, there are no official data on the value of cross-border e-commerce sales broken down by mode; official statistics on e-commerce are sparse and usually based on surveys rather than on real data.¹⁷

Nonetheless, we can evaluate and compare many different estimates and surveys that have been conducted. The U.S. Department of Commerce estimates that global e-commerce (domestic and cross-border) grew from \$19.3 trillion in 2012 to \$27.7 trillion in 2016, of which \$23.9 trillion was B2B e-commerce and \$3.8 trillion was B2C e-commerce.¹⁸ McKinsey Global Institute estimates that 600 million individuals around the world participate in crossborder e-commerce, and the Ecommerce Foundation expects that number to climb to almost one billion in 2020.¹⁹ McKinsey concludes that B2B and B2C crossborder e-commerce combined reached \$2.2 trillion in 2015, or 12% of total goods trade. And while goods trade growth has been flattening worldwide, the share enabled by e-commerce is growing 27% per year.²⁰

McKinsey did not separate out transatlantic e-commerce trade in goods, but a substantial portion of this global figure is undoubtedly between the EU and the United States. Nearly half of all U.S. companies polled by the U.S. International Trade Commission indicated that they had an online trading relationship with the European Union,²¹ and almost half say that Europe is the region outside North America where they focus their cross-border strategy first, far ahead of other regions. Over half of European companies also focus first on North America as their primary e-commerce market outside of Europe, again far more than on other regions.²²

Still, e-commerce, especially via cross-border sales, is still emerging. While the European Single Market offers an opportunity for more vigorous crossborder e-commerce within the EU, and while 57% of European internet users shop online, European markets remain fragmented and the potential for cross-border e-commerce has not yet been fully exploited. Only 8% of EU enterprises made e-sales to other EU countries in 2014, and only 16% of consumers shopped online from another EU country in 2015 – although according to Eurostat that figure jumped 33% from just two years earlier.²³

Table 8 shows combined B2B and B2C cross-border e-commerce of selected European countries. It shows that most European cross-border e-commerce is conducted mainly with other European countries, and highlights the outsized role of Germany and the UK.

Table 8 also refutes European angst that U.S. companies are dominating Europe's digital economy, while underscoring the importance of the transatlantic link to the digital economy on each side of the Atlantic. U.S. companies play a significant, yet by no means dominant, role in cross-border e-commerce with Europe. The United States is the number one e-customer for German and UK-based companies, and is among the top five for companies based in Sweden, Italy, France and Denmark. U.S. companies, in turn, are the number one e-suppliers for customers in the United Kingdom and Turkey, and are among the top five for customers in Germany, France, Italy, the Netherlands, Poland and Spain.

Country	Exports	Country	Imports
Country	Top Markets	Country	Top Suppliers
United Kingdom	1. United States (11%) 2. Germany (9.8%)	United Kingdom	1. United States (24%) 2. China (21%) 3. Germany (9%)
Germany	1. United States (8.6%) 2. France (8.5%) 3. United Kingdom (7.1%) 4. China (6.9%)	Germany	 United Kingdom (14%) United States (13%) China (12%) Netherlands (5%)
France	 Germany (15%) Benelux (8.3%) United Kingdom (7.3%) United States (7.1%) 	France	 United Kingdom (17%) Germany (14%) United States (10%) China (10%)
Italy	 Germany (12%) France (9.8%) United States (8.8%) United Kingdom (5.5%) Switzerland (4.4%) 	Italy	 United Kingdom (16%) Germany (15%) China (8%) United States (7%) France (5%)
Spain	1. France (14%) 2. Germany (11%) 3. Portugal (8.4%) 4. United Kingdom (7.3%) 5. Italy (7.2%)	Spain	 China (21%) United Kingdom (12%) United States (12%) Germany (9%) France (6%)
Poland	1. Germany (25%) 2. United Kingdom (6.3%) 3. Czechia (5.9%) 4. France (5.6%) 5. Italy (4.6%)	Poland	 United Kingdom (7%) Germany (7%) United States (5%) China (3%) France (2%)
Turkey	1. Germany (10%) 2. Iraq (6.5%) 3. United Kingdom (6.2%) 4. France (4.7%)	Turkey	 United States (36%) China (30%) Hong Kong (14%) United Kingdom (11%) Germany (9%)
Netherlands	 Germany (22%) Belgium-Luxembourg (16%) United Kingdom (9.7%) France (6.1%) Italy (5.2%) 	Netherlands	 Germany (14%) United States (11%) United Kingdom (10%) China (10%) Russia (7.1%)
Sweden	 Germany (11%) United Kingdom (7.7%) Denmark (7.3%) Norway (7.2%) United States (6.4%) 	Sweden	1. Germany (17%) 2. Netherlands (8.1%) 3. Denmark (7.2%) 4. Norway (6.6%) 5. United Kingdom (6%)
Norway	 United Kingdom (19%) Germany (17%) Netherlands (14%) Sweden (6.7%) France (6.1%) 	Norway	1. Sweden (13%) 2. Germany (12%) 3. China (9.1%) 4. United Kingdom (6.5%) 5. Denmark (6.1%)
Denmark	 Germany (14%) Sweden (11%) United Kingdom (7.8%) United States (7.7%) Norway (5.6%) 	Denmark	1. Germany (20%) 2. Sweden (12%) 3. Netherlands (7.7%) <i>4. China (7.1%)</i> 5. Norway (5.5%)
Belgium	 Germany (15%) France (15%) Netherlands (14%) United Kingdom (9.3%) Italy (5.5%) 	Belgium	1. Netherlands (25%) 2. Germany (7%) 3. United Kingdom (6%) <i>4. China (5%)</i> 5. France (3%)

Table 8European and Transatlantic Connections: Combined B2B and B2C Cross-Border E-Commerce,
Selected European Countries, 2015

Source: Payvision, acapture 2016.

	Exports		Imports		
Country	Top Markets	Country	Top Suppliers		
United States	 1. United Kingdom (24%) 2. Canada (17%) 3. Mexico (13%) 4. China (9.2%) 5. Japan (4.2%) 	United States	 1. China (20%) 2. Canada (15%) 3. Mexico (13%) 4. Germany (5.9%) 5. Japan (5.9%) 		
Canada	1. United States (74%) 2. China (4%) 3. United Kingdom (2.4%)	Canada	1. United States (55%) 2. China (11%) 3. Mexico (5.6%)		
Mexico	1. United States (73%) 2. Canada (6%) 3. China (2%) 4. Spain (1.5%)	Mexico	1. United States (73%) 2. China (12%) 3. Hong Kong (8%) 4. Canada (7%)		

Table 9 North America: Combined B2B and B2C Cross-Border E-Commerce, 2015

Source: Payvision, acapture 2016.

Table 9 shows combined B2B and B2C cross-border e-commerce for North America. It underscores the importance of intra-North American e-commerce for all three countries. The United Kingdom, however, is the top foreign e-market in the world for U.S.-based companies, accounting for almost a quarter of all U.S. e-commerce exports. Germany ranks fourth as an e-supplier to the United States.

B2B e-commerce accounts for up to 86% of global e-commerce and is therefore also likely to be the most important component of cross-border sales online.²⁴ B2B e-commerce is of particular importance to the U.S. and European manufacturing industries, as their supply chains have become longer and more complex, often straddling borders.²⁵

B2C e-commerce involves businesses selling to the general public through a wide range of digital channels, including dedicated e-commerce websites, social networks, crowdsourcing platforms, mobile applications and more. Although a fraction of the size of B2B e-commerce,²⁶ B2C e-commerce is what most people think of when they hear the term "e-commerce."²⁷

Most of the EU's B2C e-commerce transactions are conducted between EU countries.²⁸ In terms of individual countries, however, the United States and UK are each other's most important cross-border B2C e-commerce markets. In 2016, 49% of all U.S. digital shoppers buying across borders purchased from UK-based companies.²⁹ Similarly, U.S. companies are the most important foreign online sellers to UK and German consumers. 70% of all UK digital shoppers, and 48% of all German digital shoppers, buying across borders purchased from U.S.-based companies.³⁰ In terms of global cross-border B2C e-commerce sales, the United States and the United Kingdom are the leading buyers. Over a third of British online consumers purchase from other countries. China is the most popular market for consumers around the world to shop from, accounting for 26% of most recent cross-border purchases, followed by the United States (16%), Germany (15%) and the UK (15%).³¹ The United States and China are the main markets for cross-border shoppers from the Asia Pacific and from Canada, whereas China is the overall favored cross-border market for Europeans. In some European countries, however - for instance Luxembourg, Belgium, and Austria - cross-border shoppers mainly buy from neighboring countries with shared languages.³²

3. The C2C Platform Economy

The economies of Europe and the United States, as well as the digital connections between them, are being reshaped by platform companies that connect individuals directly to each other to trade products and services. By matching supply and demand in real time, and at unprecedented scale, platforms are swiftly becoming a dominant business model in the transatlantic digital economy.³³ While they have become important for business-to-consumer (B2C) e-commerce, as we discussed in the previous chapter, they have simply supercharged consumer-to-consumer (C2C) e-commerce (also known as peer-to-peer or P2P e-commerce) in ways that are potentially transformational.

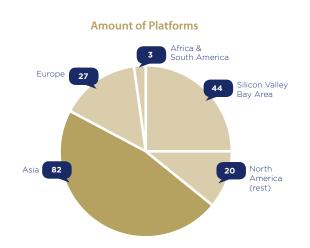
The C2C platform economy model – with main sectors including lending and community financing, online distance work, home sharing, car sharing, online music and video streaming – is spreading quickly to new and more established sectors, such as medical equipment and healthcare, retail, legal services, human resources and food delivery.³⁴

While C2C still commands a small share of the e-commerce market, the platform economy has supercharged its potential. Annual growth currently exceeds 25%, and some sectors are projected to even reach 63% by 2025.³⁵ PriceWaterhouseCoopers estimates that the revenue of C2C platform economy companies will grow 22-fold by 2025 and catch up to the B2C model, with each model achieving sales revenue in 2025 of \$335 billion.³⁶

A study undertaken for the European Parliament estimates that the EU could gain €572 billion in annual consumption if it could harness the platform economy model to take more effective advantage of underutilized capacities across the Single Market. The study extends its analysis to include B2C transactions, so should be considered an expansive projection. Nonetheless, the potential is significant.³⁷

Overall, the United States remains the leader of the C2C platform economy, but this sector of the UK economy is also robust. A third of UK adults are engaging in C2C platform economy transactions, compared to 19% of U.S. adults.³⁹ London is the C2C platform economy capital of Europe and home to one in 12 companies in this space. Worldwide, San Francisco and New York are the only cities to have produced more C2C platform economy startups than London. The UK is home to 10% of the businesses

Table 10 World Regions by Number of Platforms



Source: Center for Global Enterprise; Internet Economy Foundation; Roland Berger.⁴¹ involved in the global C2C platform economy – more than France, Germany and Spain combined.³⁹

Some of the more expansive projections for the growth of the platform economy should be considered with caution, as public policies, which move at the speed of law, attempt to catch up with digital innovation, which seems to move at the speed of light. The platform economy is generating major economic opportunities, but is also creating new policy challenges across a wide spectrum of issues, ranging from tax and competition policy to privacy, insurance, finance and labor markets. Nonetheless, even with a more sober appreciation of the future possibilities, the potential is significant.

The Center for Global Enterprise has identified 176 platform companies worldwide with a market valuation of \$1 billion or more. Asia has the largest number of leading platforms with 82, exceeding those in North America and in Europe. Only 27 of these 176 digital platforms have their home in Europe. Top urban hubs for platform formation and operations include San Francisco Bay Area, Beijing, London, New York and New Delhi. One out of four digital platforms (44) is in the San Francisco Bay Area.⁴⁰

The financial resources of these platform companies are even more concentrated than their geography. Those from Silicon Valley and its surrounding region account for over 50% of the cumulative stock market value of all platforms.





Source: Center for Global Enterprise; Internet Economy Foundation; Roland Berger. ⁴²



Cross-border data flows between the U.S. and Europe are by far the most intense in the world

4. Cross-Border Data Flows

Another way to understand the nature of transatlantic digital connections is to appreciate the role of crossborder data flows. McKinsey estimated that in 2014 the value of global data flows increased worldwide GDP by \$2.8 trillion. Moreover, those flows are accelerating: McKinsey estimates that cross-border data flows are increasing at rates approaching 50 times those of last decade, and are far outpacing trade and financial flows. According to the U.S. International Trade Commission, fully half of all global trade in services are now depending on access to cross-border data flows. These estimates highlight the need to capture the value of cross-border data flows and the digital economy in all sectors of the economy, rather than just the information and communication technology sector, since such flows enable other flows of goods, services, finance, and people.43

As of 2015, cross-border data flows between the United States and Europe, at about 15 terabits per second, were 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.⁴⁴

Researchers are reluctant to use data flows as a proxy for commercial links, since data traffic is not always related to commercial transactions.⁴⁵ Knowing the volume of data flows does not necessarily provide insight on the economic value of their content. The Bureau of Economic Analysis puts it succinctly: "Streaming a video might be of relatively little monetary value but use several gigabytes of data, while a financial transaction could be worth millions of dollars but use little data."⁴⁶

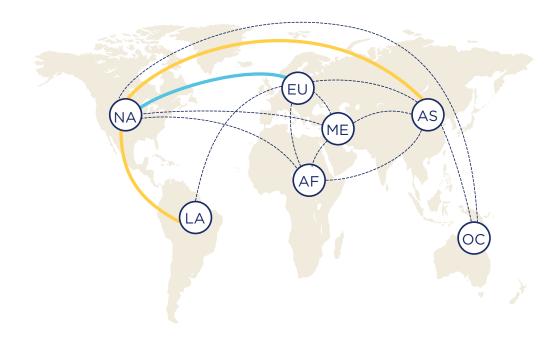
In addition, commercial transactions do not always accompany data, and data do not always accompany commercial transactions. For instance, multinational companies often send valuable, but non-monetized, data to their affiliates.⁴⁷ "Peering" agreements between networks allow traffic to traverse different networks' infrastructure without payment. Usergenerated content on blogs and on YouTube drives very high volumes of internet traffic both within countries and across borders, but very little of this content is paid for by consumers. Since it does not involve a monetary transaction, the significant value that this content generates does not show up in economic or trade statistics but instead reveals itself as "consumer surplus." McKinsey estimates that this "consumer surplus" from the United States and Europe alone is close to €250 billion (\$266.4 billion) each year.⁴⁸

In other words, data flows are commercially significant, yet their commercial value is hard to measure. Our purpose, however, is not just to look at commercial connections across the Atlantic, but to understand how both Europe and the United States are connected in the digital space, and looking at flows of data can be helpful in this regard.

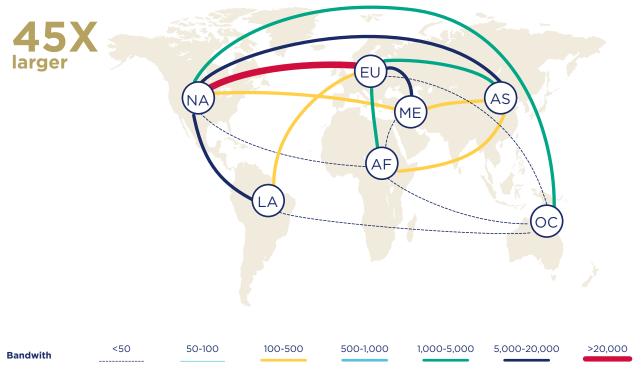
Although the amount of internet traffic coursing between countries, measured in bits, is difficult to measure and is in constant flux, it is possible to gauge the amount of international traffic by examining the levels of bandwidth provisioned by telecommunication carriers, internet service providers, content providers (like Google and Facebook), and other networking companies on the terrestrial and submarine fiber optic networks running between cities in different countries.⁴⁹ As McKinsey noted in 2016, "The amount of crossborder bandwidth that is used has grown 45 times larger since 2005. It is projected to increase by an additional nine times over the next five years as flows of information, searches, communication, video, transactions, and intracompany traffic continue to surge."⁵⁰ Cross-border internet traffic has increased 500-fold since 2000 - and with conservative assumptions will expand another eightfold by 2025.⁵¹ Table 12 Transatlantic Ties: Used Cross-Border Bandwidth

2005

100% - 4.7 Terabits (Tbps) per second



2014 100% - 211.8 Tbps



Regions NA (North America) - EU (Europe) - AS (Asia) - LA (Latin America) - ME (Middle East) AF (Africa) - OC (Oceania)

Source: J. Manyika, S. Lund, J. Bughin, J. Woertzel, K. stamenov, and D. Dhingra, "Digital globalization: The new era of global flows," McKinsey Global Institute, 2016.



Undersea cables bring the internet to life: they transmit **99%** of all intercontinental telecommunication traffic

5. Under the Sea: 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. They transmit 99% of all intercontinental telecommunication traffic – data, phone calls, texts, emails.⁵² They serve as an additional proxy for the ties that bind continents, particularly Europe and North America.

Transatlantic cable connections represent the densest and highest capacity cable routes, with the highest traffic, in the world.⁵³ Between 2011 and 2016 total available capacity increased 240%, with all 13 current transatlantic systems on at least 40G technology and 85% on 100G technology.⁵⁴ Military agencies also build submarine cables, yet those do not appear on public maps. Suffice it to say that if such connections are also considered, transatlantic submarine cables are even more dense than commonly depicted.⁵⁵

Between 2003 and 2014, no new transatlantic cables were laid. Yet commercial and consumer demand is rapidly outpacing supply, and simple upgrades are inadequate to racing bandwidth needs and greater infrastructure requirements.⁵⁶ Telegeography projects that two new transatlantic cables will be needed every year between now and 2025 just to keep up with demand. If no new transatlantic cables

were built, the system would run out of capacity in 2021.⁵⁷ Five more transatlantic systems are in the works. If all planned systems for just the next two years become operational, they will double existing total transatlantic capacity.⁵⁸

Traditionally, transatlantic cables were laid and controlled by large consortia of national telecommunication carriers, also known as Internet Protocol "backbone" operators. This is now changing. The new surge in transatlantic capacity is being driven by private networks, mainly providers of content and cloud services, which are displacing backbone operators as the major buyers of international capacity and the major investors in subsea cables.⁵⁹

Content providers keen on getting closer to customers and achieving economies of scale are moving quickly to the digital frontier. Rather than rely on leasing arrangements with backbone providers, they see advantages in owning these cable networks themselves as they anticipate continuing massive growth in bandwidth needs.⁶⁰ They are building up new nodes in both primary and secondary user markets, driving long-haul demand and routing patterns, and their densest connections are between North America and Europe.⁶¹ If current transatlantic demand trends, continue, Telegeography estimates a compound annual growth rate of 38% in capacity until 2025.⁶²

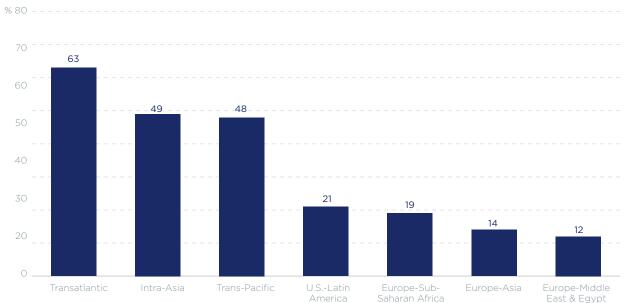


Table 13 Private Networks' Share of Used Bandwidth by Route, 2015

Source: Telegeography. 63

Hubs, Nodes and Trombones

The internet is structured as a hub-and-spoke system: the hubs are the internet exchanges located in cities around the world, and the spokes are the undersea fiber optic cables that run between these exchanges.

This submarine cable system underscores the unevenness of the digital economy and the critical roles the United States and Europe play as central hubs in the global system. For instance, 30% of all internet capacity in 2015 was connected to the United States.⁶⁴ Yet when it comes to major cross-border interconnection hubs, Europe is the global leader, with tremendous connected international capacity. Frankfurt, London and Amsterdam substantially outpace North American and Asian cities (Table 14). Frankfurt's connected capacity, for instance, is over three times greater than that of New York and almost five times greater than that of Singapore, the Asian leader. Europe has increased its position, while leading Asian cities have surpassed U.S. cities.⁶⁵

Table 14 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
Tokyo	7.3	2.3
San Francisco	7	2.8
Washington, DC	4.9	2.5

Tbps: Terabits per second. Source: Telegeography. 66

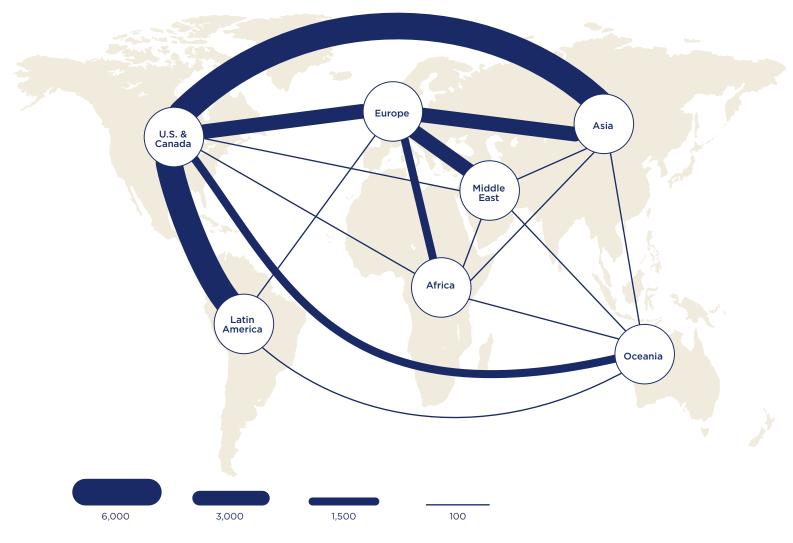
The role of the United States and Europe as critical digital gateways is also underscored by looking at inter-regional connections and capacity. Of the 241 Terabits per second (Tbps) of international internet capacity in 2016, 79 Tbps was between each of the

major world regions and 162 Tbps was within those regions. Yet in the digital economy, data does not always travel directly from point A to Point B. If a server at Point C hosts the relevant content being transmitted, then the content travels first between C and A before it travels from A to B. This so-called "trombone effect" highlights the sometimes-circuitous nature of the digital economy, and the central role of the transatlantic economy.⁶⁷

Rising economies are becoming more integrated into the submarine cable network, yet few have data centers and so are reliant on content that is not stored locally. In addition, local content providers in many emerging economies choose to host their content abroad because the cost is much lower. South Americans, for instance, rely almost exclusively on international interconnections routed through data centers in the United States. Similarly, 85% of international traffic emanating from the Middle East travels to centers in Europe. Africa is equally dependent: most traffic travels the trombone-like path from Africa through Europe and back to Africa, even if the African user is browsing a local website for a business just down the street.⁶⁸

The trombone effect highlights why both the United States and Europe play such outsized roles in international digital traffic, even when a cursory glance at data flows may lead one to other conclusions.⁶⁹ For instance, until 2013 the highestcapacity inter-regional route had always been the transatlantic link between Europe, the United States and Canada. This changed, however, as capacity on the Latin America-U.S./Canada route exceeded the transatlantic route. In 2016, the Latin America-U.S. & Canada route extended its lead, expanding 33% to reach 23.4 Tbps (see Table 15). This surprising shift is understandable if one takes account of the fact that Latin America's international internet bandwidth is almost completely connected to the United States. In other words, the Latin America-North America link has gained so much so guickly because Latin America's traffic is routed first to North America before it travels elsewhere. And content sent within Latin America could very well travel the trombone route to the United States and then back to a Latin American sender before it travels to his next-door neighbor.

Table 15 Inter-Regional Internet Bandwidth, 2016



Data as of mid-2016. Source: TeleGeography © 2016 PriMetrica, Inc.

Endnotes

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The 50 U.S. States: European-Related Jobs, Trade and Investment



41 - THE TRANSATLANTIC ECONOMY 2018



The strength and resilience of the U.S. economy continued in 2017, with strong macroeconomic fundamentals leading the transatlantic economy to break out from years of a sluggish recovery to an environment of accelerated growth. In addition, corporate tax reform in the United States is expected to alter significantly the international investment landscape, attracting more investment from abroad, and leading to a surge in capital expenditures, further boosting productivity and economic growth.

The latest figures suggest that the U.S. economy expanded by 2.3% in 2017. Meanwhile, the pick-up in growth has become increasingly broad-based, with about 120 economies seeing an improvement in annual growth in 2017, according to the latest figures from the International Monetary Fund (IMF). This widespread global growth has many benefits not only for the health of the U.S. corporate sector but also for U.S. labor markets, with higher demand from abroad propping up exports and increased foreign investment supporting jobs. The U.S. unemployment rate is at the lowest level since 2000, or 4.1% at the end of 2017.

Even as the U.S. economic expansion approaches its tenth year, the pace of U.S. growth is expected to accelerate in 2018 for a number of reasons, including elevated consumer confidence and spending, probusiness fiscal and regulatory policies, a projected upturn in business investment, and higher external demand caused by a synchronized global upswing. These factors have caused the IMF to revise its projections upward for real economic growth in the United States, from 2.3% to 2.7% in 2018, and from 1.9% to 2.5% in 2019.

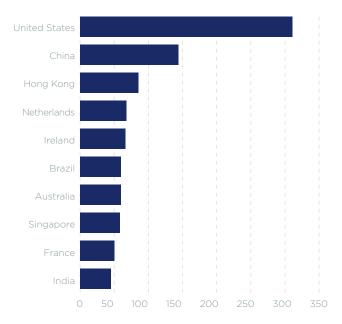


Meanwhile, this constructive outlook is coming off of an already strong base, with U.S. economic output an estimated \$19 trillion in 2017, measured in nominal U.S. dollar terms. In other words, America's economy is presently one of the strongest, most competitive and most resilient in the world.

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). For the past eleven years, the United States has ranked number one in the world in FDI inflows, attracting over \$300 billion in 2017 (Table 1).

As Table 2 depicts, no nation has attracted more FDI this century than the United States, taking in \$3.5 trillion cumulatively since 2000, more than the total for the next two nations (China and the UK) combined. The table also underscores that, in general, most global FDI flows have been directed at mature, rich developed nations rather than poorer, underdeveloped nations. The United States has attracted 16% of total global foreign investment flows this century, and of the top ten receiving countries for investment flows, six are developed nations.

Table 1 FDI Inflows: Top 10 Host Economies, 2017 (\$Billions)



Source: United Nations Conference on Trade and Development (UNCTAD). Data for 2017 are preliminary estimates as of January 2018.

Table 2 Cumulative Investment Inflows 2000-2016 Rankings

Rank	Country	Cumulative Flows (Billions of U.S. \$)	Percent of World Total
1	United States	3,484.2	16.0%
2	China	1,567.9	7.2%
3	United Kingdom	1,476.9	6.8%
4	Hong Kong	1,089.5	5.0%
5	Brazil	744.7	3.4%
6	Germany	739.3	3.4%
7	Canada	725.6	3.3%
8	Belgium	708.5	3.2%
9	Netherlands	692.4	3.2%
10	Singapore	650.2	3.0%

Source: United Nations Conference on Trade and Development (UNCTAD). Data as of January 2018.

Multiple factors underpin America's dominance in foreign investment flows. First, the U.S. market is a critical destination for multinational companies looking to access a large and wealthy consumer base. European companies investing overseas routinely look to the United States, with a population of 325 million and per capita incomes in excess of \$50,000. With less than 5% of the global population, the United States still accounts for around 30% of global personal consumption expenditures, a testament to the purchasing power of American consumers and healthy consumer sentiment in the world's largest economy.

Second, the United States boasts a hyper-competitive economy, moving up to second place in the World Economic Forum's latest Global Competitiveness rankings, and trailing only Switzerland. This competitiveness is driven by a strong innovative, risk-taking corporate culture and is underpinned by strong institutions, technological readiness, worldclass universities, a strong capacity and culture of entrepreneurship, and a dense web of universityindustry collaboration in R&D. The ability to attract R&D from companies abroad is important to the innovative health of the U.S. economy. In fact, R&D performed by U.S. affiliates of foreign multinationals accounts for about 17% of the total R&D conducted by all U.S. businesses.



European firms will continue to deepen and spread their footprint in the United States in the years ahead

Additionally, European companies investing in the United States gain access to a desired pool of skilled, flexible and productive labor. We estimate that U.S. jobs supported directly by European multinational enterprises topped 4.4 million in 2016.

Meanwhile, the United States is a friendly locale to do business, climbing two spots in the World Bank's Ease of Doing Business rankings to 6th place in 2017. Supporting this business environment are a number of factors, including transparent rule of law, sophisticated accounting, auditing and reporting standards, secure access to credit, ease of entrepreneurship, and respect for intellectual property rights, among other things. Another competitive endowment of the U.S.: relatively cheap energy costs thanks to the U.S. energy renaissance that has seen oil production more than double since 2008, in addition to soaring natural gas production.

And with a lower corporate tax rate and strong economic growth projected for 2018, we anticipate that FDI flows to the U.S. economy will strengthen in the near-term. Add in the rising risks of U.S. protectionism under the current U.S. administration, which will spur more foreign firms to be inside the U.S. economy, we expect European firms will continue to deepen and spread their footprint in the United States in the years ahead.

Europe's Stakes in the United States

European firms maintained their dominant foreign investment position in the United States again in 2017. Although flows from Europe were relatively flat in 2017 from a recent peak in 2015-2016, most investment streaming into the United States continues to be sourced from European countries. Based on our preliminary estimates, we anticipate that 54% (\$168 billion) of the total \$311 billion worth of U.S. FDI inflows in 2017 were from Europe, reflecting European firms' strategy to be "inside" the world's largest and most dynamic market. The UN estimates that 2017 was an unstable year for developed markets' investment inflows, with the United States attracting less capital due to a considerable reduction in flows from offshore financial centers such as Ireland, Luxembourg, and Switzerland.

Data from the Bureau of Economic Analysis similarly suggests a retreat in U.S. FDI inflows in 2017. During the first nine months of last year, U.S. FDI inflows from Europe came in at \$126 billion, which is less than half of the comparable figure from a year earlier. Almost 90% of the shortfall in flows from the first three quarters in 2017 versus the first three quarters in 2016 came from lower investment from four key markets: Ireland, Luxembourg, the Netherlands, and Switzerland. For instance, Swiss investment flows to the United States were \$25 billion in the first nine months of 2017, a considerable decrease from the first nine months of 2016 (\$73 billion) but higher than the full four quarters of inflows in 2015, reflecting the highly volatile nature of foreign investment flows.

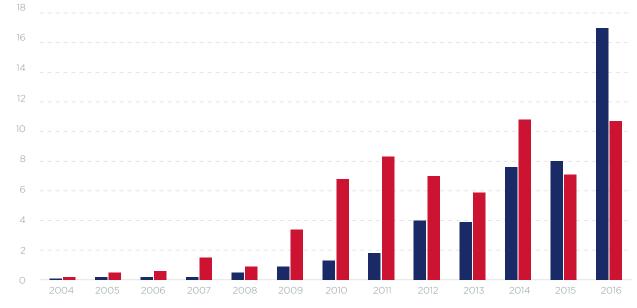
Despite the drastic year-over-year decline in investment flows, Europe continues to have an outsized investment presence in the United States, as reflected by its foreign direct investment position, a more stable metric of foreign investment in the U.S. In terms of foreign capital stock in the United States, Europe again leads the way. The region accounted for 70% of the total \$3.7 trillion of foreign capital sunk in the United States as of 2016. Total European stock in the United States of \$2.6 trillion was more than 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 \$556 billion in 2016. Luxembourg ranked second in Europe (\$417 billion), followed by the Netherlands (\$355 billion), Switzerland (\$311 billion), Germany (\$292 billion), and France (\$253 billion). Many firms from these countries are just as embedded in the U.S. economy as in their own home markets.



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 China. The United States and Europe represent large, wealthy markets, with respect for the rule of law and transparent rules and regulations. 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. Table 3 highlights that Chinese investment in both the United States and Europe has risen sharply over the past few years, yet 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, however China's regulatory crackdown on outbound capital flows is expected to have diminished these figures in 2017 to a certain extent. In addition, a growing backlash against Chinese investment in both the United States and Europe may also dim the outlook for Chinese investment outflows.

Table 3 Chinese Foreign Direct Investment Outflows - U.S. and Europe (Billions of U.S. \$)



U.S. Europe

Source: China National Bureau of Statistics/Haver Analytics. Data as of January 2018. 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.

Whether Swiss pharmaceutical corporations, German auto manufacturers or British services providers, European firms' corporate and commercial links to America have been hugely important and beneficial to their bottom line. That said, European firms earned an estimated \$113 billion in the United States last year, in line with the \$115 billion in income that European affiliates recorded in 2016. Through the first nine months of 2017, European affiliate income earned in the U.S. totaled \$85 billion. Affiliates of British multinationals are the top earners and saw a steady increase in income of 3% in the first nine months of 2017, compared to the same period in 2016. Taking the long view, affiliate earning levels for most European firms are significantly higher today than they were at the start of the century. 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 this connection between European investment in the United States and European affiliate earnings. The two metrics are highly correlated - the 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.



Table 4 European Foreign Direct Investment and Income Earned in the United States (Billions of U.S. \$)



The presence of European affiliates in many states and communities across the United States has helped to **improve America's job picture**

Europe's Stakes in America's 50 States

European firms can be found in all 50 states, and in all economic sectors - manufacturing and services alike. 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 across the United States. It is important to note that the chart represents only those jobs that have been directly created by European investment, thus underestimating the true impact on U.S. jobs of America's commercial ties to Europe. Jobs tied to exports and imports of goods and services are not included, nor are many other jobs created indirectly through suppliers or distribution networks and related activities. Given mounting labor shortages in the United States, many European affiliates have taken the lead in job training in the U.S., and have emerged as strong advocates and funders of vocational training.

As mentioned above, European employment is relatively diverse and spread across many U.S. states. Not surprisingly, California, Texas and New York – among the most populous states in the nation – are home to the largest share of European affiliate jobs. Over one million U.S. workers were on the payrolls of European affiliates in the three states combined in 2015. As the economy has recovered from the 2008/2009 recession, so have the payrolls of European affiliates, with an increase in hiring across many states and industries. In 2015, 19 of the top 20 states measured by European affiliate employment increased hiring.

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

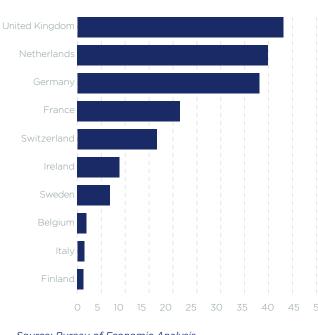
Table 5 Ranking of Top 20 States by Jobs Supported Directly by European Investment (The superplaced of exerclassics)

(Thousands of employees)

U.S. State	2013	2014	2015
California	383.8	389.6	406.9
Texas	319.9	332.8	355.5
New York	302.1	310.0	327.9
Pennsylvania	216.0	213.7	220.6
Illinois	194.7	206.0	215.0
New Jersey	169.3	187.4	194.8
Florida	173.5	181.0	191.1
North Carolina	166.3	173.8	178.4
Massachusetts	154.1	161.9	160.1
Michigan	138.7	147.6	151.1
Ohio	144.8	145.1	150.8
Virginia	127.7	126.7	132.5
Georgia	131.0	124.8	131.3
Indiana	93.6	108.8	113.9
South Carolina	92.2	92.1	94.9
Tennessee	78.6	82.4	91.8
Maryland	81.5	87.5	89.4
Connecticut	82.2	80.9	81.2
Missouri	70.5	73.1	75.9
Minnesota	64.3	64.7	68.5

Source: Bureau of Economic Analysis.

Deep investment ties with Europe have also generated U.S. trade. 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 2015, the last year of available data, U.S. exports shipped by all foreign affiliates totaled \$353 billion, with European affiliates accounting for 52% of the total. The United Kingdom, the Netherlands and Germany dominate European affiliate exports from the United States, with the three countries combined representing over 65% of European affiliate exports in 2015. By commodity, transportation equipment made up 26% of German-owned affiliate exports. 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. Table 7

Table 7 Ranking of Top 20 U.S. States Total Goods Exports to Europe, by Value (\$Billions)

U.S. State	2000	2016	% Change from 2015	% Change from 2000
California	27.9	34.2	3%	23%
Texas	12.3	28.8	-9%	134%
New York	15.3	26.2	-7%	71%
Washington	13.1	17.0	20%	30%
Illinois	7.3	11.2	-9%	53%
Massachusetts	8.0	10.2	7%	28%
South Carolina	2.8	10.2	4%	263%
Pennsylvania	4.7	10.1	-3%	117%
Florida	3.9	9.8	8%	151%
New Jersey	6.4	9.7	8%	52%
Kentucky	3.1	9.5	15%	211%
Indiana	3.1	8.9	-6%	184%
Louisiana	3.3	8.6	-19%	163%
Ohio	5.0	8.5	-11%	68%
Georgia	4.0	8.2	-9%	107%
North Carolina	4.6	7.7	10%	66%
Michigan	5.0	7.1	3%	41%
Tennessee	2.7	6.3	2%	134%
Connecticut	3.5	6.3	0%	80%
Alabama	2.5	5.3	15%	116%
U.S. Total	187.4	319.6	-1%	70%

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

ranks the top 20 state goods exporters to Europe in 2016, with California ranked number one, followed by Texas, New York and Washington. Overall, exports fell moderately in 2016 from the prior year but have jumped sizably since 2000.



Source: Bureau of Economic Analysis. Data for 2015.

Table 8 U.S. State Exports of Goods to Europe and China, 2016 (\$Millions)

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Washington 17,034 16,130 West Virginia 1,422 465 Wisconsin 4,140 1,425			
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	Wyoming	121	31

Table 8 shows the importance of the European market to U.S. state exports. Even as an emerging middle class in China demands more foreign imports, merchandise exports to Europe are still more than double exports to China. On a state level, 45 of 50 states exported more to Europe than China in 2016. Goods exports from California to Europe were more than double those to China; New York exports to Europe were more than nine times those to China. Exports from Texas to Europe were almost three times larger than exports to China. Only the Pacificoriented states of Alaska, Hawaii, Idaho, New Mexico and Oregon sent more goods to China than Europe in 2016.

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 A highlights European-related jobs, trade, and investment for each of the 50 states.

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

5

European Countries: U.S.-Related Jobs, Trade and Investment







\$204 billion U.S. FDI outflows to Europe in 2017 **+12%** since 2016

Over the past few years Europe has been navigating a series of shocks, ranging from the aftermath of the financial crisis and disruption within the eurozone to Russia's military interventions in neighboring countries, major migration inflows and the decision of the United Kingdom to leave the European Union in March 2019. In 2017 the focus shifted to the rise of populist movements across the continent and implications for elections in key European countries, including the Netherlands, France and Germany.

In the end the forces of integration held their ground, and the year ended much differently than it had begun. Elections did not bring the adverse market and economic effects that many investors had feared, and macroeconomic conditions improved considerably. Real economic growth in the eurozone came in stronger than expected at 2.5%, and outpaced growth in the United States. Looking ahead, growth in the eurozone is expected to remain solid at 2.2% in 2018 and 2.0% in 2019, according to IMF forecasts.

The acceleration of Europe's economic engine can be attributed to a number of factors - rising consumer confidence and business optimism, improving fiscal conditions, strengthening trade in goods and services, and accommodative monetary policy. However, 2018 brings its fair share of risks that economists, investors and business leaders should monitor closely, including Italian elections, Brexit negotiations, the nature and priorities of a new German government, and the introduction of the EU's sweeping General Data Protection Regulation (GDPR) in May, to name a few. Populist voices have eroded the position of many mainstream parties across the continent. Crises in some eurozone countries have accentuated north-south divisions, while migration challenges have exacerbated east-west splits.

Notwithstanding these risks, Europe remains one of the most attractive regions of the world for U.S. FDI. The latest economic figures underscore Corporate America's enduring commitment to its long-standing transatlantic partner. We estimate that U.S. FDI outflows to Europe in 2017 totaled \$204 billion, a 12% increase from the flows to the region in 2016 (\$183 billion). After hitting a post-crisis peak of \$235 billion in 2011, U.S. FDI outflows to Europe retreated, but since 2014 have increased every year. On a global basis, U.S. FDI outflows were \$265 billion during the first three quarters of 2017, a 9% rise from the comparable period a year earlier. We estimate that Europe accounted for a 64% share of U.S. outflows in 2017. By contrast, the Asia-Pacific region represented just 16% 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 direct 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 2017, five nations accounted for over 90% of total U.S. FDI outflows of \$165 billion to Europe. The five nations, ranked in order: the Netherlands, attracting \$48.8 billion and 29.5% of total flows to Europe; Ireland (\$41.9 billion and 25.3%); Switzerland (\$26.4 billion and 16.0%); the United Kingdom (\$16.8 billion and 10.2% of the total); and Luxembourg (\$16.4 billion and 9.9%). That said, some of these investment flows, ultimately make their way to neighboring countries, so they likely misrepresent the ultimate destination of U.S. direct investment.

U.S. direct investment flows to the Netherlands were up 43% in the first nine months of 2017 from the same period a year earlier. By the same metric, flows to Switzerland are projected to have doubled.

Ireland is another favored destination for FDI among U.S. multinationals, with flows also estimated to have grown. This dynamic reflects a number of variables, including Ireland's flexible and skilled Englishspeaking 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, 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.

FDI flows to Germany and France in the first three quarters of 2017 were higher than during the entire year in 2016. Combined flows in France and Germany for the nine-month period were over \$10 billion, an improvement from sluggish investment in recent years, but still weak compared to U.S. FDI flows to China (including Hong Kong) and India, which totaled \$14 billion over the same period. This signals that more and more U.S. firms are finding better market conditions in Asia's largest economies than in Europe's bigger economies, although as mentioned a good deal of U.S. investment flows into countries such as France and Germany from smaller EU countries such as Luxembourg or the Netherlands, and so ultimate U.S. FDI flows to these economies are likely to be larger than direct flows may imply. U.S.

investment over the past few years in India has been averaging roughly \$4 billion per year, well ahead of U.S. investment in most European countries

At the other end of the spectrum are Russia and numerous other European countries, where U.S. FDI inflows have declined over the past year. Flows to Belgium, Hungary, Luxembourg, Poland, and Portugal were all lower in the first nine months of 2017 than in the corresponding months of 2016. Net outflows were reported in Norway, Greece, Finland and Demark. Inflows to both Italy and Spain rebounded in 2017, although the figures remain relatively small – just \$772 million to Italy and \$2.1 billion to Spain in the first nine months.

	1990-1999		2000	-2009	2010-3	Q2017
	\$ Aggregate Total	% of Total	\$ Aggregate Total	% of Total	\$ Aggregate Total	% of Total
Europe	465,337		1,149,810		1,389,063	
Austria	2,908	0.6%	501	0.0%	14,349	1.0%
Belgium	12,028	2.6%	40,120	3.5%	15,354	1.1%
Czech Republic	155	0.0%	1,941	0.2%	2,756	0.2%
Denmark	2,798	0.6%	5,782	0.5%	10,471	0.8%
Finland	1,485	0.3%	1,598	O.1%	224	0.0%
France	29,063	6.2%	42,963	3.7%	17,489	1.3%
Germany	31,817	6.8%	60,363	5.2%	26,607	1.9%
Greece	413	O.1%	943	O.1%	387	0.0%
Hungary	2,929	0.6%	1,376	O.1%	-38	0.0%
Ireland	21,369	4.6%	115,085	10.0%	312,596	22.5%
Italy	13,825	3.0%	26,462	2.3%	6,147	0.4%
Luxembourg	15,912	3.4%	126,989	11.0%	233,731	16.8%
Netherlands	70,770	15.2%	295,889	25.7%	393,481	28.3%
Norway	4,198	0.9%	4,997	0.4%	10,721	0.8%
Poland	2,681	0.6%	4,699	0.4%	1,054	0.1%
Portugal	1,993	0.4%	2,212	0.2%	745	0.1%
Russia	1,555	0.3%	11,289	1.0%	-4	0.0%
Spain	11,745	2.5%	28,371	2.5%	14,667	1.1%
Sweden	10,783	2.3%	16,974	1.5%	-11,402	-0.8%
Switzerland	32,485	7.0%	97,869	8.5%	101,452	7.3%
Turkey	1,741	0.4%	5,994	0.5%	4,229	0.3%
United Kingdom	175,219	37.7%	237,906	20.7%	235,808	17.0%
Other	17,465	2.6%	19,487	1.4%	-1,761	-0.1%

Table 1 U.S. FDI in Europe: The Long View (Millions of \$, (-) inflows)

Source: Bureau of Economic Analysis.



Europe remains the favored destination of U.S. firms

Meanwhile, flows to the United Kingdom, a longpreferred destination of U.S. firms, declined by 50% in the first nine months of 2017 compared with the period a year earlier. Brexit may have had some impact on the decline of flows, yet to what extent is not entirely certain, since the 2016 numbers were skewed by a surge in inflows in the second quarter of 2016 (\$20 billion); the other quarters in 2016 averaged roughly \$6 billion, in line with average quarterly FDI flows in 2017.

As evidenced by the figures above, changes in quarterly, and even annual, FDI flows can be an extremely volatile measure of U.S.-European investment ties. Thus, Table 1 provides a more longterm view of U.S. foreign direct investment across Europe. A few items stand out. First, three countries on the list (Hungary, Russia and Sweden) have 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 this decade, with France accounting for just 1.3% of U.S. FDI flows to Europe since 2010. Germany's share is slightly higher, 1.9%, 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 or Luxembourg, finds its way ultimately to Germany.

Just as U.S. firms leverage different states across America, with certain activities sprinkled around the northeast, mid-west, 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. Ireland is the number one export platform for U.S. affiliates in the entire world, reflecting the country's attraction as a strategic beachhead for U.S. multinationals hoping to penetrate the larger European market.

Ireland ranked well down the list 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 2015 to \$298 billion. U.S. firms leverage Ireland as an export base to a far greater degree than low-cost locales like Mexico, Hong Kong and China. U.S. affiliates export almost five times more from Ireland than from China and about four times more than from Mexico, despite strong NAFTA linkages.

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. Moreover, the UK's decision to leave the European Union may further solidify Ireland's spot as the number one location for U.S. affiliate exports if companies decide to relocate operations to Ireland in search of easier access to the EU market.

Of the top twenty global export platforms for U.S. multinationals in the world, ten 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. Switzerland, ranked third, remains a key export platform and pan-regional distribution hub for U.S. firms.

Table 2 Top 20 U.S. Affiliate Sales Abroad by Destination* (\$Millions)

	1982		1990		2000		2015	
Rank	Country	Value	Country	Value	Country	Value	Country	Value
1	United Kingdom	33,500	United Kingdom	51,350	United Kingdom	94,712	Ireland	297,864
2	Switzerland	27,712	Canada	46,933	Canada	94,296	Singapore	283,943
3	Canada	25,169	Germany	41,853	Germany	69,522	Switzerland	230,077
4	Germany	19,117	Switzerland	38,937	Netherlands	67,852	United Kingdom	173,397
5	Netherlands	15,224	Netherlands	33,285	Singapore	56,961	Germany	151,767
6	Belgium	11,924	France	24,782	Switzerland	56,562	Netherlands	143,950
7	Singapore	11,579	Belgium	21,359	Ireland	51,139	Canada	130,809
8	France	11,255	Singapore	15,074	Mexico	37,407	Mexico	79,632
9	Indonesia	8,289	Hong Kong	9,951	France	35,797	Hong Kong	75,964
10	Hong Kong	4,474	Italy	9,562	Belgium	32,010	Belgium	64,561
11	Italy	3,993	Ireland	9,469	Hong Kong	22,470	China	62,667
12	Australia	3,710	Spain	7,179	Malaysia	16,013	France	58,418
13	Ireland	2,842	Japan	7,066	Sweden	15,736	Australia	33,849
14	United Arab Emirates	2,610	Australia	6,336	Italy	14,370	Luxembourg	32,791
15	Brazil	2,325	Mexico	5,869	Spain	12,928	Spain	31,086
16	Japan	2,248	Indonesia	5,431	Japan	11,845	Brazil	29,143
17	Malaysia	2,046	Brazil	3,803	Australia	9,370	India	26,347
18	Panama	1,662	Norway	3,565	Brazil	8,987	Italy	25,499
19	Spain	1,635	Malaysia	3,559	China	7,831	Japan	24,615
20	Mexico	1,158	Nigeria	2,641	Norway	6,238	Korea	23,627
	All Country Total	252,274	All Country Total	398,873	All Country Total	857,907	All Country Total	2,392,084

Source: Bureau of Economic Analysis. *Destination = Affiliate sales to third market + sales to U.S. for majority-owned foreign affiliates.

The UK still plays an important role for U.S. companies as an export platform to the rest of Europe. The exports of U.S. firms based in the UK to the rest of Europe are greater than the exports of U.S. firms based in China to the rest of the world. However, the introduction of the euro, the Single Market and EU enlargement have enticed more U.S. firms to invest directly in continental member states of the EU. 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 decisionmaking. Additionally, the looming Brexit deadline has many implications for the strategy of U.S. firms when it comes to investment in different European countries.

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 to 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 23.0% of world output in 2017, according to estimates from the International Monetary Fund. Even when the United Kingdom is excluded from the figures, the aggregate output of this group of nations - \$15.6 trillion, or 19.7% - is among the largest in the world. The figure (EU excluding the UK) is slightly less than America's share (24.4%), but in excess of China's - 15.1%. Based on purchasing power parity figures, the European Union's share, including Norway, Switzerland, and Iceland, was greater than that of the United States, but slightly less than that of China in 2017.

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 an economic behemoth of 28 member states joined together in a Single Market. Even with the UK's decision to leave the EU, 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.

Table 3 Cumulative U.S. FDI Outflows (\$Millions)

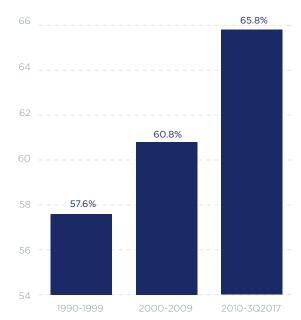
	All Countries	Europe	Europe as a % of World
1950-1959	20,363	3,997	19.6%
1960-1969	40,634	16,220	39.9%
1970-1979	122,721	57,937	47.2%
1980-1989	171,880	94,743	55.1%
1990-1999	869,489	465,337	53.5%
2000-2009	2,056,009	1,149,810	55.9%
2010Q1-2017Q3	2,399,121	1,389,063	57.9%

Source: Bureau of Economic Analysis.

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 57.9% 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 climbs even higher, to almost two-thirds of U.S. direct investment (see Table 4).

Table 4 U.S. FDI Flows to Europe

(% of World Total*)



*Excluding Caribbean and Other Western Hemisphere. Source: Bureau of Economic Analysis. Data as of January 2018.



Even after adjusting for FDI flows related to holding companies, Europe remains the favored destination of U.S. firms (see Box 2 on holding company flows). This 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 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. Although both Russia and Brazil have emerged from recession, growth is still projected to remain relatively weak in 2018 compared to the eurozone. 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. 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 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).



Table 5 U.S. Foreign Direct Investment Flows to China vs. Europe (\$ Billions)

Europe China

*2017 estimate based on 1Q-3Q data. Source: Bureau of Economic Analysis. Data as of January 2018.

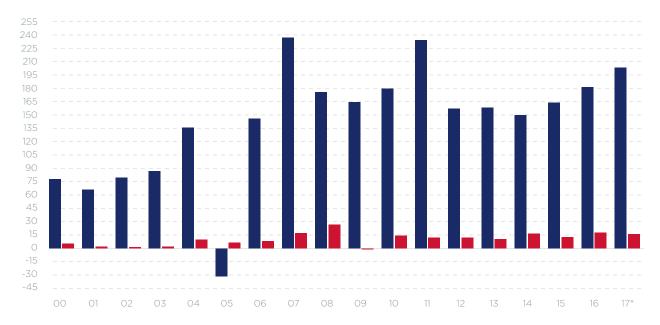


Table 6 U.S. Foreign Direct Investment Outflows to the BRICs vs. Europe¹ (\$ Billions)

Europe BRICs

1 Europe does not include flows to Russia. *2017 estimate based on 1Q-3Q data. Source: Bureau of Economic Analysis. Data as of January 2018.

Third, economic growth in Europe is on the rebound. As mentioned, real economic growth accelerated to 2.5% 2017, one of the strongest levels in years, thanks to rising consumer and business sentiment, declining unemployment, higher consumption, and the European Central Bank's accommodative monetary policies.

Fourth, in addition to being 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, 14 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 \$8,123 in 2016, according to figures from the World Bank. The Chinese figure ranks 73rd in the world and is well below the per capita income levels of Sweden (\$51,949), the Netherlands (\$45,670), Finland (\$43,403), Germany (\$42,070), and the European Union average of around \$32,000. With a miserly per capita income of about \$1,700, India ranks 141st. Wealth drives consumption, with the EU accounting for about 21% of total global personal consumption expenditures in 2016, a slightly lower share than that of the United States but well above that of China (10%) and India (3%) and the BRICs combined (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 European 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 2018 Ease of Doing Business rankings, 18 European economies ranked among the top 30 most business-friendly countries. Denmark ranked 3rd overall, followed by the United Kingdom (7th), Norway (8th), Georgia (9th), Sweden (10th), Macedonia (11th), Estonia (12th), Finland (13th), Lithuania (16th), Ireland (17th), Latvia (19th), Germany (20th), Austria (22nd), Iceland (23rd), Poland (27th), Spain (28th), Portugal (29th), and the Czech Republic (30th) (See Table 7).

Table 7 Ease of Doing Business 2018 Global Rankings

	Ease of Doing Business 2018
Rank	Country
1	New Zealand
2	Singapore
3	Denmark
4	Korea
5	Hong Kong
6	United States
7	United Kingdom
8	Norway
9	Georgia
10	Sweden
11	Macedonia
12	Estonia
13	Finland
14	Australia
15	Taiwan
16	Lithuania
17	Ireland
18	Canada
19	Latvia
20	Germany
21	United Arab Emirates
22	Austria
23	Iceland
24	Malaysia
25	Mauritius
26	Thailand
27	Poland
28	Spain
29	Portugal
30	Czech Republic

Source: World Bank, Ease of Doing Business Report 2018.

Outliers include Italy, ranked 46th, Croatia, ranked 51st, and Greece, ranked 61th. 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 125th. India moved up 30 places to the 100th spot, but the nation still significantly lags some of the developing countries in Europe. In other words, while

the BRICs are regularly hyped as among the most dynamic in the world, strong real GDP growth does not necessarily equate to a favorable environment for business. Other factors need to considered, like the rise of state capitalism in many developing nations, 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.

Table 8 Transatlantic Economies are the Most Competitive in the World

Global Competitiveness Index 2017-2018	
Rank	Country
1	Switzerland
2	United States
3	Singapore
4	Netherlands
5	Germany
6	Hong Kong
7	Sweden
8	United Kingdom
9	Japan
10	Finland
11	Norway
12	Demark
13	New Zealand
14	Canada
15	Taiwan
16	Israel
17	United Arab Emirates
18	Austria
19	Luxembourg
20	Belgium
21	Australia
22	France
23	Malaysia
24	Ireland
25	Qatar
26	Korea
27	China
28	Iceland
29	Estonia
30	Saudi Arabia

Source: World Economic Forum, Global Competitiveness Report 2017-2018.

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 nine more among the top thirty. Switzerland ranked first, the Netherlands 4th, Germany 5th, Sweden 7th, the United Kingdom 8th and Finland 10th (see Table 8). The United States, by way of comparison, ranked 2nd in the latest rankings.

At the other end of the spectrum, a handful of European nations scored poorly, underscoring the fact that Europe's competitiveness is hardly homogenous. Some nations did not even score in the top fifty – Latvia ranked 54th, Slovakia 59th, Hungary 60th, Romania 68th, Croatia 74th, while Greece ranked 87th in the latest survey, the worst performer among EU Member States.

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 macroeconomic environment and financial markets, which stands in contrast to Norway's healthy credit market and budget balances or Sweden's efficient financial markets.

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 sophistication of business culture, market size, and leadership in innovation. Spain's ranking was hurt by macroeconomic imbalances and labor market inefficiencies, but scored relatively well in terms of technological readiness and infrastructure. Finally, Germany ranked highly across many variables: quality of infrastructure, consumer sophistication, R&D spending and labor market productivity, 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 2017, Sweden, Denmark, Finland, the Netherlands, the UK, and Germany rank as "innovation leaders" in Europe. These are the most innovative states in the EU, performing well above that of the EU 28 average.

So-called "strong innovators" include Austria, Luxembourg, Belgium, Ireland, France, and Slovenia. The performance of the Czech Republic, Portugal, Estonia, Lithuania, Spain, Malta, Italy, Cyprus, Slovakia, Greece, Hungary, Latvia, Poland, and Croatia 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 all BRIC nations. In addition, based on the latest figures, the EU is closing its performance gap with the United States.

In that R&D expenditures are a key driver of valueadded growth, it is interesting to note that Europebased companies accounted for 21.2% of total global R&D in 2016. That lagged the share of the United States (25.6%) but exceeded the share of Japan (8.6%), China (20.1%), and India (3.6%). In 2016, 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 full time equivalent (FTE) research staff. Of the world's global research pool, the EU housed 1.8 million researchers in 2015 versus 1.4 million in the United States and 1.6 million in China, according to OECD estimates.

The EU remains notably strong in such high-technology manufacturing industries as pharmaceuticals and scientific instruments and aerospace. Also, the EU is the largest exporter of commercial knowledgeintensive services (excluding intra-EU exports), which includes communications, business services, financial services, telecommunications, and computer and information services. Finally, in terms of future workers, the U.S. high school graduation rate lags behind most European nations, including states like Austria, Denmark, Germany, Italy, Norway, Poland, and Slovenia. The U.S. graduate rate was 83% in 2015 versus an OECD average of 86%.

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. 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.

Box 2. FDI Outflows to Europe Adjusted for Flows of Holding Companies

For the past few years, we have highlighted the role of U.S. holding companies in determining U.S. investment flows to Europe. This additional lens is warranted since 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 2016, the last year of available data, nonbank holding companies accounted for \$142 billion, or over half of global U.S. FDI of \$281 billion, and 54% of total U.S. foreign direct investment to the European Union of \$183 billion. As the U.S. Bureau of Economic Analysis (BEA) 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. The countries attracting the most investment of holding companies, not surprisingly, are those with some of the lowest corporate tax rates in Europe, such as Luxembourg, the Netherlands, the UK and Ireland.

Tables 9a and 9b, drawing on BEA data, reflect the significance of holding companies in the composition of U.S. FDI outflows. European markets have accounted for roughly 57% of total U.S. FDI outflows since 2009. However, when flows to nonbank holding companies are excluded from the data, the share of outflows to markets such as Europe and Other Western Hemisphere declines.

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 BEA. Nonetheless, Europe remains the top destination of choice among U.S. firms even after the figures are adjusted. Between 2009 and 2016, Europe still accounted for over 47% 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 U.S. and Europe.

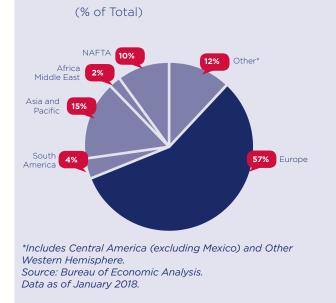
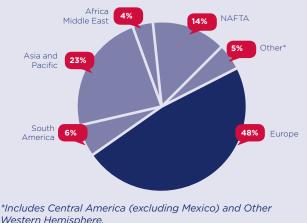


Table 9a Total U.S. FDI Outflows, 2009-2016

Table 9b U.S. FDI Outflows Excluding Flows to Nonbank Holding Companies, 2009-2016 (% of Total)

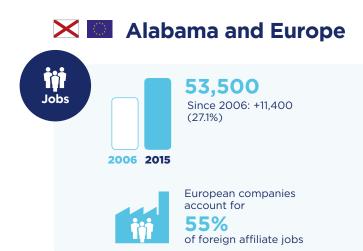


Source: Bureau of Economic Analysis. Data as of January 2018.



European Commerce and the 50 U.S. States: A State-by-State Comparison

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Employment within Alabama, 2015

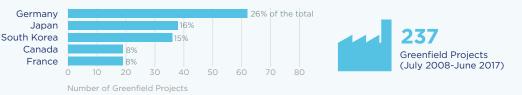
Country	Employment
Japan	19,400
Germany	13,000
United Kingdom	11,500
France	8,000
Canada	6,100

On a country basis, German companies operating in Alabama represented 13% of total foreign affiliate employment in Alabama, with German multinationals supporting approximately 2,500 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Alabama Goods Exports to Europe, 2016

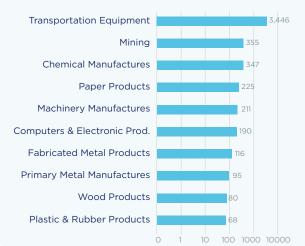
\$5.3 bn

64% of total exports from Alabama to Europe represented transportation equipment, reflecting the state's linkages with European auto manufacturers.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	3,194
United Kingdom	558
France	422
Belgium	246
Netherlands	174

Top Ten Exports to Europe, 2016 (\$ millions)



Alabama Goods Imports from Europe, 2016

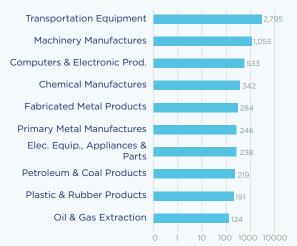
\$6.4 bn

Transportation equipment and machinery manufactures were the top product imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	3,869
Russia	336
United Kingdom	319
France	232
Czech Republic	223

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Alaska, 2015

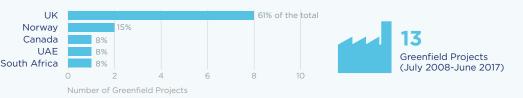
Country	Employment
Canada	4,900
United Kingdom	4,700
Japan	2,900
France	500
Germany	300

On a country basis, U.K. companies operating in Alaska represented 27% of total foreign affiliate employment in Alaska, with U.K. multinationals supporting approximately 400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)







Alaska Goods Exports to Europe, 2016

\$788.8 m

The bulk of exports consists of primary commodities.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	257
Spain	152
Netherlands	135
France	55
Finland	45

\$211.4 m

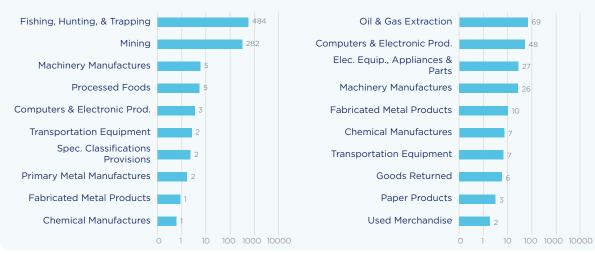
Alaska Goods Imports from Europe, 2016

Oil & gas extraction made up about one-third of total imports from Europe. Other large import categories from Europe include computers, electronic products, electrical equipment and parts.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Russia	76
France	63
United Kingdom	22
Germany	13
Denmark	8

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)



Employment within Arizona, 2015

Country	Employment
Canada	17,700
United Kingdom	14,300
France	9,400
Japan	9,200
Germany	8,500

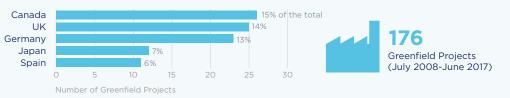
On a country basis, U.K. companies operating in Arizona represented 14% of total foreign affiliate employment in Arizona, with U.K. multinationals supporting approximately 1,200 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)

of foreign affiliate jobs





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Arizona Goods Exports to Europe, 2016

\$3.9 bn

Roughly one-third of the state's exports consists of transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	858
Germany	726
France	471
Netherlands	419
Ireland	244

Arizona Goods Imports from Europe, 2016

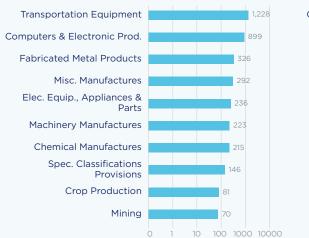
\$3.9 bn

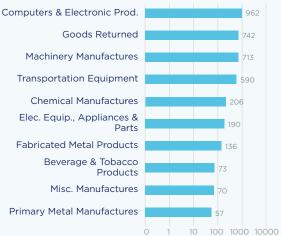
Computers & electronic products were the top product imports, representing 25% of total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	875
Netherlands	594
Italy	565
United Kingdom	561
France	457

Top Ten Imports from Europe, 2016 (\$ millions)





Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA

Top Ten Exports to Europe, 2016 (\$ millions)



Employment within Arkansas, 2015

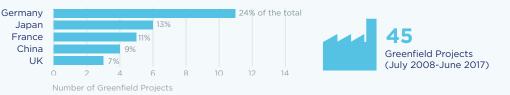
Country	Employment
United Kingdom	7,200
France	6,100
Japan	6,100
Switzerland	4,700
Canada	3,300

On a country basis, U.K. companies operating in Arkansas represented 15% of total foreign affiliate employment in Arkansas, with U.K. multinationals supporting approximately 3,500 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Arkansas Goods Exports to Europe, 2016

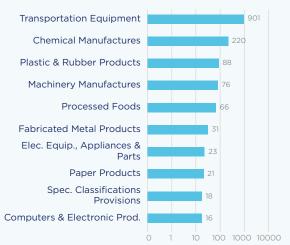
\$1.5 bn

Transportation equipment made up 60% of Arkansas exports to Europe in 2016.

Top European Export Markets, 2016

Country	Exports (\$ millions)
France	783
United Kingdom	143
Belgium	126
Netherlands	99
Germany	77

Top Ten Exports to Europe, 2016 (\$ millions)



Arkansas Goods Imports from Europe, 2016

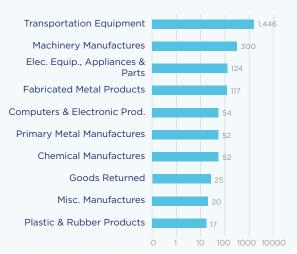
\$2.3 bn

Transportation equipment and machinery manufactures were the top product imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
France	1,415
Germany	309
Italy	97
United Kingdom	59
Hungary	57

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within California, 2015

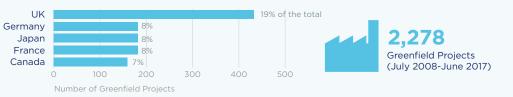
Country	Employment
Japan	119,700
United Kingdom	100,100
France	72,700
Switzerland	70,100
Germany	65,500

On a country basis, U.K. companies operating in California represented 14% of total foreign affiliate employment in California, with U.K. multinationals supporting approximately 15,600 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets



California Goods Exports to Europe, 2016

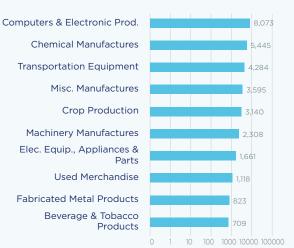
\$34.2 bn

24% of Californian exports to Europe consists of high-tech goods.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Netherlands	5,460
United Kingdom	5,433
Germany	5,352
France	2,985
Belgium	2,956

Top Ten Exports to Europe, 2016 (\$ millions)



California Goods Imports from Europe, 2016

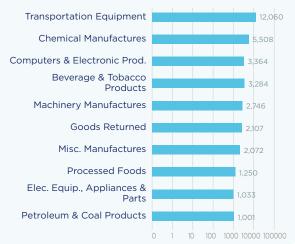
\$40.9 bn

Transportation equipment and chemical manufactures were the top product imports, representing 29% and 13% of total European imports, respectively.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	11,205
United Kingdom	5,501
Italy	4,011
France	3,871
Switzerland	2,705

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Colorado, 2015

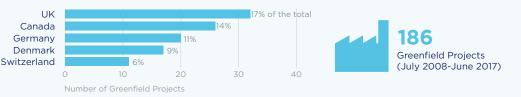
Country	Employment
United Kingdom	16,400
Canada	13,900
France	7,500
Japan	7,200
Germany	6,200

On a country basis, U.K. companies operating in Colorado represented 16% of total foreign affiliate employment in Colorado, with U.K. multinationals supporting approximately 3,200 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Colorado Goods Exports to Europe, 2016

\$1.6 bn

27% of the state's exports consists of high-tech goods like computers & electronic products.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	326
Switzerland	230
Netherlands	228
United Kingdom	220
France	139

Top Ten Exports to Europe, 2016 (\$ millions)

Colorado Goods Imports from Europe, 2016

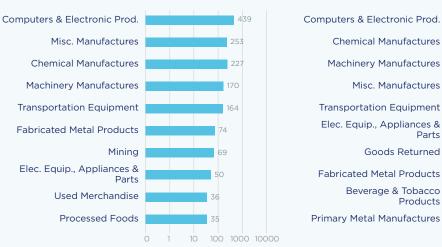
\$3.1 bn

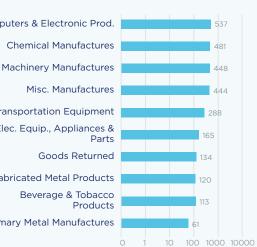
Computers & electronic products were also Colorado's top import from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	699
Switzerland	652
France	233
Italy	225
United Kingdom	216

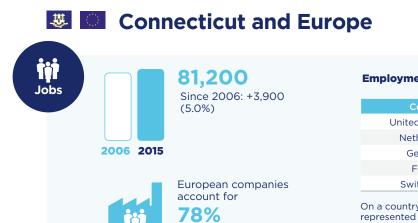
Top Ten Imports from Europe, 2016 (\$ millions)





Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

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Employment within Connecticut, 2015

Country	Employment
United Kingdom	18,900
Netherlands	18,300
Germany	12,400
France	7,700
Switzerland	7,400

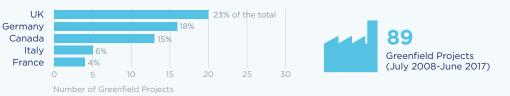
On a country basis, U.K. companies operating in Connecticut represented 18% of total foreign affiliate employment in Connecticut, with U.K. multinationals supporting approximately 400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)

of foreign affiliate jobs



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Connecticut Goods Exports to Europe, 2016

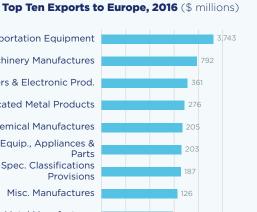
\$6.3 bn

Exports are heavily skewed towards transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
France	1,953
Germany	1,642
United Kingdom	893
Netherlands	499
Belgium	242





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Connecticut Goods Imports from Europe, 2016

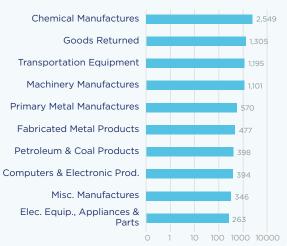
\$9 _4 bn

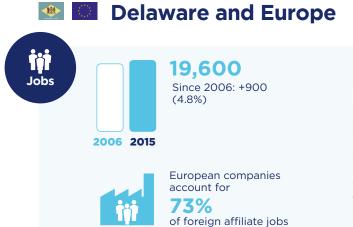
Chemicals are Connecticut's main import from Europe, representing 27% of total merchandise imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
United Kingdom	2,549
Germany	1,446
Ireland	1,153
France	642
Italy	566

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Delaware, 2015

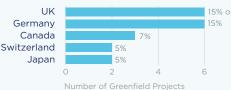
Country	Employment
United Kingdom	8,500
Germany	2,900
Canada	2,300
Japan	2,300
France	1,800

On a country basis, U.K. companies operating in Delaware represented 31% of total foreign affiliate employment in Delaware.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

Investment

Sources of Greenfield Foreign Direct Investment (FDI)



15% of the total 15% 5 8 10

40 Greenfield Projects (July 2008-June 2017)

Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Delaware Goods Exports to Europe, 2016

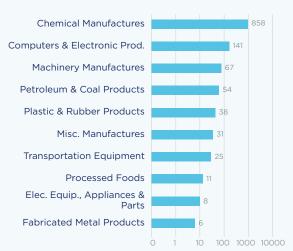
\$1.3 bn

Chemicals are Delaware's primary export to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	549
Germany	311
Belgium	140
Netherlands	63
Sweden	34

Top Ten Exports to Europe, 2016 (\$ millions)



\$3.6 bn

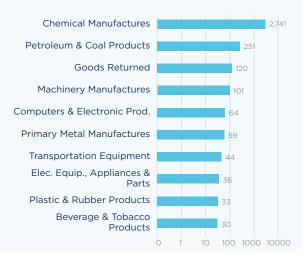
Delaware Goods Imports from Europe, 2016

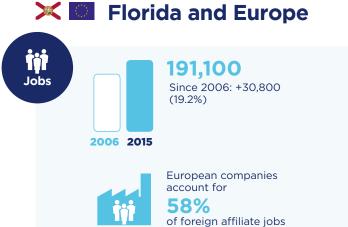
Chemicals are also Delaware's top import from Europe, representing 76% of the state's total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
United Kingdom	1,327
France	789
Germany	243
Belgium	188
Sweden	180

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Florida, 2015

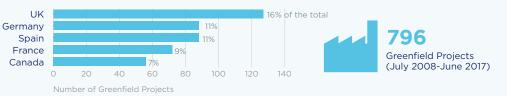
Country	Employment
United Kingdom	61,000
Canada	38,600
France	29,000
Germany	28,800
Japan	22,000

On a country basis, U.K. companies operating in Florida represented 19% of total foreign affiliate employment in Florida, with U.K. multinationals supporting approximately 19,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Florida Goods Exports to Europe, 2016

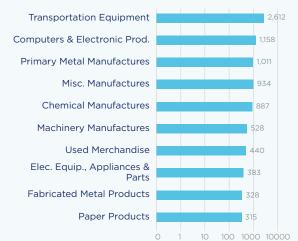
\$9.8 bn

Transportation equipment accounts for about 27% of total exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	1,948
United Kingdom	1,421
Switzerland	1,244
Netherlands	962
France	902

Top Ten Exports to Europe, 2016 (\$ millions)



Florida Goods Imports from Europe, 2016

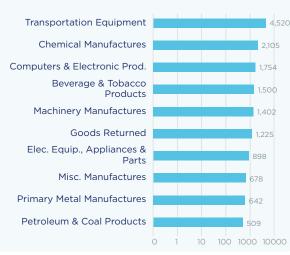
\$18.6 bn

Florida's imports from Europe are relatively diverse, ranging from transportation equipment to chemicals and machinery manufactures.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	4,257
France	3,268
Italy	1,950
United Kingdom	1,911
Switzerland	1,171

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Georgia, 2015

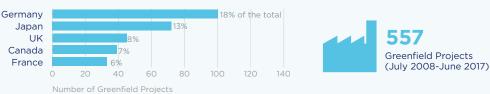
Country	Employment
United Kingdom	31,900
Japan	31,200
Canada	25,700
Germany	24,000
Netherlands	19,700

On a country basis, U.K. companies operating in Georgia represented 14% of total foreign affiliate employment in Georgia, with U.K. multinationals supporting approximately 8,600 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Georgia Goods Exports to Europe, 2016

\$8.2 bn

Over 30% of Georgia's exports to Europe consists of transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	1,585
United Kingdom	1,345
Netherlands	761
Belgium	746
France	568

Top Ten Exports to Europe, 2016 (\$ millions)

Georgia Goods Imports from Europe, 2016

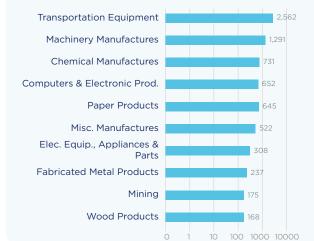
\$28.9 bn

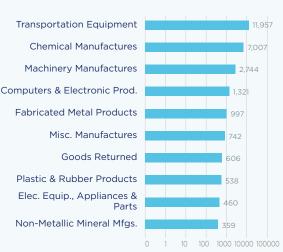
Transportation equipment, chemicals and machinery manufactures were the top product imports.

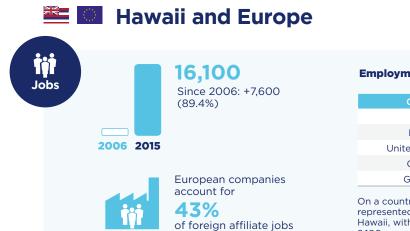
Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	13,772
United Kingdom	3,713
France	2,034
Italy	1,701
Ireland	1,068

Top Ten Imports from Europe, 2016 (\$ millions)







Employment within Hawaii, 2015

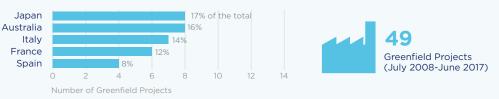
Country	Employment
Japan	16,800
France	6,500
United Kingdom	2,900
Canada	1,400
Germany	1,000

On a country basis, French companies operating in Hawaii represented 17% of total foreign affiliate employment in Hawaii, with French multinationals supporting approximately 2,100 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Hawaii Goods Exports to Europe, 2016

\$22.7 m

Used Merchandise

Processed Foods

Parts

Computers & Electronic Prod.

Transportation Equipment

Elec. Equip., Appliances &

Machinery Manufactures

Misc. Manufactures

Animal Production

Crop Production

Fishing, Hunting, & Trapping

Used merchandise, computer & electronic products, and processed foods led the way as top export categories.

Top European Export Markets, 2016

Country	Exports (\$ millions)
France	6
United Kingdom	4
Germany	4
Netherlands	2
Sweden	2

Top Ten Exports to Europe, 2016 (\$ millions)

0.5



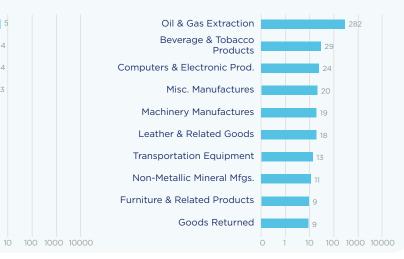
\$482.0 m

Hawaii's top European import category was oil & gas.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Russia	282
Italy	49
Germany	25
Netherlands	25
France	23

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Idaho, 2015

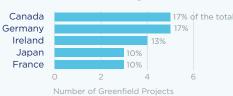
Country	Employment
United Kingdom	4,100
Canada	2,500
France	2,400
Germany	1,800
Japan	1,500

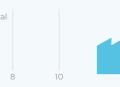
On a country basis, U.K. companies operating in Idaho represented 23% of total foreign affiliate employment in Idaho, with U.K. multinationals supporting approximately 1,700 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





30 Greenfield Projects (July 2008-June 2017)

Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Idaho Goods Exports to Europe, 2016

\$366.9 m

Computers & Electronic Prod.

Fabricated Metal Products

Machinery Manufactures

Chemical Manufactures

Transportation Equipment

Elec. Equip., Appliances &

Primary Metal Manufactures

Misc. Manufactures

Crop Production

Processed Foods

Parts

Exports are mostly concentrated in computers & electronic products.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	115
Netherlands	71
France	35
Germany	27
Spain	26

Top Ten Exports to Europe, 2016 (\$ millions)



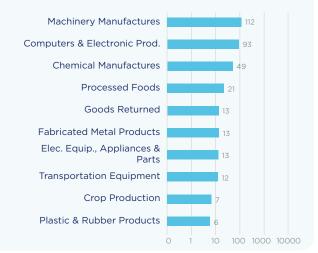
\$361.9 m

Machinery manufactures represented 31% of the state's total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	80
Switzerland	44
Greece	37
Italy	30
France	22

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

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Employment within Illinois, 2015

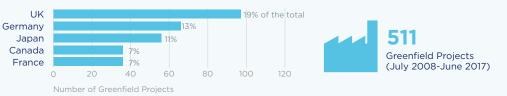
Country	Employment
United Kingdom	62,800
Japan	43,100
Germany	42,200
France	34,300
Canada	25,800

On a country basis, U.K. companies operating in Illinois represented 19% of total foreign affiliate employment in Illinois, with U.K. multinationals supporting approximately 11,900 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Illinois Goods Exports to Europe, 2016

\$11.2 bn

Chemicals and machinery are key exports, followed by computers & electronic products and transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	2,772
United Kingdom	1,680
Belgium	1,501
Netherlands	1,390
France	839

Top Ten Exports to Europe, 2016 (\$ millions)



Illinois Goods Imports from Europe, 2016

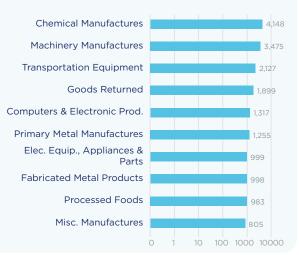
\$20.2 bn

Chemicals and machinery are also the state's top imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	4,977
United Kingdom	2,590
Italy	2,159
France	1,691
Switzerland	1,686

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Indiana, 2015

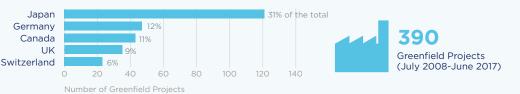
Country	Employment
Japan	49,100
United Kingdom	33,900
France	28,600
Canada	15,600
Germany	14,800

On a country basis, U.K. companies operating in Indiana represented 18% of total foreign affiliate employment in Indiana, with U.K. multinationals supporting approximately 2,300 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Indiana Goods Exports to Europe, 2016

\$8.9 bn

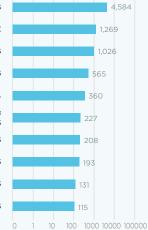
Trade in chemical manufactures represented 51% of total exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	1,781
United Kingdom	1,419
France	1,218
Italy	1,192
Netherlands	924

Top Ten Exports to Europe, 2016 (\$ millions)

Chemical Manufactures Transportation Equipment Misc. Manufactures Machinery Manufactures Computers & Electronic Prod. Elec. Equip., Appliances & Parts Primary Metal Manufactures Plastic & Rubber Products Fabricated Metal Products Processed Foods



Indiana Goods Imports from Europe, 2016

\$20.7 bn

Trade in chemical manufactures represented 62% of total imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Ireland	8,399
Denmark	3,256
Germany	2,530
France	1,904
Switzerland	1,275

Top Ten Imports from Europe, 2016 (\$ millions)

Chemical Manufactures Misc. Manufactures Goods Returned Transportation Equipment Machinery Manufactures Computers & Electronic Prod. Primary Metal Manufactures Plastic & Rubber Products Fabricated Metal Products Elec. Equip., Appliances & Parts



🗖 🔟 Iowa and Europe



Employment within Iowa, 2015

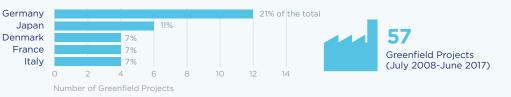
Country	Employment
United Kingdom	8,200
Netherlands	6,600
Japan	6,000
France	4,600
Germany	4,500

On a country basis, U.K. companies operating in Iowa represented 15% of total foreign affiliate employment in Iowa, with U.K. multinationals supporting approximately 100 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets



Iowa Goods Exports to Europe, 2016

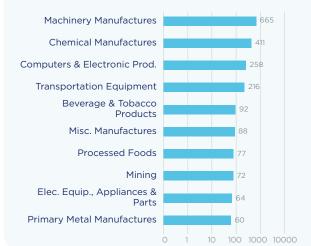
\$2.2 bn

Machinery manufactures account for 31% of total exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	432
France	276
United Kingdom	243
Ireland	190
Netherlands	168

Top Ten Exports to Europe, 2016 (\$ millions)



Iowa Goods Imports from Europe, 2016

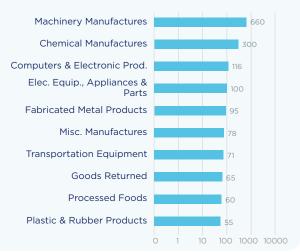
\$1.7 bn

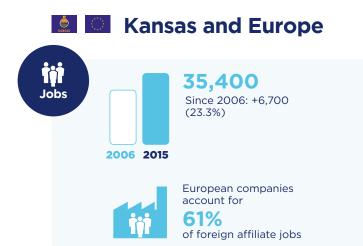
Machinery manufactures and chemicals were the top product imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	567
Italy	244
France	149
United Kingdom	136
Netherlands	98

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Kansas, 2015

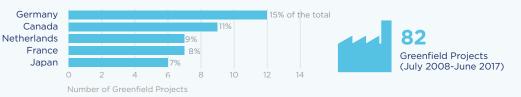
Country	Employment
Japan	9,100
United Kingdom	8,200
Switzerland	6,500
Canada	6,000
Germany	5,500

On a country basis, U.K. companies operating in Kansas represented 14% of total foreign affiliate employment in Kansas, with U.K. multinationals supporting approximately 2,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Kansas Goods Exports to Europe, 2016

\$1.9 bn

Transportation Equipment

Chemical Manufactures

Machinery Manufactures

Elec. Equip., Appliances &

Fabricated Metal Products

Primary Metal Manufactures

Plastic & Rubber Products

Spec. Classifications

Processed Foods

Parts

Provisions

Computers & Electronic Prod.

Over two-thirds of Kansas exports to Europe was concentrated in three main export categories: transportation equipment, computer & electronic products, and chemicals.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	431
Germany	368
France	294
Netherlands	102
Belgium	92

16 Top European Import Markets, 2016

\$2.8 bn

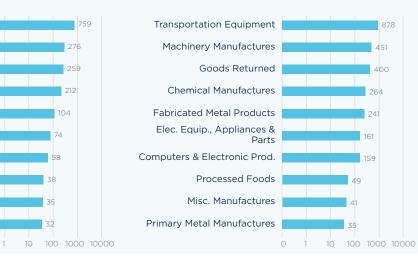
Country	Imports (\$ millions)
Germany	904
United Kingdom	492
France	309
Italy	171
Spain	129

Kansas Goods Imports from Europe, 2016

Transportation equipment represented 32% of the

state's total imports from Europe.

Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)

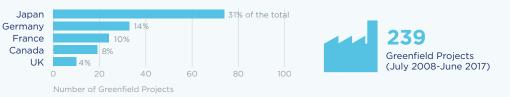


On a country basis, German companies operating in Kentucky represented 10% of total foreign affiliate employment in Kentucky, with German multinationals supporting approximately 1,700 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Kentucky Goods Exports to Europe, 2016

\$9.5 bn

Reflecting the large presence of automobile manufacturers in the state, Kentucky's top export to Europe is transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	2,836
France	2,833
Germany	1,000
Netherlands	971
Austria	568

Chemical manufactures and transportation

\$13.6 bn

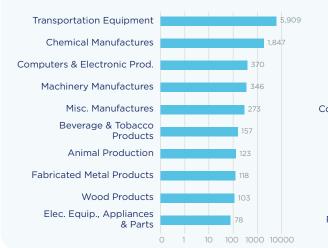
equipment were the top product imports.

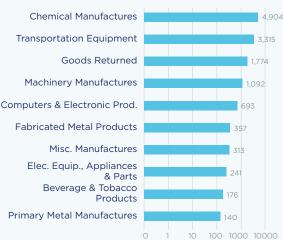
Kentucky Goods Imports from Europe, 2016

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	2,545
France	2,374
Switzerland	1,937
Italy	1,373
Belgium	1,369

Top Ten Imports from Europe, 2016 (\$ millions)





Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)



Employment within Louisiana, 2015

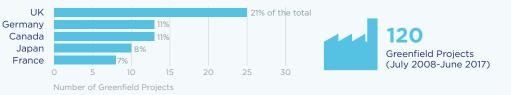
Country	Employment
United Kingdom	16,400
Canada	7,600
France	7,600
Germany	5,600
Netherlands	5,100

On a country basis, U.K. companies operating in Louisiana represented 24% of total foreign affiliate employment in Louisiana, with U.K. multinationals supporting approximately 4,800 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Louisiana Goods Exports to Europe, 2016

\$8.6 bn

Most of the state's exports to Europe consists of a mix of petroleum & coal products, agricultural products and chemicals.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Netherlands	2,370
Belgium	1,118
France	1,017
United Kingdom	905
Spain	656

Louisiana Goods Imports from Europe, 2016

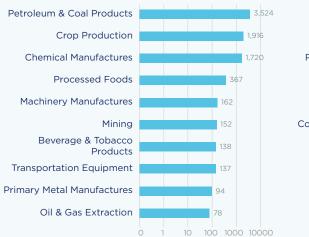
\$5.8 bn

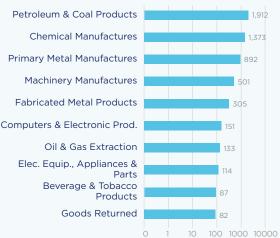
Petroleum & coal products were Louisiana's top imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Russia	2,397
Germany	507
United Kingdom	437
Italy	386
France	331

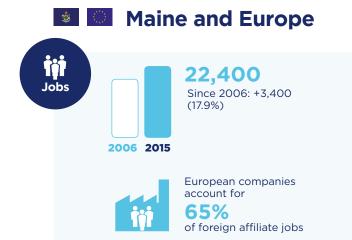
Top Ten Imports from Europe, 2016 (\$ millions)





Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)



Employment within Maine, 2015

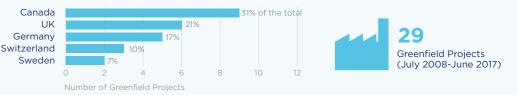
Country	Employment
Canada	8,500
United Kingdom	2,900
Switzerland	2,400
Germany	1,800
Japan	1,300

On a country basis, U.K. companies operating in Maine represented 8% of total foreign affiliate employment in Maine, with U.K. multinationals supporting approximately 1,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Maine Goods Exports to Europe, 2016

\$543.9 m

Transportation Equipment

Computers & Electronic Prod.

Paper Products

Provisions

Spec. Classifications

Machinery Manufactures

Chemical Manufactures

Plastic & Rubber Products

Fishing, Hunting, & Trapping

Processed Foods

Waste & Scrap

Transportation equipment and paper products are the state's top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	216
Belgium	60
United Kingdom	57
Netherlands	51
Italy	39



\$708.2 m

Machinery was the largest import category, representing over 20% of the state's total European imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
United Kingdom	141
Germany	107
Denmark	84
Italy	72
Netherlands	38

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)

10 100 1000 10000

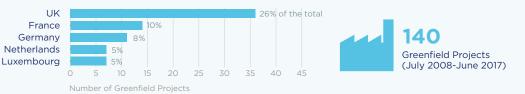


approximately 3,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

nvestment

Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Maryland Goods Exports to Europe, 2016

\$2.7 bn

Chemical Manufactures

Transportation Equipment

Machinery Manufactures Fabricated Metal Products

Plastic & Rubber Products

Elec. Equip., Appliances &

Misc. Manufactures

Parts

Mining

Waste & Scrap

Computers & Electronic Prod.

Top exports are chemicals, transportation equipment, and computers & electronic products.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	529
Netherlands	465
Germany	416
Belgium	411
France	325

Transportation equipment and machinery

\$13.4 bn

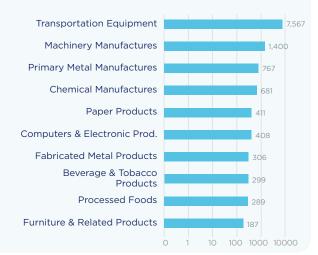
Maryland Goods Imports from Europe, 2016

manufactures were the top product imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	4,380
United Kingdom	3,507
Sweden	861
Italy	569
France	462

Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)

Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

682

348

66

10 100 1000 10000

Appendix A - European Commerce and the 50 U.S. States: A State-by-State Comparison



Employment within Massachusetts, 2015

Country	Employment
United Kingdom	37,300
Netherlands	34,500
France	28,200
Canada	21,900
Germany	17,700

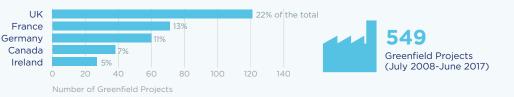
On a country basis, U.K. companies operating in Massachusetts represented 17% of total foreign affiliate employment in Massachusetts.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)

of foreign affiliate jobs



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Massachusetts Goods Exports to Europe, 2016

\$10.2 bn

Computers & electronic products and chemicals each account for over 18% of total European exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Switzerland	1,769
Germany	1,635
United Kingdom	1,585
Netherlands	1,370
Ireland	949

Top Ten Exports to Europe, 2016 (\$ millions)

\$10.6 bn

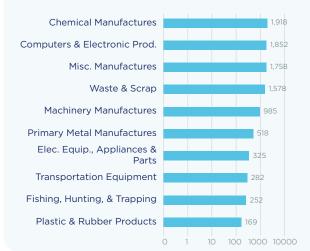
Key imports from Europe include miscellaneous manufactured items, computer & electronic products, chemical manufactures, and machinery.

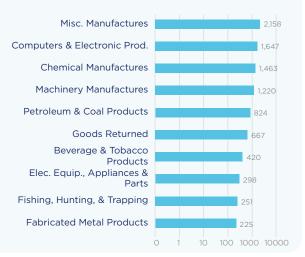
Massachusetts Goods Imports from Europe, 2016

Top European Import Markets, 2016

Country	Imports (\$ millions)
Ireland	2,043
Germany	1,819
United Kingdom	1,382
Italy	1,033
Switzerland	934

Top Ten Imports from Europe, 2016 (\$ millions)







Employment within Michigan, 2015

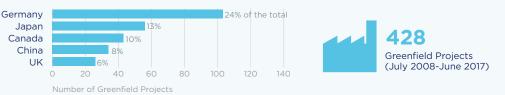
Country	Employment
Germany	38,000
Japan	32,500
Canada	25,400
United Kingdom	24,400
France	18,700

On a country basis, German companies operating in Michigan represented 16% of total foreign affiliate employment in Michigan, with German multinationals supporting approximately 12,100 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Michigan Goods Exports to Europe, 2016

\$7.1 bn

Not surprisingly, transportation equipment makes up 36% of Michigan's exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	1,999
Italy	906
United Kingdom	878
Belgium	725
France	534

Top Ten Exports to Europe, 2016 (\$ millions)

Transportation Equipment Chemical Manufactures Machinery Manufactures Non-Metallic Mineral Mfgs. Computers & Electronic Prod. Elec. Equip., Appliances & Parts Fabricated Metal Products Plastic & Rubber Products Primary Metal Manufactures Misc. Manufactures 143



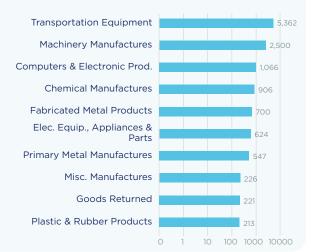
Michigan Goods Imports from Europe, 2016

Imports from Europe mainly consist of transportation equipment and machinery.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	4,254
Italy	3,211
Spain	903
United Kingdom	660
France	558

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

2,564

43

10 100 1000 10000





Employment within Minnesota, 2015

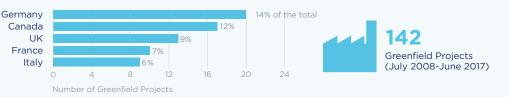
Country	Employment
Canada	22,800
United Kingdom	18,300
Germany	10,800
Japan	8,300
France	7,400

On a country basis, U.K. companies operating in Minnesota represented 16% of total foreign affiliate employment in Minnesota, with U.K. multinationals supporting approximately 3,600 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets



Minnesota Goods Exports to Europe, 2016

\$4.3 bn

Computers & electronic products account for 23% of Minnesota's exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	763
Belgium	733
United Kingdom	564
Ireland	398
Netherlands	370

Top Ten Exports to Europe, 2016 (\$ millions)

\$4.1 bn

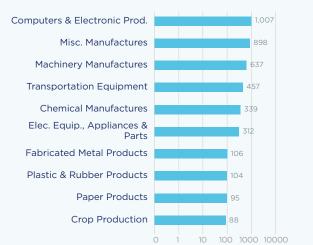
Computer & electronic products were also the state's top imports from Europe.

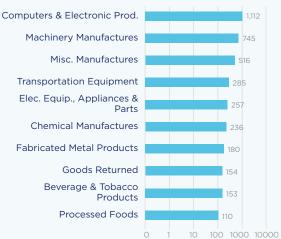
Minnesota Goods Imports from Europe, 2016

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	1,023
Ireland	912
Italy	374
United Kingdom	373
France	294
Trance	234

Top Ten Imports from Europe, 2016 (\$ millions)







Employment within Mississippi, 2015

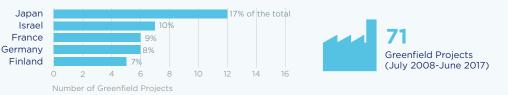
Country	Employment
Japan	9,800
United Kingdom	4,700
Germany	4,500
France	4,200
Canada	3,700

On a country basis, U.K. companies operating in Mississippi represented 12% of total foreign affiliate employment in Mississippi, with U.K. multinationals supporting approximately 1,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)







Mississippi Goods Exports to Europe, 2016

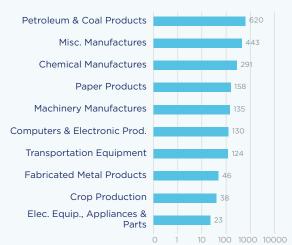
\$2.1 bn

Petroleum & coal products, miscellaneous manufactured commodities, chemicals and paper products rank as the top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Netherlands	401
Belgium	400
Germany	351
Gibraltar	320
United Kingdom	171

Top Ten Exports to Europe, 2016 (\$ millions)



Mississippi Goods Imports from Europe, 2016

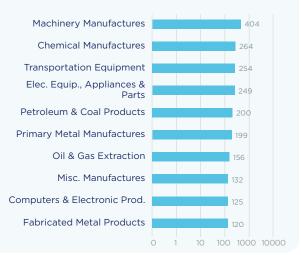
\$2.2 bn

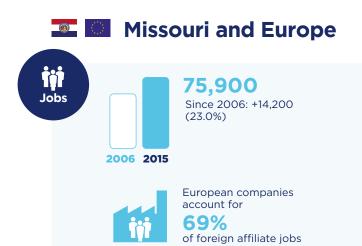
Machinery and chemicals were the top imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	646
United Kingdom	286
Italy	200
France	170
Russia	132

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Missouri, 2015

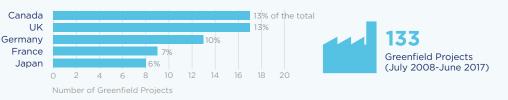
Country	Employment
United Kingdom	23,400
Germany	11,700
Japan	10,100
France	10,000
Canada	9,500

On a country basis, U.K. companies operating in Missouri represented 21% of total foreign affiliate employment in Missouri, with U.K. multinationals supporting approximately 6,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Missouri Goods Exports to Europe, 2016

\$2.3 bn

Top exports to Europe from Missouri are chemicals, transportation equipment and machinery manufactures.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	492
Germany	459
United Kingdom	302
France	207
Switzerland	151

Top Ten Exports to Europe, 2016 (\$ millions)

\$3.7 bn

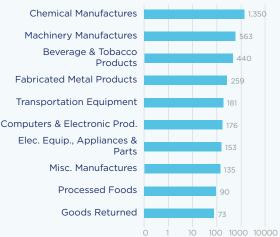
Missouri Goods Imports from Europe, 2016

Chemicals, machinery, and beverage & tobacco products were the top imported goods from Europe.

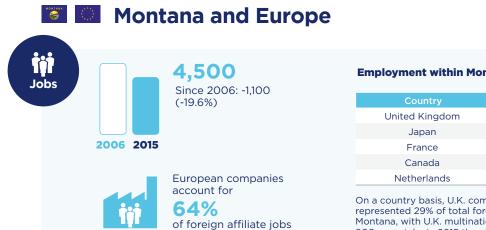
Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	1,353
Belgium	387
United Kingdom	316
Italy	277
France	258

Top Ten Imports from Europe, 2016 (\$ millions)



Chemical Manufactures 816 Transportation Equipment 357 Machinery Manufactures 289 Computers & Electronic Prod. 134 Elec. Equip., Appliances & Parts 99 Fabricated Metal Products 44 Misc. Manufactures 73 Primary Metal Manufactures 58 Mining 56 Plastic & Rubber Products 55



Employment within Montana, 2015

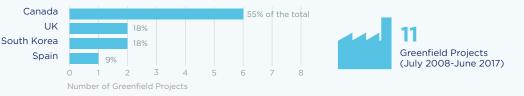
Country	Employment
United Kingdom	2,000
Japan	1,000
France	800
Canada	500
Netherlands	300

On a country basis, U.K. companies operating in Montana represented 29% of total foreign affiliate employment in Montana, with U.K. multinationals supporting approximately 900 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Montana Goods Exports to Europe, 2016

\$179.9 m

Exports are relatively small and skewed towards chemicals, agricultural products, and machinery.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	32
Germany	21
United Kingdom	19
Netherlands	17
France	16

Montana Goods Imports from Europe, 2016

\$371.3 m

Montana's imports from Europe are also small and heavily concentrated in waste & scrap, used merchandise and machinery.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	213
Italy	94
United Kingdom	25
France	10
Belgium	6

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)





Employment within Nebraska, 2015

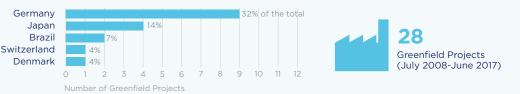
Country	Employment
Japan	5,200
United Kingdom	5,000
France	3,500
Switzerland	2,300
Netherlands	1,500

On a country basis, U.K. companies operating in Nebraska represented 15% of total foreign affiliate employment in Nebraska, with U.K. multinationals supporting approximately 2,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)







Nebraska Goods Exports to Europe, 2016

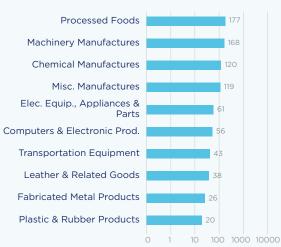
\$0.9 bn

Top exports are processed foods, machinery and chemicals.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	152
Germany	135
Netherlands	128
France	109
Italy	80

Top Ten Exports to Europe, 2016 (\$ millions)



Nebraska Goods Imports from Europe, 2016

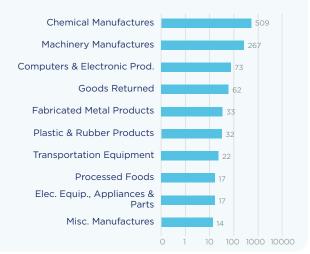
\$1.1 bn

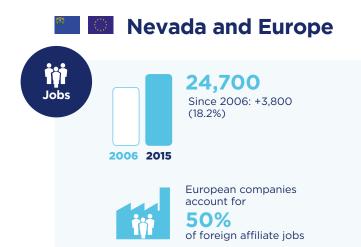
Chemicals made up 46% of Nebraska's total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	284
United Kingdom	206
Austria	147
Switzerland	144
France	98

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Nevada, 2015

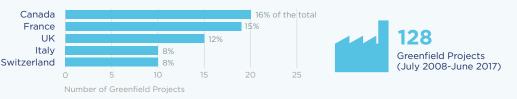
Country	Employment
Canada	10,700
United Kingdom	7,300
France	5,900
Japan	3,400
Germany	3,000

On a country basis, U.K. companies operating in Nevada represented 15% of total forein affiliate employment in Nevada, with U.K. multinationals supporting approximately 1,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)





Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.

Nevada Goods Exports to Europe, 2016

\$4.8 bn

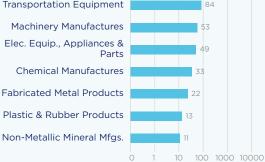
Primary metal manufactures account for 81% of total exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Switzerland	3,937
Germany	167
United Kingdom	131
Belgium	126
Netherlands	115

Top Ten Exports to Europe, 2016 (\$ millions)

Primary Metal Manufactures Misc. Manufactures Computers & Electronic Prod. Transportation Equipment **Machinery Manufactures**



Nevada Goods Imports from Europe, 2016

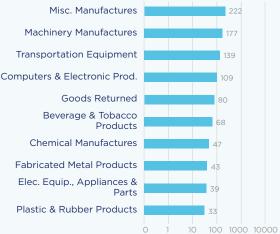
bn

Imports from Europe to Nevada are more diverse, ranging from miscellaneous manufactured commodities to machinery to transportation equipment.

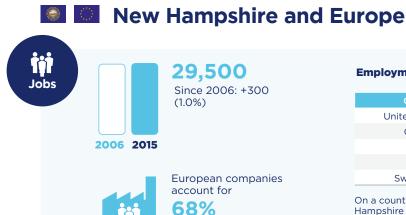
Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	171
France	164
United Kingdom	147
Italy	131
Switzerland	112

Top Ten Imports from Europe, 2016 (\$ millions)



Appendix A - European Commerce and the 50 U.S. States: A State-by-State Comparison



Employment within New Hampshire, 2015

Country	Employment
United Kingdom	10,500
Canada	5,700
Japan	4,400
France	3,900
Switzerland	3,600

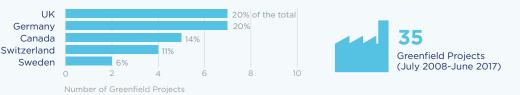
On a country basis, U.K. companies operating in New Hampshire represented 24% of total foreign affiliate employment in New Hampshire, with U.K. multinationals supporting 200 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

Investment

Sources of Greenfield Foreign Direct Investment (FDI)

of foreign affiliate jobs







New Hampshire Goods Exports to Europe, 2016

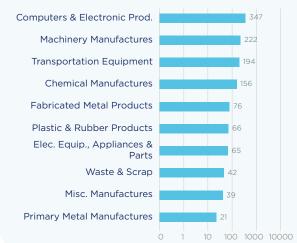
\$1.3 bn

Computers and machinery are the top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	236
France	187
Ireland	159
United Kingdom	153
Netherlands	147

Top Ten Exports to Europe, 2016 (\$ millions)



New Hampshire Goods Imports from Europe, 2016

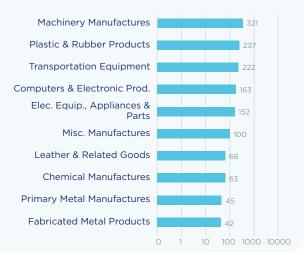
\$1.6 bn

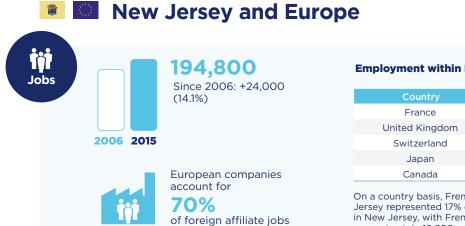
Machinery manufactures represented 20% of the state's total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	525
Ireland	136
United Kingdom	136
Switzerland	114
Sweden	107

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within New Jersey, 2015

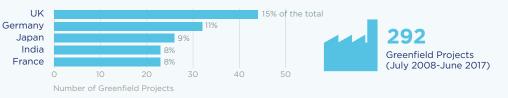
Country	Employment
France	46,200
United Kingdom	45,600
Switzerland	28,800
Japan	27,600
Canada	25,400

On a country basis, French companies operating in New Jersey represented 17% of total foreign affiliate employment in New Jersey, with French multinationals supporting approximately 16,600 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



New Jersey Goods Exports to Europe, 2016

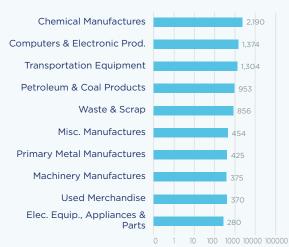
\$9.7 bn

Top exports consist of chemical manufactures and computers & electronic products.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	1,910
Netherlands	1,572
Germany	1,340
France	1,211
Belgium	818

Top Ten Exports to Europe, 2016 (\$ millions)



New Jersey Goods Imports from Europe, 2016

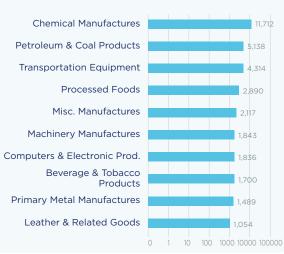
\$39.5 bn

30% of imports from Europe was related to the chemicals industry.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	5,940
Italy	5,793
Switzerland	5,529
United Kingdom	4,334
France	3,463

Top Ten Imports from Europe, 2016 (\$ millions)







Employment within New Mexico, 2015

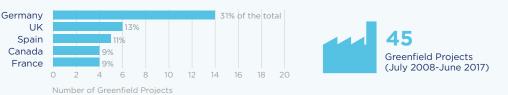
Country	Employment
Germany	5,300
United Kingdom	2,900
France	2,600
Japan	2,200
Canada	1,700

On a country basis, German companies operating in New Mexico represented 26% of total foreign affiliate employment in New Mexico, with German multinationals supporting approximately 2,600 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



New Mexico Goods Exports to Europe, 2016

\$326.6 m

Computers & Electronic Prod.

Transportation Equipment

Machinery Manufactures

Chemical Manufactures

Primary Metal Manufactures

Elec. Equip., Appliances &

Crop Production

Parts

Misc. Manufactures

Used Merchandise

Exports are relatively small and are skewed toward computers & electronic products and transportation equipment.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	68
Belgium	46
United Kingdom	37
Ireland	29
Netherlands	27

New Mexico Goods Imports from Europe, 2016

\$344.1 m

Machinery was the top product import from Europe, representing 31% of total European imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	95
United Kingdom	54
Netherlands	39
Switzerland	25
Belgium	24

Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)

Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Fabricated Metal Products

10 100 1000 10000



Employment within New York, 2015

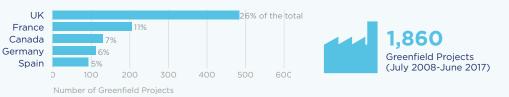
Country	Employment
United Kingdom	105,600
France	53,000
Canada	51,300
Japan	41,400
Germany	40,600

On a country basis, U.K. companies operating in New York represented 22% of total foreign affiliate employment in New York, with U.K. multinationals supporting approximately 16,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



New York Goods Exports to Europe, 2016

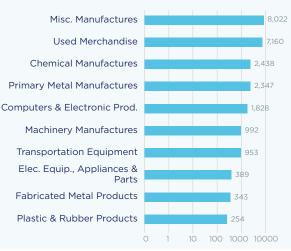
\$26.2 bn

Miscellaneous manufactures and used merchandise are the top exports to Europe

Top European Export Markets, 2016

Country	Exports (\$ millions)
Switzerland	6,456
United Kingdom	5,544
Belgium	4,344
France	2,288
Germany	2,226

Top Ten Exports to Europe, 2016 (\$ millions)



New York Goods Imports from Europe, 2016

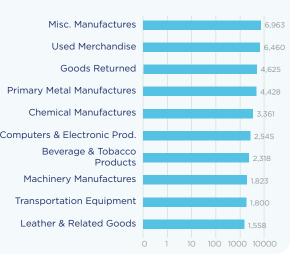
\$42.6 bn

New York's imports from Europe are relatively diverse, ranging from miscellaneous manufactured commodities to metal manufactures.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Switzerland	8,340
France	7,322
Italy	5,780
United Kingdom	4,815
Belgium	4,225

Top Ten Imports from Europe, 2016 (\$ millions)



Appendix A - European Commerce and the 50 U.S. States: A State-by-State Comparison



Employment within North Carolina, 2015

Country	Employment
United Kingdom	33,500
Germany	32,900
Japan	23,400
Switzerland	19,000
France	15,000

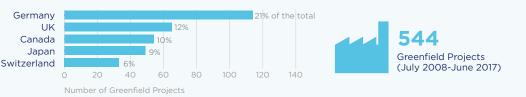
On a country basis, U.K. companies operating in North Carolina represented 13% of total foreign affiliate employment in North Carolina, with U.K. multinationals supporting 6,800 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)

of foreign affiliate jobs







North Carolina Goods Exports to Europe, 2016

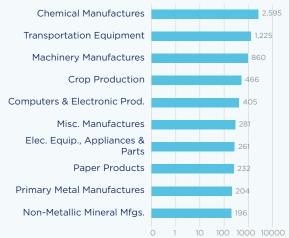
\$7.7 bn

Chemical manufactures account for about a third of total exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	1,455
France	1,184
Germany	999
Netherlands	758
Belgium	692

Top Ten Exports to Europe, 2016 (\$ millions)



North Carolina Goods Imports from Europe, 2016

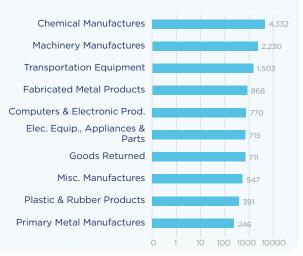
\$13.7 bn

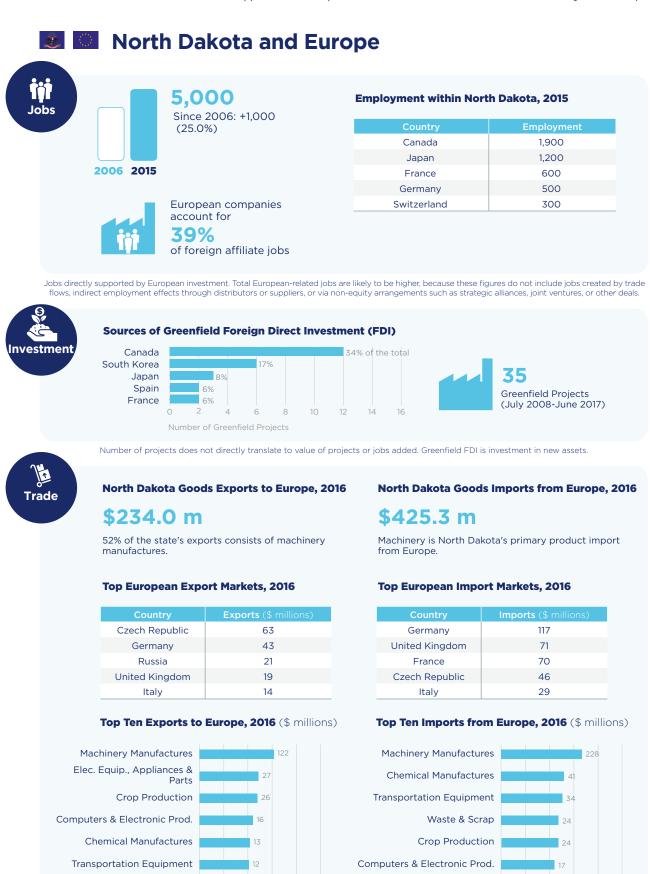
Imports from Europe mainly consist of chemicals, machinery and transportation equipment.

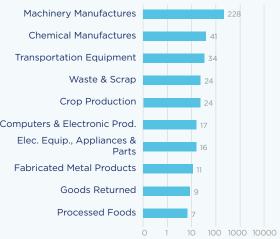
Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	3,022
United Kingdom	1,908
France	1,831
Italy	1,624
Ireland	780

Top Ten Imports from Europe, 2016 (\$ millions)







Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA

10 100 1000 10000

Plastic & Rubber Products

Fabricated Metal Products

Furniture & Related Products

Processed Foods



Employment within Ohio, 2015

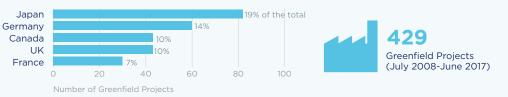
Country	Employment
Japan	62,100
United Kingdom	42,600
Germany	30,900
Canada	23,800
Switzerland	19,400

On a country basis, U.K. companies operating in Ohio represented 16% of total foreign affiliate employment in Ohio, with U.K. multinationals supporting approximately 6,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Ohio Goods Exports to Europe, 2016

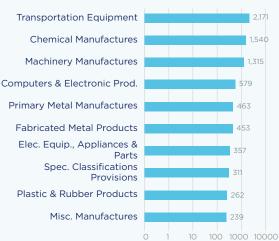
\$8.5 bn

Transportation equipment, chemicals and machinery are the state's top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	1,896
Germany	1,312
France	1,172
Netherlands	672
Belgium	635

Top Ten Exports to Europe, 2016 (\$ millions)



Ohio Goods Imports from Europe, 2016

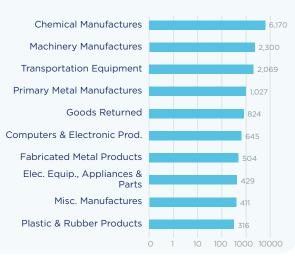
\$15.7 bn

Chemical manufactures make up 39% of Ohio's imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	4,919
Ireland	2,694
France	1,632
Italy	1,100
United Kingdom	1,052

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Oklahoma, 2015

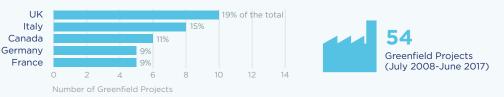
Country	Employment
France	9,500
United Kingdom	8,800
Germany	4,000
Switzerland	3,700
Canada	3,100

On a country basis, French companies operating in Oklahoma represented 19% of total foreign affiliate employment in Oklahoma, with French multinationals supporting approximately 3,500 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Oklahoma Goods Exports to Europe, 2016

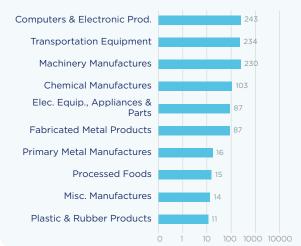
\$1.1 bn

Top exports include computers, transportation equipment and machinery.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	369
United Kingdom	162
Netherlands	157
France	68
Russia	44

Top Ten Exports to Europe, 2016 (\$ millions)



Oklahoma Goods Imports from Europe, 2016

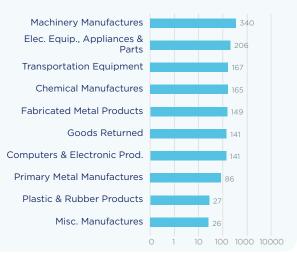
\$1.5 bn

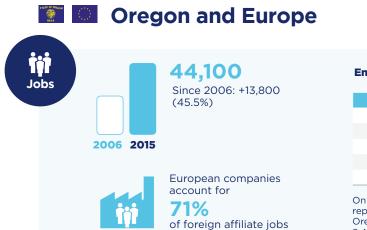
Machinery manufactures and electrical equipment are key European import categories.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	278
United Kingdom	249
Italy	164
France	156
Ireland	126

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Oregon, 2015

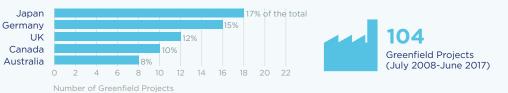
Country	Employment
United Kingdom	16,700
Germany	8,400
Japan	6,800
Canada	5,800
Switzerland	5,500

On a country basis, U.K. companies operating in Oregon represented 27% of total foreign affiliate employment in Oregon, with U.K. multinationals supporting approximately 8,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Oregon Goods Exports to Europe, 2016

\$2.4 bn

One-third of Oregon's exports to Europe consists of computers and related products.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	381
United Kingdom	345
Netherlands	296
Switzerland	249
Ireland	183

Top Ten Exports to Europe, 2016 (\$ millions)

Oregon Goods Imports from Europe, 2016

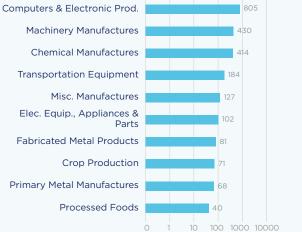
\$4.8 bn

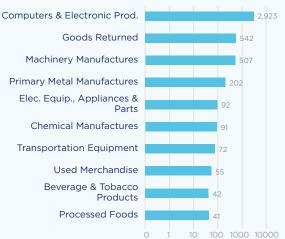
Computers & electronic products represent over 60% of Oregon's total European imports.

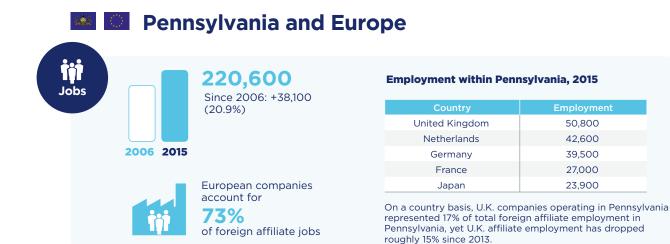
Top European Import Markets, 2016

Country	Imports (\$ millions)
Ireland	2,996
Germany	458
Netherlands	303
Russia	156
United Kingdom	153

Top Ten Imports from Europe, 2016 (\$ millions)



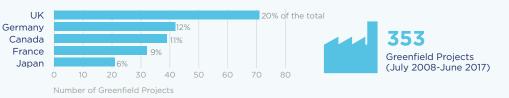




Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Pennsylvania Goods Exports to Europe, 2016

\$10.1 bn

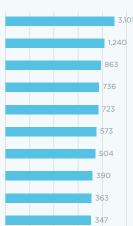
Exports are relatively diverse, ranging from chemicals to transportation equipment, primary metals, machinery and computers & electronic products

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	2,121
Netherlands	1,358
Germany	1,353
Belgium	1,258
France	701

Top Ten Exports to Europe, 2016 (\$ millions)

Chemical Manufactures Transportation Equipment Primary Metal Manufactures Machinery Manufactures Computers & Electronic Prod. Misc. Manufactures Oil & Gas Extraction Plastic & Rubber Products **Eabricated Metal Products** Mining



10 100 1000 10000

Pennsylvania Goods Imports from Europe, 2016

50,800

42,600

39.500

27.000

23,900

\$22.9 bn

Imports are heavily concentrated, with chemicals making up almost 50% of the state's total European imports.

Top European Import Markets, 2016

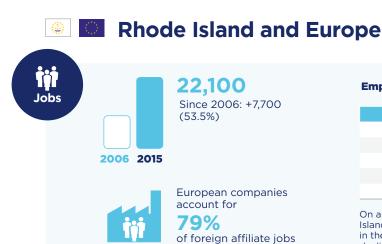
Country	Imports (\$ millions)
Germany	5,823
Switzerland	3,758
United Kingdom	2,085
Italy	1,584
Ireland	1,296

Top Ten Imports from Europe, 2016 (\$ millions)





Appendix A - European Commerce and the 50 U.S. States: A State-by-State Comparison



Employment within Rhode Island, 2015

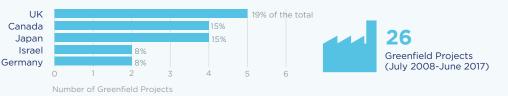
Country	Employment
United Kingdom	5,100
France	4,300
Japan	2,000
Canada	1,100
Germany	1,100

On a country basis, U.K. companies operating in Rhode Island represented 18% of total foreign affiliate employment in the state, or 5,100 jobs, yet U.K. affiliate employment declined by 50% from 2014 to 2015.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

Investment

Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Rhode Island Goods Exports to Europe, 2016

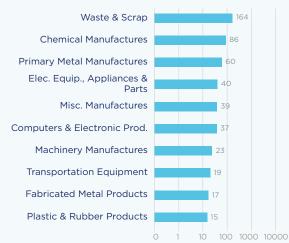
\$0.5 bn

Waste & scrap account for 30% of exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	96
Italy	86
United Kingdom	72
Turkey	64
Ireland	55

Top Ten Exports to Europe, 2016 (\$ millions)



Rhode Island Goods Imports from Europe, 2016

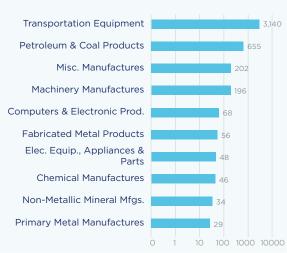
\$4.6 bn

Transportation equipment is the top imported product from Europe, representing 68% of total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	2,257
United Kingdom	540
Slovakia	485
France	333
Hungary	239

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within South Carolina, 2015

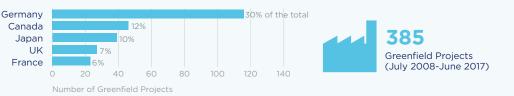
Country	Employment
Germany	27,400
France	20,900
Japan	14,600
United Kingdom	11,500
Canada	9,600

On a country basis, German companies represented 21% of total foreign affiliate employment in South Carolina, with German multinationals supporting 8,100 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



South Carolina Goods Exports to Europe, 2016

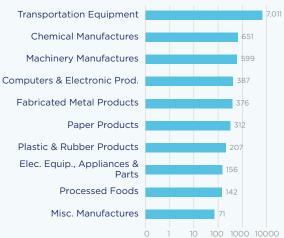
\$10.2 bn

69% of the state's exports consist of transportation equipment, reflecting the state's linkages with European auto manufacturers.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Germany	3,745
United Kingdom	2,842
Spain	677
Belgium	616
Netherlands	382

Top Ten Exports to Europe, 2016 (\$ millions)



South Carolina Goods Imports from Europe, 2016

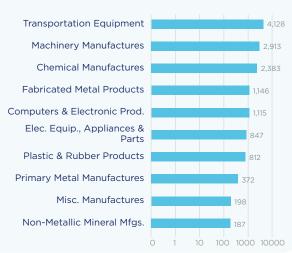
\$15.1 bn

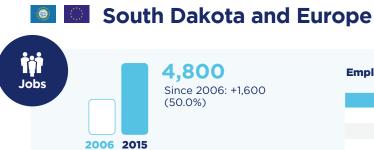
Transportation equipment was also the top imported product from Europe, with a 27% share of the state's total European imports.

Top European Import Markets, 2016

Imports (\$ millions)
6,594
1,124
1,082
836
735

Top Ten Imports from Europe, 2016 (\$ millions)







Employment within South Dakota, 2015

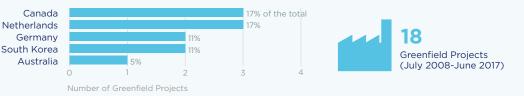
Country	Employment
Canada	2,500
United Kingdom	1,600
France	1,400
Japan	900
Germany	500

On a country basis, U.K. companies operating in South Dakota represented 13% of total foreign affiliate employment in South Dakota, with U.K. multinationals supporting 100 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

Investment

Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



South Dakota Goods Exports to Europe, 2016

\$107.3 m

Machinery Manufactures

Transportation Equipment

Chemical Manufactures

Misc. Manufactures

Crop Production

Leather & Related Goods

Printing & Related Products

Eabricated Metal Products

Plastic & Rubber Products

Computers & Electronic Prod.

Machinery manufactures are the state's top export to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	20
United Kingdom	18
Germany	16
Netherlands	8
Italy	8

Machinery manufactures and computers & electronic

products make up the bulk of imports from Europe.

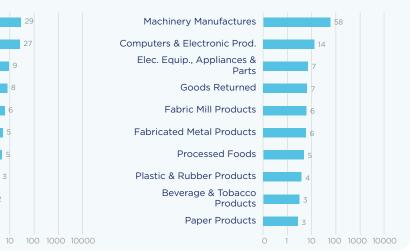
South Dakota Goods Imports from Europe, 2016

Top European Import Markets, 2016

\$122.1 m

Country	Imports (\$ millions)
Germany	33
Italy	23
United Kingdom	14
Netherlands	13
France	8

Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)



Employment within Tennessee, 2015

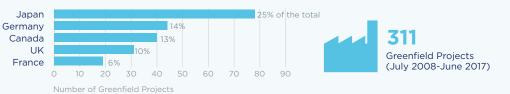
Country	Employment
Japan	48,900
United Kingdom	20,400
France	17,700
Germany	16,000
Netherlands	10,300

On a country basis, U.K. companies operating in Tennessee represented 12% of total foreign affiliate employment in Tennessee, with U.K. multinationals supporting approximately 500 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Tennessee Goods Exports to Europe, 2016

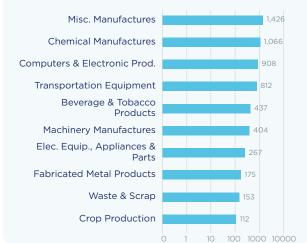
\$6.3 bn

Miscellaneous and chemical manufactures as well as computers & electronic products make up the bulk of exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	1,295
Netherlands	1,089
United Kingdom	955
Germany	949
France	410

Top Ten Exports to Europe, 2016 (\$ millions)



Tennessee Goods Imports from Europe, 2016

\$18.3 bn

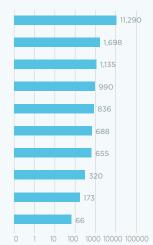
Chemicals dominate the state's imports from Europe.

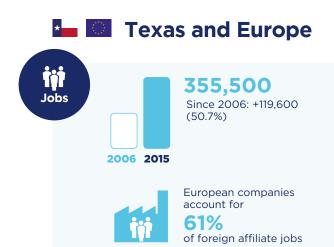
Top European Import Markets, 2016

Country	Imports (\$ millions)
Ireland	6,625
Germany	3,562
United Kingdom	2,076
Italy	1,389
France	868

Top Ten Imports from Europe, 2016 (\$ millions)

Chemical Manufactures Machinery Manufactures Computers & Electronic Prod. Goods Returned Misc. Manufactures Transportation Equipment Fabricated Metal Products Elec. Equip., Appliances & Parts Plastic & Rubber Products Non-Metallic Mineral Mfgs.





Employment within Texas, 2015

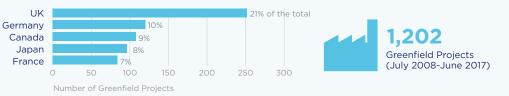
Country	Employment
United Kingdom	113,800
France	58,700
Japan	50,500
Canada	42,700
Germany	41,200

On a country basis, U.K. companies operating in Texas represented 19% of total foreign affiliate employment in Texas, with U.K. multinationals supporting approximately 43,200 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)







Texas Goods Exports to Europe, 2016

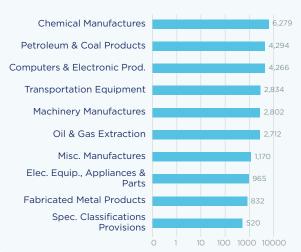
\$28.8 bn

Exports are relatively diverse, ranging from chemicals and petroleum to computers and machinery manufactures.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Netherlands	6,373
United Kingdom	3,987
Belgium	3,660
Germany	3,413
France	2,440

Top Ten Exports to Europe, 2016 (\$ millions)



Texas Goods Imports from Europe, 2016

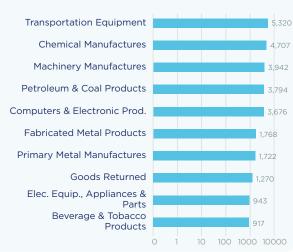
\$31.4 bn

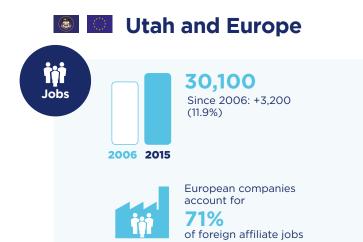
Transportation equipment and chemicals are the top product imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	6,724
United Kingdom	3,614
Italy	2,968
France	2,851
Russia	2,590

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Utah, 2015

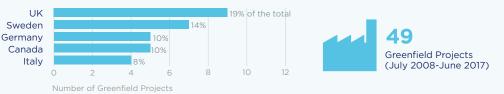
Country	Employment
United Kingdom	8,100
France	5,300
Germany	4,500
Switzerland	3,700
Japan	3,000

On a country basis, U.K. companies operating in Utah represented 19% of total foreign affiliate employment in Utah, with U.K. multinationals supporting approximately 2,300 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Utah Goods Exports to Europe, 2016

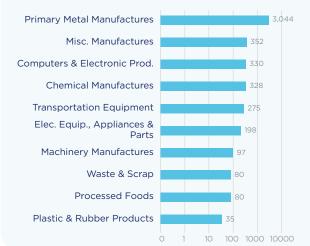
\$4.9 bn

Primary metals dominate the state's exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	3,074
Netherlands	448
Germany	343
Switzerland	209
Italy	173

Top Ten Exports to Europe, 2016 (\$ millions)



Utah Goods Imports from Europe, 2016

\$1.1 bn

Imports are relatively diversified. Machinery, miscellaneous and chemical manufacturers are the state's key product imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	195
France	182
Italy	134
United Kingdom	112
Austria	58

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Vermont, 2015

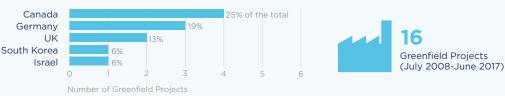
Country	Employment
Canada	2,200
United Kingdom	2,200
France	1,300
Switzerland	1,100
Netherlands	800

On a country basis, U.K. companies operating in Vermont represented 18% of total foreign affiliate employment in Vermont, with U.K. multinationals supporting approximately 800 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

Investment

Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Vermont Goods Exports to Europe, 2016

\$414.2 m

Computers & Electronic Prod.

Misc. Manufactures

Parts

Machinery Manufactures

Chemical Manufactures

Elec. Equip., Appliances &

Transportation Equipment

Plastic & Rubber Products

Fabricated Metal Products

Spec. Classifications

Processed Foods

Provisions

Computers & electronic products are the top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Netherlands	114
United Kingdom	73
Germany	71
France	41
Belgium	21

Top Ten Exports to Europe, 2016 (\$ millions)

Vermont Goods Imports from Europe, 2016

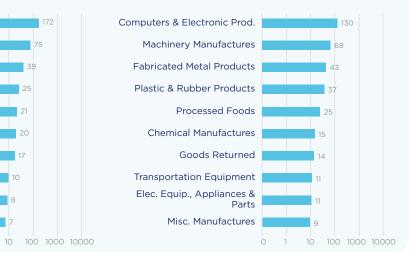
\$410.4 m

32% of total imports from Europe consists of computer & electronic products.

Top European Import Markets, 2016

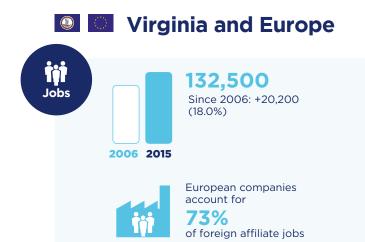
Country	Imports (\$ millions)
France	119
Germany	55
United Kingdom	43
Russia	37
Italy	26

Top Ten Imports from Europe, 2016 (\$ millions)



Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Tell Exports to Europe, 2016 (\$ minions



Employment within Virginia, 2015

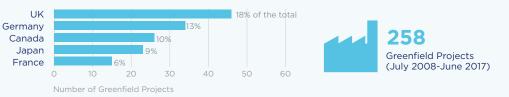
Country	Employment
United Kingdom	33,300
France	16,500
Japan	15,800
Germany	15,000
Netherlands	14,100

On a country basis, U.K. companies operating in Virginia represented 18% of total foreign affiliate employment in Virginia, with U.K. multinationals supporting approximately 5,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



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Virginia Goods Exports to Europe, 2016

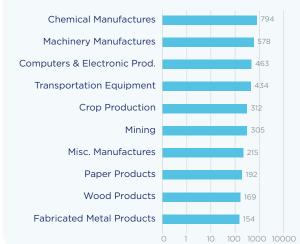
\$4.6 bn

Top exports include chemicals and machinery manufactures.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	895
Germany	819
Belgium	569
Netherlands	535
Switzerland	242

Top Ten Exports to Europe, 2016 (\$ millions)



Virginia Goods Imports from Europe, 2016

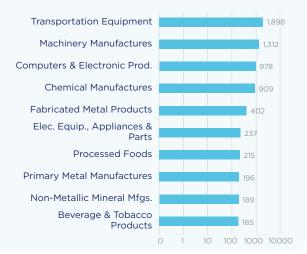
\$7.8 bn

Transportation equipment is the largest import from Europe, making up 24% of total imports.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	2,111
Italy	869
Austria	805
United Kingdom	770
France	651

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Washington, 2015

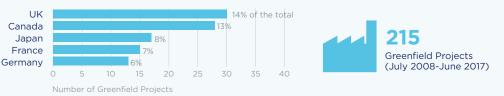
Country	Employment
United Kingdom	18,900
Canada	17,500
Japan	14,900
Germany	14,800
France	9,100

On a country basis, U.K. companies operating in Washington represented 17% of total foreign affiliate employment in Washington, with U.K. multinationals supporting approximately 5,000 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)







Washington Goods Exports to Europe, 2016

\$17.0 bn

Transportation equipment dominates Washington's exports to Europe, making up 78% of total exports.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	3,566
Netherlands	2,173
Turkey	2,168
Ireland	1,942
France	1,489

orts. Washington's exports, with transportation equipment making up only 21% of total imports from

\$5.4 bn

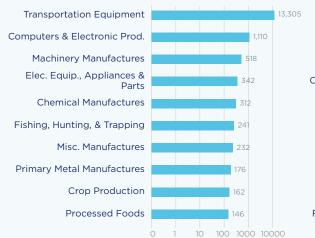
Europe. Top European Import Markets, 2016

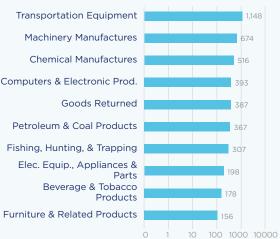
Imports from Europe are more diverse than

Country	Imports (\$ millions)
Russia	990
France	906
Germany	782
United Kingdom	762
Italy	465

Washington Goods Imports from Europe, 2016

Top Ten Imports from Europe, 2016 (\$ millions)





Sources: Bureau of Economic Analysis; Foreign Trade Division, U.S. Census Bureau; U.S. Department of Commerce; SelectUSA.

Top Ten Exports to Europe, 2016 (\$ millions)



Employment within West Virginia, 2015

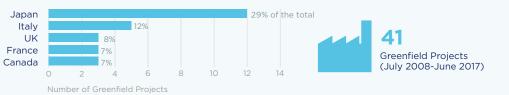
Country	Employment
Japan	4,600
United Kingdom	4,300
Canada	4,000
Germany	2,000
France	1,600

On a country basis, U.K. companies represented 15% of total foreign affiliate employment in West Virginia, or 4,300 jobs, yet U.K. affiliate employment has slipped from a peak of 7,500 jobs in 2012.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



West Virginia Goods Exports to Europe, 2016

\$1.4 bn

Minerals & ores account for 45% of exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
Belgium	289
Netherlands	253
Germany	166
Italy	128
Ukraine	120

West Virginia Goods Imports from Europe, 2016

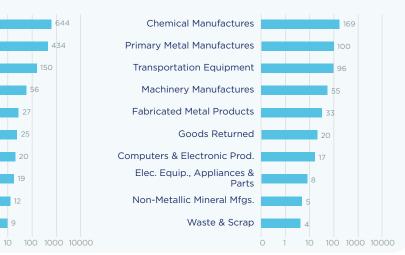
\$0.5 bn

Chemicals and primary metal manufactures are West Virginia's top imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	150
France	107
Italy	56
United Kingdom	41
Belgium	37

Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)

Minina

Parts

Chemical Manufactures

Transportation Equipment

Machinery Manufactures

Non-Metallic Mineral Mfgs.

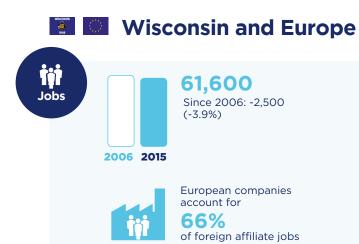
Elec. Equip., Appliances &

Plastic & Rubber Products

Computers & Electronic Prod.

Misc. Manufactures

Primary Metal Manufactures



Employment within Wisconsin, 2015

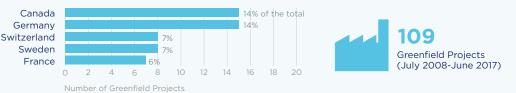
Country	Employment
Canada	14,900
United Kingdom	14,700
Germany	9,500
Switzerland	8,500
France	7,800

On a country basis, U.K. companies operating in Wisconsin represented 16% of total foreign affiliate employment in Wisconsin, with U.K. multinationals supporting approximately 3,400 more jobs in 2015 than in 2010.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Wisconsin Goods Exports to Europe, 2016

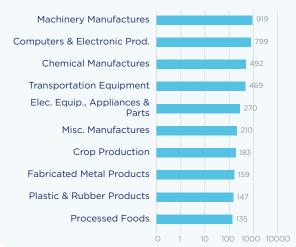
\$4.1 bn

Machinery and computers & electronic equipment are the state's top exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)		
United Kingdom	813		
Germany	625		
France	437		
Netherlands	402		
Belgium	384		

Top Ten Exports to Europe, 2016 (\$ millions)



Wisconsin Goods Imports from Europe, 2016

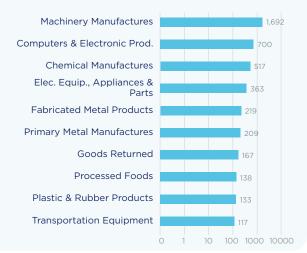
\$4.8 bn

Machinery manufactures account for 35% of total imports from Europe.

Top European Import Markets, 2016

Country	Imports (\$ millions)
Germany	1,380
Italy	660
France	438
United Kingdom	349
Netherlands	230

Top Ten Imports from Europe, 2016 (\$ millions)





Employment within Wyoming, 2015

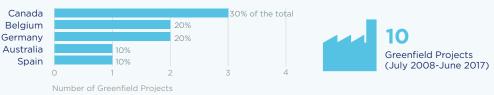
Country	Employment
United Kingdom	1,500
Canada	700
Japan	700
France	500
Germany	300

On a country basis, U.K. companies represented 19% of total foreign affiliate employment in Wyoming.

Jobs directly supported by European investment. Total European-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



Sources of Greenfield Foreign Direct Investment (FDI)



Number of projects does not directly translate to value of projects or jobs added. Greenfield FDI is investment in new assets.



Wyoming Goods Exports to Europe, 2016

\$121.0 m

Chemical Manufactures

Used Merchandise

Parts

Mining

Elec. Equip., Appliances &

Machinery Manufactures

Fabricated Metal Products

Transportation Equipment

Petroleum & Coal Products

Misc. Manufactures

Computers & Electronic Prod.

Chemicals account for 72% of exports to Europe.

Top European Export Markets, 2016

Country	Exports (\$ millions)
United Kingdom	46
Germany	22
Netherlands	22
Belgium	11
Spain	7

Machinery and computers & electronic products are Wyoming's top imports from Europe.

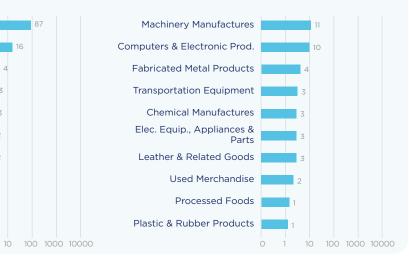
Wyoming Goods Imports from Europe, 2016

Top European Import Markets, 2016

\$47.7 m

Country	Imports (\$ millions)
Germany	12
Italy	7
United Kingdom	6
Sweden	3
Turkey	3

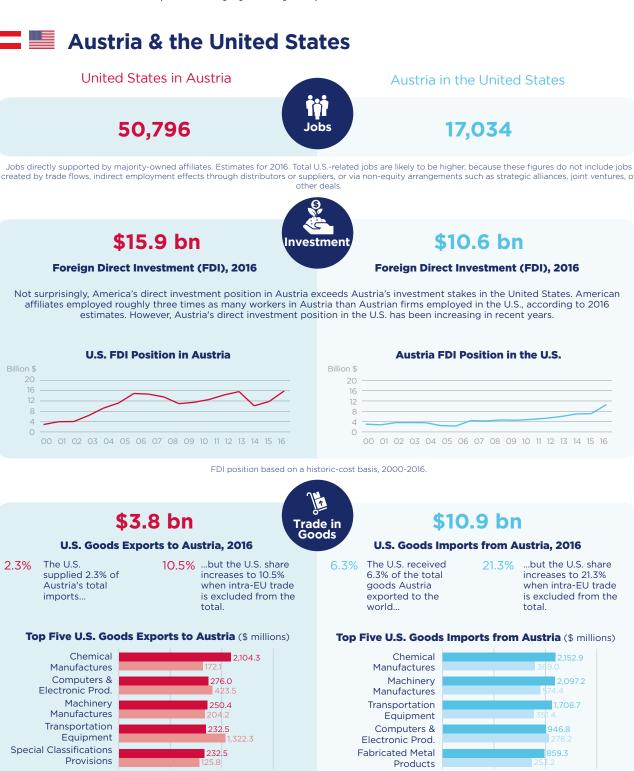
Top Ten Imports from Europe, 2016 (\$ millions)



Top Ten Exports to Europe, 2016 (\$ millions)



U.S. Commerce and Europe: A Country-by-Country Comparison



0	2	3	4	6	
568.4	282.6	207.2	164.5	103.9	
Kentucky	California	North	New York	Texas	
		Carolina			

U.S. Services Exports to Austria, 2016

Austria in the United States

17,034

created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or

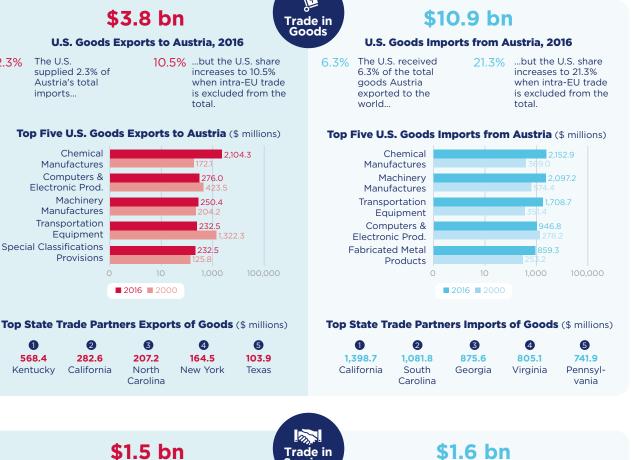
\$10.6 bn

Foreign Direct Investment (FDI), 2016

U.S. Services Imports from Austria, 2016

affiliates employed roughly three times as many workers in Austria than Austrian firms employed in the U.S., according to 2016 estimates. However, Austria's direct investment position in the U.S. has been increasing in recent years.

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16



Belgium & the United States



Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



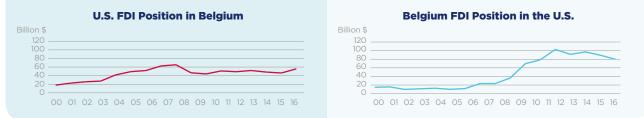
\$79.9 bn Foreign Direct Investment (FDI), 2016

153,408

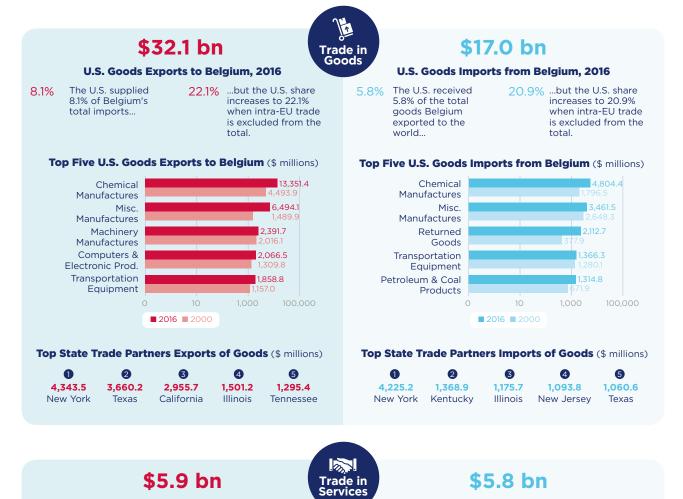
Foreign Direct Investment (FDI), 2016

\$55.8 bn

U.S. direct investments in Belgium are heavily concentrated in manufacturing, notably in the chemicals manufacturing industry, which makes up almost one third of U.S. FDI in Belgium. Similarly, the manufacturing sector accounts for 70% of Belgium's FDI in the U.S. Belgian affiliates employed an estimated 24,000 more workers in the U.S. than U.S. affiliates employed in Belgium. However, value added by U.S. affiliates in Belgium totaled \$22.6 billion in 2016, 40% more than that of Belgium's affiliates in the U.S.

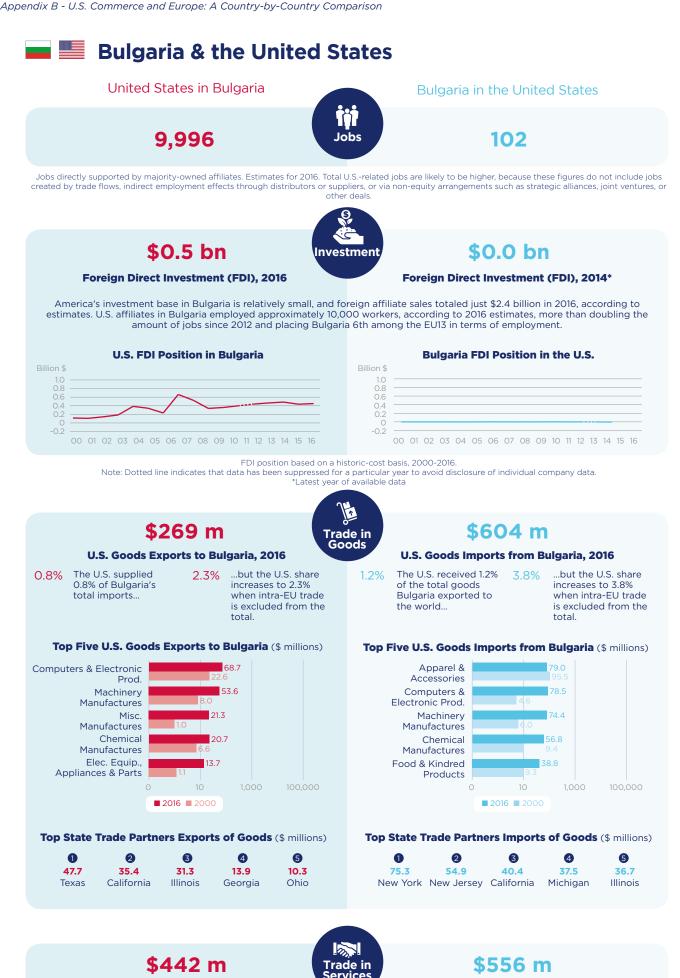


FDI position based on a historic-cost basis, 2000-2016.



U.S. Services Exports to Belgium, 2016

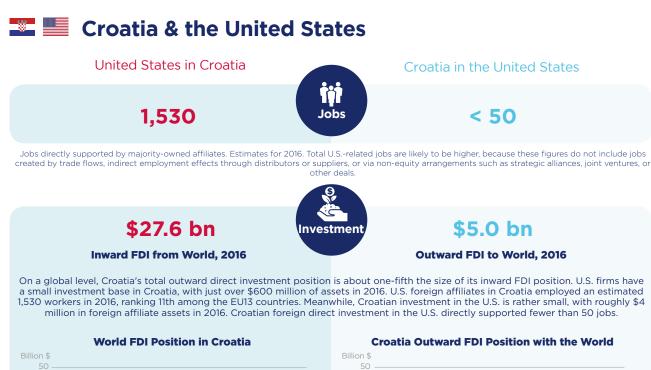
U.S. Services Imports from Belgium, 2016



U.S. Services Exports to Bulgaria, 2016

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund

U.S. Services Imports from Bulgaria, 2016

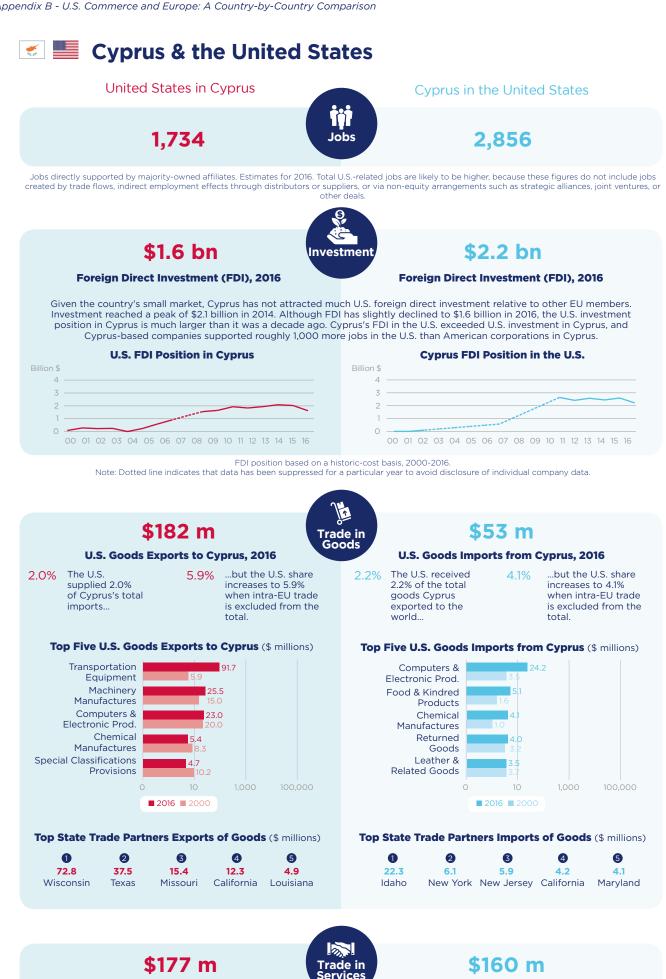


00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

40

FDI position based on a historic-cost basis, 2000-2016. Note: Due to lack of available data for U.S.-Croatia FDI trends, global outward and inward FDI stock were used.





U.S. Services Exports to Cyprus, 2016

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund Latest year of available data

U.S. Services Imports from Cyprus, 2015*

Czech Republic & the United States

United States in Czech Republic

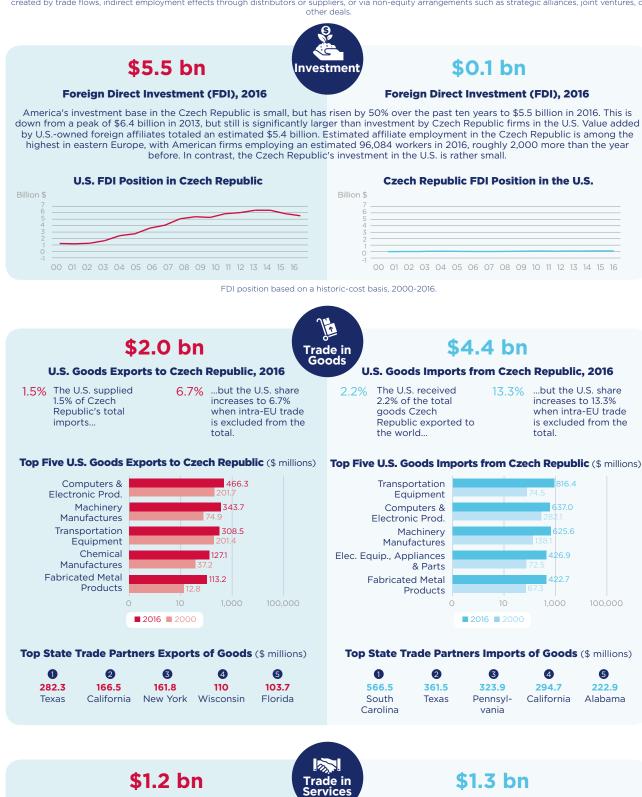
96,084



Czech Republic in the United States



Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



U.S. Services Exports to Czech Republic, 2016

U.S. Services Imports from Czech Republic, 2016



United States in Denmark

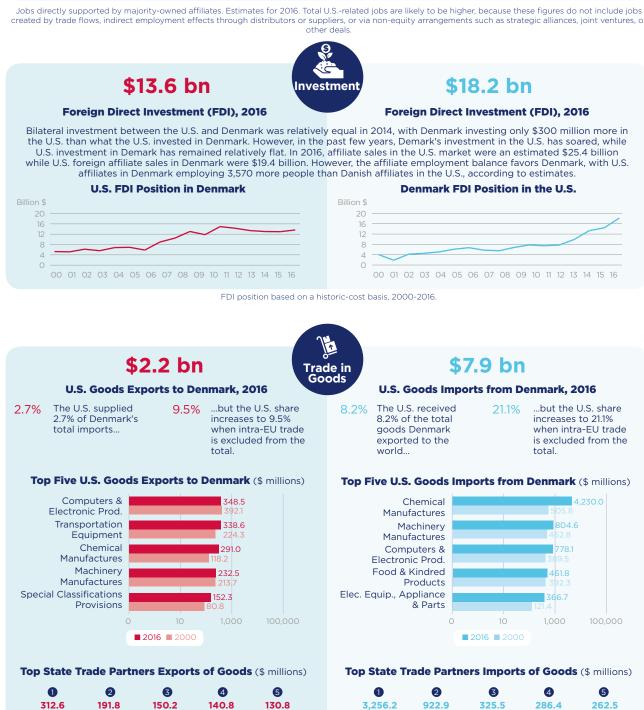
41,616

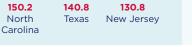


Denmark in the United States

38,046

created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or







\$5.0 bn U.S. Services Exports to Denmark, 2016

California

Florida



\$2.7 bn

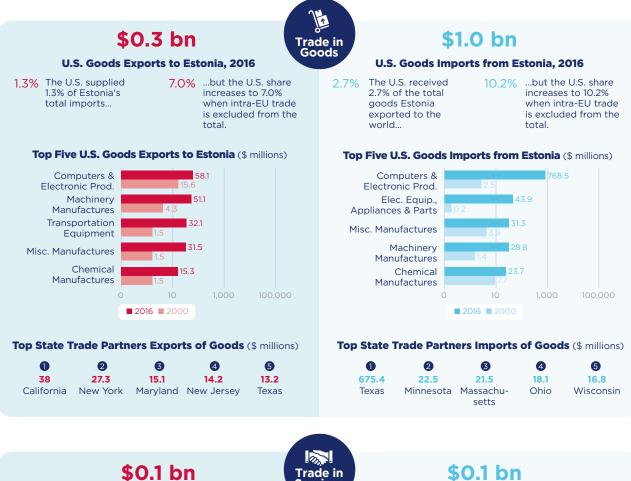
U.S. Services Imports from Denmark, 2016

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund Latest year of available data

Estonia & the United States



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U.S. Services Exports to Estonia, 2016 U.S. Services Imports from Estonia, 2016

🛨 🎩 Finland & the United States

United States in Finland

26,010



Finland in the United States

24,174

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



\$5.9 bn

Foreign Direct Investment (FDI), 2016

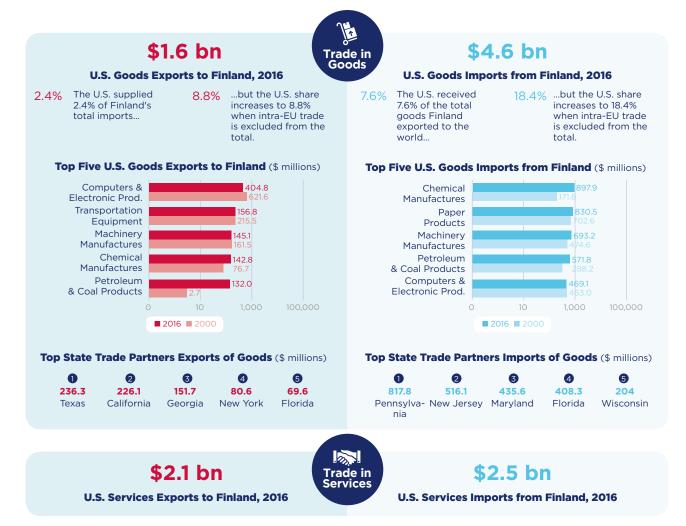
\$3.4 bn

Foreign Direct Investment (FDI), 2016

The direct investment balance favors the United States, with Finnish investment in the U.S. totaling \$5.9 billion in 2016 versus just \$3.4 billion of U.S. investment in Finland. However, the affiliate employment balance favors Finland by roughly 2,000 jobs. Finnish direct investment in the U.S. is heavily concentrated in the wholesale trade industry, representing 42% of total FDI, and the manufacturing sector, 32% of the total.



FDI position based on a historic-cost basis, 2000-2016.



France & the United States

United States in France

487,968



France in the United States

691,050

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

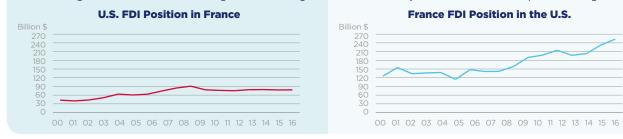


\$252.9 bn Foreign Direct Investment (FDI), 2016

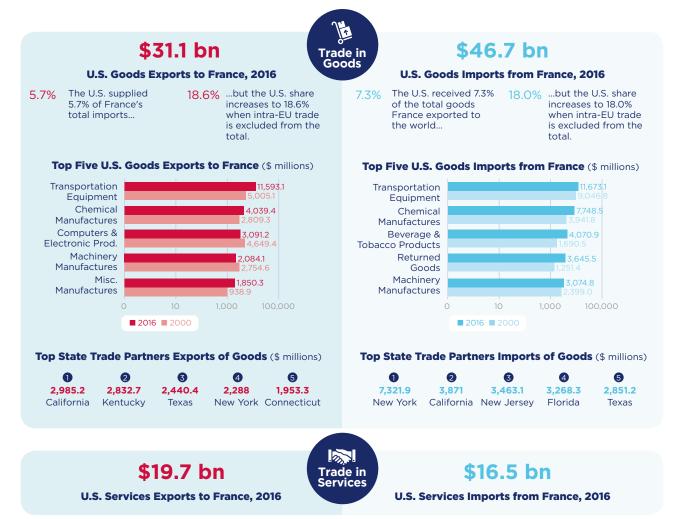
Foreign Direct Investment (FDI), 2016

\$78.1 bn

The direct investment balance favors the U.S., with U.S. investment in France (\$78.1 billion) just 31% of total French investment in the U.S. in 2016 (\$252.9 billion). The U.S. is a significant market for French firms, with U.S. affiliates of French firms recording an estimated \$284 billion in sales during 2016. The manufacturing sector makes up almost half, or \$118 billion, of French FDI in the U.S. In terms of jobs, U.S. and French affiliates combined employed over 1 million workers, with the employment balance favoring the U.S. by about 200,000 jobs, according to 2016 estimates. The Paris region is the 2nd largest source of onshored jobs to America of all European metro regions.



FDI position based on a historic-cost basis, 2000-2016.



Germany & the United States

United States in Germany

717,264



Germany in the United States

687,378

\$291.7 bn

Foreign Direct Investment (FDI), 2016

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

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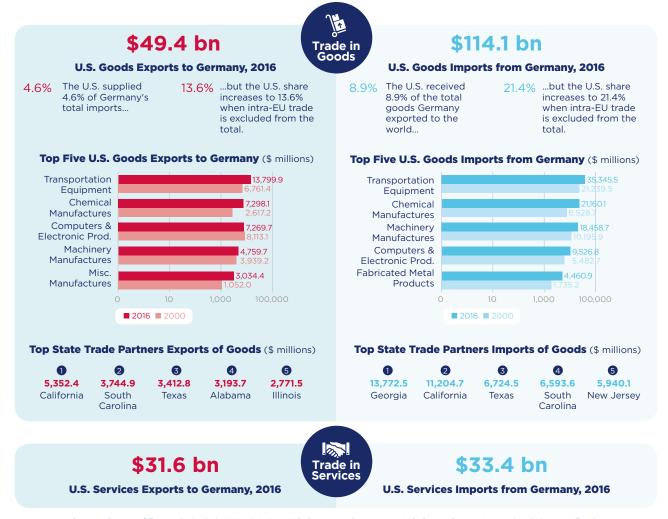
\$107.7 bn

Foreign Direct Investment (FDI), 2016

The investment balance favors the U.S., with U.S. investment in Germany, totaling \$107.7 billion in 2016, less than half the size of Germany's \$291.7 billion investment in the U.S. Germany's asset base in the U.S. was nearly double America's total asset base in Germany in 2016. The value added by U.S. affiliates operating in Germany (\$90.2 killion) was only slightly less than that of German affiliates in the United States, according to estimates. The employment picture is relatively balanced, with affiliates of both countries employing a combined total of over 1.4 million workers, according to 2016 estimates.



FDI position based on a historic-cost basis, 2000-2016.



Greece & the United States

\$0.6 bn

Foreign Direct Investment (FDI), 2016



Greece in the United States

2,550

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



\$0.7 bn

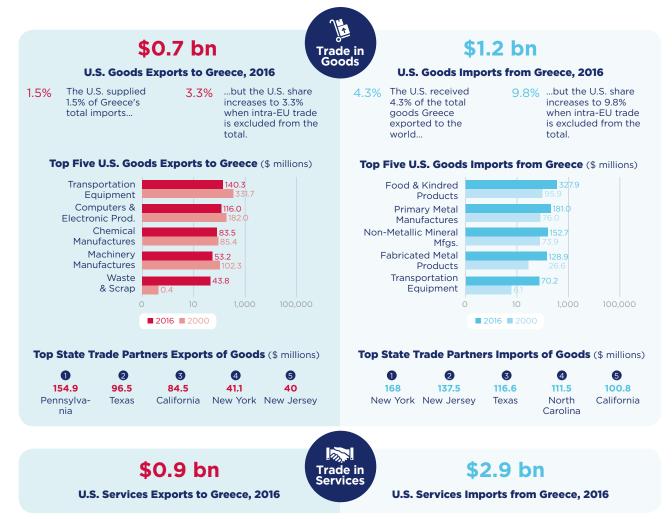
Foreign Direct Investment (FDI), 2016

Greece's economic woes were reflected in its transatlantic commercial links, but investment ties are on the rebound. In 2016, America's foreign direct investment position in Greece was \$628 million, a slight increase from the prior year. Greece's FDI position in the U.S. also improved slightly in 2016 to \$684 million. Estimated U.S. affiliate sales in Greece of just \$5.6 billion in 2016 ranked among the lowest in the EU.



FDI position based on a historic-cost basis, 2000-2016.

Note: Dotted line indicates that data has been suppressed for a particular year to avoid disclosure of individual company data.





United States in Hungary

68,646



Hungary in the United States

102

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or

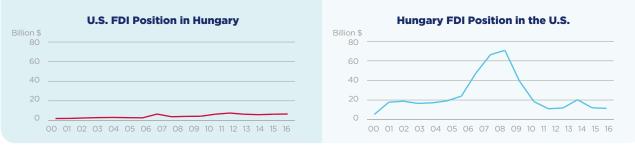


\$11.5 bn Foreign Direct Investment (FDI), 2016

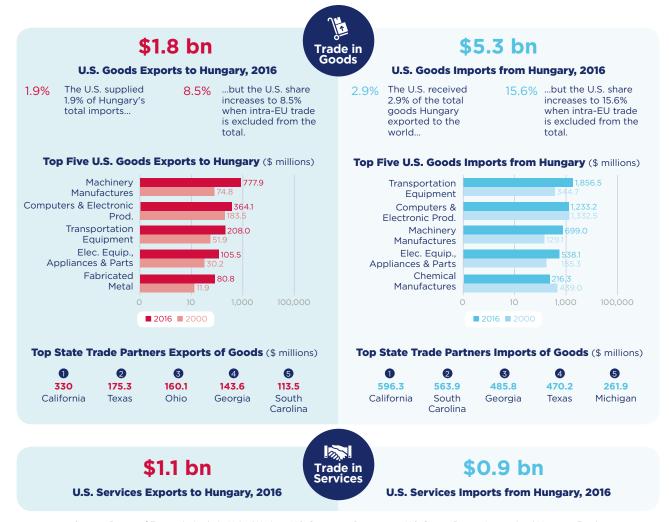
Foreign Direct Investment (FDI), 2016

\$6.6 bn

America's investment base in Hungary amounted to \$6.6 billion on a historic-cost basis in 2016, down from its peak position of \$7.5 billion in 2012. Affiliate employment in Hungary ranked third among EU13 countries. Value added by U.S.-owned affiliates totaled an record \$15.2 billion, according to estimates. Meanwhile, Hungarian investment in the U.S. was \$11.5 billion in 2016, far below its peak of \$70.7 billion in 2009.



FDI position based on a historic-cost basis, 2000-2016.



Ireland & the United States

United States in Ireland



Ireland in the United States

273,972

127,296

\$387.1 bn

Foreign Direct Investment (FDI), 2016



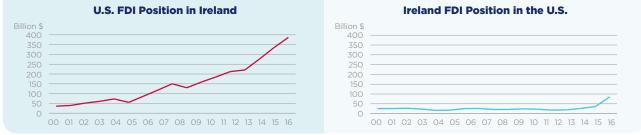
Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



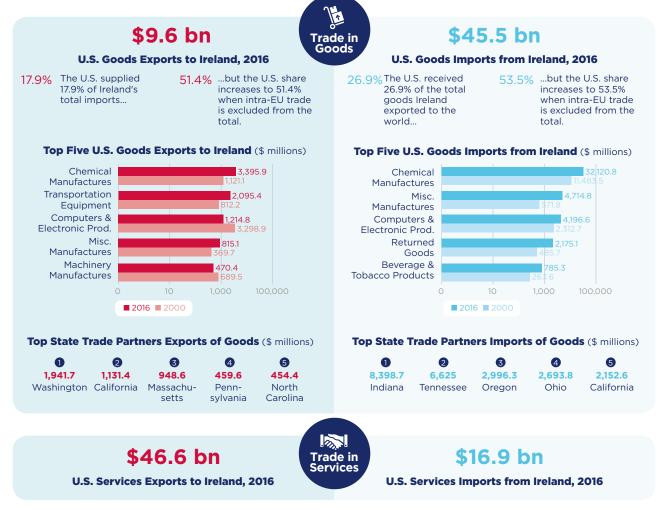
\$85.5 bn

Foreign Direct Investment (FDI), 2016

The investment balance favors Ireland, with U.S. investment in Ireland totaling some \$387.1 billion in 2016 versus \$85.5 billion of Ireland's investment in the U.S. Value added by U.S. affiliates in Ireland totaled an estimated \$90.2 billion in 2016, more than double the gross product of affiliates of Irish firms operating in the U.S. However, 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.



FDI position based on a historic-cost basis, 2000-2016.



Italy & the United States

United States in Italy

217,158



Italy in the United States

76,806

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or

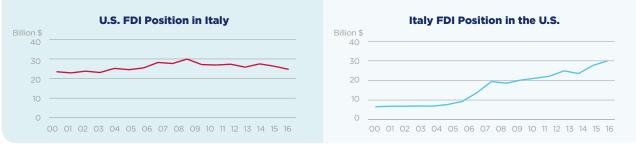


\$30.0 bn Foreign Direct Investment (FDI), 2016

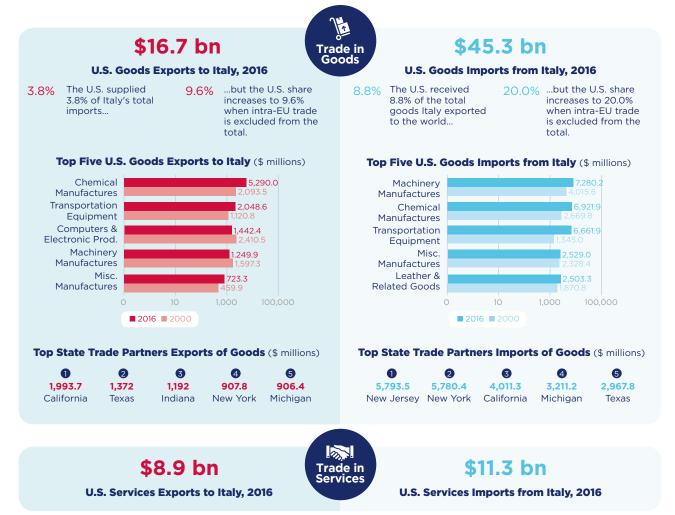
Foreign Direct Investment (FDI), 2016

\$24.7 bn

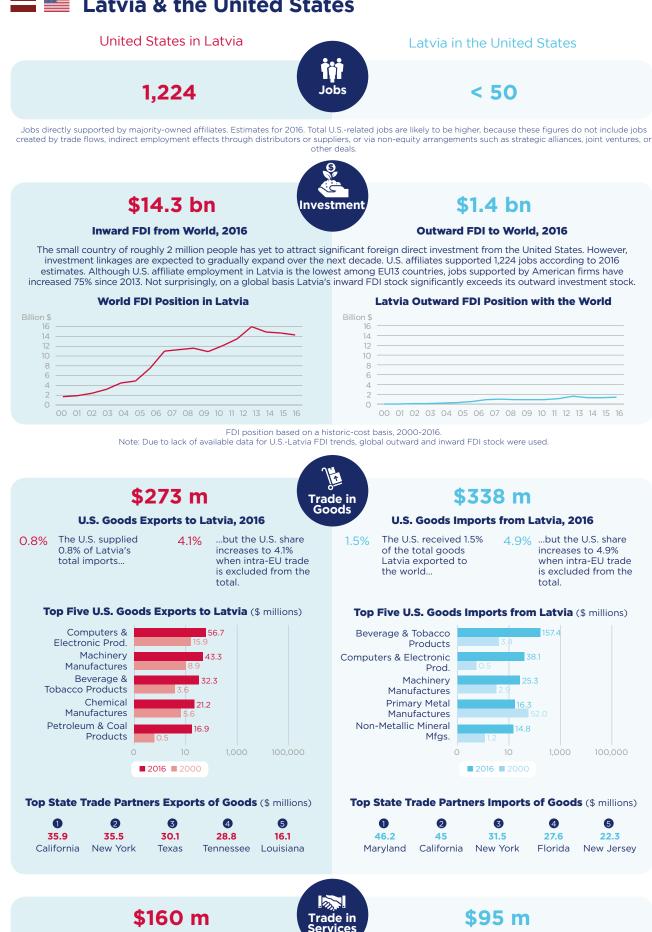
While America's FDI position in Italy has stalled since the start of the century, Italian investment in the U.S. has been climbing steadily, up 350% since 2000. However, Italy benefited more with regards to affiliate sales, assets, value added and employment. For example, value added by U.S. affiliates in Italy was three times the amount that affiliates of Italian companies contributed in the U.S. Also, affiliates of U.S.-owned companies supported roughly 140,000 more jobs in Italy than affiliates of Italian multinationals provided in the U.S. according to 2016 estimates.



FDI position based on a historic-cost basis, 2000-2016.



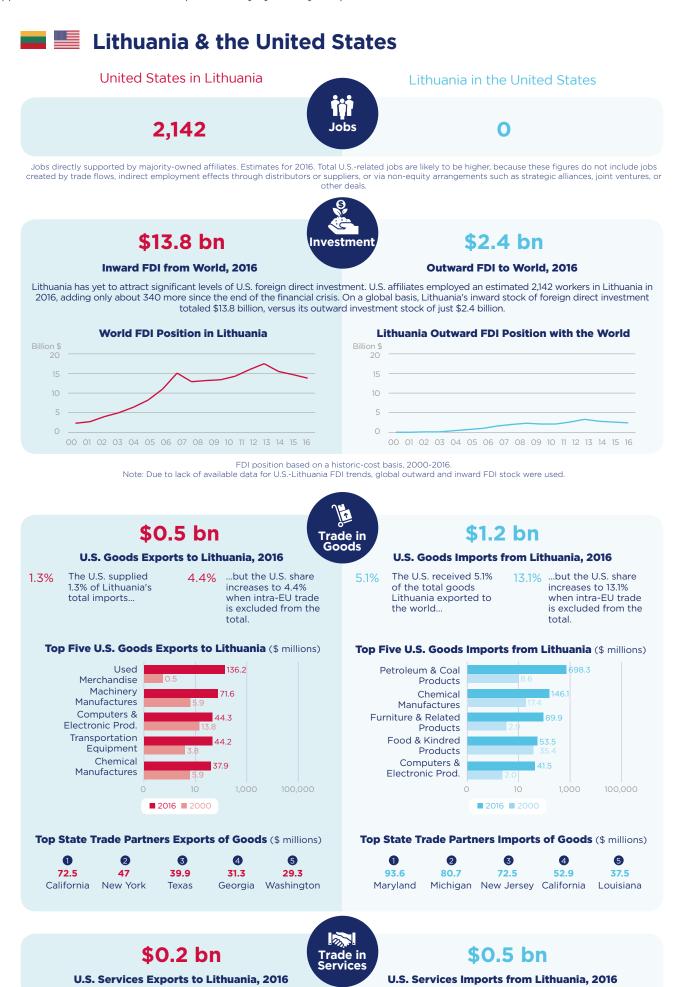
Latvia & the United States



U.S. Services Exports to Latvia, 2016

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund.

U.S. Services Imports from Latvia, 2016



Luxembourg & the United States

United States in Luxembourg

23,562



Luxembourg in the United States

7,140

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



\$417.4 bn Foreign Direct Investment (FDI), 2016

Foreign Direct Investment (FDI), 2016

\$607.8 bn

Investment between the U.S. and Luxembourg is skewed in favor of Luxembourg. Estimated U.S. foreign affiliate sales in Luxembourg were about 17 times greater than sales of Luxembourg affiliates in the U.S. Although direct investment in the U.S. by Luxembourg-based companies has been increasing in recent years, total affiliate employment has been falling from a peak of 38,300 in 2010 to an estimated 7,140 in 2016. This is in contrast to the 43% rise in U.S. affiliate employment in Luxembourg since 2010, and explains the large shift in the employment balance from the start of the decade.



FDI position based on a historic-cost basis, 2000-2016.





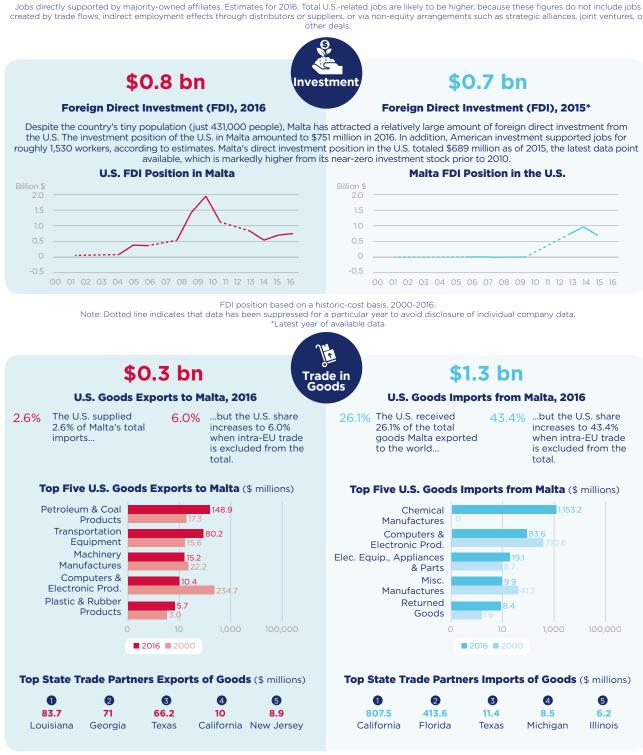
Malta in the United States

1,530



612

created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



U.S. Services Exports to Malta, 2016

\$0.2 bn

\$0.6 bn **U.S. Services Imports from Malta, 2016**

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund

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Netherlands & the United States

United States in Netherlands



Netherlands in the United States

251,226

\$847.4 bn



469,608

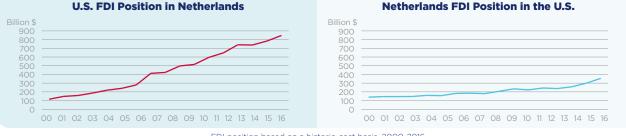
Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



\$355.2 bn

Foreign Direct Investment (FDI), 2016

Investment between the U.S. and the Netherlands is skewed toward the latter, with America's investment stake in the Netherlands more than double the amount of Dutch investment in the U.S. Still, the U.S. is a prime foreign destination for Dutch firms, which recorded an estimated \$305.1 billion in affiliate sales in the U.S. during 2016. The employment balance clearly favors the U.S. with the gap as wide as 218,000 jobs, according to estimates. Amsterdam-North Holland is the 3rd largest source of onshored jobs to America of all European metro regions.



FDI position based on a historic-cost basis, 2000-2016.



Norway & the United States

United States in Norway

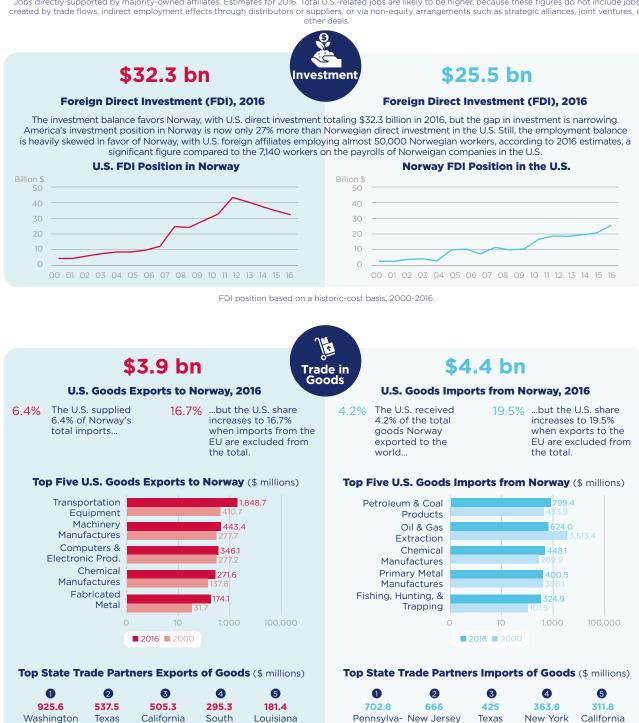
49,266



Norway in the United States

7,140

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund

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nia

\$2.7 bn

U.S. Services Imports from Norway, 2016

Carolina

\$3.1 bn

U.S. Services Exports to Norway, 2016





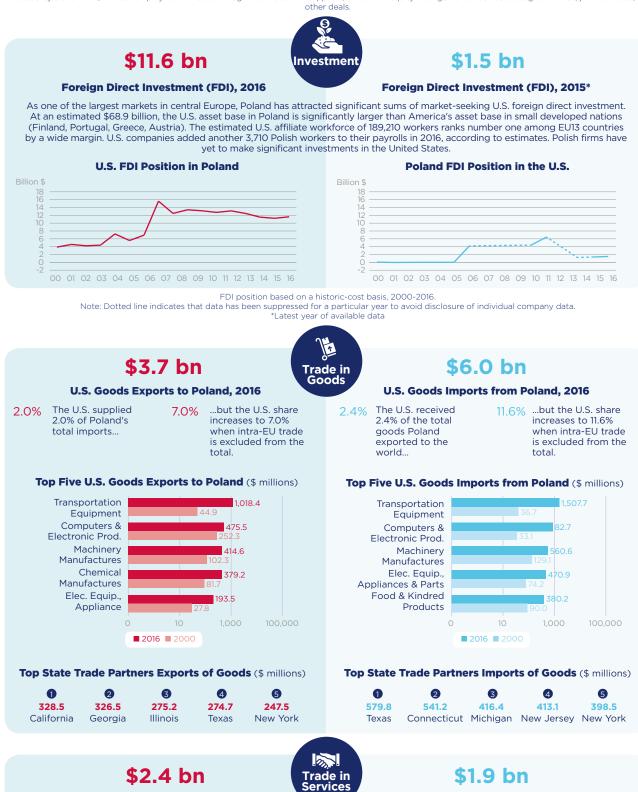
189,210



Poland in the United States

714

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



U.S. Services Exports to Poland, 2016

Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund.

U.S. Services Imports from Poland, 2016

Portugal & the United States

United States in Portugal

30,294



Portugal in the United States

714

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or



\$0.9 bn Foreign Direct Investment (FDI), 2016

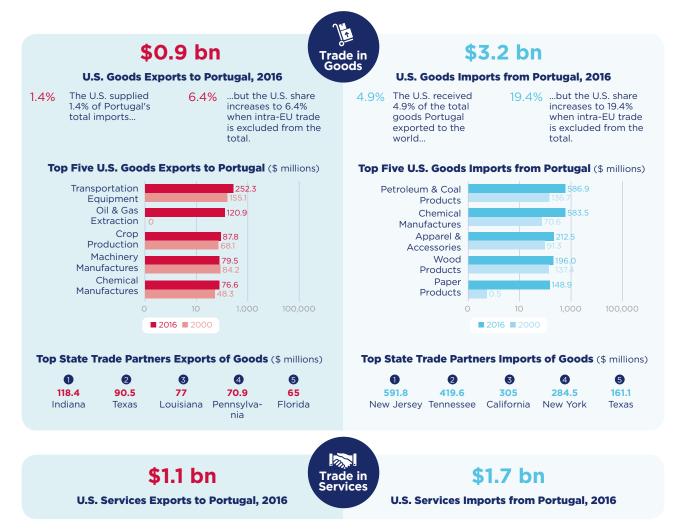
Foreign Direct Investment (FDI), 2016

\$2.3 bn

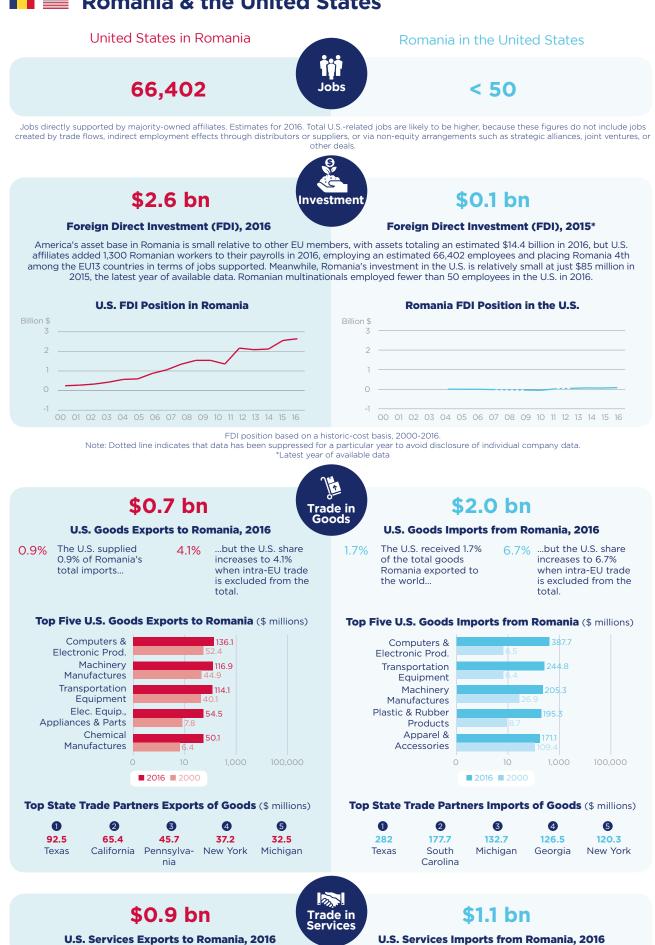
The investment balance is favored towards Portugal. U.S. direct investment in Portugal totaled \$2.3 billion in 2016, which is largely concentrated in manufacturing, wholesale trade, and financial firms. U.S. affiliates employed an estimated 30,294 Portuguese workers in 2016 compared to Portugal's affiliate employment of just 714 Americans. Portugal's direct investment in the U.S. has increased seven-fold since 2009, albeit from a small base, and is at a record high of \$937 million.

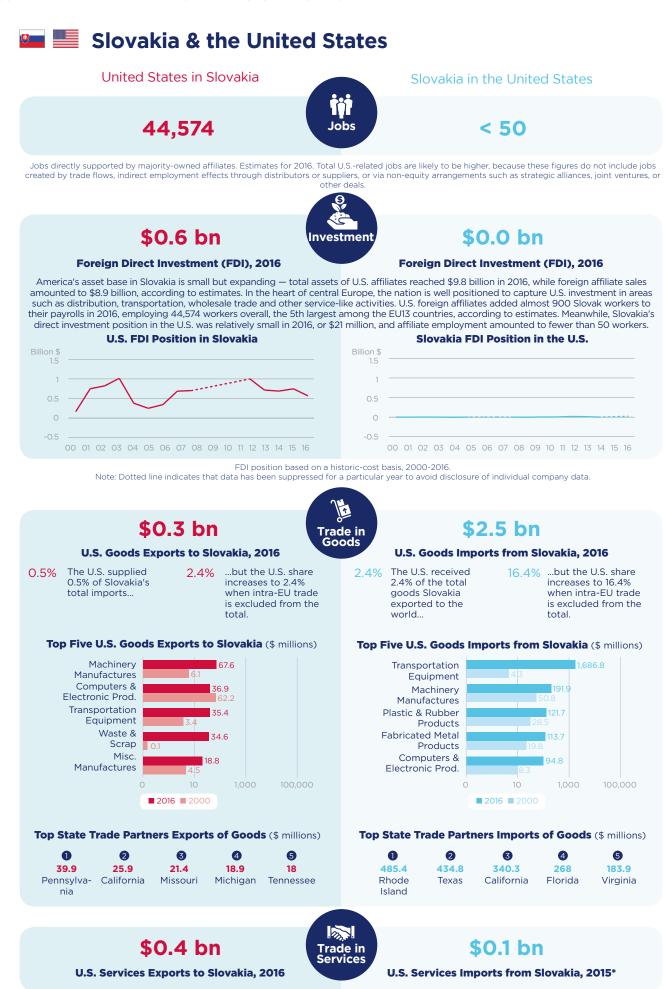


FDI position based on a historic-cost basis, 2000-2016. Note: Dotted line indicates that data has been suppressed for a particular year to avoid disclosure of individual company data



Romania & the United States





Sources: Bureau of Economic Analysis; United Nations; U.S. Commerce Department; U.S. Census Bureau; International Monetary Fund. *Latest year of available data.

Global Outward FDI from Slovenia, 2016

Slovenia & the United States

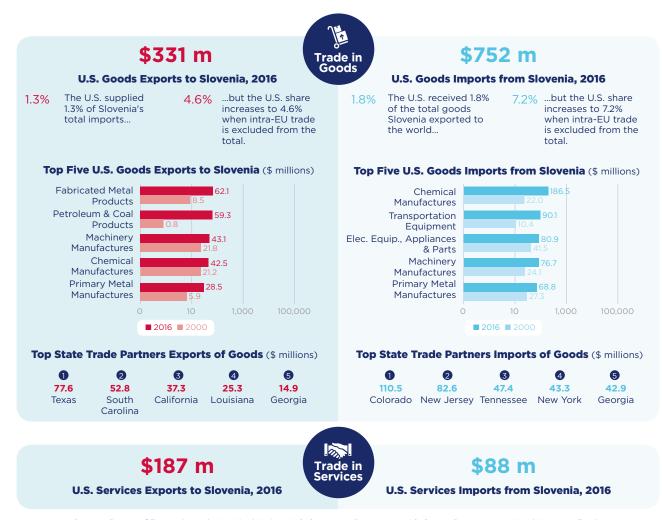


Global Inward FDI to Slovenia, 2016

On a global basis, worldwide foreign direct investment in Slovenia totaled \$12.7 billion in 2016, a record high. Meanwhile, Slovenia's outward FDI position was less than half that figure, or \$5.7 billion, and declining. U.S. direct investment in Slovenia supported over 5,000 jobs, while Slovenian investment had a relatively small impact to the employment situation in the U.S. Estimated U.S. foreign affiliate sales in Slovenia were \$945 million, compared with just \$3 million of foreign affiliate sales that Slovenian firms made in the U.S.



FDI position based on a historic-cost basis, 2000-2016. Note: Due to lack of available data for U.S.-Slovenia FDI trends, global outward and inward FDI stock were used.





Spain in the United States

181,560



83,334

\$68.2 bn

Foreign Direct Investment (FDI), 2016

Spain FDI Position in the U.S.

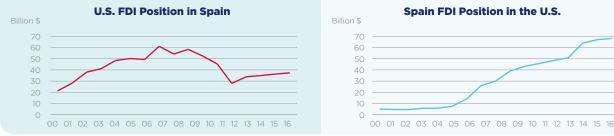
Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals

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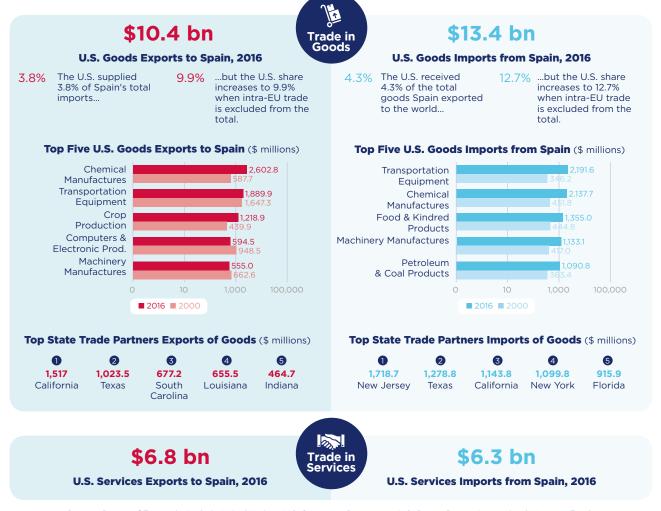
\$37.4 bn

Foreign Direct Investment (FDI), 2016

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. Since then, U.S. direct investment in Spain has been recovering, amounting to \$37.4 billion in 2016. Originally not a strategic priority to Spanish firms, the U.S. has seen foreign direct investment stock grow almost five-fold over the last ten years. Spanish investment in the U.S. has increased every year since 2002. U.S. affiliates based in Spain added roughly 3,600 workers to their payrolls in 2016, and employ about 2.2 times as many workers as Spanish affiliates in the U.S., according to estimates.



FDI position based on a historic-cost basis, 2000-2016.



🔚 📕 Sweden & the United States

United States in Sweden

73,032



Sweden in the United States

214,812

\$46.9 bn

Foreign Direct Investment (FDI), 2016

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.

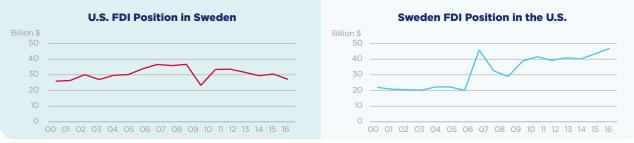
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\$27.1 bn

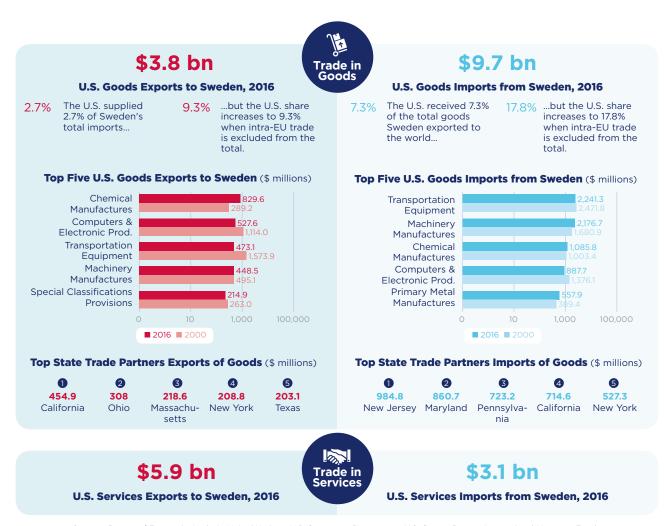
27.1 MI

Foreign Direct Investment (FDI), 2016

The investment balance favors the U.S., with Swedish direct investment in the U.S. totaling \$46.9 billion, while U.S. firms invested \$27.1 billion in Sweden in 2016. The value added of Swedish affiliates is the U.S. also exceeded that of U.S. foreign affiliates. The employment balance is heavily in favor of the United States, according to 2016 estimates, with the Stockholm area ranking as the ninth most important source of onshored jobs to America of all European metro regions.



FDI position based on a historic-cost basis, 2000-2016.



🚹 📕 Switzerland & the United States

United States in Switzerland

102,408



Switzerland in the United States

477,564

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



\$310.8 bn Foreign Direct Investment (FDI), 2016

Foreign Direct Investment (FDI), 2016

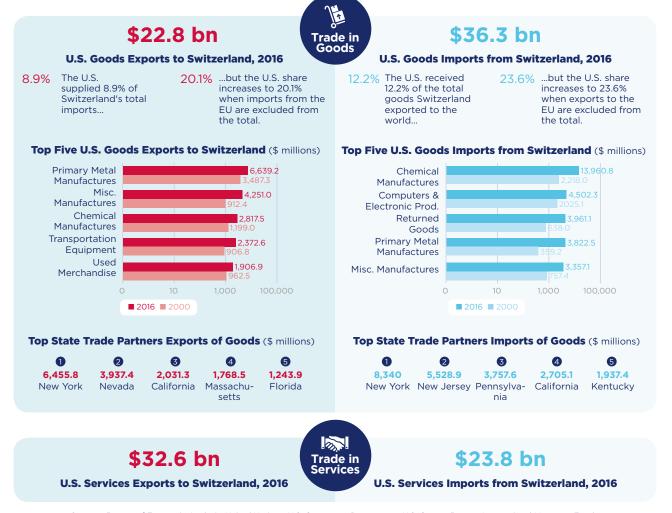
\$172.6 bn

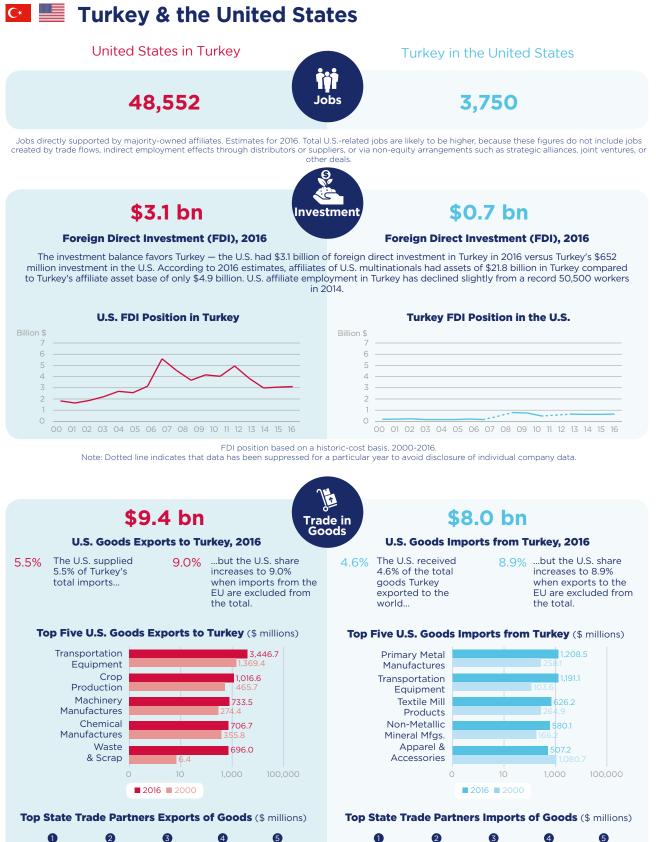
The investment balance favors the U.S.—direct investment in Switzerland totaled \$172.6 billion in 2016 versus \$310.8 billion of Swiss investment in the U.S. Switzerland has one of the largest asset bases in the U.S. of any nation at \$1.2 trillion (mainly in services like insurance and financial services), according to 2016 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 2016.



Switzerland FDI Position in the U.S. Billion \$ 320
240
200
160
200
160
200
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

FDI position based on a historic-cost basis, 2000-2016.





793.2774.7754.1640.1475.3New JerseyNew YorkTexasCaliforniaMichigan

\$3.1 bn U.S. Services Exports to Turkey, 2016

563.6

New York

525.4

Georgia

905.3

California

1,005.3

Texas

2,168

Washington

\$1.9 bn

U.S. Services Imports from Turkey, 2016



United States in United Kingdom

1,444,014



United Kingdom in the United States

1,162,800

\$555.7 bn

Foreign Direct Investment (FDI), 2016

Jobs directly supported by majority-owned affiliates. Estimates for 2016. Total U.S.-related jobs are likely to be higher, because these figures do not include jobs created by trade flows, indirect employment effects through distributors or suppliers, or via non-equity arrangements such as strategic alliances, joint ventures, or other deals.



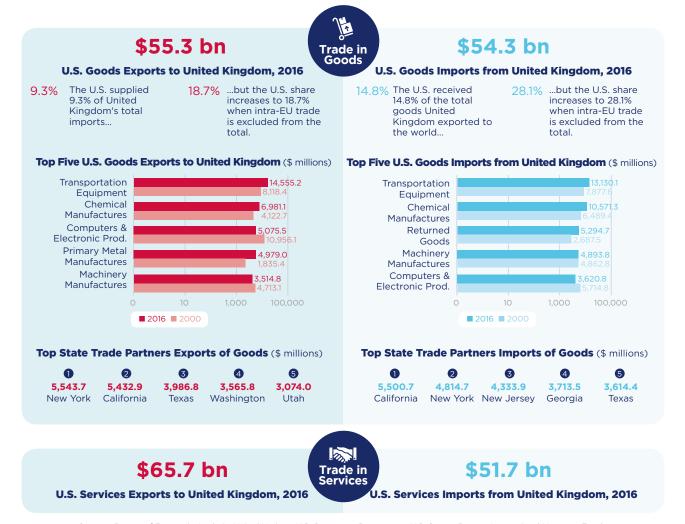
Foreign Direct Investment (FDI), 2016

In terms of the U.S.-U.K. investment balance, the U.S. had a larger net cross-border impact in 2016. U.S. foreign direct investment in the United Kingdom totaled a record \$682.4 billion in 2016, and the U.K.'s foreign direct investment in the U.S. increased to \$555.7 billion. Estimated sales of American and British affiliates totaled more than \$1.1 trillion in 2016, with over 20,000 workers added to the payrolls in each country. U.S. affiliates employed over 1.4 million workers in the U.K. while U.K. affiliates employed roughly 1.2 million Americans, according to 2016 estimates. London is the top source of onshored jobs to America of all European metro regions, and Oxford-Gatwick-South East ranks 8th.

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FDI position based on a historic-cost basis, 2000-2016



Notes on Terms, Data and Sources

Employment, Investment, and Trade Linkages for the 50 U.S. States and Europe

Jobs data are from the U.S. Commerce Department's Bureau of Economic Analysis (BEA). BEA employment by state is only available for Canada, France, Germany, Japan, the Netherlands, Switzerland, and the United Kingdom; for this reason, other countries may not listed in this jobs section. Data source for greenfield investment is from SelectUSA, a program led by the U.S. Department of Commerce, using data from fDi Markets. Percentages of total greenfield projects may differ due to rounding. The data show number of Greenfield FDI projects announced over the span of nine years; this does not directly translate to the value of projects or jobs added. Trade data comes from the U.S. Census Bureau's USA Trade Online database as well as the International Trade Administration at the U.S. Commerce Department. Europe includes Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faeroe Islands, Finland, France, Georgia, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Kosovo, Kyrgyzstan, 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, Turkmenistan, Ukraine, United Kingdom, Uzbekistan, Vatican City. The top ten exports and imports bar charts employ a logarithmic scale to facilitate cross-state comparisons.

Investment and Trade for the EU 28, Norway, Switzerland, Turkey and the U.S.

Investment and jobs data are from the Bureau of Economic Analysis, with employment figures representing author estimates for 2016. For certain countries where there was no discernable FDI position trend between the European country and the U.S., data on global outward and inward stock was used from the United Nations Conference on Trade and Development (UNCTAD) database. Data on exports and imports of goods and services are from the U.S. Commerce Department. The bar charts employ logarithmic scales to facilitate cross-country comparisons. Data on trade exports and imports by state were extracted from the U.S. Census Bureau's USA Trade Online database. The data on the United States' share of imports and exports were calculated using data from the International Monetary Fund's Direction of Trade Statistics database.

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: 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 *Atlantic Rising: Changing Commercial Dynamics in the Atlantic Basin; Germany and Globalization; France and Globalization; Globalization and Europe: Prospering in a New Whirled Order; Sleeping Giant: Awakening the Transatlantic Services Economy; Protecting Our Prosperity: Ensuring Both National Security and the Benefits of Foreign Investment in the United States; Deep Integration: How Transatlantic Markets are Leading Globalization; and Partners in Prosperity: The Changing Geography of the Transatlantic Economy. 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. 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 *Creating a North Atlantic Marketplace: Three Paths, One Detour, A U-Turn and the Road*

to Nowhere; The Transatlantic Digital Economy 2017; Rule-Makers or Rule-Takers? Exploring the Transatlantic Trade and Investment Partnership, edited with Jacques Pelkmans; Domestic Determinants of Foreign Policy in the European Union and the United States, edited with Teija Tiilikainen; Forward Resilience: Protecting Society in an Interconnected World; The Geopolitics of TTIP; Transatlantic 2020: A Tale of Four Futures, edited with Kurt Volker; 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 Fordham 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).

THE TRANSATLANTIC ECONOMY 2018

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

Daniel S. Hamilton and Joseph P. Quinlan

The Transatlantic Economy 2018 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.

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 and is registering heightened growth opportunities, despite a whirlwind of political uncertainty about the direction of U.S., EU and UK policies.

The Transatlantic Economy 2018 explains what Brexit means for the transatlantic economy, how the digital economy is becoming a driver of the economic relationship, and how decision-makers and business leaders can address current opportunities and challenges. *The Transatlantic Economy 2018* 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.



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