



United States
International Trade Commission

Recent Trends in U.S. Services Trade:

2017 Annual Report

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Preface

This report is the 21st in a series of annual reports on recent trends in U.S. services trade that the U.S. International Trade Commission (Commission or USITC) has published. The Commission also publishes an annual companion report on U.S. trade in goods, *Shifts in U.S. Merchandise Trade* (which will be published as online tables this year). These recurring reports are the products of an investigation instituted by the Commission in 1993 under section 332(b) of the Tariff Act of 1930.¹ The information in this report reflects the knowledge, industry contacts, and analytic skills the Commission uses to provide expert analysis of services industries in its statutory investigations and in apprising its customers of global industry trends, regional developments, and competitiveness issues.

¹ On August 27, 1993, acting on its own motion under section 332(b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)), the USITC instituted investigation no. 332-345, *Annual Reports on U.S. Trade Shifts in Selected Industries*. On December 20, 1994, the Commission on its own motion expanded the scope of this report to include more detailed coverage of services industries. Under the expanded scope, the Commission publishes two annual reports, *Shifts in U.S. Merchandise Trade* and *Recent Trends in U.S. Services Trade*. The USITC's current report format provides a systematic means of examining and assessing major trade developments with leading U.S. trading partners in the services, agriculture, energy, and manufacturing sectors.¹ The time frames used in this report are based on the latest available data. Industry-level analyses may cover slightly different years, depending on the source used. However, presentation of U.S. services trade data will largely be consistent throughout the report. As of the date of publication, May 2017, World Trade Organization (WTO) data were available through 2015; annual data on cross-border trade from the U.S. Bureau of Economic Analysis (BEA) were available through 2015 (with preliminary data for available for 2016), and BEA data on affiliate transactions were available through 2014. For details on the different modes of services trade, see box 1.1.

Abstract

Recent Trends in U.S. Services Trade: 2017 Annual Report focuses on U.S. exports and imports of professional services, particularly accounting and auditing, architecture and engineering, legal, and management consulting services. In 2015, the United States exported \$139.7 billion in professional services and imported \$91.0 billion, resulting in a trade surplus of \$48.7 billion for this segment of the services sector. By comparison, the total U.S. services trade surplus was \$263.4 billion. U.S. professional services contributed \$2.6 trillion to U.S. gross domestic product (GDP) in 2015, or 19 percent of total U.S. private sector GDP. Professional services employed over 29 million full-time equivalent employees in 2015, representing 25.8 percent of U.S. total private sector employment. The healthcare sector supplied about half of professional services' contribution to employment and GDP. Wages for professional services workers have grown slightly more slowly than those in many other services industries. These workers earned an average wage of \$65,861 in 2015, exceeding the private sector average, but trailing wages in electronic services, financial services, and goods manufacturing.

Professional services such as management consulting are being transformed by digital technology, as software is increasingly able to perform routine tasks. However, many professional services also require non-routine creative tasks, as well as social interaction, neither of which can easily be automated. Sectors like legal services and accounting and auditing services remain highly regulated, and these regulations can significantly influence patterns of international trade.

Table 1.1 was updated on October 27, 2017 to correct a production error affecting the percent change between 2015 and 2016 and the values of the “Other” services exports category.

Acronyms and Abbreviations

Terms	Definitions
AE	architecture and engineering
AI	artificial intelligence
A-P	Asia-Pacific
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BEA	Bureau of Economic Analysis
BIM	building information modeling
BRIC	Brazil, Russia, India, China
CAD	computer-aided design
CAGR	compound annual growth rate
CPA	certified public accountant
CRM	customer relationship management
ENR	Engineering News-Record
EU	European Union
EY	Ernst & Young
FTE	full-time equivalent
GAAP	Generally Accepted Accounting Principles
GATS	General Agreement on Trade in Services
GDP	gross domestic product
HMY	Helpman, Melitz, and Yeaple
IFRS	International Financial Reporting Standards
IT	information technology
LIFO	last-in, first-out
MNEs	multinational enterprise
MOFA	majority-owned foreign affiliate
MOOC	massive open online course
MOUSA	majority-owned U.S. affiliate
MRA	mutual recognition agreement
NAICS	North American Industry Classification System
NTMs	nontariff measures
OECD	Organisation for Economic Co-operation and Development
PCAOB	Public Company Accounting Oversight Board
PE	partial equilibrium
PPPs	public-private partnerships
PwC	PricewaterhouseCoopers
SEC	U.S. Securities and Exchange Commission
SMEs	small and medium-sized enterprises
SOEs	state-owned enterprises
STRI	Services Trade Restrictiveness Index
TiSA	Trade in Services Agreement
TPP	Trans-Pacific Partnership
UBO	ultimate beneficial owner
UK	United Kingdom
USDOC	U.S. Department of Commerce
USITC	U.S. International Trade Commission
VR	virtual reality
WTO	World Trade Organization

Executive Summary

The United States is the world's largest services market, and remained the largest cross-border services exporter and importer in 2015.¹ U.S. exports continue to be highly competitive in the global services market: the United States' share of global exports was more than double that of the next largest single-country exporter in 2015 (figure ES.1). Preliminary data for 2016 indicate that U.S. services exports exceeded those in 2015 by 0.3 percent, or \$2.0 billion, whereas U.S. imports were 3.2 percent higher (\$14.8 billion) in 2016 than in 2015.

¹ The time frames used in this report are based on the latest available data. Industry-level analyses may cover slightly different years, depending on the source used. However, presentation of U.S. services trade data will largely be consistent throughout the report. As of the date of publication, May 2017, World Trade Organization (WTO) data were available through 2015; annual data on cross-border trade from the U.S. Bureau of Economic Analysis (BEA) were available through 2015 (with preliminary data for available for 2016), and BEA data on affiliate transactions were available through 2014. For details on the different modes of services trade, see box 1.1.

U.S. Services Trade Highlights

The United States continued to be the largest global exporter and importer of services in 2015. With exports of \$139.7 billion and imports of \$91.0 billion, professional services^a represented the second-largest share of both exports and imports of U.S. services, registering a trade surplus of \$48.7 billion in 2015.

Business and management consulting services accounted for the largest share of professional services exports in 2015, while research and development services led cross-border imports.

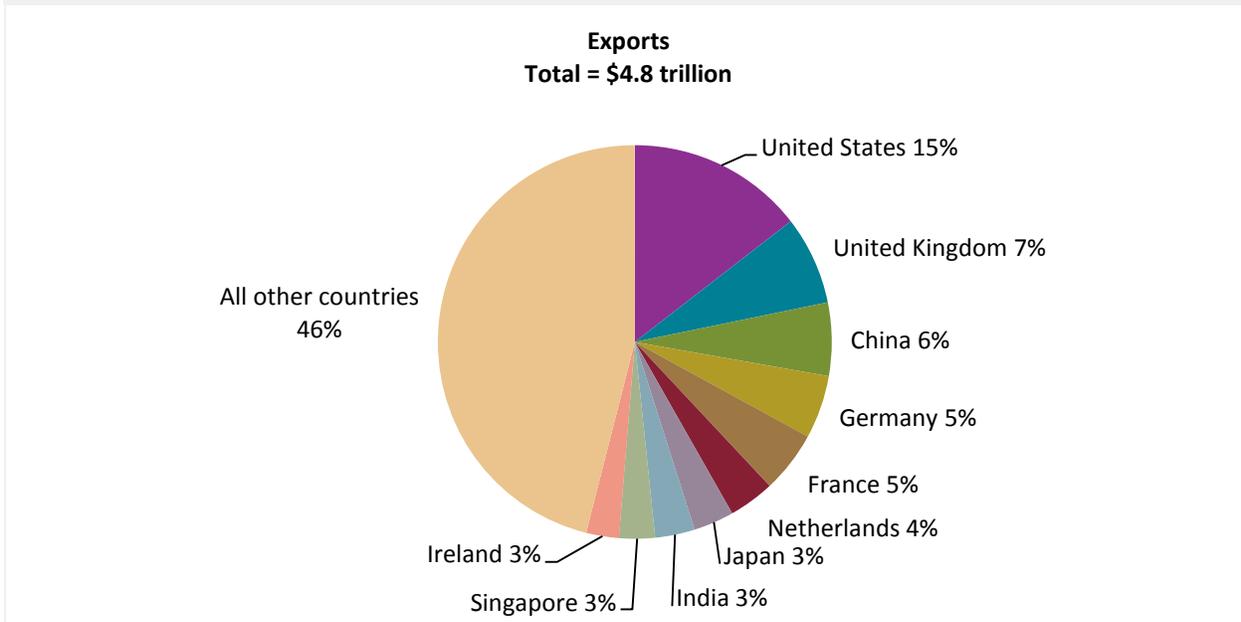
Accounting firms are increasingly providing consulting services, though certain regulations (both foreign and domestic) limit their ability to diversify their offerings.

Growth in architecture and engineering services is driven by trends in infrastructure demand, which in turn is heavily influenced by the energy sector; demand for green design services is also rising.

China is an important market for U.S. legal services exports, but regulations restrict the growth and profitability of foreign law firms.

^a For purposes of this report, professional services covers accounting and auditing services, architecture and engineering services. Data from DEA and the WTO may include other services industries under professional services, such as healthcare and education.

Figure ES.1: Global services: The United States led the world in cross-border exports of commercial services in 2015



Source: WTO, Statistics database, Time Series on International Trade, Trade in Commercial services, 2005–onward (BPM6), (accessed December 14, 2016). (See [appendix table B.1](#))

Notes: Excludes public sector transactions.

This report is the latest in the annual *Recent Trends* series prepared by the U.S. International Trade Commission (Commission or USITC), and provides an overview of U.S. trade in services. This year’s report focuses on recent developments in professional services industries, with detailed descriptions of trends in accounting and auditing services, architecture and engineering services, legal services, and management consulting services.² Professional services supply the administrative infrastructure that supports businesses, and are linked by their use of highly skilled labor. Accountants, architects, consultants, and lawyers require advanced education and training, and are often subject to licensing, certification, or other registration requirements to ensure that they are properly qualified.

Complex and opaque regulations may limit the ability of firms to supply services in foreign markets. Licensing requirements are a particular challenge for many professional services firms. Such requirements often differ across countries and even across states or provinces, imposing costs on firms supplying services in different jurisdictions. A recent OECD study found that the

² This report covers professional services, with chapters on accounting and auditing services, architecture and engineering services, legal services, and management consulting services. Additional services, such as healthcare and education services, are covered by the overall definition of professional services used to calculate industry-related statistics in this report, which varies slightly depending on the source used. Beginning in 2013, *Recent Trends* rotated its coverage between professional services, electronic services, distribution services, and financial services. The 2016 *Recent Trends* report focused on financial services. The previous professional services report, published in 2013, covered the education, healthcare, and legal services industries.

costs of regulatory differences among trading partners were equivalent to an added cost of 20-75 percent of the value of traded services.³ However, governments and international standards bodies have made attempts to harmonize regulations. Mutual recognition agreements are seen as particularly useful, though they are often contentious and can take years to develop and implement.

The business models of professional services firms are evolving in response to changes in technology, as software is increasingly able to perform routine tasks. One study estimates that several occupations in professional services, including tax preparers and legal secretaries, have a high probability of being automated in the future, though it observes that jobs involving creative tasks and significant social interactions cannot easily be done by computers. Some professional services firms are embracing new technology as a complement to their highly skilled workers, allowing these firms to offer new services to their clients while cutting costs. Technology is also changing the way some professional services are traded, enabling the digital delivery across borders of certain professional services, including some types of healthcare and education services, and opening new markets to competition.

Professional services firms are adapting to changing economic conditions by finding new markets and niches within industries. For example, U.S. firms are active in the market for green building services, a sector whose revenues are growing. Small- and medium-sized enterprises in the management consulting industry have also experienced growing revenues, as large consulting tasks—once performed by only a few global firms—can increasingly be unbundled into smaller specialized projects, while digital communications make project coordination easier. At the same time, professional services firms are also blurring the lines between specific services industries. Accounting and auditing firms, for example, are increasingly diversifying their revenue streams by supplying consulting or legal services.

³ See chapter 2 for more information.

Key Findings

U.S. Trade in Services

The United States Was the Leading Global Services Supplier in 2015

U.S. cross-border exports of private services⁴ totaled \$730.6 billion in 2015 (about 24.9 percent of total U.S. exports of goods and services), while U.S. imports totaled \$467.1 billion (about 15.0 percent of total U.S. imports of goods and services). This resulted in a trade surplus in services of \$263.4 billion, compared to a trade deficit in goods of \$745.7 billion. Leading export markets are Canada, Germany, Ireland, Japan, and the United Kingdom, which collectively accounted for 32 percent of U.S. cross-border services exports in 2015. Similarly, the UK (11 percent), Germany (7 percent), Japan (6 percent), and Canada (6 percent) supplied the largest single-country shares of U.S. services imports.

As in previous years, travel services and passenger fares accounted for the largest share of U.S. services trade, together representing 34 percent of U.S. services exports (\$246.2 billion) and 32 percent of imports (\$148.4 billion), and resulting in a surplus of \$97.9 billion. Professional services were the next-largest share of total services trade, accounting for \$139.7 billion (19 percent) of exports and \$91.0 billion (19 percent) of imports, and resulting in a surplus of \$48.7 billion in 2015.

Services, including professional services, supplied in foreign markets by the local affiliates of U.S. multinational enterprises (MNEs) totaled \$1.5 trillion in 2014. The largest foreign purchasers of services from U.S.-owned affiliates that year were the UK (15 percent), Canada (9 percent), and Ireland (7 percent). Sales to the EU (including the UK) accounted for 42 percent of total services supplied by U.S.-owned foreign affiliates. Affiliates of U.S. professional services firms located abroad (i.e., U.S.-owned foreign affiliates) represented 8 percent (\$124.8 billion) of sales by all U.S.-owned foreign affiliates in 2014, the latest year of data available. Purchases of professional services from affiliates of foreign firms located in the United States (i.e., foreign-owned U.S. affiliates) totaled \$90.7 billion in 2014.

Going forward, demand from emerging markets will be increasingly important for many professional services industries, as firms in those countries require more sophisticated accounting services, legal services, and management consulting services. Regulations will continue to impact trade in professional services; for example, new laws requiring clients to

⁴ Exports and imports of private services exclude government transactions, which primarily consist of services supplied in support of operations by the U.S. military and embassies abroad.

rotate the firms they use for audits may increase competition among accounting firms, while restrictions on foreigners who supply legal services may limit market access. The global architecture and engineering services industry is expected to grow as rising incomes, accelerating urbanization, and increasing infrastructure investment stimulate demand for new construction.

Professional Services

Business and Management Consulting Services Accounted for the Largest Share of Cross-border Professional Services Trade in 2015

Business and management consulting services represented 31 percent (\$42.8 billion) of total U.S. professional services exports and 35 percent (\$31.4 billion) of imports in 2015. Ranking second, architecture and engineering services made up 10 percent (\$13.9 billion) of total U.S. professional services exports and 9 percent (\$8.3 billion) of imports. Legal services accounted for 6 percent (\$9.0 billion) of total U.S. professional services exports and 2 percent (\$2.2 billion) of imports, while accounting and auditing services represented 1 percent (\$1.5 billion) of total U.S. professional services exports and 3 percent (\$2.9 billion) of imports. The UK was the largest market for U.S. exports of accounting services (15 percent of such exports), legal services (18 percent), and management consulting services (15 percent), while China (10 percent) was the largest market for architecture and engineering services.

Architecture and Engineering Services Accounted for the Largest Share of Affiliate Transactions in 2014

Within professional services, architecture and engineering services represented the largest share of sales by foreign affiliates with 41 percent (\$35.0 billion) in 2014, followed by sales of management consulting services at 27 percent (\$2.0 billion). Management consulting services represented the largest share of purchases from foreign-owned U.S. affiliates in professional services, totaling \$14.5 billion (16 percent), followed closely by healthcare and social assistance (15 percent) and architecture and engineering services (15 percent).

Professional Services Were a Significant Contributor to the U.S. Economy in 2015

In 2015, U.S. private sector professional services, including healthcare and education, contributed \$2.6 trillion to U.S. gross domestic product (GDP), accounting for nearly 19 percent of U.S. private sector GDP. Healthcare represented almost one-half of professional services' contribution to U.S. GDP in 2015. Employment in professional services accounted for a significant share of total private sector employment, with nearly 29 million full-time equivalent

(FTE) employees (almost 26 percent of the total). Most of these employees worked in healthcare services (16.9 million), miscellaneous professional and technical services (5.4 million), and education services (3.1 million).⁵

Workers in the professional services sector earned an average wage of \$65,861 in 2015, though this varied widely by industry. Average yearly wages ranged from \$45,871 in education services to \$125,658 in management of companies and enterprises. During 2010–14, compound annual wage growth in the professional services sector was 2.1 percent, but growth increased to 3.1 percent from 2014 to 2015. In 2015, labor productivity in professional services (measured as output in dollars per FTE) grew by 0.9 percent, compared to a 0.3 percent decline registered by the sector from 2010 to 2014. The professional services sector had the lowest labor productivity of any services sector in the U.S. economy in 2015, which reflects differences in the industries' capital-labor ratio. Average output per worker in the sector was \$91,336, though this, too, varied, ranging from \$53,589 in education services to \$176,744 in legal services.

Accounting and Auditing Services

The United States Was the Largest Single-country Market for Accounting and Auditing Services by Revenue in 2015

The United States is the world's largest market for accounting services by a large margin, with U.S. industry revenue totaling over \$163.3 billion in 2015. North America generated around 42 percent of global revenue in 2015. The United States alone accounted for nearly 36 percent of the global total, while Europe (including the UK) represented 41 percent and North Asia (including China) represented 4.5 percent. Accounting and auditing services is dominated by four large firms, which together capture 25 percent of the global market. Accounting firms largely operate as networks with affiliates in multiple countries. Three of the 10 largest networks are headquartered in the United States, while 5 are headquartered in the UK. Accounting firms are increasingly providing non-accounting services, particularly consulting, though regulations in certain countries limit their ability to expand in this market.

Most Trade in U.S. Accounting Services Occurs through Affiliate Transactions

In 2015, U.S. cross-border exports of accounting and auditing services totaled \$1.5 billion, while U.S. imports were \$2.9 billion. By contrast, the United States sold \$13.5 billion in accounting services through its foreign affiliates in 2014 while purchasing only \$0.2 billion from foreign-

⁵ Categories used in cross-border services trade statistics, such as management consulting or accounting services, do not correspond exactly to categories used in GDP or employment statistics.

owned affiliates in the United States. The UK is the largest single-country market for U.S. foreign affiliate sales, accounting for 10 percent of all such sales, followed by Canada (6 percent).

Architecture and Engineering Services

U.S. Firms Are Leading Participants in the Global Architecture and Engineering Services Industry

U.S. firms have a strong presence in the global architecture and engineering services industry, with 3 of the 10 largest firms by revenue based in the United States. Demand for architecture and engineering services is driven largely by factors such as population growth, urbanization, and infrastructure and energy projects. While demand for these services in the energy segment has been depressed by the recent decline in oil prices, there is growing interest in renewable energy projects and green building services. China is the leading market for U.S. exports of architecture and engineering services; it accounts for 11 percent of all U.S. exports, followed by Mexico and the UK (9 percent each). Specifically, the United States is the leading source of Chinese architecture imports and, together with Germany and Hong Kong, is one of the leading sources of Chinese engineering imports.

The United States Posted a Large Trade Surplus in Architecture and Engineering Services in 2015

The United States has consistently run a trade surplus in architecture and engineering services. In 2015, U.S. cross-border exports of architecture and engineering services totaled \$13.9 billion, while imports were valued at \$8.3 billion, resulting in a trade surplus of \$5.6 billion. The United States also posted trade surpluses with each of its top five export markets, including its largest surpluses with China (\$1.2 billion), and Mexico (\$0.9 billion). U.S. sales of architecture and engineering services by foreign affiliates are significantly higher than cross-border exports, totaling \$35.0 billion in 2014 and surpassing U.S. purchases of these services from foreign-owned affiliates (\$13.5 billion) in that year.

Legal Services

Over Half of the World's Largest Law Firms Were Based in the United States in 2015

The United States represented 49 percent of global legal services revenue in 2015 (\$289.8 billion), followed by Europe (27 percent, or \$161.2 billion) and Asia-Pacific (14 percent, or \$85.3 billion). Overall, the U.S. legal services market grew less than 1 percent annually from

2009 to 2015, compared to 4 percent annually during 2004–07; this weaker performance reflected reduced demand for legal services as a result of the 2008–09 recession. Five of the top 10 global legal services firms are headquartered in the United States, while 4 are based in the UK and 1 in China. Together, the United States and the UK accounted for 93 out of the top 100 largest law firms in 2015 by revenue. U.S. legal services firms are active in the Chinese market, despite Chinese restrictions on foreign legal services suppliers, and made up 57 percent of all foreign law firms operating in China in 2012.

U.S. Legal Services Generated a Large Trade Surplus in 2015

In 2015, the United States exported \$9.0 billion and imported \$2.2 billion in legal services, resulting in a trade surplus of \$6.9 billion. The United States posted a trade surplus each year during 2010–15, though the balance declined slightly after 2013 as export growth slowed. Exports grew almost 6 percent annually from 2010 to 2014, but declined 0.7 percent from 2014 to 2015. U.S. export markets for legal services are similar to those for other professional services, with the UK accounting for 18 percent of exports, followed by Japan (12 percent) and Canada (7 percent). The UK was also the largest supplier of U.S. imports of legal services (22 percent), followed by Germany and Canada (both 8 percent). Sales of legal services by U.S.-owned foreign affiliates totaled \$6.8 billion in 2014, while purchases from foreign-owned affiliates in the United States totaled only \$0.1 billion the same year.

Management Consulting Services

The United States Is the World's Leading Market for Management Consulting Services

The United States accounts for over half of global revenue in management consulting services, and four of the seven largest firms are located in the United States. The top seven firms, however, collectively accounted for only 12.5 percent of global revenue in 2016. Many of the leading suppliers of consulting services are also accounting firms, with three of the Big Four accounting firms (Deloitte, PricewaterHouseCoopers, and KPMG) among the leading consulting firms by revenue. However, advances in digital technology and the unbundling of large consulting projects into smaller tasks have allowed SME consultants to become more competitive. The U.S. industry has a large number of smaller providers (those with less than 4 employees). These firms accounted for \$23.6 billion in sales in 2016, compared to \$27.7 billion in sales for large firms (those with over 500 employees).

U.S. Exports of Management Consulting Services Experienced Robust Growth from 2010 to 2015

The United States exported \$42.8 billion in management consulting services in 2015, up from \$33.0 billion in 2010. Exports grew by an average of 4.5 percent annually from 2010 to 2014 and jumped 9.0 percent during 2014–15. Imports grew at a similar rate, rising from \$21.4 billion in 2010 to \$31.4 billion in 2015 (8.0 percent average annual growth). As a result, the United States had a cross-border surplus in every year from 2010 to 2015, totaling \$11.5 billion in 2015. Additionally, in 2014, the United States sold management consulting services through its foreign affiliates valued at over \$24.1 billion, while purchases from U.S. affiliates of foreign firms were far less at \$14.5 billion. The UK was the largest market for both U.S. cross-border exports and foreign affiliate sales in 2015, representing 15 percent (\$6.6 billion) and 18 percent (\$4.4 billion) of U.S. management consulting exports and foreign affiliate sales, respectively.

USITC Roundtable Discussion

The Commission hosted its 10th annual Services Roundtable on November 17, 2016, with Commissioner Meredith Broadbent and Commissioner Rhonda Schmidlein moderating. The Commission holds these roundtables annually to encourage discussion among individuals from government, industry, and academia about important issues affecting trade in services. This year's event focused on the usefulness of the "modes of supply" framework, created by negotiators of the General Agreement on Trade in Services (GATS) as a tool for understanding services trade.⁶ The roundtable also examined the importance of initiatives to harmonize regulations and to liberalize services trade, as well as how these initiatives may interact.

During the roundtable, participants stated that one of the biggest changes to trade in services since the inception of the GATS has been the expansion of services supplied across borders (mode 1 trade), facilitated by the Internet and digital technologies. Participants noted that Internet-based services may require multiple modes of supply to complete a transaction, such as when cloud computing services are supplied through the Internet (mode 1) but specialists travel from headquarters to set up the service (mode 4) and local sales representatives are needed to complete the transaction (mode 3). Panelists explained that such modes of supply can be complementary, and that consumers of services like e-commerce demand seamless integration of all modes of supply.

Aspects of regulations affecting services trade were also discussed. Participants pointed to the effects of data localization requirements, which limit the free flow of data across borders, on mode 1 services trade, noting that such requirements may make certain services impossible to

⁶ For more information on modes of supply in services trade, see Box 1.1.

provide across borders. Potential improvements in provisions governing services trade contained within the Trans-Pacific Partnership were mentioned as well, such as those concerning data localization, intermediary liability for digital service providers, and the nondiscriminatory treatment of digital products.

On the topic of regulatory harmonization, participants noted that some companies providing previously unregulated digital services are now too big to be ignored by regulators, asserting that countries must choose to either expand existing regulations or create entirely new regulations for such services. Roundtable participants viewed broad regulations covering consumer protection as preferable to industry-specific regulations, though some stated that broad regulations may also hamper competition. Some participants also noted that developing countries need strong regulations in order to provide globally competitive services. Certain state-owned enterprises, such as post offices that also supply non-postal services, were mentioned as potentially benefiting from regulatory regimes less strict than those applied to their competitors.

Panelists stated that while movement towards regulatory harmonization has been difficult, cooperation that allows countries to recognize each other's regulations as achieving the same goal may be a way to move forward, though countries have different preferences for how to regulate risk. Panelists concluded by discussing current regulatory cooperation efforts, noting that regulations tend to gravitate towards either U.S. or EU standards, and by observing that the concerns of countries' regulators may not be wholly in line with industry concerns or countries' trade agendas.

Chapter 1

Introduction

Services continue to be an important part of the U.S. economy, accounting for about four-fifths of U.S. gross domestic product (GDP) and employment in 2015. In addition, the World Trade Organization (WTO) reports that the United States is the single largest exporter of services.⁷ The *Recent Trends* report annually examines U.S. services trade (both in the aggregate and in selected industries), highlights important U.S. trading partners, and analyzes global market conditions in selected industries. This year, the report focuses on professional services, with specific attention to four professional services: accounting and auditing services, architecture and engineering services, legal services, and management consulting services.⁸ In 2015, professional services industries⁹ employed 29 million people and accounted for 19 percent of U.S. GDP, with the healthcare sector accounting for around half of professional services' contribution to employment and GDP.

Data and Organization

The U.S. International Trade Commission (Commission or USITC) draws much of the services trade data used in this report from the Bureau of Economic Analysis (BEA) at the U.S. Department of Commerce (USDOC). The BEA collects trade data through surveys that generally require respondents with more than \$2 million in exports or \$1 million in imports to report information about their international services transactions. The BEA estimates trade flows using these survey results.¹⁰

⁷ WTO, Statistics Database, Time Series on International Trade, "Trade in Commercial Services, 2005–onward" (accessed November 28, 2016).

⁸ In 2013, *Recent Trends* changed its format to rotate on a four-year basis among professional services, electronic services, distribution services, and financial services. The 2016 report focused on financial services. The previous professional services report, published in 2013, covered education, healthcare, and legal services.

⁹ Professional services also comprise industries not covered in this report, such as advertising, education, health care and social assistance, research and development services, and waste management and remediation services.

¹⁰ For more information on the BEA's data collection methodology, see USDOC, BEA, *Survey of Current Business*, October 2015, 26.

For this report, the Commission has supplemented the BEA data with information from other sources, including individual firms, trade associations, academic journals, industry reports, international organizations, and other government agencies.¹¹

This chapter examines the U.S. services sector, global trade in services, and U.S. trade in services. It reviews both cross-border trade in services during 2010–15 and affiliate firms' sales of services during 2010–14,¹² comparing services trade flows in recent years with earlier data. Chapter 2 gives an overview of professional services; identifies key trends affecting the sector; and examines its contribution to U.S. economic output, employment, labor productivity, and trade. Chapters 3, 4, 5, and 6 focus on accounting and auditing services, architecture and engineering services, legal services, and management consulting services, respectively. These chapters provide an overview of market conditions, selected emerging demand and supply factors, and recent trends in U.S. cross-border and affiliate trade in these industries. Chapter 7 summarizes the information presented and the views expressed at the 10th annual USITC services trade roundtable, hosted by the Commission on November 16, 2016. Appendix A offers a snapshot of recent services research conducted by Commission staff. The data tables in appendix B correspond to the figures used in this report. This report is also accompanied by web-based interactive charts, which allow users to explore trends in U.S. services exports and imports over time and for selected industries and countries. [Recent Trends 2017 interactive data link.](#)

The U.S. Services Sector

Services industries account for a large majority of U.S. output and employment. In 2015, U.S. services industries accounted for 78 percent (or \$11.1 trillion) of U.S. private sector GDP and 82 percent (or 91.8 million) of U.S. private sector full-time employees, compared to 22 percent and 18 percent, respectively, for the goods-producing sector.¹³ Overall, growth in the services sector's value added, employment, and wages slightly outpaced that of the goods sector during

¹¹ The BEA updates its international trade statistics for prior years as additional data become available, and occasionally revises the methodology and presentation of its statistics in order to improve their quality and comply with new international standards. For these reasons, care should be taken in comparing statistics in previous *Recent Trends* reports with currently published statistics. For more information, see USDOC, BEA, "The Comprehensive Restructuring," March 2014; USDOC, BEA, "Comprehensive Restructuring and Annual Revision," July 2014, 1–3.

¹² "Affiliate firms" includes both firms outside the United States that are owned by U.S. companies and firms located in the United States that are owned by foreign companies. Note that publication of data on affiliate transactions lags publication of data on cross-border services trade. This report compares affiliate transactions in 2014 with trends from 2010 through 2013.

¹³ The goods-producing sector encompasses agriculture, construction, fishing, forestry, and manufacturing. Some aspects of mining are also included in goods-producing sector, although drilling, exploration, and other related services are included in the services sector. USDOC, BEA, "Frequently Asked Questions," March 10, 2006; USDOC, BEA representative, email interview by USITC staff, March 7, 2017.

2010–15. On the other hand, the goods-producing sector saw a small increase in labor productivity during the same period, while labor productivity in services declined slightly.¹⁴

Global Services Trade

The United States continues to be highly competitive in the global services market. As the world’s top exporter of services, the United States supplied \$690.1 billion, or 15 percent, of global cross-border commercial services exports in 2015 (figure 1.1).¹⁵ Other top single-country exporters included the United Kingdom (\$345.1 billion; 7 percent), China (\$285.5 billion; 6 percent), Germany (\$247.3 billion; 5 percent), and France (\$239.7 billion; 5 percent). As in past years, most of the world’s top 10 services exporters were developed countries, with the exception of China (which leapt from the 5th-largest exporter in 2014 to the 3rd-largest exporter in 2015) and India (which remained the 8th-largest services exporter). Overall, the top 10 exporting countries together generated 54 percent of global cross-border services exports in 2015.¹⁶ The United States also remains the world’s largest importer of services (\$469.1 billion), followed by China (\$466.3 billion), Germany (\$289.5 billion), France (\$228.1 billion), and the UK (\$207.7 billion).¹⁷

The BEA publishes annual data on both U.S. cross-border trade and U.S. affiliate transactions in services, which together account for a substantial portion of the services provided through all four “modes of supply” specified in the WTO’s General Agreement on Trade in Services (GATS) (box 1.1). The BEA publishes these data by country and by industry, at the highest level of detail that its surveys and confidentiality policies allow. The BEA also publishes quarterly cross-border trade data in highly aggregated form.¹⁸

¹⁴ USDOC, BEA, “Real Value Added by Industry,” April 1, 2016; USDOC, BEA, “Full-Time Equivalent Employees by Industry,” April 1, 2016; USDOC, BEA, “Wages and Salaries by Industry,” August 3, 2016. “Value added” is a measure of an industry’s contribution to GDP; it is the difference between the value of an industry’s gross output and the cost of its inputs. Full-time equivalent employees (FTEs) are the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis. The number of FTEs in each industry is the product of the total number of employees and the ratio of average weekly hours per employee for all employees to average weekly hours per employee on full-time schedules. Labor productivity is calculated here as a sector’s contribution to GDP divided by the number of employees in that sector, so this measure fluctuates with changes in both output and employment.

¹⁵ This discussion draws on WTO trade data to help compare U.S. trends with those of other countries. The term “commercial services” used by the WTO refers to services offered by the private sector rather than the public sector.

¹⁶ WTO, Statistics Database, “Trade in Commercial Services” (accessed November 28, 2016).

¹⁷ Ibid.

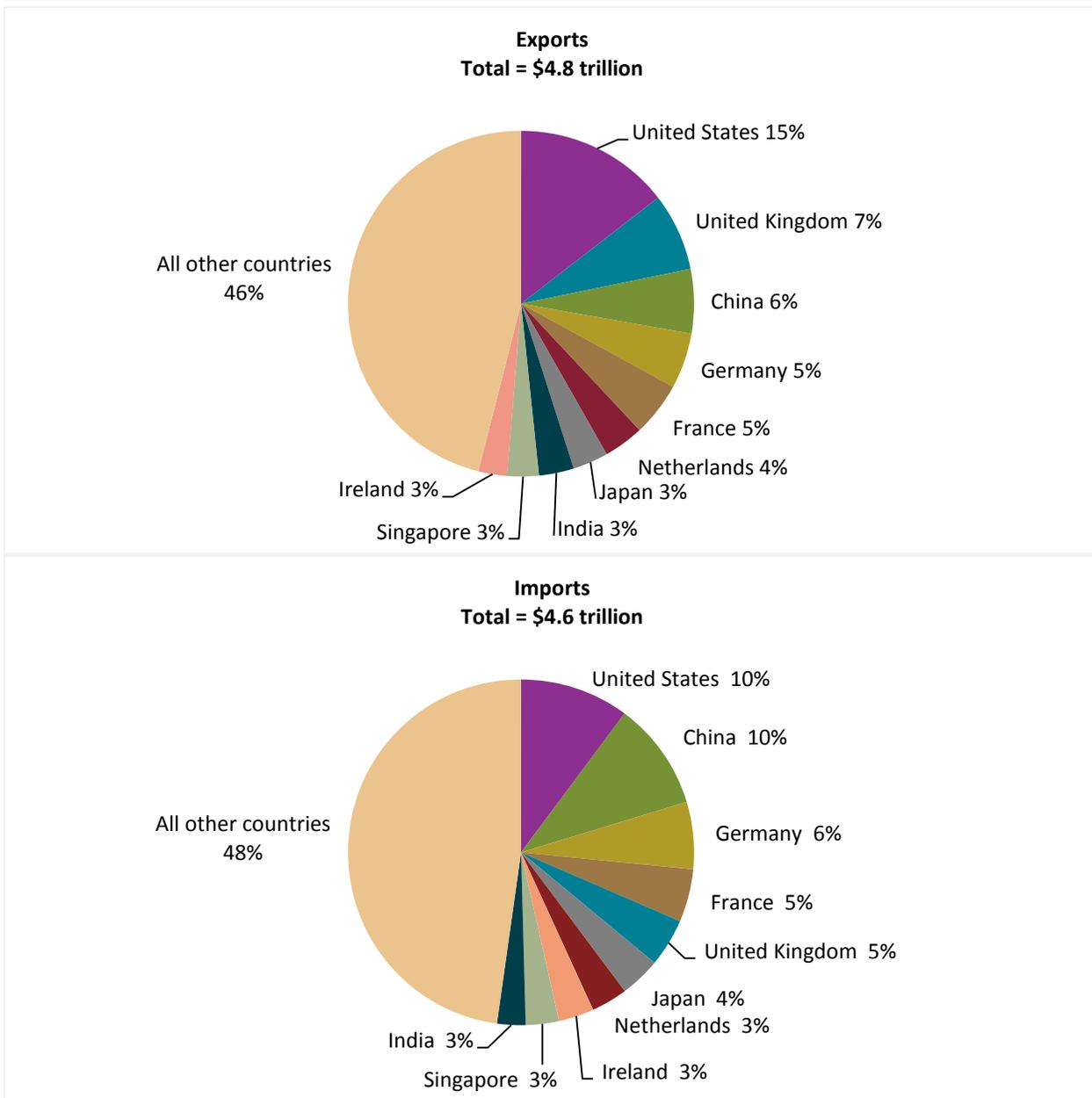
¹⁸ Quarterly data on U.S. services trade can be found in USDOC, BEA, Interactive Data, International Data, International Transactions. The BEA will suppress data for certain countries or sectors in its publications if that data could potentially reveal confidential information about individual respondents.

According to the BEA, “cross-border trade” occurs when suppliers in one country sell services to consumers in another country, with people, information, or money crossing national borders in the process.¹⁹ Such transactions appear as exports and imports in a country’s balance of payments. Firms also provide services to foreign consumers through affiliates established in host (i.e., foreign) countries; the income generated through “affiliate transactions” may appear as direct investment income in the balance of payments.²⁰

¹⁹ This definition is also consistent with the WTO’s GATS classifications.

²⁰ Income generated through affiliate transactions only appears as direct investment income in the balance of payments once it has been repatriated to the United States.

Figure 1.1: Global services: The United States led the world in cross-border exports and imports of commercial services in 2015



Source: WTO, Statistics database, Time Series on International Trade, Trade in Commercial services, 2005–onward (BPM6), (accessed December 14, 2016). (See [appendix table B.1.](#))

Notes: The value of global exports and imports differ due to several factors, including time lags, differences in collection methodology, and other measurement errors. Excludes public sector transactions.

Box 1.1: Services Trade “Modes of Supply” under the WTO’s General Agreement on Trade in Services (GATS)

The GATS identifies four “modes of supply” for services trade—i.e., four ways that services can be traded:

Mode 1 is cross-border supply. In this mode, a service is supplied by an individual or firm in one country to an individual or firm in another (i.e., the service crosses national borders). An example would be a digital file of an architectural design emailed to a foreign client. Mode 1 under the GATS does not directly compare to the BEA’s data for cross-border trade (see discussion below).

Mode 2 is consumption abroad. In this mode, an individual from one country travels to another country and consumes a service in that country. An example would be a foreign tourist staying in hotels and eating in restaurants while vacationing in the United States.

Mode 3 is commercial presence. In this mode, a firm based in one country establishes an affiliate in another country and supplies services through that locally established affiliate. An example would be a U.S.-based law firm providing legal services to citizens of a foreign country from its affiliated office located in that country.

Mode 4 is the temporary presence of natural persons. In this mode, an individual service supplier from one country travels to another country on a short-term basis to supply a service there—for instance, as a consultant, contract employee, or intracompany transferee at an affiliate.^a An example would be U.S.-based engineers traveling to a foreign country to help local staff on a construction project.

The BEA’s categories for services trade—i.e., cross-border trade and affiliate transactions—do not correspond exactly to the channels of service delivery described in GATS.^b Mode 1 and 2 transactions, as well as some mode 4 transactions, generally are grouped together in the BEA’s data on cross-border trade, while mode 3 transactions are included, with some exceptions, in the BEA’s affiliate transactions data.^c

^a USDOC, BEA, *Survey of Current Business*, October 2009, 40–43, tables 1 and 2. For more information on the four modes of supply under the GATS, see WTO, “Chapter 1: Basic Purpose and Concepts,” https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s3p1_e.thm (accessed July 19, 2016).

^b The BEA includes only affiliate transactions between residents and nonresidents, while certain transactions that fall under mode 3 of the GATS could involve only residents of one country. Some statistics on services supplied through mode 4 may also be commingled with statistics on compensation of employees. USDOC, BEA, *U.S. International Economic Accounts: Concepts and Methods*, September 2014.

^c The channel of delivery that service providers use is primarily determined by the nature of the service. For example, professional services such as legal and accounting are generally supplied through affiliates located close to consumers. By contrast, audiovisual services are predominantly traded across borders. As in past years, affiliate transactions (i.e., services provided by U.S. affiliates in foreign countries) remain the principal means of providing services to overseas markets.

Cross-border Trade, 2015

U.S. cross-border exports of private services²¹ totaled \$730.6 billion in 2015, while U.S. imports totaled \$467.1 billion, resulting in a trade surplus of \$263.4 billion (figure 1.2).²² As in previous years, travel services and passenger fares accounted for the largest share of U.S. services trade, representing 34 percent of U.S. services exports and 32 percent of imports. Professional services were the second-largest category, accounting for 19 percent of both imports and exports, in line with previous years. Overall, U.S. trade in professional services resulted in a trade surplus of \$48.7 billion in 2015 (figure 1.3).

In 2015, U.S. cross-border services exports rose by 1 percent, significantly lower than the 7 percent average annual growth rate that prevailed during 2010–14. This low growth stemmed from slower export growth in some industries and falling exports in others. Industry segments in which export growth declined included electronic services, professional services, and travel services, which all grew by 5 percent in 2015, compared to average annual rates of 8 percent, 8 percent, and 9 percent, respectively, during 2010–14.²³ Segments experiencing an outright decline in exports included charges for the use of intellectual property (down 6 percent), financial services (down 4 percent), and distribution services (down 2 percent).²⁴

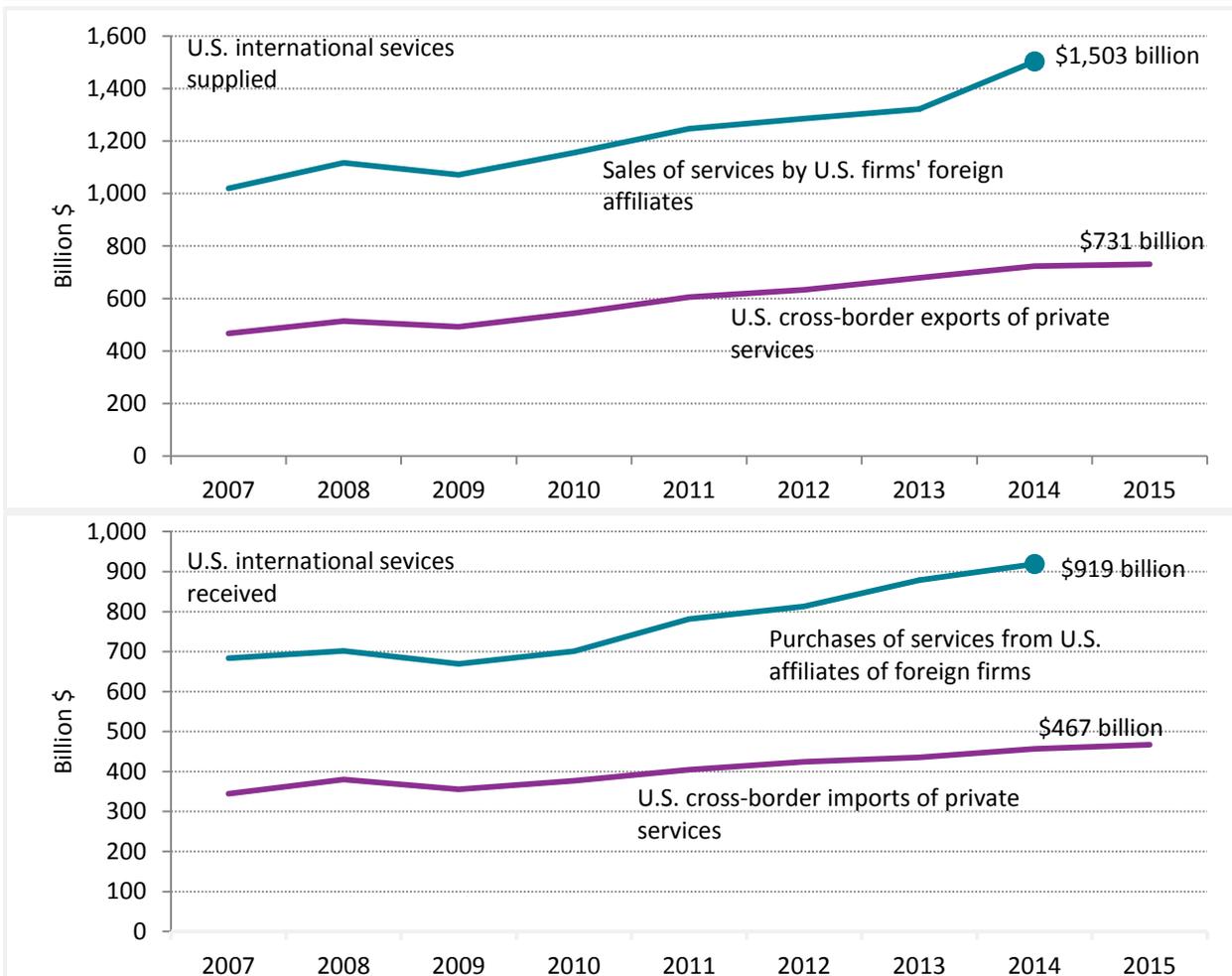
²¹ Cross-border services trade, as reported by the BEA, includes both private and public sector transactions. The latter principally reflect operations of the U.S. military and embassies abroad. However, because public sector transactions are not considered to reflect U.S. services industries' competitiveness and may introduce anomalies resulting from events such as international peacekeeping missions, this report will focus solely on private sector transactions, except as noted.

²² For comparison, U.S. services exports represented around 24.9 percent of total exports of goods and services, while imports accounted for around 15.0 percent of total imports of goods and services. The U.S. also runs a trade deficit in goods of \$745.7 billion. USITC calculation, U.S. Census Bureau, "U.S. International Trade In Goods and Services" (accessed March 13, 2017).

²³ In this study, all multiyear growth rates are calculated as compound annual growth rates (CAGR) unless otherwise specified.

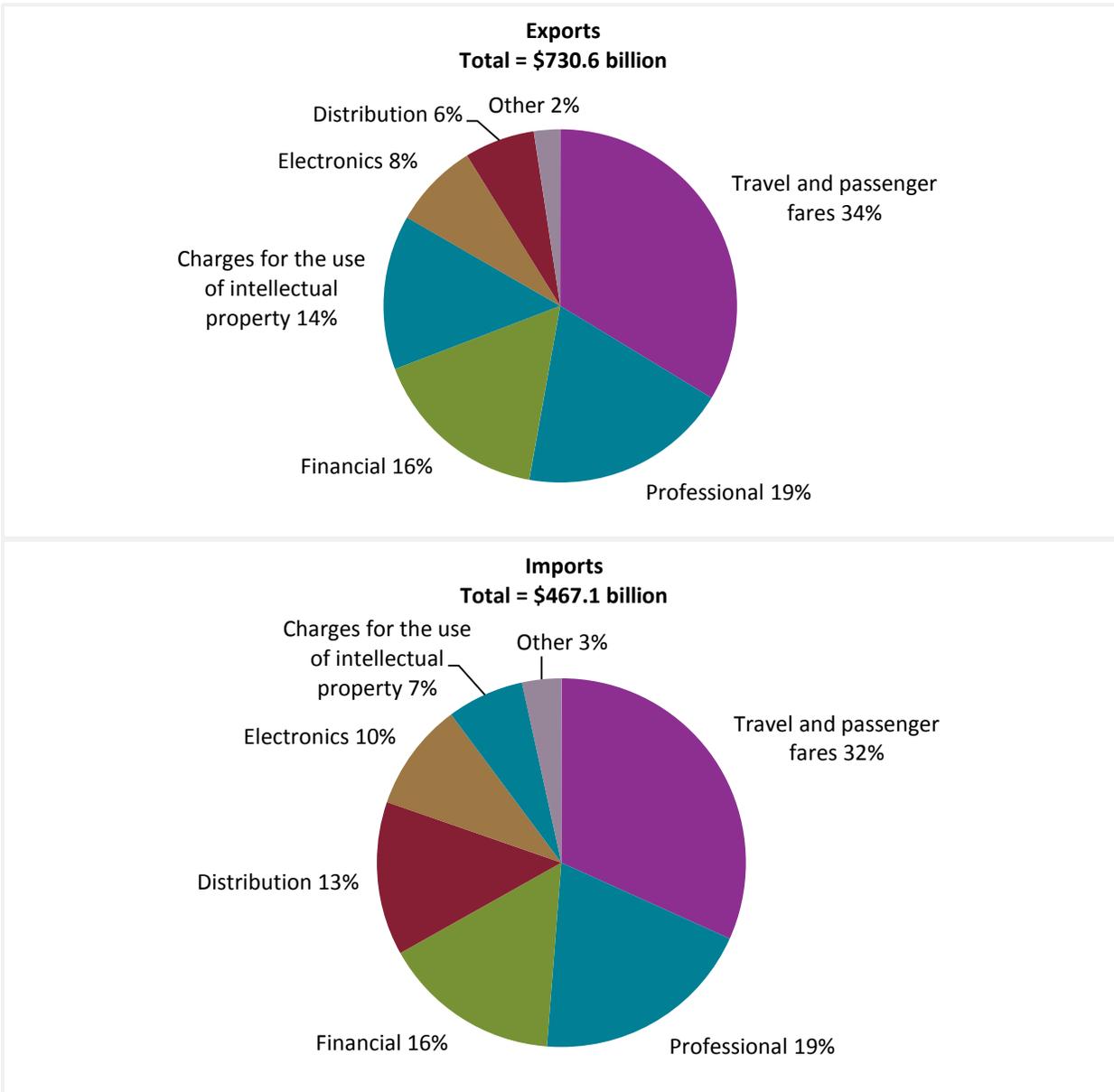
²⁴ USDOC, BEA, table 2.2, "U.S. International Trade in Services," October 24, 2016. For comparison, the average annual growth rates of exports during 2010–14 for charges for the use of intellectual property, financial services, and distribution services were 5 percent, 10 percent, and 4 percent, respectively.

Figure 1.2: U.S. services: Sales and purchases of services through affiliate transactions were more than twice the value of cross-border trade in services in 2014



Source: USDOC, BEA, table 2.1, "U.S. Trade in Services, by Type of Service," October 24, 2016; table 4.1: "Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate," December 19, 2016; and table 5.1, "Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSA, by Industry of Affiliate and by Country of UBO," December 19, 2016. (See [appendix table B.2.](#))

Figure 1.3: U.S. services: Travel and passenger fares accounted for the largest share of U.S. cross-border trade in 2015



Source: USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service,” October 24, 2016. (See [appendix table B.3.](#))
 Notes: Excludes public-sector transactions. Total exports and imports by sector are based on the latest BEA data for which all figures for sectors are available.

The growth of U.S. services imports also slowed during 2015, rising by only 2 percent, in contrast to an average of 5 percent during 2010–14. Similar to exports, slowing import growth is attributable to declining import growth in some industry segments and to falling imports in others. In 2015, imports of electronic services and professional services grew by 1 percent and 5 percent, respectively, compared to annual growth rates (in both segments) of 8 percent

during 2010–14. Imports actually declined in the categories of charges for the use of intellectual property (down 9 percent) and in financial services (down 5 percent).²⁵

As in previous years, most U.S. services industries registered cross-border trade surpluses in 2015. The largest trade surplus was in travel services (\$97.9 billion), followed by charges for the use of intellectual property (\$71.8 billion), professional services (\$48.7 billion), and financial services (\$46.7 billion). Distribution services was the only major industry category to register a cross-border trade deficit in 2015 (\$15.8 billion), although several industry subsectors also recorded trade deficits, including insurance services (\$30.6 billion), sea transport services (\$19.3 billion), and computer services (\$11.8 billion).

These deficits occurred for diverse reasons.²⁶ The deficit in distribution services largely reflects the deficit in U.S. merchandise trade and the payments of freight and port fees to transport those goods to the United States.²⁷ The deficit in insurance services was principally the result of U.S. primary insurers' payments to European and Bermudian reinsurers in return for assuming a portion of their risks.²⁸ Finally, the deficit in computer services primarily reflects the tendency of some U.S. firms to offshore such services to foreign providers, particularly those in India.

A small number of developed countries continued to account for a substantial portion of U.S. cross-border services trade. The UK, Canada, Japan, Ireland, and Germany collectively represented 32 percent of U.S. cross-border services exports in 2015. During the same year, the countries with the largest shares of U.S. services imports were the UK (11 percent), Germany (7 percent), Japan (6 percent), Canada (6 percent), and Bermuda (5 percent). As a region, in 2015, the European Union (EU) accounted for 30 percent of U.S. services exports and 35 percent of U.S. imports.²⁹

Cross-border Trade, 2016

Preliminary data for 2016 suggest a small increase in total U.S. services exports, while imports continued to grow at a faster rate that year. Annual private services exports were reported to

²⁵ USDOC, BEA, table 2.2, "U.S. International Trade in Services," October 24, 2016.

²⁶ Ibid.

²⁷ For example, Chinese shipments of manufactured goods to the United States typically exceed U.S. shipments of goods to China; payments to Chinese or other foreign shippers for transporting U.S. merchandise imports are recorded by the BEA as U.S. imports of transportation services.

²⁸ Reinsurance is a form of risk management whereby insurance companies buy insurance contracts from other insurers (reinsurers) to protect themselves from large unexpected claims.

²⁹ USDOC, BEA, "U.S. International Trade in Services," October 24, 2016. Data for the European Union used in this report include the UK.

be \$732.6 billion in 2016, up just 0.3 percent from \$730.6 billion in 2015 (table 1.1).³⁰ However, some individual industries experienced high growth. Exports of professional and management consulting services and of maintenance and repair services rose 13.9 and 10.2 percent, respectively, from 2015 to 2016. These increases were mostly offset by declines in exports in other sectors, including technical, trade-related, and other business services (down 13.4 percent).

Overall, services imports in 2016 totaled \$482.0 billion, exceeding those in 2015 by 3.2 percent. As a result, in 2016, the United States recorded a services trade surplus of \$250.6 billion, a decrease of \$12.8 billion from the previous year.³¹ Initial data indicate that the UK and Canada remained the largest recipients of U.S. cross-border services exports in 2016, while China overtook Japan to become the third-largest export market. The UK, Canada, and Germany remained the largest sources of U.S. services imports.³²

³⁰ The data regarding exports and imports for 2016 discussed in this section are preliminary; the data do not contain breakdowns for all countries and certain industries or affiliate transactions, which are included in the data reported for 2015 referenced in the previous section. Data reported in table 1.1 for 2015 have also been revised slightly from the figures published in the BEA's 2016 *Survey of Current Business*. The BEA is scheduled to publish its full report covering international trade in services in October 2017.

³¹ USDOC, BEA, table 3.1, "U.S. International Trade in Services," March 21, 2017.

³² Ibid.

Table 1.1: U.S. private services exports and imports to the world, by category, 2015–16

Service industry	2015 (billion \$)	2016 (billion \$)	% change, 2015–16
Exports			
Travel and passenger fares	246.2	246.0	-0.1
Charges for the use of intellectual property n.i.e. ^a	124.7	122.2	-2.0
Financial services	102.5	96.8	-5.6
Professional and management consulting services	64.9	74.0	13.9
Research and development services	34.5	36.2	4.7
Technical, trade-related, and other business services ^b	35.2	30.5	-13.4
Maintenance and repair services, n.i.e.	24.0	26.5	10.2
Air transport (excludes passenger fares)	23.0	22.8	-0.8
Insurance services	16.2	16.3	0.7
Other	17.2	17.6	2.3
Total	730.6	732.6	0.3
Imports			
Travel and passenger fares	141.0	142.9	1.3
Insurance services	47.8	48.4	1.3
Charges for the use of intellectual property n.i.e. ^a	39.5	42.7	8.2
Professional and management consulting services	40.4	41.2	1.9
Sea transport	37.3	35.1	-5.9
Research and development services	32.0	35.0	9.2
Computer services	27.8	29.7	6.9
Financial services	25.2	25.2	0.3
Technical, trade-related and other business services ^b	26.9	24.5	-9.0
Other	49.3	57.2	16.2
Total	467.1	482.0	3.2

Source: USDOC, BEA, table 3.1, "U.S. International Trade in Services," March 21, 2017.

Notes: Table 1.1 was updated on October 27, 2017 to correct a production error affecting the percent change between 2015 and 2016 and the values of the "Other" services exports category. Data for 2016 are preliminary. n.i.e. = not included elsewhere. Excludes public-sector transactions.

^a Charges for the use of intellectual property, n.i.e. (formally classified as royalties and licenses fees), includes processes, computer software, trademarks and franchise fees, audiovisual and related products, and other intellectual property.

^b The category of technical, trade-related, and other business services includes construction, architecture and engineering services, waste treatment, operational leasing, trade-related, and other business services.

Affiliate Transactions, 2014

In 2014, services supplied in foreign markets by the local affiliates of U.S. multinational enterprises (MNEs) totaled \$1,503.4 billion, compared to \$1,321.5 billion in 2013 (figure 1.4). Note that the difference between foreign affiliate transactions recorded in 2013 and 2014 is largely attributable to an increased number of reporting enterprises on the BEA's 2014 *Benchmark Survey of U.S. Direct Investment Abroad*. As a result, these figures do not necessarily

reflect an actual increase in the amount of services supplied.³³ In 2014, distribution services represented the largest share of sales, with 25 percent of total services provided by U.S.-owned foreign affiliates. Financial services ranked second, accounting for 19 percent of such sales (figure 1.4).³⁴ The largest foreign purchasers of services from U.S.-owned affiliates were the UK (15 percent), Canada (9 percent), and Ireland (7 percent). In 2014, sales to the EU represented 43 percent of total services supplied by U.S.-owned foreign affiliates.³⁵

The value of services purchased from foreign-owned affiliates in the United States grew by 3 percent in 2014 to \$918.7 billion, slower than the 7 percent average annual growth rate exhibited by the industry during 2010–13. Distribution services remained the largest category in 2014, accounting for 28 percent of services purchased from foreign-owned affiliates in the United States, and financial services ranked second, accounting for 21 percent of such purchases.³⁶ By country, Japan accounted for the largest share of services purchased from foreign-owned affiliates in 2014 (16 percent), followed by the UK (15 percent) and Germany (15 percent). Overall, affiliates of EU-based companies supplied 52 percent of such purchases in the United States.³⁷

³³ USDOC, BEA, *U.S. International Services*, December 2016, 21. The net increase in the recorded value of services supplied by U.S. MNEs in foreign markets that can be attributed to improved coverage on the benchmark survey was 12 percent. By contrast, the increase that can be attributed to the acquisition or establishment of new affiliates in 2014, changes in existing operations, and sales or liquidations of foreign affiliates was 2 percent.

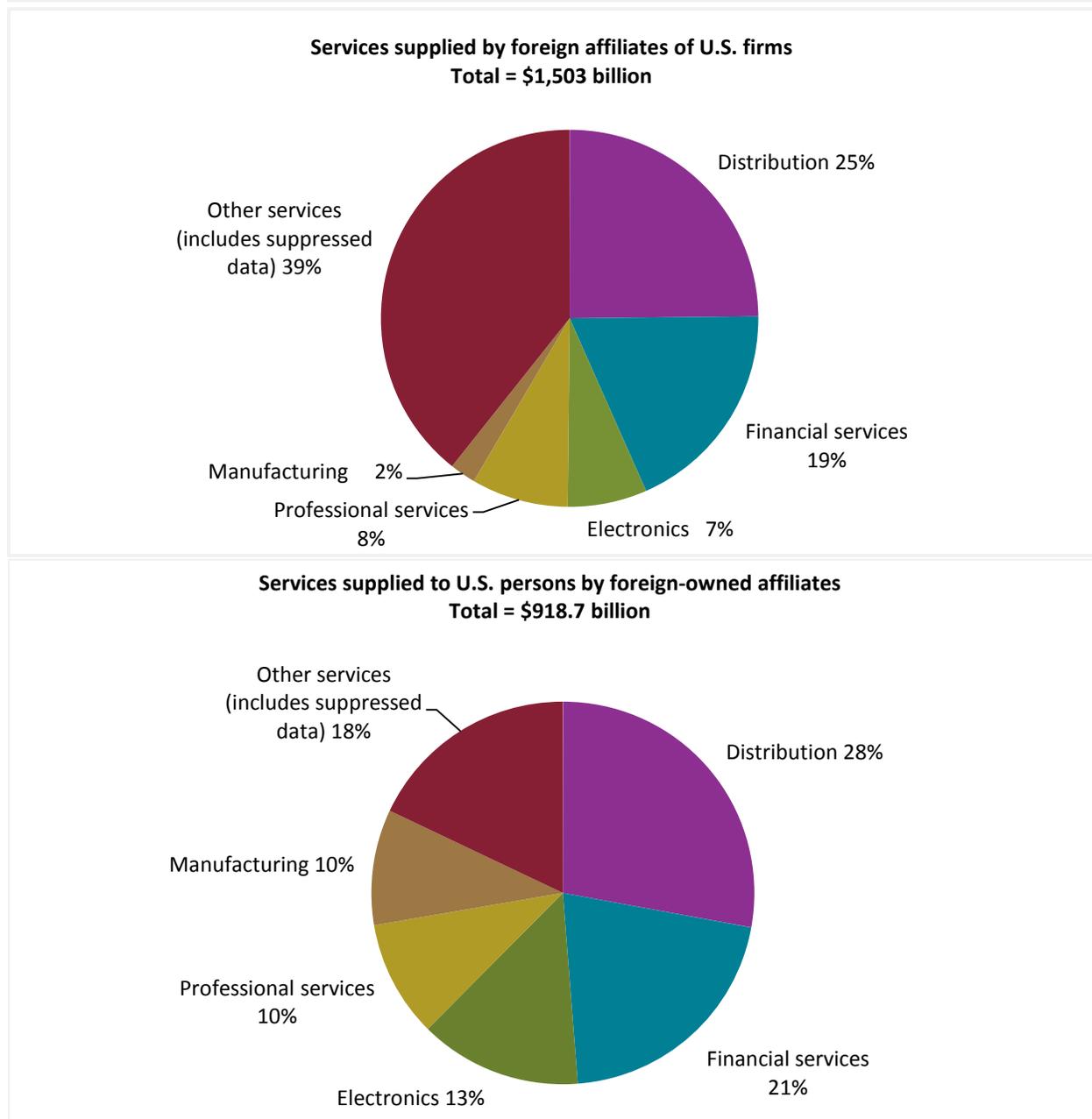
³⁴ USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” December 19, 2016. “Other services”—a catchall category comprising services industries ranging from agriculture to publishing—accounted for 39 percent of total services sold through U.S.-owned affiliates.

³⁵ USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” December 19, 2016.

³⁶ USDOC, BEA, table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO.” December 19, 2016.

³⁷ USDOC, BEA, table 5.2, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Country of UBO.” December 19, 2016.

Figure 1.4: U.S. services: In 2014, distribution accounted for the largest share of services supplied by both foreign affiliates of U.S.-owned firms and foreign-owned affiliates in the United States



Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and “Table 5.1. Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO,” December 19, 2016. (See [appendix table B.4.](#))

Notes: 2014 is the latest year for which U.S. affiliate transactions data are available. For “Services supplied by foreign affiliates of U.S.-owned firms,” data were suppressed for trucking and warehousing (under distribution); motion picture and sound recording, telecommunications, broadcasting (except Internet) and data processing, hosting, and related services (under electronic services); management, scientific, and technical consulting; other professional, scientific, and technical services; and waste management and remediation services (all under professional services). For “Services supplied by foreign affiliates of U.S.-owned firms,” data were suppressed for waste management and remediation services and health care and social services (both under professional services).

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Chapter 1: Introduction

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Chapter 2

Professional Services

Overview

Professional services³⁸ encompass a range of industries, linked by their use of highly skilled labor. These industries supply the administrative infrastructure that supports businesses and provide essential social services such as healthcare and education. While professional services represent a large proportion of total services employment worldwide, they account for only a small share of international trade in services by value.³⁹ Accountants, architects, lawyers, teachers, and healthcare providers require advanced education and training, and are often subject to licensing, certification, or other requirements. These requirements ensure that providers are properly qualified, but may also limit market entry. Where requirements differ, both across international borders as well as among different domestic jurisdictions, trade, investment, and occupational mobility may be hindered, particularly when such requirements are complex or opaque.⁴⁰ Economic growth is increasing demand for professional services across the world, including in emerging markets like China.

Automation is Changing Business Models in Professional Services

Professional services are rapidly adopting digital technologies, though the effect is uneven across industries.⁴¹ Automation, at first concentrated in the manufacturing sector, is increasingly spreading to professional services, as software and other computer processes can now perform many routine tasks. According to one study, several professional services occupations are at relatively high risk of undergoing automation in the future, including

³⁸ Professional services that are discussed in detail in this report include accounting and auditing services, architecture and engineering services, legal services, and management consulting services. Other professional services such as advertising, healthcare, education, scientific and technical consulting and waste management are included in overall professional services statistics presented in chapters 1 and 2 but are not discussed separately.

³⁹ USDOC, BEA, Interactive data, "Table 6.5D. Full-Time Equivalent Employees by Industry" (accessed January 4, 2017).

⁴⁰ Nordas and Rouzet, "The Impact of Services," February 5, 2015 4–5; Borchert, Gootiiz, and Mattoo, "Policy Barriers," January 2014, 2, 34–36.

⁴¹ World Economic Forum, "Digital Transformation Initiative: Professional Services Industry," January 2017.

accountants, auditors, legal secretaries, and tax preparers.⁴² The same study finds that automation risk is lowest for occupations involving non-routine, creative tasks along with those involving significant social interaction and persuasion. This category includes many occupations in healthcare and education, as well as lawyers and architects (for a discussion of how technology is changing healthcare and education, see box 2.1 below).

In one survey of businesses, 39 percent of respondents indicated they had already implemented some type of automation in accounting, and 77 percent planned to use automation in the next five years.⁴³ Even professional services occupations involving higher-level cognitive skills, such as abstract problem-solving, may be affected by this trend. Management consultants are investing in big data capabilities to augment their human capital and offer new services to their clients, such as analyzing customer interactions, while also cutting costs.⁴⁴ Similarly, some law firms are beginning to use artificial intelligence tools (including “e-discovery” software) to help lawyers scrutinize large volumes of case law and evidence, a task that had previously been difficult to automate due to the unstructured nature of the data.⁴⁵ The future of professional services industries like legal services may involve a hybrid approach, with virtual assistants and other systems supporting highly skilled professionals. This approach will require firms to create new jobs to manage the evolving technology.⁴⁶ Automation can thus be both a complement and a substitute for labor, though it may also contribute to labor market polarization and wage inequality.⁴⁷

⁴² Frey and Osborne, “The Future of Employment,” September 17, 2013, 56–72. The report, which examines occupations in both the services- and goods-producing industries, assumes that new technologies will automate certain tasks, particularly those that can be distilled into a set of rules which computers can follow. It estimates the probability of an occupation being automated by looking at the percentage of potentially automatable tasks performed by that occupation. Note that in some occupations, such as cashiers, the technology already exists to automate most of the functions of an occupation, but other factors such as cost or consumer preference prevent the occupation from being carried out entirely by machines.

⁴³ Capgemini, “Robotic Process Automation,” 2016, 20.

⁴⁴ Brahm, Cheri, and Sherer, “What Big Data Means,” August 8, 2016.

⁴⁵ Sobowale, “How Artificial Intelligence is Transforming the Legal Profession,” April 1, 2016.

⁴⁶ Deloitte, “Developing Legal Talent,” February 2016.

⁴⁷ Autor, “Why Are There Still So Many Jobs,” 2015, 12; Bessen, “How Computer Automation Affects Occupations,” October 3, 2016, 2. Labor market polarization occurs when automation acts as substitute for labor involving middle-skilled jobs but complements or creates higher-skilled jobs. Autor notes that over the last several years both the top and the bottom of the income and skill distribution have experienced wage gains (though not to the same degree); the middle of the distribution, though, has not. Bessen also finds that occupations which use computers more intensively have grown faster than other comparable occupations. But increases in computer use are also associated with greater wage inequality within occupations, as computer use lowers the cost of supplying certain services while increasing the wage gap between workers of different skill levels.

Regulations and Licensing Requirements Pose Challenges

Professional services are highly regulated, though the intensity of regulation varies across industries and countries. Legal services and accounting services tend to be more heavily regulated (along with healthcare and education); consulting services, less so.⁴⁸ Regulations most obviously impede trade when they explicitly limit entry into foreign markets (for example, via nationality requirements or economic needs tests). But they also impede trade when they impose additional operational requirements on firms (such as joint venture requirements or restrictions on the hiring of foreign staff), as well as when they are opaque or overly complex. Licensing requirements, though non-discriminatory, pose a particular challenge in professional services industries like legal services and accounting, as different jurisdictions (at the national or subnational level) have different standards for issuing licenses.⁴⁹ Harmonizing regulations in trade agreements has proven difficult.⁵⁰ However, mutual recognition agreements (MRAs), which provide a framework for accepting foreign credentials,⁵¹ have been included in past trade agreements. For example, members of the Association of Southeast Asian Nations (ASEAN) currently have an MRA covering architecture and engineering services. The North American Free Trade Agreement (NAFTA) contains an MRA for accounting services, though it took 10 years of negotiations for the three member countries to fully implement the agreement.⁵² World Trade Organization (WTO) research has found that overall regulatory restrictiveness has decreased since the 1990s in accounting services and architecture services, but regulations on legal services show no clear trend of liberalization.⁵³

Having to deal with large numbers of dissimilar regulations imposes additional costs on firms doing business in multiple markets. One study by the Organisation for Economic Co-operation and Development (OECD) found that regulatory differences among trading partners were equivalent to an ad valorem trade cost of between 20 and 75 percent, even when other

⁴⁸ Geloso Grosso and Shepherd, "Towards the Development," 2008, 19. Professional services generally fall into two categories: those that require some type of accreditation (such as accounting services, architecture services, and legal services) and those that do not (such as management consulting or advertising). Note, however, that other types of regulation, such as national or local standards, can also affect trade.

⁴⁹ WTO, "Accountancy Services," June 7, 2010, 1; WTO, "Legal Services," June 14, 2010, 18.

⁵⁰ USITC, "Tenth Annual Services Roundtable," November 16, 2016, 87.

⁵¹ Such a framework does not imply automatic acceptance of foreign credentials, and agreements typically leave considerable discretion for monitoring and even for revoking recognition.

⁵² ASEAN, "Mutual Recognition Arrangement on Architectural Services," November 20, 2010; Peek et al., "NAFTA Professional Mutual Recognition," 2007. Negotiations on the MRA in NAFTA were complicated by the existence of 55 separate regulatory bodies with jurisdiction over accounting standards in the three member countries.

⁵³ WTO, "Legal Services," June 14, 2010, 19; WTO, "Accountancy Services," June 7, 2010, 9; WTO, "Architecture Services," September 17, 2009, 7.

measures of services trade restrictiveness were low.⁵⁴ A number of countries, such as the United States and Canada, also impose certain licensing requirements at the state or provincial level (for example, lawyers who must pass the bar exam or otherwise be licensed in each U.S. state where they practice). This structure adds an additional level of heterogeneity, which may be associated with higher wages and limited labor mobility.⁵⁵

Box 2.1: Mode Shifting: Massive Open Online Courses and Telemedicine

New developments in digital technology are enabling the cross-border delivery of services in industries that previously required suppliers to be close to their consumers. This trend has had a particular impact on professional services, where many firms can choose to deliver services through different modes of supply (see box 1.1). Education and healthcare services are examples of industries where individuals, like students or patients, traditionally had to travel abroad to consume a service at its point of delivery, such as a school or hospital. However, while the majority of education and healthcare services are still provided in person, both massive open online courses (MOOCs) and telemedicine are reshaping parts of these industries by enabling the delivery of certain services without the need for suppliers and consumers to be in the same physical location.

Massive Open Online Courses

MOOCs are university-level classes offered via streaming video. Emerging in 2009–10, websites like Academic Earth and Open Culture offered videos of professors teaching classes on subjects ranging from corporate finance to the history of the Roman Empire. Although viewers did not earn credit, these early sites attracted attention because they featured professors at top-level academic institutions, including Harvard University, the Massachusetts Institute of Technology, and Stanford University. Starting in 2012, MOOCs received a surge of national attention following the launch of several high-profile websites, most notably Coursera, edX, and Udacity.

During this initial period, enthusiastic advocates hailed MOOCs as a revolutionary development that could overturn a model of higher education that had existed for centuries. These advocates envisaged a “scaling up” of higher education, with MOOCs delivering a top-tier education over the Internet to millions of students around the globe at a very low cost. They foresaw such efficiencies as eventually driving down costs at traditional, “bricks-and-mortar” colleges and universities. Some advocates wondered whether these online classes would merely transform the existing higher education establishment, or replace it entirely.^a Although student interest in MOOCs has been substantial—an estimated 58 million students worldwide signed up for at least one MOOC between 2012 and 2016^b—initial expectations have been tempered, largely because course completion rates are consistently less

⁵⁴ Nordås, “Services Trade Restrictiveness Index: The Trade Effect,” May 13, 2016, 10, 17. Ad valorem trade costs are similar to tariffs in that they can be interpreted as a percentage of the value of the product being traded. This range is derived from different trade cost elasticities used in the authors' gravity model (which relates bilateral trade between countries to various country characteristics) to estimate ad valorem equivalents. The average heterogeneity score on which the ad valorem equivalent range is based was 0.26, while the regulatory heterogeneity scores for professional services were all above the average: accounting services scored 0.322; architecture services, 0.296; engineering services, 0.281; and legal services, 0.392.

⁵⁵ Kleiner, “Reforming Occupational Licensing Policies,” March 2015. Several U.S. states have reciprocity agreements for lawyers and other professional services occupations, and eligibility requirements may vary depending on work experience or other qualifications.

than 10 percent of initial enrollments.^c Additionally, faculty at some universities became skeptical, stating that classes delivered to massive audiences via streaming technologies were inferior to classroom-based instruction.^d At the same time, some traditional universities have also begun to offer online classes to students, both in conjunction with on-campus education and as stand-alone distance learning programs.

Telemedicine

Mode shifting is also underway in healthcare through the increased use of telemedicine, which provides clinical care remotely using telecommunications and other information technologies. Early attempts at telemedicine were usually limited to offering healthcare to rural or other isolated populations. But more recently, hospitals and clinics have been expanding their telemedicine offerings to the general public, especially in domains like patient monitoring and the remote diagnosis of certain conditions. The sector is growing quickly from a low base. However, several barriers, including differences in state-level regulations, licensing and liability issues, and patient concerns about quality, have restricted the growth of telemedicine (including international telemedicine services) to a few niche areas of healthcare.^e

Radiology and pathology, which rely on medical images to diagnose health issues, were some of the first types of healthcare to use telemedicine due to the relative ease with which such data could be transmitted over the Internet. This type of telemedicine took two forms: the “nighthawk” model, in which scans are sent to a dedicated team that processes the images in large volumes; and the outsourcing model, where medical images are sent overseas to be read by physicians in countries where costs are lower, such as India.^f Though many telemedicine services focus on cost savings, U.S. hospitals and physicians also supply telemedicine services to foreign patients in emerging markets like China, particularly in specialty areas such as pediatrics and cardiology, in which U.S. providers are seen as higher quality.^g

Hopes for the widespread use of telemedicine were initially high, and the industry has grown rapidly in recent years. Nonetheless, barriers such as licensing and insurance requirements have hindered the industry’s development, and it makes up only a small proportion of the total healthcare market. For example, while U.S. telemedicine revenue rose 34 percent annually during 2010–15,^h reaching \$645 million in 2015, it is only a fraction of total annual U.S. healthcare spending of roughly \$3.2 trillion. While data reflecting telemedicine’s share of total U.S. healthcare spending are unavailable, one industry group estimated that 15 million U.S. patients received some type of care via telemedicine in 2015. Another survey found that 15 percent of family physicians used some form of telemedicine in their practices in the same year, and that 39 percent of consumers were not familiar with telemedicine.^j

^a Pope, “What Are MOOCs Good For?” December 15, 2014.

^b Shah, “MOOCs by the Numbers,” December 25, 2016.

^c Parr, “Not Staying the Course,” May 10, 2013; Pope, “What Are MOOCs Good For?” December 15, 2014.

^d Pope, “What Are MOOCs Good For?” December 15, 2014.

^e Morea, *Telehealth Services in the U.S.*, August 2015; Beck, “How Telemedicine Is Transforming,” June 26, 2016.

^f McLean and Richards, “Teleradiology,” September 2006. The nighthawk model reduces costs by keeping radiologists employed full-time, something out of the reach of many smaller hospitals, while the outsourcing model reduces costs by using radiologists in countries where wages are lower and who may not be licensed to practice in the United States.

^g Kutscher, “The Long Reach of Medicine,” October 20, 2012.

^h IBISWorld, *Telehealth Services in the U.S.* August 2016.

ⁱ USDHHS, CMS, “NHE Tables” (accessed March 20, 2017).

^j Beck, “How Telemedicine Is Transforming Health Care,” June 26, 2016.

U.S. Trade in Professional Services

Professional services were substantial contributors to U.S. services trade in 2015, accounting for 19 percent of both total exports and total imports of U.S. cross-border services.⁵⁶ In that year, the United States exported \$139.7 billion and imported \$91.0 billion in professional services, resulting in a surplus of \$48.7 billion. Between 2010 and 2014, both exports and imports of professional services grew at an annual rate of about 8 percent (figure 2.1).⁵⁷

In 2015, management consulting services accounted for 31 percent of total professional services exports (\$42.8 billion).⁵⁸ Other leading subsectors were research and development services (\$34.5 billion, or 25 percent of sector exports), maintenance and repair services (\$24 billion, or 17 percent), and architecture and engineering services (\$13.9 billion, or 10 percent). Management consulting (\$31.4 billion) and research and development services (\$32.0 billion) each accounted for approximately 35 percent of sector imports.⁵⁹ The top market for U.S. professional services exports in 2015 was the UK (\$13.7 billion), likely followed by Canada, Ireland, and Switzerland.⁶⁰ During that same year, the UK (\$13.8 billion), Canada (\$6.9 billion), and Germany were the largest sources of U.S. imports of professional services.⁶¹

⁵⁶ USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service” (accessed June 20, 2016). For the purposes of this report, cross-border trade in professional services includes maintenance and repair services; research and development services; legal services; accounting, auditing, and bookkeeping services; business and management consulting and public relations services; advertising; architecture and engineering services; industrial services; and training services.

⁵⁷ USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service” (accessed June 20, 2016).

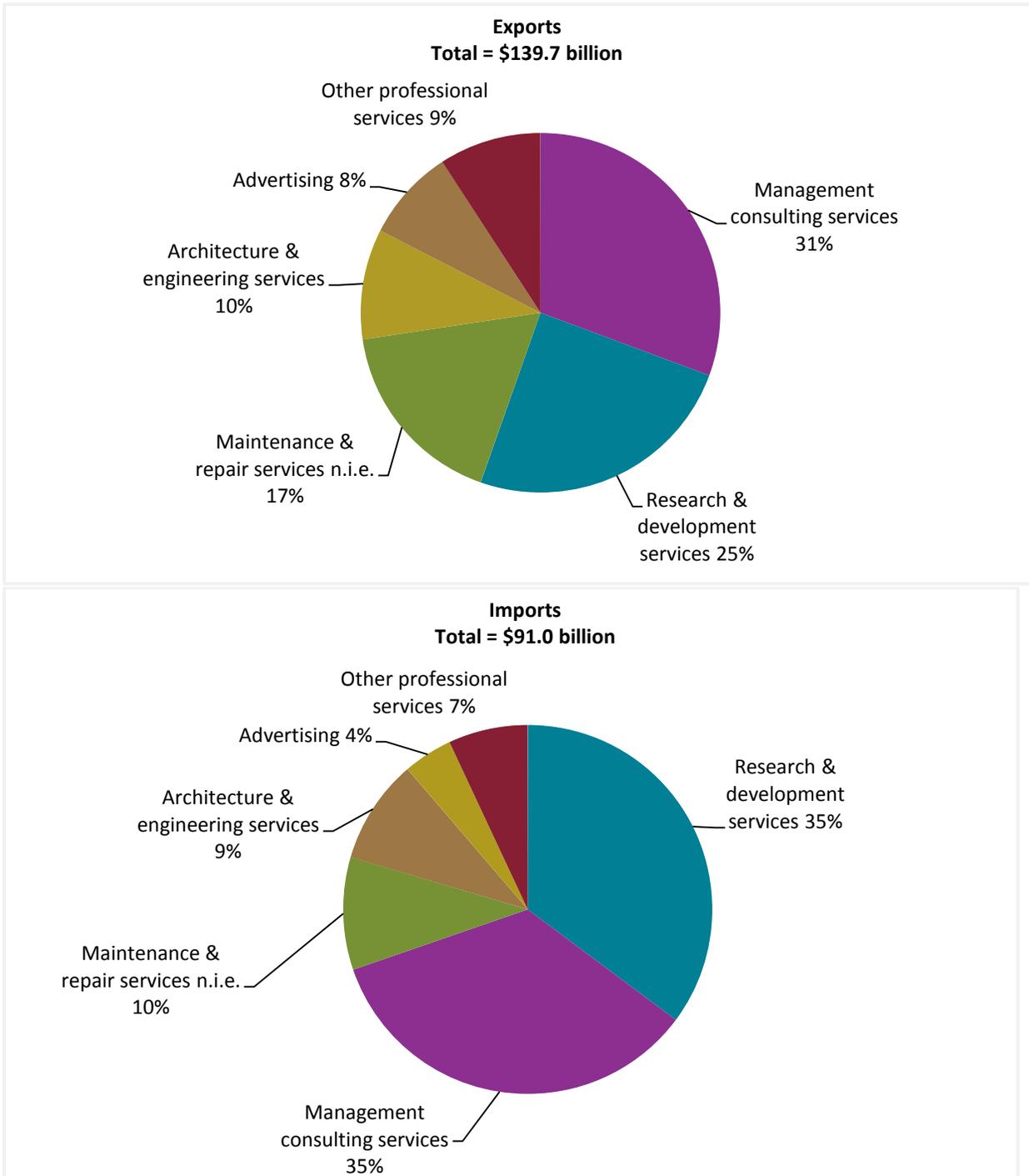
⁵⁸ The data presented here on cross-border trade in management consulting services are sourced from the BEA's *Business and management consulting and public relations services* category, which also includes expenses related to the general operation and management of a business not classified elsewhere as well as public relations services. USDOC, BEA representative, email interview by USITC staff, October 11, 2016.

⁵⁹ USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service” (accessed June 20, 2016).

⁶⁰ USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Service” (accessed June 20, 2016). Data suppression by the BEA prevents the calculation of exact export totals for Canada, Ireland, and Switzerland, although past trends suggest that these countries continue to be the second-, third-, and fourth- largest services export markets.

⁶¹ USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Service” (accessed June 20, 2016). Data suppression by the BEA prevents the calculation of an exact import total for Germany, although past trends indicate that Germany continues to be the third-largest export market.

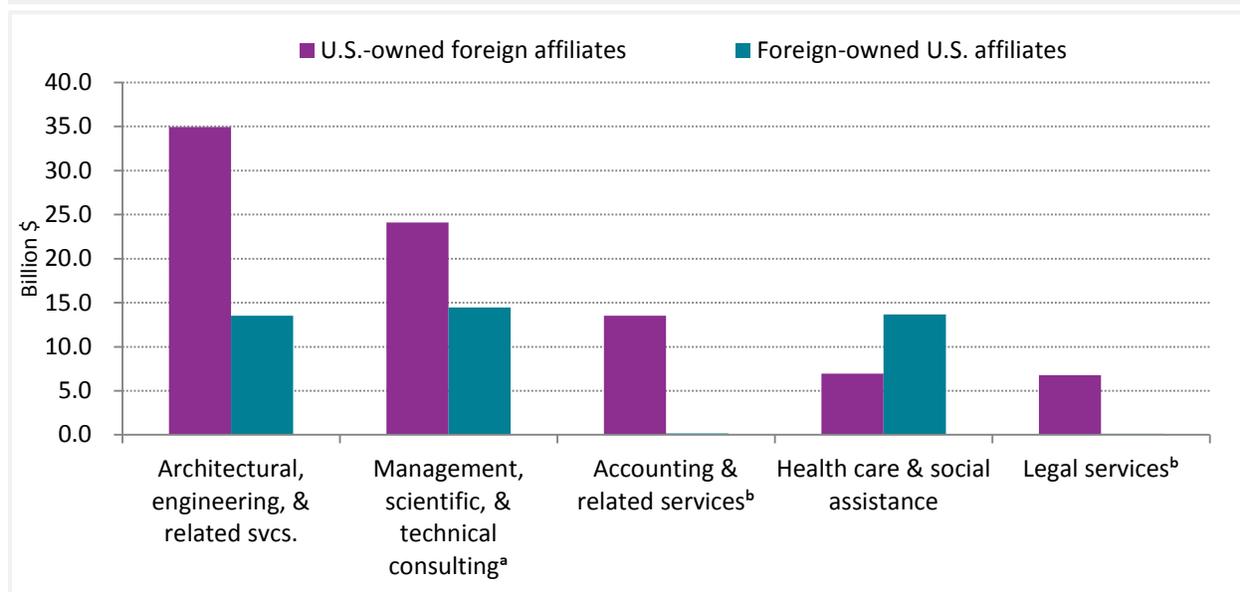
Figure 2.1: U.S. professional services: In 2015, management consulting services led cross-border exports while research and development services led imports of professional services



Source: USDOC, BEA, table 2.1, "U.S. Trade in Services, by Type of Service" (accessed November 14, 2016). (See [appendix table B.5.](#)) Notes: Excludes public-sector transactions.

In 2014, the value of professional services sold in foreign markets by the local affiliates of U.S. MNEs totaled \$124.8 billion, a figure that is nearly as large as cross-border exports of such services. Sales of architecture, engineering, and related services (AE services) (\$34.9 billion) represented the largest share of these sales, accounting for 28.0 percent of total services provided by U.S.-owned foreign affiliates, while management consulting services (including scientific and technical consulting services) ranked second (19.3 percent). In that same year, professional services purchased from foreign-owned affiliates in the United States totaled \$90.7 billion. Management consulting services accounted for the largest shares of sales in the United States by the affiliates of foreign companies, accounting for 16.0 percent of the total, followed closely by healthcare and social assistance and AE services and (15.1 and 14.9 percent, respectively) (figure 2.2).⁶²

Figure 2.2: U.S. professional services: Architecture, engineering, and related services accounted for the largest share of professional services sales by foreign affiliates of U.S. firms in 2014



Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017). (See [appendix table B.6.](#))

Note: The advertising and related services category accounted for the largest share of purchases (\$36.5 billion) but was not broken out in this year’s report, and therefore was not included in this figure.

^a The total value of services supplied by foreign affiliates of U.S. management, scientific, and technical consulting firms is not available due to BEA suppression of data for Latin America and Other Western Hemisphere countries in 2014. However, services supplied by U.S. firms to all other regions of the world (plus Mexico and Brazil) totaled \$24.1 billion.

^b Legal services and accounting and related services accounted for \$111 million and \$154 million, respectively, of purchases from foreign-owned U.S. affiliates.

⁶² USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service” (accessed November 14, 2016). For affiliate transactions, the BEA reports data only for the broader management, technical, and scientific consulting category.

GDP, Employment, Labor Productivity, and Salaries

In 2015, the U.S. professional services industry grew by 3.6 percent to \$2.6 trillion, contributing 19 percent of U.S. private sector GDP⁶³ (table 2.1). Within the industry, the healthcare and social assistance segment⁶⁴ was not only the largest—accounting for 8.4 percent of private sector GDP—but also registered the fastest growth (4.5 percent) during 2014–15. This figure was more than twice the sector’s 1.9 percent compound annual growth rate (CAGR) during 2010–14 (table 2.2). During the same year, the waste management and remediation services segment grew by 0.8 percent, compared to an average annual decline of 3.6 percent during 2010–14.

Table 2.1: United States: GDP, FTEs, wage and salary accruals, and labor productivity, by goods and services industry, 2010, 2014–15

	2010	2014	2015	CAGR 2010–14	% change 2014–15
GDP ^a (billion \$)					
Private sector	12,650	13,754	14,144	2.1	2.8
Goods	2,780	3,010	3,089	2.0	2.6
Manufacturing	1,818	1,883	1,912	0.9	1.5
Nonmanufacturing	962	1,127	1,177	4.0	4.4
Services	9,870	10,745	11,056	2.1	2.9
Distribution services	2,132	2,339	2,399	2.4	2.5
Electronic services	744	853	929	3.5	8.9
Financial services	1,131	1,220	1,234	1.9	1.2
Professional services	2,348	2,554	2,646	2.1	3.6
Other services	3,516	3,779	3,848	1.8	1.8
FTEs (1,000)					
Private sector	100,074	110,823	112,239	2.6	1.3
Goods	18,398	20,075	20,395	2.2	1.6
Manufacturing	11,231	11,918	12,076	1.5	1.3
Nonmanufacturing	7,167	8,157	8,319	3.3	2.0
Services	81,676	90,748	91,844	2.7	1.2
Distribution services	21,691	24,698	23,931	3.3	-3.1
Electronic services	3,141	3,478	3,615	2.6	3.9
Financial services	6,003	6,281	6,413	1.1	2.1
Professional services	25,685	28,223	28,970	2.4	2.6
Other services	25,157	28,069	28,914	2.8	3.0

⁶³ Private sector GDP excludes the value of goods and services produced by the government at the federal, state, and local levels (such as defense and government enterprises). This is similar to exports and imports of private services, a category that excludes international government transactions involving foreign military bases and U.S. embassies abroad.

⁶⁴ The healthcare and social assistance sector includes industries in the NAICS 62 major category, such as hospitals, nursing care facilities, and residential care facilities, as well as childcare services and other types of social assistance.

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	2010	2014	2015	CAGR 2010–14	% change 2014–15
Wages and salary accruals (\$ per FTE)^b					
Private sector	51,906	56,395	58,726	2.1	4.1
Goods	57,252	62,636	64,140	2.3	2.4
Manufacturing	60,017	65,445	66,802	2.2	2.1
Nonmanufacturing	52,919	58,531	60,274	2.6	3.0
Services	50,701	55,015	57,524	2.1	4.6
Distribution services	43,798	45,361	49,292	0.9	8.7
Electronic services	86,626	100,693	103,515	3.8	2.8
Financial services	84,909	97,059	99,672	3.4	2.7
Professional services	58,706	63,860	65,861	2.1	3.1
Other services	35,833	39,544	40,886	2.5	3.4
Labor productivity^c (\$ per FTE)					
Private sector	126,409	124,111	126,020	-0.5	1.5
Goods	151,125	149,938	151,444	-0.2	1.0
Manufacturing	161,891	158,005	158,331	-0.6	0.2
Nonmanufacturing	134,254	138,151	141,447	0.7	2.4
Services	120,843	118,403	120,377	-0.5	1.7
Distribution services	98,280	94,720	100,238	-0.9	5.8
Electronic services	236,740	245,371	257,095	0.9	4.8
Financial services	188,439	194,188	192,406	0.8	-0.9
Professional services	91,396	90,483	91,336	-0.3	0.9
Other services	139,758	134,618	133,077	-0.9	-1.1

Source: USDOC, BEA, “Real Value Added by Industry,” April 1, 2016; USDOC, BEA, table 6.5D, “Full-Time Equivalent Employees by Industry,” April 1, 2016; USDOC, BEA, table 6.3D, “Wage and Salary Accruals per Full Time Equivalent Employee by Industry,” August 3, 2016.

Note: CAGR = compound annual growth rate.

^a Real valued added by industry using 2009 chained dollars.

^b Average wages are calculated by industry group, not by occupation. Wage and employment data presented in table 2.1 for the goods sector cover all workers employed in that sector, including those in both production and services occupations.

USDOC, BEA representative, email interview by USITC staff, May 3, 2017.

^c Labor productivity, calculated by USITC staff, is GDP by industry divided by the number of FTEs.

Table 2.2: United States: GDP, FTEs, wage and salary accruals, and labor productivity, by professional services industry, 2010, 2014–15

	2010	2014	2015	CAGR 2010–14	% change 2014–15
GDP^a (billion \$)					
Education services	165	168	168	0.4	0.2
Health care and social assistance	1,056	1,137	1,187	1.9	4.5
Legal services	198	186	190	-1.6	2.0
Management of companies and enterprises	266	338	346	6.2	2.4
Miscellaneous professional, scientific, and technical services	619	688	717	2.7	4.3
Waste management and remediation services	44	38	39	-3.6	0.8
FTEs (thousands)					
Education services	2,865	3,074	3,135	1.8	2.0
Health care and social assistance	14,910	16,471	16,930	2.5	2.8
Legal services	1,072	1,074	1,075	0.0	0.1

	2010	2014	2015	CAGR 2010–14	% change 2014–15
Management of companies and enterprises	1,791	2,009	2,077	2.9	3.4
Miscellaneous professional, scientific, and technical services	4,705	5,219	5,370	2.6	2.9
Waste management and remediation services	342	376	383	2.4	1.9
Wages and salary accruals (\$ per FTE) ^b					
Education services	41,317	45,054	45,871	2.2	1.8
Health care and social assistance	48,993	51,376	53,020	1.2	3.2
Legal services	86,568	93,691	96,969	2.0	3.5
Management of companies and enterprises	103,877	123,136	125,658	4.3	2.0
Miscellaneous professional, scientific, and technical services	76,776	85,820	89,125	2.8	3.9
Waste management and remediation services	55,351	57,758	59,366	1.1	2.8
Labor productivity ^b (\$ per FTE)					
Education services	57,592	54,652	53,589	-1.3	-1.9
Health care and social assistance	70,825	69,030	70,112	-0.6	1.6
Legal services	184,701	173,184	176,744	-1.6	2.1
Management of companies and enterprises	148,520	168,243	166,586	3.2	-1.0
Miscellaneous professional, scientific, and technical services	131,562	131,826	133,520	0.1	1.3
Waste management and remediation services	128,655	101,064	101,828	-5.9	0.8

Source: USDOC, BEA, Interactive data, GDP by Industry, "Real Value Added by Industry," April 1, 2016; USDOC, BEA, table 6.5D, "Full-Time Equivalent Employees by Industry," April 1, 2016; USDOC, BEA, table 6.3D, "Wages and Salaries by Industry," August 3, 2016.

Note: CAGR = compound annual growth rate. Average wages are calculated by industry group, not by occupation.

^a Real valued added by industry using 2009 chained dollars.

^b Labor productivity, calculated by USITC staff, is GDP by industry divided by the number of FTEs.

In 2015, employment in professional services accounted for a significant share of total private sector employment, with nearly 29 million full-time equivalent (FTE) employees⁶⁵ representing 25.8 percent of total private sector employment in the United States. In that same year, FTEs in professional services grew by 2.6 percent, in line with the 2.4 percent CAGR recorded during 2010–14. In absolute terms, during 2010–15 the professional services industry added 3.3 million FTEs to U.S. payrolls, representing a 12.8 percent total increase over the period. The health care and social assistance segment, which employed 16.9 million workers in 2015, represented more than half (58.4 percent) of professional services employment that year. This segment was followed by miscellaneous professional, scientific, and technical services (which

⁶⁵ The BEA defines full-time equivalent employees as the number of employees on full-time schedules, plus the number of part-time employees that would have been needed to complete all the hours of full-time work reported in a given data set.

includes the industries covered in this report)⁶⁶ (18.5 percent) and education services (10.8 percent). Employment in all professional services sectors grew in 2015 and during 2010–14.

Workers in professional services earned an average wage of \$65,861 in 2015, which exceeded the private sector average (\$58,726) but trailed wages in electronic services (\$103,515), financial services (\$99,672), and goods manufacturing (\$66,802). Average wages vary substantially within the sector, ranging from \$45,871 in education to \$125,658 in management of companies and enterprises.⁶⁷ During 2015, average annual wage growth in the professional services industry was 3.1 percent, slightly less than the 4.1 percent growth rate for private sector services as a whole. In 2010–14, growth in average professional services wages (2.1percent) lagged that of most services categories, with the exception of distribution services, which grew by less than 1 percent. By contrast, the categories with the fastest-growing wages were electronic services, which grew by 3.8 percent during this period, and financial services, which grew by 3.4 percent.

In 2015, labor productivity in professional services (measured as output in dollars per FTE) grew by 0.9 percent, as output rose slightly faster than employment. This represents an improvement over 2010–14, when labor productivity remained essentially unchanged (down 0.3 percent). The professional services sector had the lowest labor productivity of any other services segment in the U.S. economy in 2015, with an average output per worker of \$91,336. This was driven by relatively lower labor productivity in the healthcare and education industries. Labor productivity varied substantially among professional services: average output per worker ranged from \$53,589 in education services to \$176,744 in legal services. Other sectors with high output per worker included management of companies and enterprises (\$166,586), miscellaneous professional, scientific, and technical services (\$133,520), and waste management and remediation services (\$101,828).

⁶⁶ The miscellaneous professional, scientific, and technical services category consists of accounting, tax preparation, bookkeeping, and payroll services; architecture, engineering, and related services; specialized design services; management, scientific, and technical consulting services; scientific research and development services; advertising and related services; and other professional, scientific, and technical services.

⁶⁷ Wages are defined as monetary remuneration for employees, including tips, commissions, overtime, bonuses, and subsidies (such as for housing). USDOC, BEA, "Concepts and Methods," February 2014.

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Chapter 3

Accounting and Auditing Services

Summary

The United States is the largest provider of accounting services globally, with total revenue of \$163.3 billion in 2015. Accounting services (including auditing and tax services) are predominantly provided by four networks of firms, which together capture around 25 percent of the global market. In order to diversify revenue streams, U.S. accounting firms are increasingly providing non-accounting services to their clients, particularly consulting services. However, their ability to expand their range of services is limited by the 2002 Sarbanes-Oxley Act, which defined the types of non-audit services that accounting firms can provide to their audit clients. Nonetheless, global efforts to adopt a single set of financial reporting standards have the potential to support growth in the sector.

The United States exports accounting services mainly through sales by U.S.-owned affiliates in foreign markets, which totaled \$13.5 billion in 2014. This total is substantially larger than purchases of accounting services from U.S. affiliates of foreign firms, which were only \$154 million that year. Cross-border trade in U.S. accounting services has been growing steadily, reaching \$2.9 billion in imports and \$1.5 billion in exports in 2015. Going forward, accounting services face increased regulation, particularly in the auditing segment, but will likely grow in line with the overall health of the world economy.

Introduction

Firms use accounting services to report financial data in a consistent format for government records and tax purposes, and to demonstrate financial health to investors and banks. Small companies, in particular, rely on accounting firms to complete routine financial reporting tasks, including financial statement and balance sheet preparation, tax preparation, and payroll and bookkeeping.

Public firms rely on accounting firms to conduct audits that assess whether their financial situation has been accurately reported. Since the 1930s, audits have been required for public companies in the United States, as well as for many privately held firms seeking external financing. The goal of auditors is to verify that financial statements fairly represent the financial position of a company based on the accounting standards of the country in which the company is operating. Auditors verify financial statements by counting inventory, matching purchase

invoices with shipments and bank statements, assessing the plausibility of manager estimates of revenue, and verifying any costs tied to those revenues.⁶⁸ Additionally, auditors assess whether the internal control systems in place in a company are effective at producing accurate financial information.⁶⁹ Accounting firms also provide tax consultation services, which help companies comply with tax regulations and minimize their tax burden. These services are particularly valuable to companies that operate in multiple tax jurisdictions.

Market Conditions

The global accounting market grew by almost 3 percent in 2016 to \$469.4 billion, only slightly slower than the average annual growth rate of 3.4 percent recorded during 2011–15. The profitability of accounting firms depends on getting business from new and expanding firms that require accounting services. For example, a new business may need accounting firms to prepare financial statements, and an expanding firm may need auditing services in order to secure a loan. As a result, growth in accounting sector revenue tends to rely on the overall strength of the economy. Globally, the two largest segments of the accounting sector are auditing services and tax consultancy, which respectively accounted for 40.6 percent and 32.9 percent of total global accounting services revenue in 2016.⁷⁰

North America and Europe each account for about 40 percent of global accounting services revenue. The United States is the largest single-country market for accounting services representing 35.8 percent of the world market, with \$163.3 billion in revenue in 2015. While most North American revenue comes from the United States, there is no dominant single-country market in Europe for accounting services. In Asia, China and India are the largest markets for accounting services, each representing around 20 percent of the Asian market with approximately \$10.2 billion in revenue apiece in 2015.⁷¹ Table 3.1 shows a regional breakdown of accounting services revenue in 2015.

⁶⁸ *Economist*, “Accounting Scandals,” December 13, 2014.

⁶⁹ PCAOB, “AS 2201: An Audit of Internal Control,” 2017.

⁷⁰ IBISWorld, *Global Accounting Services*, October 2016, 11.

⁷¹ The total Asian market is the sum of accounting services in three subregions—North Asia, Southeast Asia, and India and Central Asia—which together accounted for \$47 billion in accounting services in 2015.

Table 3.1: Regional breakdown of global accounting revenue, 2015

Region	Total revenue 2015 (billion \$)	Percent of global revenue
North America	192.6	42.2
United States	163.3	35.8
Europe	189.9	41.4
United Kingdom	38.9	8.5
Germany	37.6	8.2
France	15.7	3.4
North Asia	20.5	4.5
China	10.2	2.2
Japan	3.7	0.8
Southeast Asia	13.7	3.0
India and Central Asia	12.8	2.8
India	10.2	2.2
Africa and Middle East	11.0	2.4
South America	9.6	2.1
Oceania	7.3	1.6

Sources: USITC staff calculations using data from IBISWorld, *Global Accounting Services*, October 2016, and the following seven publications from MarketLine: *Accountancy in the United States*, January 2016; *Accountancy in the United Kingdom*, November 2016; *Accountancy in India*, January 2016; *Accountancy in France*, January 2016; *Accountancy in China*, January 2016; *Accountancy in Japan*, January 2016; and *Accountancy in Germany*, January 2016.

Note: Total revenue by region and percent of global revenue are approximate.

The largest global accounting firms operate as a network of “member firms,” with each member firm incorporated in a different country. The role of the global accounting firm headquarters is not to serve clients but to coordinate the member firms, which more closely resemble franchises than affiliates, since they are not directly owned.⁷² These firms benefit from the name recognition and reputation of the global brand, but are legally independent from one another.⁷³ To be a member, firms must agree to meet the level of quality and other standards set by the global headquarters, though it will not manage them directly.⁷⁴

Four major firm networks known as the “Big Four” have been the largest suppliers of accounting services globally since 2003, when a fifth global firm, Arthur Andersen, collapsed due to its role as Enron's auditor during the energy company's demise.⁷⁵ These Big Four firms are PricewaterhouseCoopers (PwC), Deloitte, Ernst & Young (EY), and KPMG. Together, their networks account for around 25 percent of the global market for accounting services (table 3.2). In 2015, PwC surpassed Deloitte to become the world's largest accounting firm, due to growth in PwC's consulting business.

⁷² IFIAR, “Current Trends in the Audit Industry,” 2015, 11.

⁷³ Masters, “Big Four Auditors Can No Longer Hide,” December 9, 2016.

⁷⁴ While this commitment to the same quality is viewed as crucial for global firms to operate, in practice, since global headquarters do not directly supervise local branches, audit quality is not necessarily consistent across firms in the same network. Ferguson, “Big Four Audit Quality Can Differ Widely,” November 17, 2015.

⁷⁵ *Economist*, “Accounting Scandals,” December 13, 2014.

Smaller global networks make up a second tier of accounting firms, and these have been expanding rapidly through acquisitions. For example, Belgium-based BDO International had member firms that were part of 19 mergers and acquisitions in 2015, following 25 mergers in 2014.⁷⁶ BDO Canada alone has acquired at least 8 accounting firms since 2014.⁷⁷

Table 3.2: Top global accounting networks by revenue, 2015

Firm	Headquarters	2015 revenue (billion \$)	2015 market share (%)
PricewaterhouseCoopers	United Kingdom	35.4	7.8
Deloitte	United States	35.2	7.7
EY	United Kingdom	28.7	6.3
KPMG	Netherlands	24.4	5.4
BDO	Belgium	7.3	1.6
RSM	United Kingdom	4.6	1.0
Grant Thornton	United States	4.6	1.0
Baker Tilly	United Kingdom	3.6	0.8
Crowe Horwath	United States	3.5	0.8
Nexia	United Kingdom	3.1	0.7

Sources: PwC, “PwC FY15 Global Revenues Increase 10%,” October 5, 2015; Deloitte, *2015 Global Report*, 2016; EY, “EY Reports 2015 Global Revenues up by 11.6%,” September 15, 2015; KPMG, *2015 KPMG International Annual Review*, 2016; BDO, “2015 Financial Results Reveal Double Digit Growth,” 2016; RSM, “RSM Achieves 6% Fee Income Growth,” February 3, 2016; Grant Thornton, “Grant Thornton Reports Global Revenues of \$4.6 Billion,” January 15, 2016; Baker Tilly, *Annual Report 2015*, 2016; Crowe Horwath, “Crowe Horwath International Delivers Fifth Consecutive Year,” February 4, 2016; Nexia, “Nexia International” (accessed December 13, 2016); USITC staff calculations using data from IBISWorld, *Global Accounting Services*, October 2016. Note: Market shares are approximate due to differences in calculating the end of the fiscal year 2015 across firms.

Despite the prominence of the Big Four accounting firms, most accounting services firms are small and medium-sized enterprises. In the United States in 2013, firms with less than 500 employees represented 99 percent of all accounting firms and employed almost 700,000 people—just over half the total employment in the U.S. industry that year. Moreover, 70 percent of U.S. accounting firms employed zero to four people.⁷⁸ By comparison, Deloitte had about 65,000 employees in its U.S. offices in 2014.⁷⁹

⁷⁶ IBISWorld, *Global Accounting Services*, October 2016, 28.

⁷⁷ Bureau van Dijk, Zephyr database (accessed January 9, 2017).

⁷⁸ An enterprise with zero employees is a sole-proprietor business. U.S. Census, 2013 SUSB Annual Datasets by Establishment Industry, 2016 (accessed August 15, 2016).

⁷⁹ Deloitte, “Facts and Figures,” 2016.

Emerging Supply and Demand Factors

The large market share of the Big Four accounting firms is attributable principally to their role in providing auditing services to large multinational companies. However, the Big Four have been providing an increasing amount of non-accounting services in recent years. This trend is driven in part by the limited number of new clients for auditing services among global companies, which tend not to change auditors, motivating the Big Four firms to expand their consulting activities in order to remain profitable. However, beginning in the early 2000s, growth in the non-accounting services provided by accounting firms has been constrained by changes in regulations.

The 1980s and 1990s saw a series of mergers among the eight largest accounting firms as they sought to increase capacity in order to audit the expanding number of multinational firms.⁸⁰ As a result, the current Big Four accounting firms are among the few firms that have sufficient capacity to audit the largest global companies. In 2014, the Big Four firms were responsible for auditing companies that made up 98 percent of the value on U.S. stock markets, and they tend to dominate the markets for certain types of audits in different markets.⁸¹ For example, in 2006, EY captured 77 percent of all audit fees in the U.S. agricultural sector.⁸²

Auditing has not been the primary driver of revenue growth in recent years. Instead, growth has been driven by an increase in consulting services, which includes the provision of advice to businesses on issues like organizational design, corporate strategy, human resources, information technology, marketing, sales, finance, and logistics.⁸³ Among the Big Four firms, consulting services grew at an average of 10 percent annually during 2012–16. Figure 3.1 shows the share of global revenue represented by consulting and advisory services for each of the Big Four firms since 2011. Currently, of the Big Four firms, KPMG has the largest share of its revenue coming from consulting services, while EY and PwC have seen the fastest growth in consulting services. From 2011 to 2013, these firms announced over 60 acquisitions of consulting businesses.⁸⁴ PwC has been the most ambitious, notably by acquiring the venerable consulting firm Booz & Company (now Strategy&) in 2014. Their largest acquisition to date, Strategy& contributed to an 18 percent increase in revenues in the firm's advisory segment from 2014 to 2015.⁸⁵

⁸⁰ OECD, "Competition and Regulation in Auditing," 2010, 8.

⁸¹ *Economist*, "Accounting Scandals," December 13, 2014.

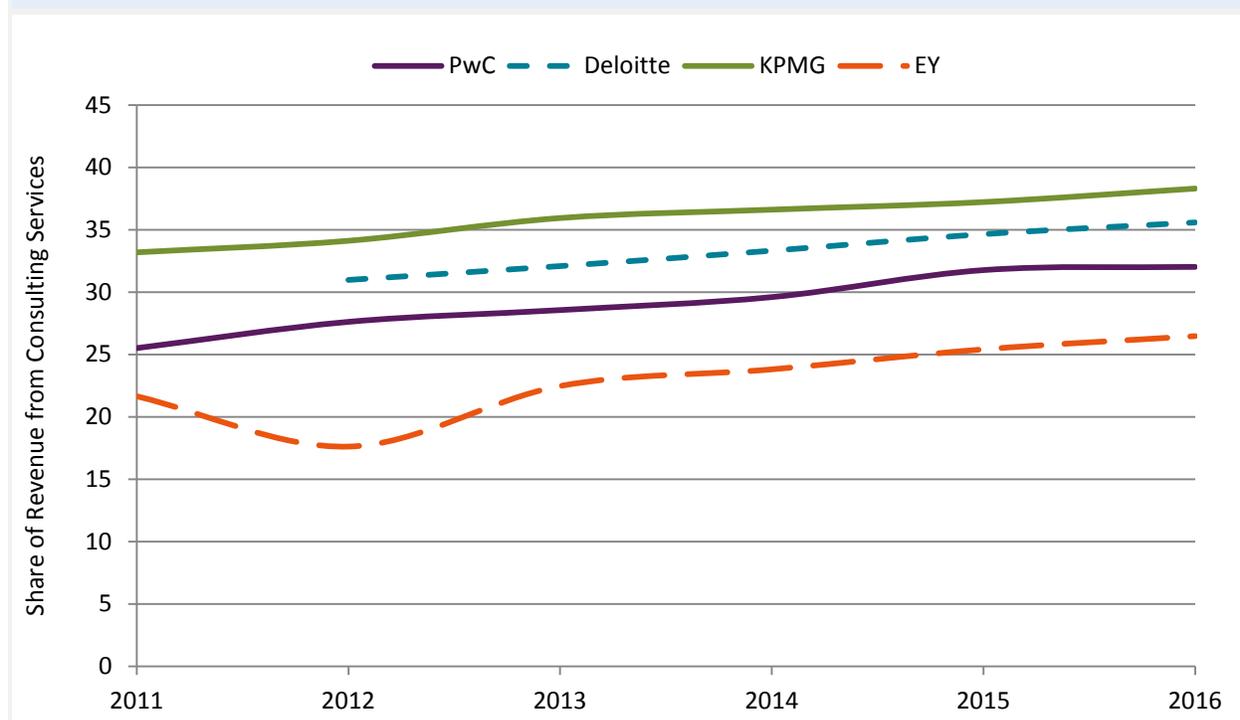
⁸² GAO, *Audits of Public Companies*, January 2008, 79.

⁸³ For more information on consulting services, see chapter 6.

⁸⁴ IFIAR, "Current Trends in the Audit Industry," 2015, 4.

⁸⁵ PwC, *Global Annual Review 2015*, 2015, 15.

Figure 3.1: Share of global revenue in consulting/advisory services, Big Four accounting firms, 2011–16



Sources: USITC staff calculations using data from Deloitte, 2016 Global Report, 2016; Deloitte, FY 15 Performance Table, 2015; Deloitte, 2012 Global Report, 2012; KPMG, International Annual Review 2016, 2016, KPMG, International Annual Review 2015, 2015; KPMG, International Annual Review 2014, 2014; KPMG, International Annual Review 2012, 2012; PwC, Global Annual Review 2016, 2016; PwC, Global Annual Review 2015, 2015; EY, “Global Review 2016 Facts and Figures,” 2016; EY, Global Annual Review 2014, 2014; EY, Global Annual Review 2013, 2013; EY, “EY Reports 2012 Global Revenues of US\$24.4 Billion,” October 2, 2012. (See [appendix table B.7.](#))

Notes: Data unavailable for Deloitte in 2011.

Facing a similar stagnation in their auditing businesses in the 1990s, the Big Five firms (the current Big Four plus now-defunct Arthur Andersen) began offering consulting and legal services to clients, in particular financial and information technology services, with the hope of becoming “multidisciplinary professional service organizations.” However, in 2002, following the collapse of Enron, the United States passed the Sarbanes-Oxley Act, which limits the types of services that accounting firms can offer to clients that they are auditing. Specifically, the act prohibits firms from providing legal and expert services unrelated to auditing, including financial and information technology consulting, to the audited firm.⁸⁶

This legislation, along with subsequent international rulings, has limited the growth of consulting and legal services among the Big Four firms. Following the passage of the Sarbanes-

⁸⁶ Sarbanes-Oxley Act 2002, Title II § 201 (2002).

Oxley Act, the Big Four firms divested from their global practices, and only PwC's legal network Landwell survived as an independent network of law firms.⁸⁷

More recently, changes to corporate structure legislation outside of the United States lessened other types of restrictions on accounting firms providing legal services. Countries including the United Kingdom and Australia lifted restrictions on multidisciplinary practices, allowing attorneys to share profits with other professions. As a result, the Big Four firms moved back into the legal market by offering legal services that complement their consulting and accounting services, though they did not directly compete with existing law firms for high-value work.⁸⁸ The Big Four have been rapidly expanding their provision of legal services in new markets, as shown in table 3.3. By 2015 all four firms had expanded their reach in legal services beyond their pre-Sarbanes-Oxley Act levels. However, this trend has not extended into the U.S. market, since all but two U.S. jurisdictions ban non-lawyers from owning interests in law firms.⁸⁹

Table 3.3: Number of countries where Big Four firms offer legal services

Firm	2001	2012	2015
Deloitte	11	49	69
EY	65	23	69
KPMG	50	39	53
PricewaterhouseCoopers	40	70	85

Source: Wilkins and Esteban, "The Reemergence of the Big Four in Law," January 2016.

⁸⁷ Wilkins and Esteban, "The Reemergence of the Big Four in Law," January 2016.

⁸⁸ *Economist*, "Professional Services," March 21, 2015.

⁸⁹ Non-lawyers can own legal firms in Washington State and the District of Columbia. American Bar Association, "Alternative Business Structures," ABA Issues paper, April 8, 2016, 3.

Consulting services have not faced the same level of regulatory restrictions as legal services. In part this is because of a distinction made by the Sarbanes-Oxley framework: it prohibits any service that could be provided only by someone licensed in the legal profession, but in consulting it differentiates between advocacy and fact-finding “expert” services.⁹⁰ For example, in 2006, the investment bank Bear Stearns reported paying Deloitte \$6.3 million for “other services” in addition to the fees paid for auditing.⁹¹ Additionally, although accounting firms may not provide consulting services to companies being audited by their firm, accounting firms are still allowed to provide consulting services to non-audit clients. This has allowed consulting services to grow globally despite regulatory hurdles.⁹²

Following the enactment of the Sarbanes-Oxley Act in the United States, other major accounting markets have increased restrictions on an accounting firm's provision of consulting services, including France, Australia, Hong Kong, and Singapore. Recently, the European Union (EU) also implemented regulations prohibiting “the provision of certain non-audit services such as specific tax, consultancy and advisory services to the audited entity,” which came into effect in the 2017 fiscal year.⁹³ Going forward, these regulations may slow the growth of consulting and legal services provided by the accounting sector.

⁹⁰ According to the final rules of the U. S. Securities and Exchange Commission (SEC) in the field of legal services, “an accountant is prohibited from providing to an audit client any service that, under circumstances in which the service is provided, could be provided only by someone licensed, admitted, or otherwise qualified to practice law in the jurisdiction in which the service is provided.” In contrast, in clarifying its prohibition of “expert services” the SEC rules state, “the prohibition on providing 'expert' services included in this rule covers engagements that are intended to result in the accounting firm's specialized knowledge, experience and expertise being used to support the audit client's positions in various adversarial proceedings,” but allow for internal investigations and factfinding engagements. SEC, “Strengthening the Commission's Requirements,” 2003.

⁹¹ This reported transfer led shareholders to sue both Bear Stearns and Deloitte following the 2008 collapse of the bank. *Economist*, “The Big Four Accounting Firms,” September 29, 2012.

⁹² Wilkins and Esteban, “The Reemergence of the Big Four in Law,” January 2016.

⁹³ European Union. Regulation (EU) No. 537/2014 of the European Parliament and of the Council of April 16, 2014 on Specific Requirements Regarding Statutory Audit of Public-Interest Entities and Repealing European Commission Decision 2005/909/EC, *Official Journal of the European Union* 57 (May, 27 2014), section 8, 81.

Box 3.1: Convergence in Global Accounting Standards

One of the major barriers to globalization in the accounting sector is differences in standards across countries. Historically, standards were developed independently at the national level. Some countries, including the United States, have “rules-based” accounting systems, which have a specific prescribed way to record each financial activity of a company. Other countries have “principles-based” systems, which include general provisions for preparing financial filings but give accountants some leeway in deciding how best to record financial activity. For example, a rules-based system would stipulate a specific percentage of ownership as a threshold to determine whether two companies should provide consolidated financial information. By contrast, a principles-based system would give the accountants discretion to determine whether one company had control over the financial decisions of another.^a

The International Financial Reporting Standards (IFRS) is a principles-based system that represents a major effort by regulators to establish a consistent methodology for reporting financial information. While the standards-setting body of the IFRS has been in place since 1973, it was not until after the 1998 Asian financial crisis and a restructuring of the organization in 2001 that countries (most notably EU countries) began to adopt IFRS systems.^b Currently, 122 jurisdictions, including the EU, require IFRS reporting for all listed companies. An additional 85 countries have adopted IFRS for small and medium-sized enterprises (SMEs).^c The United States is not currently a part of IFRS, using instead its own rules-based system, Generally Accepted Accounting Principles (GAAP). Among other differences, the IFRS seeks to provide accounting standards that can be applied across industries, while the U.S. GAAP has industry-specific accounting rules.^d

Despite these differences, the United States has taken some steps towards recognizing IFRS. First, since 2007, the Securities and Exchange Commission (SEC) has allowed foreign companies listed in U.S. securities markets to report financial data using only IFRS standards. However, large U.S. multinationals that are listed on global stock exchanges or seek international financing have to prepare financial accounts under both GAAP and IFRS standards. In 2010, the SEC, in a statement outlining its position on harmonization of accounting standards, recognized the IFRS as “best-positioned to be able to serve the role as that set of [global] standards for the U.S. market.”^e More recently, efforts to adopt IFRS in the United States have stalled, with the SEC’s chief accountant noting in December 2016 that although there is a continued interest in cooperation between IFRS and U.S. GAAP regulating bodies, U.S. GAAP will continue to be used domestically “for the foreseeable future.”^f

Top accounting firms support the movement towards IFRS standards, and this convergence would likely improve the competitiveness of second-tier global network firms, which often lack the capacity to provide services in multiple regulatory regimes.^g U.S.-trained accountants could be disadvantaged if they know only U.S. GAAP. However, since 2011, the Uniform Certified Public Accountant (CPA) exam in the United States has covered both U.S. GAAP and IFRS, indicating that new U.S. CPAs are expected to understand both systems.^h

A change to IFRS is likely to impact tax burdens for U.S. businesses, particularly in the case of valuing inventory. IFRS does not allow the last-in, first-out (LIFO) inventory valuation method, which is currently acceptable under U.S. law. The LIFO method assumes that the newest inventory is sold first, leaving the older inventory listed as assets. Due to inflation, older inventory may have a lower value than newer inventory, leading to a smaller overall net income and consequently a lower tax burden for firms. Under IFRS, firms currently using the LIFO method would no longer be able to take advantage of this tax-reducing feature.ⁱ

^a Carmona and Trombetta, “On the Global Acceptance of IAS/IFRS,” 2008, 456.

^b FASB, “Comparability in International Accounting Standards” (accessed January 5, 2017).

^c IFRS, “Analysis of the IFRS profiles for SMEs Standards” (accessed March 20, 2017).

^d Tan et al., “An Investigation into the Potential Adoption of IFRS,” 2016, 47.

^e SEC, “Commission Statement in Support of Convergence,” February 24, 2010.

^f Bricker, “Working Together to Advance High Quality,” December 5, 2016.

^g Tan et al., “An Investigation into the Potential Adoption of IFRS,” 2016, 51.

^h AICPA, “Uniform CPA Examination FAQs” (accessed January 5, 2017).

ⁱ Tan et al., “An Investigation into the Potential Adoption of IFRS,” 2016, 48.

Trade Trends

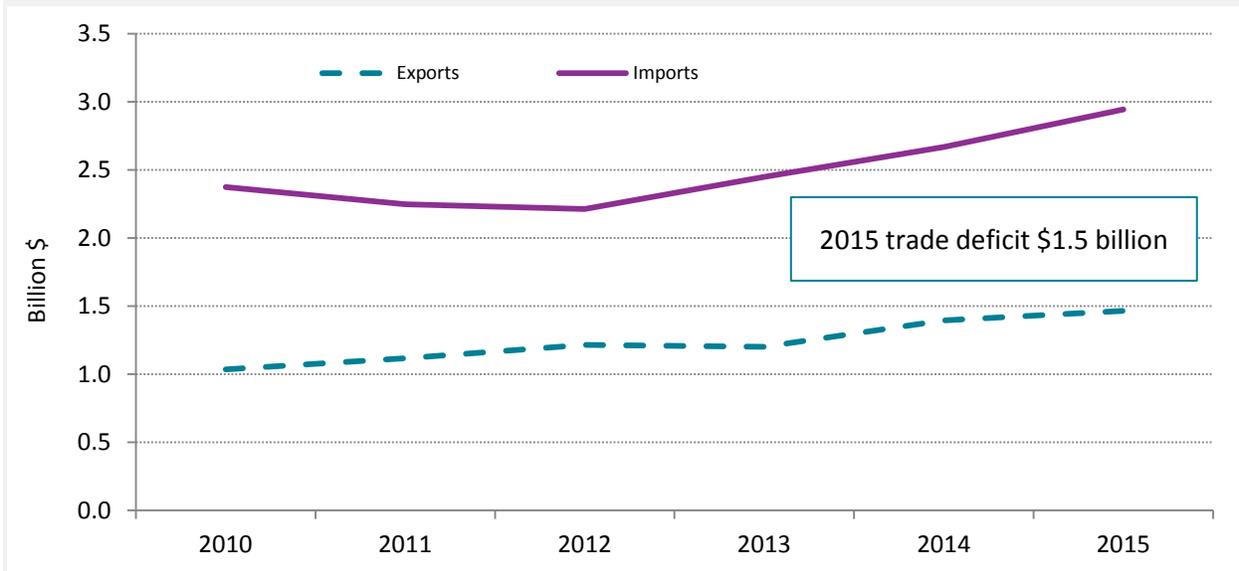
Cross-Border Trade

The United States exported \$1.5 billion and imported \$2.9 billion of accounting services in 2015, representing an expansion of 5 percent and 10 percent, respectively, in cross-border exports and imports of these services from 2014. Since 2010, there has been a trade deficit in this sector, which totaled about \$1.5 billion in 2015. However, since 2010, exports of accounting services have been growing more quickly on average than imports: exports grew at an average annual rate of 7.2 percent between 2010 and 2015, while imports had two years of declining growth in 2011 and 2012 and as a result only grew 4.4 percent on average during the same period.

Figure 3.2 shows the growth in cross-border exports and imports in the United States since 2010. Cross-border exports of accounting services are not a prominent source of revenue for U.S. firms, representing less than 1 percent of total revenue in the U.S. industry in 2015.⁹⁴

⁹⁴ Includes total revenue for accounting, tax preparation, and payroll and bookkeeping services. USITC staff calculation using data from BEA, International Data, International Services, “Table 2.2. U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016), and MarketLine, *Accountancy in the United States*, January 2016.

Figure 3.2: Accounting, auditing, and bookkeeping services: U.S. cross-border trade resulted in a U.S. trade deficit each year during 2010–15



Source: USDOC, BEA, International Data, International Services, “Table 2.2. U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016). (See [appendix table B.8.](#))

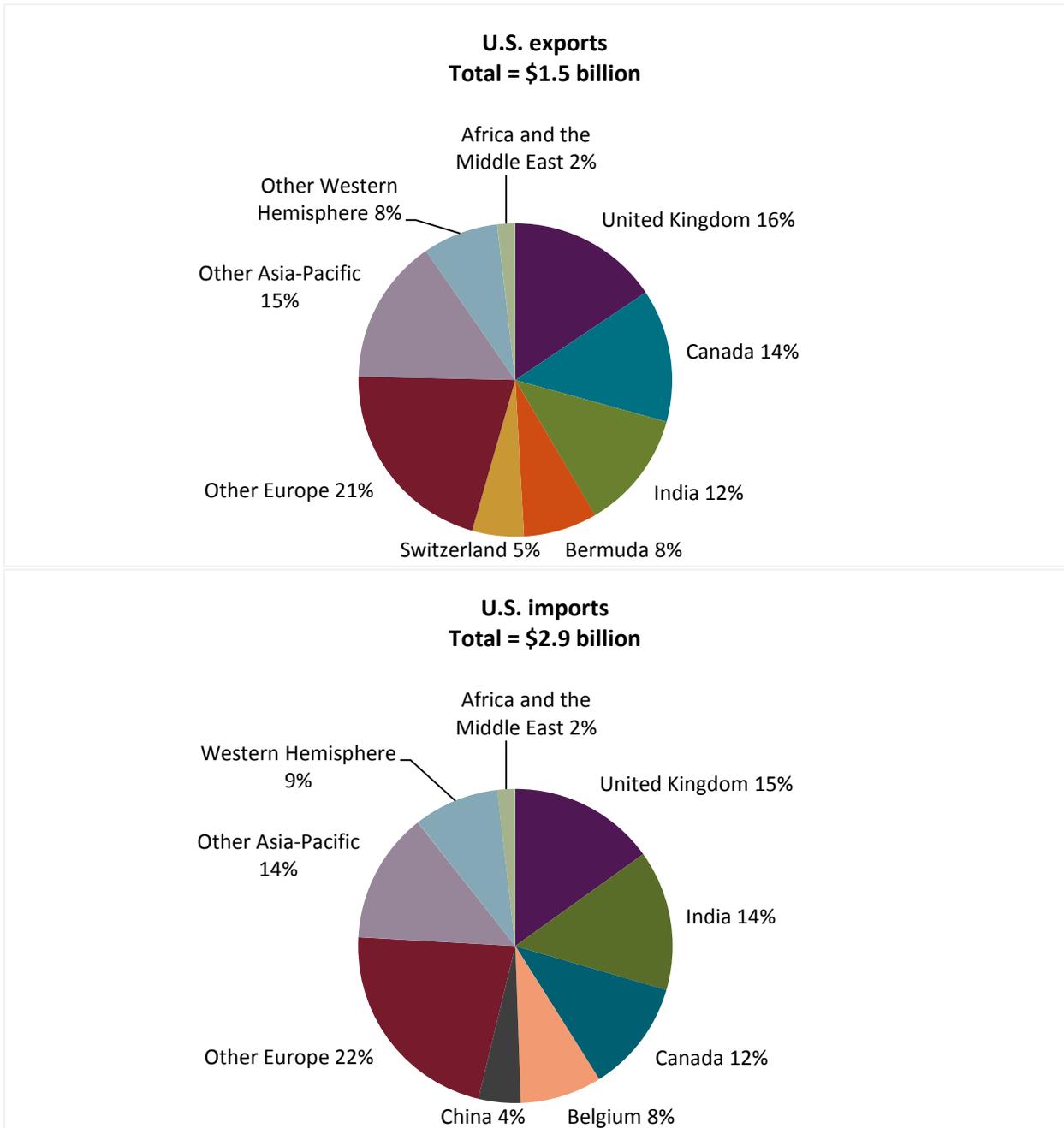
The UK is the largest market for U.S. accounting services exports as well as the largest source of imports, accounting for 15 percent of both total exports and total imports in 2015. This is not surprising considering that two of the Big Four accounting firms (EY and PwC) are headquartered in London. Canada and India are also prominent markets for U.S. accounting exports as well as sources of imports. Figure 3.3 shows the distribution of U.S. cross-border accounting exports and imports by partner country. Although the top destinations for U.S. exports of accounting services tend not to restrict the provision of accounting services across borders, cross-border trade in accounting, tax preparation, payroll, and auditing services is low due to differences in reporting standards and regulations.⁹⁵ Accounting requires a high level of country-specific technical knowledge; it is costly for firms to retrain individuals to operate under new regulatory systems. Further, many countries require accountants and auditors to be locally licensed to provide services, do not recognize foreign credentials, or have nationality or residency requirements that make cross-border trade effectively impossible.⁹⁶ However, efforts to consolidate accounting standards under International Financial Reporting Standards (IFRS) may contribute to growth in cross-border trade in accounting services going forward (see box 3.1).⁹⁷

⁹⁵ Of the top 10 destinations for U.S. accounting services exports, only Austria requires commercial presence to provide accounting services. OECD Services Trade Restrictiveness Index (STRI) Regulatory Database (accessed November 30, 2016).

⁹⁶ OECD, “STRI Sector Brief: Accounting Services,” February 2016, 2.

⁹⁷ IBISWorld, *Global Accounting Services*, October 2016, 15.

Figure 3.3: Accounting, auditing, and bookkeeping services: The United Kingdom was the leading market for U.S. cross-border exports and imports in 2015

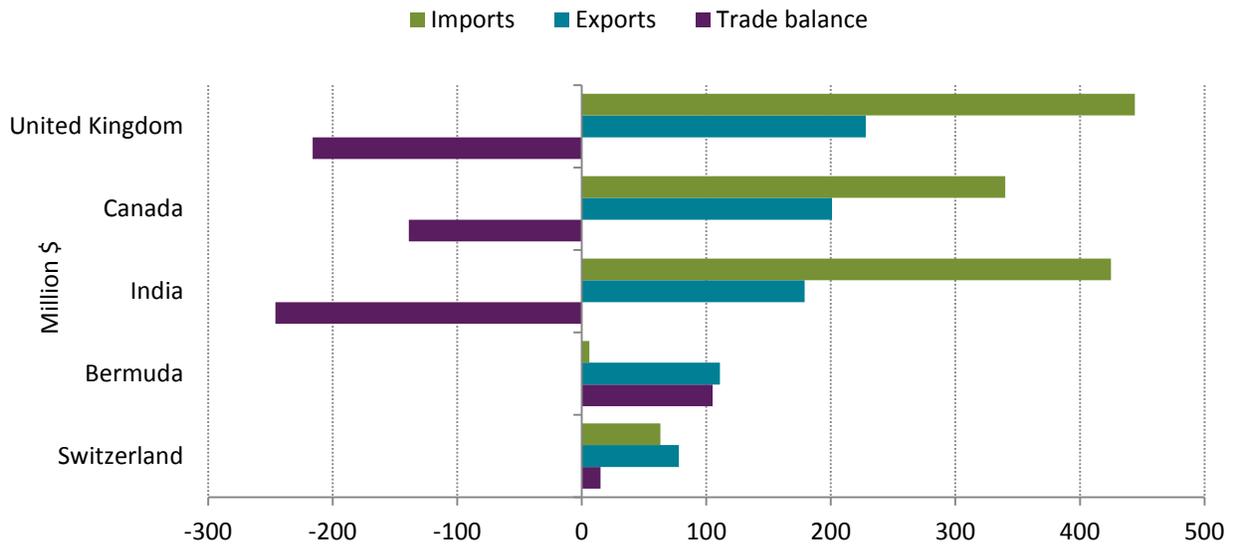


Source: USDOC, BEA, International Data, International Services, "Table 2.2. U.S. Trade in Services, by Type of Services and Country or Affiliation" (accessed November 14, 2016). (See [appendix table B.9.](#))

Figure 3.4 shows the cross-border trade balance for accounting services by partner country. The largest trade deficit is with India, a trend that has been consistent since 2010. This deficit may

be due to U.S. accounting firms contracting with firms in India to perform routine accounting-related tasks.⁹⁸

Figure 3.4: Accounting, auditing, and bookkeeping services: In 2015, the largest U.S. cross-border trade deficit was with India



Source: USDOC, BEA, International Data, International Services, “Table 2.2. U.S. Trade in Services, by Type of Services and by Country or Affiliation” (accessed November 14, 2016). (See [appendix table B.10.](#))

⁹⁸ IBISWorld, *Global Accounting Services*, October 2016, 23.

Box 3.2: Understanding Data on Cross-Border Trade and Affiliate Transactions in Accounting and Auditing Services

The Bureau of Economic Analysis (BEA) at the U.S. Department of Commerce measures both cross-border trade and foreign affiliate transactions for accounting services. Data are collected through surveys, which differ in their methodologies. Companies are asked to report cross-border sales by type of activity. For accounting services, activities include accounting systems design, auditing of accounting records, bookkeeping, budget development, financial statement preparation, payroll preparation, and tax return preparation.^a

By contrast, data on affiliate transactions are collected based on the industry classification of the parent or affiliate under North American Industry Classification System (NAICS) code 5412 (accounting, tax preparation, bookkeeping, and payroll services), rather than the type of service provided.^b Since this measure focuses on the industry of the firm rather than the types of activities performed, figures for foreign affiliate sales are not necessarily comparable with those for cross-border trade.

As discussed in this chapter, large accounting firms frequently provide consulting and legal services as well as accounting services. Because data on cross-border trade in accounting services capture only accounting activities, while affiliate transaction data include secondary services provided by accounting firms, foreign affiliate sales may overstate the level of accounting activity conducted by accounting firms. Moreover, data on affiliate transactions may be impacted by changes stemming from the BEA's benchmark surveys, which were most recently conducted for 2009 and 2014.^c These changes are often a result of improved affiliate coverage, rather than shifting trends in affiliate sales and purchases.^d

^a USDOC, BEA, Quarterly Survey of Transaction in Selected Services and Intellectual Property with Foreign Persons, Form BE-125, September, 2016, 19.

^b USDOC, BEA, *Guide to Industry Classifications for International Surveys*, 2012, 43.

^c When the BEA conducted its benchmark survey for affiliate transaction data in 2014, it increased the number of firms responding to the survey. This change partially contributed to an apparent 24 percent rise in total U.S. services supplied through foreign affiliates. For more information, see USDOC, BEA, *U.S. International Services: Trade in Services in 2015 and Services Supplied Through Affiliates in 2014*, 24.

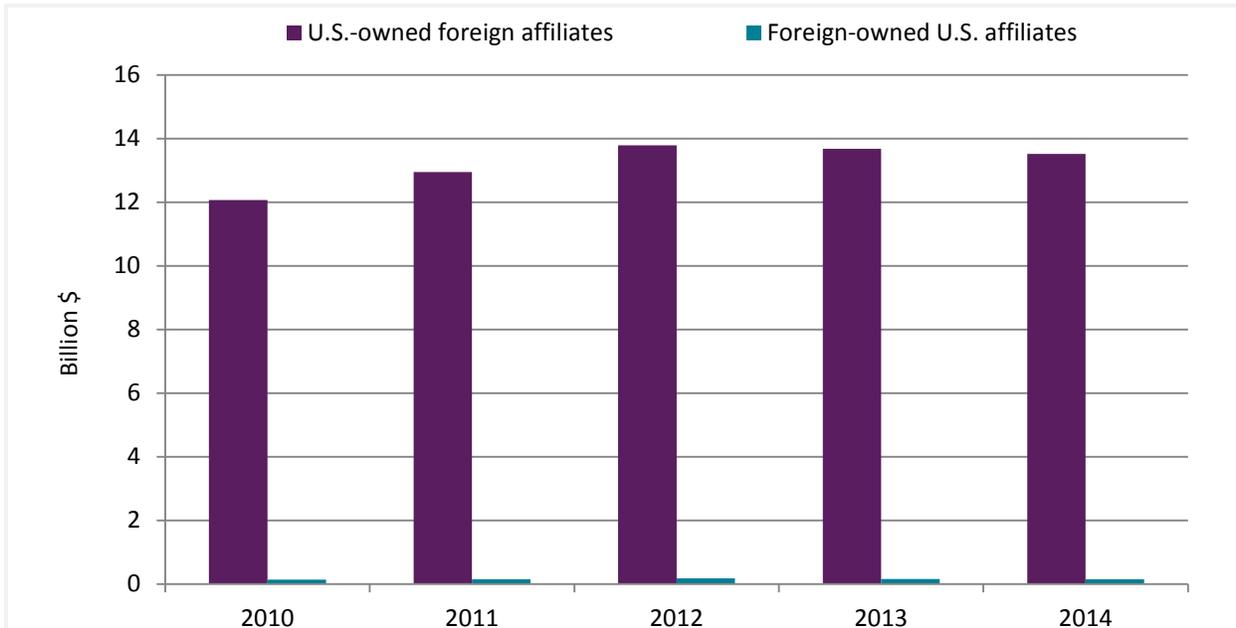
^d BEA representative, email message to USITC staff, November 29, 2016, and telephone interview by USITC staff, December 2, 2016.

Affiliate Transactions

In 2014 the United States sold \$13.5 billion in accounting services through U.S.-owned foreign affiliates, and purchased \$154 million in accounting services through local affiliates of foreign-owned firms. Both types of affiliate transactions experienced average annual growth of about 3 percent between 2010 and 2014. However, it is not clear whether affiliate sales figures exclusively represent sales of accounting services, as they likely also include affiliate transactions in consulting services by accounting firms (see box 3.2). Figure 3.5 shows the recent growth of U.S. foreign affiliate sales abroad as well as services supplied by foreign-

owned affiliates in the United States. Sales by U.S.-owned foreign affiliates consistently exceed purchases from foreign-owned U.S. affiliates by large margins.⁹⁹

Figure 3.5: Accounting, auditing, and bookkeeping services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates

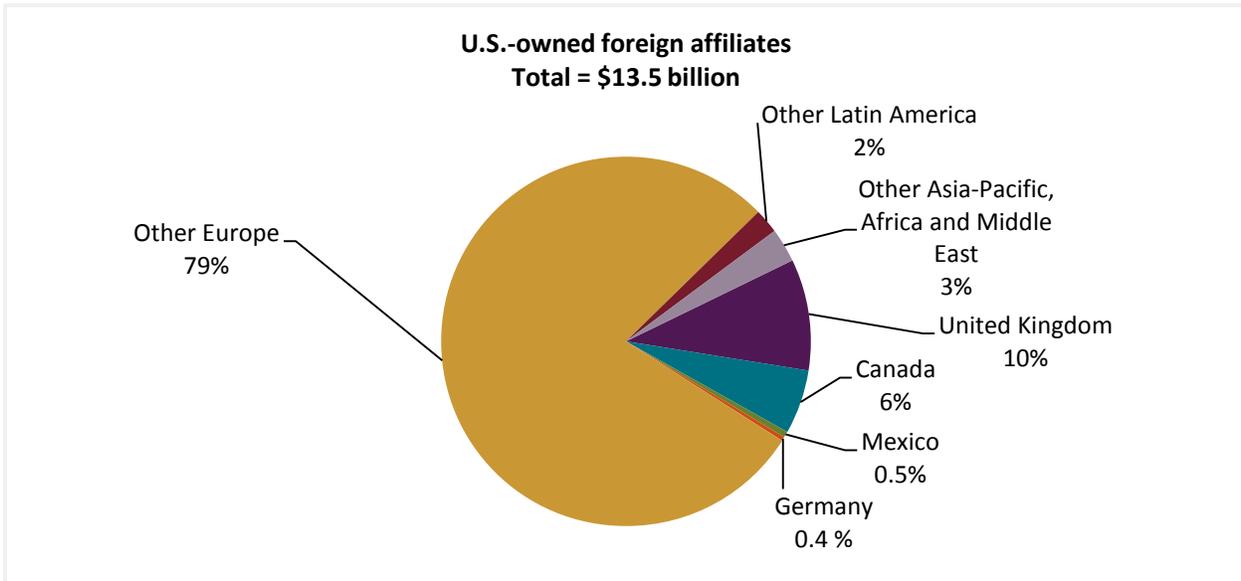


Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. Multinational Enterprises (MNEs) through Their Majority-Owned Foreign Affiliates (MOFAs), by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their Majority-Owned U.S. Affiliates (MOUSAs), by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017). (See [appendix table B.11.](#))

The UK was the largest market for sales by U.S.-owned foreign affiliates in 2014, accounting for almost 10 percent of total sales. The next two largest markets were Canada and Mexico, which accounted for 5.6 percent and 0.5 percent of sales respectively. U.S. sales of accounting services in Germany experienced a large increase from 2013 to 2014, but this is likely due to the increase in the number of respondents to the BEA's benchmarking survey conducted in 2014. Figure 3.6 shows the breakdown of foreign affiliate sales by U.S.-owned accounting firms by country in 2014.

⁹⁹ In many cases, sub-entities of accounting firms are owned at the national rather than global level, which explains the low level of majority-owned U.S. affiliates abroad and of foreign-owned affiliates in the United States.

Figure 3.6: Accounting, auditing, and bookkeeping services: In 2014, the United Kingdom was the largest market for sales of accounting services by U.S.-owned foreign affiliates



Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate” (accessed January 4, 2017). (See [appendix table B.12.](#))

Note: “Other Europe” is the European regional total minus Germany and the UK.

Outlook

Every segment of the accounting sector is expected to continue to expand, in line with overall economic growth.¹⁰⁰ Small accounting firms particularly benefit from an increase in new business associated with economic growth, as new small businesses tend to turn to local firms for accounting services.¹⁰¹ Rather than diversify into consulting, smaller accounting firms are specializing in certain types of accounting, such as forensic accounting (which analyzes financial information for legal proceedings), or focusing on certain clients, such as high-income clients with complicated tax situations. These approaches help compensate for the fall in demand for individual tax preparation services that has been attributed to the rise of tax preparation software.¹⁰²

¹⁰⁰ IBISWorld, *Global Accounting Services*, October 2016, 7.

¹⁰¹ IBISWorld, *Accounting Services in the U.S.*, September 2016, 7.

¹⁰² *Ibid.*, 11.

The Big Four auditors may face increased scrutiny in the coming years from the U.S.-based Public Company Accounting Oversight Board (PCAOB), a nonprofit organization established by the Sarbanes-Oxley Act. The PCAOB inspects audits conducted by U.S. firms as well as audits by international firms working for U.S.-listed companies.¹⁰³ While Big Four firms are committed in theory to the same set of standards across their networks, in practice differences in quality-control procedures as well as management culture at individual firms tend to create variations in audit quality.¹⁰⁴ For example, the PCAOB found that in 2013 Deloitte auditors had not detected misstatements in financial records in 28 percent of U.S. audits and in 67 percent of international audits. By contrast, the other Big Four firms' success in detecting misstatements also varied between U.S. and international audited firms, as well as from year to year.¹⁰⁵ The PCAOB also recently fined Deloitte's Brazil office \$8 million for alleged fraud.¹⁰⁶

Regulations that require mandatory rotation of auditing clients may impact the composition of the industry. In 2014, the European Union ruled that public interest entities, including listed companies, banks, and insurance firms, must change their auditing firm every 10 years. This provision comes into force in fiscal year 2017.¹⁰⁷ Although this type of regulation is designed to maintain independence between accounting firms and the companies they serve, critics, including Big Four firm PwC, argue that a lack of experience with a firm's financial situation may decrease audit quality.¹⁰⁸

Advocates of this regulation argue that a potential secondary benefit to the rule is to increase competition in the sector as firms consider second-tier auditors in addition to the Big Four.¹⁰⁹ However, in 2015, when UK firms began tendering new contracts in anticipation of this legislation change, 98 of the top 100 firms continued to purchase services from one of the Big Four firms. While this suggests that the new EU law is unlikely to increase competition in auditing services, the provision barring consulting and tax advice to audit clients may free up space for second-tier accounting firms to offer consulting services to multinational companies.¹¹⁰

¹⁰³ The PCAOB generally inspects non-U.S. firms through formal cooperative agreements, which either allow PCAOB to inspect foreign firms in coordination with a local regulator, or to conduct inspections jointly with the local regulator. The PCAOB has conducted audit inspections in 48 non-U.S. jurisdictions. PCAOB, "Non-U.S. Firm Inspections" (accessed January 10, 2017).

¹⁰⁴ Aobdia, "Does the Organization and Culture of the Largest Audit Firms?" December 2016.

¹⁰⁵ Ferguson, "Big Four Audit Quality" November 17, 2015.

¹⁰⁶ Scannell, "Accountancy: Big Four Auditors Face Crackdown," December 14, 2016.

¹⁰⁷ Tysiac, "Mandatory Audit Firm Rotation," May 28, 2014.

¹⁰⁸ Bowlin, Hobson, and Piercy, "The Effects of Auditor Rotation," 2015, 1364; PwC, "Mandatory Audit Firm Rotation," March 2013.

¹⁰⁹ EU regulations also prohibit contracts from requiring audits from only Big Four firms. Tysiac, "Auditing: Mandatory Audit Firm Rotation Rules," May 28, 2014.

¹¹⁰ Agnew, "Financial Market Regulation: Audit Merry-go-Round," January 17, 2016.

Other major markets are also shifting towards an auditor-rotation system. In fiscal year 2017, India will start requiring auditing firms to rotate clients after 10 years. This legislation is estimated to lead to the rotation of 2,500 firm audits by 2020. As a result, the Big Four will likely face increased competition from local Indian firms, which capture 62 percent of companies on the Bombay Stock Exchange 500, and thus are well positioned to compete with the Big Four auditors in the Indian market.¹¹¹

¹¹¹ The Bombay Stock Exchange 500 includes the 500 largest companies in India. Mahanta and Dave, "Audit Rotation," May 3, 2016.

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Chapter 4

Architecture and Engineering Services

Summary

The global architecture and engineering (AE) services market has experienced overall growth since 2010, though a decline in oil prices contributed to revenue decreases in certain market segments during 2014–15. Factors such as population growth, urbanization, the development of public-private partnerships (PPPs), and middle-class expansion have increased infrastructure-related demand for AE services in recent years, while demand in the energy segment has been impacted by lower oil prices and growing interest in renewable energy projects. At the same time, supply in the labor-intensive AE services industry has been affected by both a shortage of skilled workers and increasing worker productivity. The global AE services industry is expected to grow in the near term, as demand is likely to increase in the United States and some overseas markets.

The United States is competitive in the global AE market as U.S. firms have a reputation for high-quality work. The United States posted significant surpluses in cross-border AE services trade throughout 2010–15, and U.S. affiliate sales of AE services exceeded purchases by a wide margin. China was the leading market for U.S. exports of AE services in 2015, and the United States posted a large cross-border trade surplus with China in that year. Canada, the United Kingdom, and Australia accounted for significant shares of U.S. affiliate sales of AE services in 2014.

Introduction

Architects provide design and planning services for the construction and renovation of various types of structures and buildings, while engineers employ engineering principles and the laws of science in the design and development of structures, systems, and processes, in addition to machines, instruments, and materials.¹¹² Key consumers of AE services include the construction industry, government, retailers, mining firms, utilities, schools and universities, the entertainment and recreation industry, and additional entities that need designs for buildings and other structures, spaces, and processes. As such, demand for AE services depends heavily on factors that impact their customers' willingness and ability to finance construction,

¹¹² Blau, *Engineering Services in the US*, July 2016, 2; Morea, *Architects in the US*, June 2016, 2; U.S. Census, 2012 NAICS Definitions, 2012.

infrastructure, and industrial projects, such as overall economic conditions, government budgets, natural and manmade disasters, and consumer sentiment, among others.¹¹³

While there are some large and high-profile architecture and engineering companies, small firms are prevalent and market concentration is low in both the U.S. and global AE industries. However, these industries are expected to undergo some consolidation in the near term, as competitive pressures drive AE firms to deepen and broaden their expertise through mergers and acquisitions.¹¹⁴

Market Conditions

Revenues in the global architecture and engineering services markets increased through most of the 2010–15 period. In the global architecture industry, revenues rose by 1.8 percent to \$198.2 billion in 2015, following 3.4 percent average annual growth during 2010–14. Data on architecture services revenues by country or region are not available; however, Europe accounted for the largest share of establishments in the global architecture industry in 2016 (with 34 percent) followed by North America (28 percent) and North Asia (18 percent).¹¹⁵ In the global engineering services industry, revenues dropped by 4 percent to \$710.3 billion in 2015, in contrast to the 4.2 percent average annual growth during 2010–14. This decrease was likely a result of falling oil prices and an associated reduction in business from clients in the industrial and oil sectors.¹¹⁶ North America accounted for an estimated 29.5 percent of global engineering revenues in 2016, followed by Europe (21.4 percent) and Africa and the Middle East (21.2 percent).¹¹⁷

Low energy prices also depressed the revenues of the world’s leading 225 international design firms (a category that includes firms that provide architecture services and construction-related engineering services) outside of their home markets. These revenues decreased from \$70.8 billion in 2014 to \$65.4 billion in 2015.¹¹⁸ American firms accounted for the largest share of international design revenue in 2015 (31.5 percent), followed by firms from Canada

¹¹³ Blau, *Engineering Services in the US*, July 2016, 14–16; Morea, *Architects in the US*, June 2016, 13–15.

¹¹⁴ Blau, *Engineering Services in the US*, July 2016, 22; Morea, *Architects in the US*, June 2016, 19; IBISWorld, *Global Engineering Services*, September 2016, 19; IBISWorld, *Global Architectural Services*, December 2015, 4.

¹¹⁵ IBISWorld, *Global Architectural Services*, January 2017, 15, 27.

¹¹⁶ IBISWorld, *Global Engineering Services*, September 2016, 4, 32–3.

¹¹⁷ IBISWorld, *Global Engineering Services*, September 2016, 17.

¹¹⁸ These data—which are compiled by Engineering News-Record (ENR) through an annual survey—reflect construction-related architecture and engineering services revenues that are earned outside of a firm’s home market. Industry representative, email message to USITC staff, November 28, 2016; ENR, “Guidelines for Completing this Survey,” n.d. (accessed December 14, 2016); ENR, “Survey of Leading Contractors and Design Firms,” n.d. (accessed December 14, 2016); Reina and Tulacz, “The Top 225,” July 27/August 3, 2015, 74; Tulacz, “The Top 225,” July 18, 2016, 60, 62.

(12.6 percent), the Netherlands (9.9 percent), Australia (9.0 percent), and the UK (7.4 percent).¹¹⁹ While the American, Dutch, and Australian shares of top firms' international design revenues did not change substantially from 2010,¹²⁰ the UK (which ranked second in 2010 with a 14.6 percent global revenue share) and Canada (which ranked fifth in 2010 with 7.2 percent) switched places among the top five.¹²¹ This was likely due, in part, to Canada-based GENIVAR's acquisition of UK firm WSP in 2012. The combined firm—which became WSP Global Inc.¹²² in 2014—was the leading international design firm in 2015, with \$4.0 billion in international design revenues (table 4.1).¹²³

Overall, most of the top 10 earners of international design revenue are based in North America and Europe. U.S. firms ranking among the top 10 international design firms in 2015 included Jacobs, AECOM, and Fluor Corp., each of which earned revenues exceeding \$2 billion in that year.¹²⁴ Dar Al-Handasah Consultants—the only top 10 firm not based in a high-income country—was founded in Beirut 60 years ago. It now maintains 40 offices and employs more than 10,000 individuals throughout Africa, Asia, Europe, and the Middle East.¹²⁵

Table 4.1: Top 10 earners of international design revenues, 2015

Company	Home country	International revenues (million \$)
WSP Global Inc.	Canada	\$4,026.8
Arcadis NV	The Netherlands	\$3,466.0
WorleyParsons	Australia	\$3,455.8
Jacobs	United States	\$2,930.0
AECOM	United States	\$2,712.4
Fugro NV	The Netherlands	\$2,464.0
Dar Al-Handasah Consultants (Shair & Partners)	Egypt	\$2,412.7
Fluor Corp.	United States	\$2,119.6
Mott MacDonald	United Kingdom	\$1,564.4
Técnicas Reunidas	Spain	\$1,510.2

Source: Tulacz, "The Top 225," July 18, 2016, 67.

¹¹⁹ Tulacz, "The Top 225," July 18, 2016, 62.

¹²⁰ Firms based in America, the Netherlands, and Australia, respectively, accounted for 31.0 percent, 10.9 percent, and 8.1 percent of the revenues that the leading 200 international design firms earned outside of their home markets in 2010. ENR, *Global Sourcebook*, December 12, 2011, 36.

¹²¹ ENR, *Global Sourcebook*, December 12, 2011, 36.

¹²² WSP Global Inc. is an engineering company that focuses on the transportation and general building markets.

¹²³ WSP | Parsons Brinkerhoff, "History," <http://www.wsp-pb.com/en/Who-we-are/About-us/History/> (accessed December 16, 2016); Tulacz, "The Top 225," July 18, 2016, 67.

¹²⁴ Tulacz, "The Top 225," July 18, 2016, 67.

¹²⁵ Dar, "About; Overview," <http://dar.dargroup.com/about/overview> (accessed January 4, 2017); Dar, "About: History," <http://dar.dargroup.com/about/history> (accessed January 4, 2017).

By segment, leading sources of revenues among the top 225 international design firms in 2016 were petroleum (27.1 percent), transportation (20.7 percent), buildings (17.6 percent), and power (10.3 percent).¹²⁶ While revenues in most industry segments fell during 2014–15, revenues in the petroleum segment experienced a particularly large 20 percent decrease as low oil prices and slow economic growth led to project postponements and cancellations. Another notable trend is the growth in renewable energy projects in the power segment.¹²⁷ The U.S. Energy Information Administration estimates that renewables will account for 29 percent (or 10.6 trillion kWh) of global electricity generation in 2040, up from 22 percent (or 4.7 trillion kWh) in 2012.¹²⁸

Industry sources indicate that the United States is competitive in the global AE market as a result of U.S. firms' reputation for high-quality work.¹²⁹ However, competition in this market is high,¹³⁰ and U.S. firms reportedly face certain disadvantages. For example, contract and legal systems and project delivery templates in certain foreign markets are more similar to those in Europe than in the United States, which reportedly benefits European firms.¹³¹ At the same time, robust demand in the domestic market has kept U.S. architecture firms busy in recent years, and some U.S. firms have reportedly been less interested in pursuing overseas opportunities.¹³²

Emerging Supply and Demand Factors

Architecture and engineering services are inputs to the construction industry, so demand for AE services depends heavily on factors that affect demand for new and refurbished structures, as well as those that affect the financing of these projects. Oil prices, population trends, and urbanization are some of the factors that have had the greatest impact on construction trends in recent years.

A large share of demand for AE services derives from construction activity in the institutional/government, industrial, and commercial sectors. Factors that affect construction demand (and thus demand for AE services) in these sectors include population trends, overall and industry-specific economic performance, corporate revenues, interest rates, government spending and the rise of public-private partnerships, public sector outsourcing and

¹²⁶ Tulacz, "The Top 225," July 18, 2016, 60.

¹²⁷ Ibid., 60, 61.

¹²⁸ USDOE, EIA, *International Energy Outlook 2016*, May 11, 2016, 82, 84.

¹²⁹ Industry representatives, telephone interviews by USITC staff, January 10, 2017, and January 13, 2017.

¹³⁰ IBISWorld, *Global Engineering Services*, September 2016, 22; IBISWorld, *Global Architectural Services*, December 2015, 21.

¹³¹ Industry representatives, telephone interviews by USITC staff, January 10, 2017, and January 13, 2017; industry representative, interview with USITC staff, November 16, 2016.

¹³² Industry representative, telephone interview by USITC staff, January 13, 2017.

privatization, efforts to increase energy efficiency and mitigate environmental impacts, and one-time events (such as large sporting events, hurricanes, and military engagements), among others.¹³³ In recent years, these factors have impacted U.S. and global demand for AE services in a variety of ways. For example, population growth and urbanization have increased demand for infrastructure rehabilitation in developed countries and new infrastructure in developing countries.¹³⁴ Globally, infrastructure-related demand for AE services has also benefited from the development of public-private partnerships (PPPs), which have expanded funding options and generated demand despite reductions in government spending.¹³⁵ Growth in countries with expanding middle classes has led to an increase in the construction of schools and health care facilities in certain emerging markets such as India and the Middle East.¹³⁶

Recent trends in the energy and power markets have also had a significant effect on demand for AE services. Specifically, in both the U.S. and global markets, the recent decline in oil prices has led to project cancellations, delays, and an overall decrease in demand in the petroleum sector. At the same time, the demand for AE services connected to renewable energy projects has grown.¹³⁷

Residential construction projects generate some demand for architecture services, with such projects accounting for about 17 percent of revenues in the U.S. architecture industry in 2016, and about 37 percent of global revenues in 2015. Labor market and employment trends have a significant impact on the residential market's demand for architecture services. Demand is also affected by household income, interest rates, and population trends.¹³⁸ For example, as U.S. population growth has slowed in recent years, activity in the residential market has been shifting from new housing construction to the refurbishment of existing homes.¹³⁹

Architecture and engineering are labor-intensive industries.¹⁴⁰ As a result, the cost, availability, and productivity of high-skilled labor have an important impact on AE firms' ability to supply services. In recent years, wage costs in the U.S. and global AE services industries have increased as the economy recovered from the global recession, and a lack of workers with specialized

¹³³ Blau, *Engineering Services in the US*, July 2016, 16; Morea, *Architects in the US*, June 2016, 14–15; IBISWorld, *Global Engineering Services*, September 2016, 14; IBISWorld, *Global Architectural Services*, December 2015, 13, 14; industry representative, telephone interview by USITC staff, January 10, 2017.

¹³⁴ Industry representative, telephone interview by USITC staff, January 10, 2017; Tulacz, "The Top 225," July 18, 2016, 61.

¹³⁵ IBISWorld, *Global Engineering Services*, September 2016, 15; IBISWorld, *Global Architectural Services*, December 2015, 13.

¹³⁶ Industry representative, telephone interview by USITC staff, January 13, 2017.

¹³⁷ Tulacz, "The Top 225," July 18, 2016, 60–61; Tulacz, "Most Markets on the Rise," April 25/May 2, 2016, 50.

¹³⁸ Morea, *Architects in the US*, June 2016, 15; IBISWorld, *Global Architectural Services*, December 2015, 13, 14.

¹³⁹ Baker and Riskus, "The Coming Decade for Residential Design," January 11, 2016.

¹⁴⁰ Blau, *Engineering Services in the US*, July 2016, 31; Morea, *Architects in the US*, June 2016, 25; IBISWorld, *Global Engineering Services*, September 2016, 29; IBISWorld, *Global Architectural Services*, December 2015, 26.

skills has helped to boost employees' wages.¹⁴¹ In the architecture industry, a particularly marked shortage of experienced professionals is due to the industry's historically low wages (compared to other professions requiring higher education) and to the lack of opportunities for young architects to develop expertise during the 2008 recession due to low demand. As a result, wages for experienced architects are rising; to meet increased demand, some firms are hiring, applying more resources to employee training, and/or shifting their emphasis towards larger and better-paying projects.¹⁴² The engineering industry, too, reportedly faces a shortage of both qualified workers and new graduates due to increased demand and the lure of better-paying industries.¹⁴³

Several factors have increased labor productivity in the U.S. and global AE industries in recent years. For example, many engineering firms have adopted a more horizontal organizational style characterized by a relatively low number of management levels, which may have contributed to greater labor efficiency.¹⁴⁴ Additionally, the recent expansion in the use of technologies such as building information modeling (BIM) and computer-aided design (CAD)¹⁴⁵ has had a positive effect on productivity. This development has also facilitated collaboration and widened firms' geographical reach and product offerings.¹⁴⁶ Productivity in the architecture services industry may also benefit from the introduction of virtual reality (VR) applications. While still very new to the industry, VR is currently being used by a handful of architecture services providers in project design and communications. VR can reportedly save time and enable wider participation in the creation of a design by enabling architects and their clients to

¹⁴¹ Blau, *Engineering Services in the US*, July 2016, 23–4; Morea, *Architects in the US*, June 2016, 20; IBISWorld, *Global Engineering Services*, September 2016, 20; IBISWorld, *Global Architectural Services*, December 2015, 19; Ipsen, "So Many Projects, So Few Architects," June 15, 2015.

¹⁴² Ipsen, "So Many Projects, So Few Architects," June 15, 2015.

¹⁴³ Industry representative, telephone interview by USITC staff, January 10, 2017.

¹⁴⁴ Blau, *Engineering Services in the US*, July 2016, 32; IBISWorld, *Global Engineering Services*, September 2016, 29; Meehan, "Flat Vs. Hierarchical Organizational Structure," n.d. (accessed March 24, 2017).

¹⁴⁵ CAD software enables users to create computer-based two- and three-dimensional designs, while BIM allows a group of individuals from different building-related industries to work together on a single digital design that represents both the appearance and operation of a structure. Bandi, "BIM vs. CAD Files" (accessed January 18, 2017).

¹⁴⁶ The impact of technologies on AE services suppliers has not been wholly positive. For example, CAD has made drafting a more widespread skill, negatively affecting providers of such services. Blau, *Engineering Services in the US*, July 2016, 31, 32; Morea, *Architects in the US*, June 2016, 25, 26; IBISWorld, *Global Engineering Services*, September 2016, 29; IBISWorld, *Global Architectural Services*, December 2015, 26; industry representative, telephone interview by USITC staff, January 10, 2017; Weinzbaum, "Five Trends Impacting the Architecture and Engineering Sectors," Winter 2016, 6.

better visualize a design, reducing the need for in-person meetings and facilitating rapid feedback and design updates.¹⁴⁷

Other factors that affect supply in these industries include the ability to provide a wide range of services (in part, by partnering with firms in other building-related industries); and the capacity to provide specialized services (such as green design), among many others.¹⁴⁸ Recent trends in the U.S. and global green design markets are discussed in box 4.1.

Box 4.1: Rapid Growth in Green Design Services

The market for green design services—which includes architecture, engineering, and other activities related to the design and planning of sustainable structures using environmentally responsible processes and materials—has grown rapidly in recent years. This trend can be linked to a growing interest in cutting costs associated with operating a structure, government regulations and incentives, and environmental concerns, among other factors.^a For example, one source estimates that in 2015, the median reduction in operating expenses for both new green structures and green renovations was about 9 percent over the course of the first year.^b

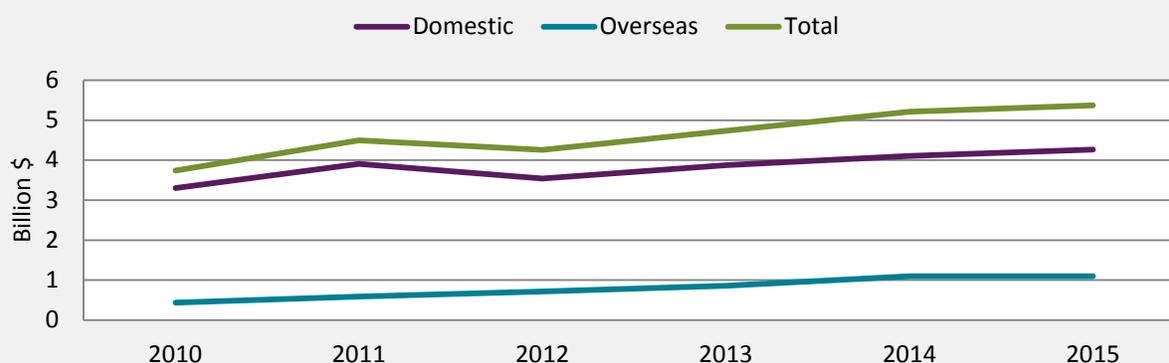
AE firms are increasingly motivated to supply green design services, largely due to substantial and growing demand for sustainable structures. In fact, while the ability to provide green building services was once a distinguishing characteristic for a firm, it has become common.^c Firms are increasingly developing green capacity in anticipation of green building becoming the norm in the near future.^d

As a result of increasing capacity, competition in the green building services market has risen.^e Early market entry and experience enhance business competitiveness in this market. Firms that are familiar with the green building standards prevalent in a certain country or region (such as LEED in the United States, BREEAM in the United Kingdom, and Green Star in Australia, New Zealand, and South Africa) may have an advantage in those markets as well.^f Effective corporate management that supports green building activities, and a propensity toward innovation, may also benefit firms' competitiveness.^g U.S. firms are internationally competitive, and growth in world demand offers substantial opportunities for green building firms to provide their services abroad.^h

Among the top 100 U.S.-based providers of green design services, total green project revenues increased by 7.5 percent annually during 2010–15, from \$3.7 billion to \$5.4 billion, with sustained growth from 2012 to 2015 (figure 4.1). Domestic revenues accounted for the vast majority of such revenues, while overseas revenues grew very rapidly (at 20.1 percent annually), albeit from a very small base.ⁱ Leading U.S. providers of green design services include Gensler, AECOM, HOK, Arup, Perkins+Will, and Jacobs.^j

¹⁴⁷ Grozdanic, “Will Virtual Reality Redefine the Way Architects Work?” n.d.; Budds, “Innovation by Design,” April 28, 2016; Pacheco, “West Coast Architecture Firms,” September 23, 2016; Beaman, “Total Immersion,” November 2016, 57; Finch, “Can Virtual Reality Really Make a Difference?” June 10, 2015.

¹⁴⁸ Blau, *Engineering Services in the US*, July 2016, 24-5; Morea, *Architects in the US*, June 2016, 21; Weinkelbaum, “Five Trends Impacting the Architecture and Engineering Sectors,” Winter 2016, 6; industry representative, telephone conversation with USITC staff, January 10, 2017.

Figure 4.1: Green project revenues earned by the leading 100 U.S.-based green design firms rose during 2010–15

Source: USITC staff calculations based on data obtained from Tulacz, “The Top 100 Green Buildings,” August 8/15, 2016, 76; “The Top 100 Green Buildings Design Firms,” August 11/18, 2014, 2; “The Top 100: From LEED to Living Buildings,” July 8, 2013, 2; “The Top 100: Interest in Green Design,” July 2, 2012, 2; and “The Top 100 Green Design Firms,” July 4, 2011, 38. (See [appendix table B.13](#).)

While data specific to the global green design market are unavailable, green building projects as a whole—which include activity reported by architecture and engineering firms as well as contractors and other entities involved in the construction market—accounted for about 24 percent of total global building projects in 2015.^k Among the 13 countries for which specific data are available,^l green projects accounted for the largest shares of total projects in South Africa (41 percent), India (37 percent), and Singapore (36 percent). By comparison, green projects accounted for about 33 percent of total U.S. building projects in 2015.^m

The U.S. and global green building markets are expected to grow in the near future, with one source estimating that the global market will grow at about 13 percent annually during 2015–20.ⁿ Many real estate owners are reportedly looking to green design as a means of cutting their operating expenses.^o Additionally, the market for green construction and design may benefit from increased demand in sectors such as health care and manufacturing.^p

^a Powell, “Green Building Services,” October 2015.

^b Dodge Data & Analytics, *World Green Building Trends 2016*, 2016, 9, 52, 55.

^c Tulacz, “The Top 100 Green Contractors,” September 17, 2012, 4; Ripley, “Green and Sustainable Building Construction,” 2011, 21.

^d Industry representative, email message to USITC staff, October 20, 2013.

^e Tulacz, “The Top 100 Green Contractors,” September 17, 2012, 4; Ripley, “Green and Sustainable Building Construction,” 2011, 21.

^f Industry representatives, telephone interviews by USITC staff, September 16, 2013.

^g Industry representatives, telephone interviews by USITC staff, September 16, 2013, and November 26, 2013.

^h Powell, “Green Building Services,” October 2015.

ⁱ USITC staff calculations based on data obtained from Tulacz, “The Top 100 Green Buildings Contractors: From LEED to Living Buildings,” August 8/15 2016, 76; Tulacz, “The Top 100 Green Buildings Design Firms,” August 11/18, 2014, 2; Tulacz, “The Top 100,” July 8, 2013, 2; Tulacz, “The Top 100: Interest in Green,” July 2, 2012, 2; Tulacz, “The Top 100 Green Design Firms,” July 4, 2011, 38.

^j Tulacz, “The Top 100 Green Buildings Contractors,” August 8/15, 2016, 82.

^k These data are based on survey responses from architects, contractors, engineers, and other professionals from 69 countries. Dodge Data & Analytics, *World Green Building Trends 2016*, 2016, 9, 64; industry representative, email response to questions posed by USITC staff, January 17, 2017.

^l Data are available for Australia, Brazil, China, Colombia, Germany, India, Poland, Mexico, Saudi Arabia, Singapore, South Africa, the UK, and the United States.

^m Dodge Data & Analytics, *World Green Building Trends 2016*, 2016, 9.

ⁿ Hermes, “Green Building Market,” February 17, 2015; Tulacz, “The Top 100 Green Buildings,” August 8/15, 2016, 77; Dodge Data & Analytics, *World Green Building Trends 2016*, 2016, 5.

^o Tulacz, “The Top 100 Green Buildings Contractors,” August 8/15, 2016, 77.

^p *Ibid.*, 76.

AE firms’ ability to supply services in certain overseas markets are affected by licensing measures (which affect both firms and individual professionals), recognition of foreign education or credentials, residency requirements, and measures affecting foreign ownership (such as equity restrictions), among other provisions.¹⁴⁹ For example, Indonesia maintains a 55 percent cap on foreign equity ownership that affects both the architecture and engineering industries.¹⁵⁰ In several countries, residency and/or nationality requirements apply to a firm’s manager and/or its board of directors, and some countries limit the share of foreigners that a firm may employ.¹⁵¹ Numerous countries also require foreign architects and/or engineers to pass a local examination or to practice in the local market for a certain amount of time in order to be registered or licensed as an architect or engineer.¹⁵² Additionally, service providers may face different risks and rules regarding liability in overseas markets, making it necessary or advisable for these providers to hold additional insurance coverage (see box 5.1 for a quantitative analysis of how restrictions affect trade in AE services).¹⁵³

Trade Trends

Cross-Border Trade

In 2015, U.S. cross-border exports of AE services—which include architecture and engineering services as well as industrial engineering services (i.e., design services for transportable products) (box 4.2)—totaled \$13.9 billion, exceeding imports of such services (\$8.3 billion) and

¹⁴⁹ Industry representative, telephone interview by USITC staff, January 10, 2017; OECD, STRI database (accessed January 13, 2017); American Institute of Architects (AIA), *AIA Global Practice Primer*, January 2017, 17.

¹⁵⁰ OECD, STRI database (accessed January 13, 2017).

¹⁵¹ OECD, STRI database (accessed January 13, 2017); American Institute of Architects (AIA), *AIA Global Practice Primer*, January 2017, 17.

¹⁵² OECD, STRI database (accessed January 13, 2017); CIC News, “Receiving an Engineering License in Canada,” October 30, 2013; AACA, “Application Form S2” (accessed March 1, 2017).

¹⁵³ For example, only a local insurer may write coverage for professional liability in some countries, requiring professionals to hold policies that are specific to those markets. In another example, architects and engineers may be subject to “decennial liability” provisions in certain markets, under which any participant in a construction project may be liable for structural or safety problems for 10 years following the completion of the structure. Professionals can obtain insurance that covers this particular risk. American Institute of Architects (AIA), *AIA Global Practice Primer*, January 2017, 17; industry representative, telephone interview by USITC staff, January 13, 2017.

yielding a trade surplus of \$5.6 billion (figure 4.2). The United States posted significant surpluses in AE services trade throughout the 2010–15 period.

Box 4.2: Understanding Data on Cross-Border Trade and Affiliate Transactions in Architecture and Engineering Services

The U.S. Bureau of Economic Analysis (BEA) publishes data on both cross-border trade in architecture and engineering (AE) services and affiliate sales and purchases by AE services firms. Data are collected through surveys, which differ in their methodologies. Cross-border trade surveys are collected by type of service rather than type of firm, and encompass the provision of architecture and engineering services irrespective of whether companies are architecture or engineering firms. Data on affiliate transactions, on the other hand, are collected based on the industry classification of the parent or affiliate, rather than on the type of service provided. Since this measure focuses on the industry of the firm rather than the types of activities performed, foreign affiliate sales are not necessarily comparable with cross-border trade.

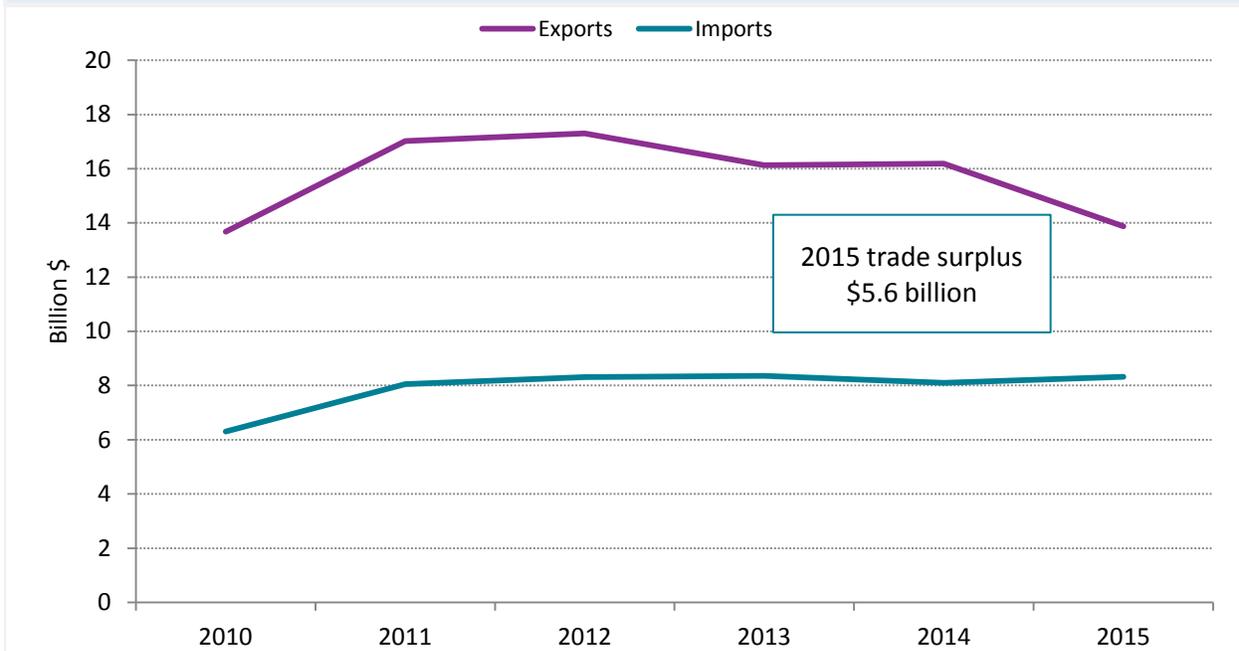
The cross-border trade data presented in this chapter cover both “architecture and engineering services” and “industrial engineering services.” BEA data on cross-border trade in “architecture and engineering services” capture exports and imports of architecture services, engineering services performed for mining and construction projects, and land-surveying services for both proposed and active projects. The data on “industrial engineering services” includes design services for transportable products. Data on U.S. cross-border AE services trade with particular trading partners are available only for 2012–15, as the country-specific data on architecture, engineering, and industrial engineering services for prior years are combined with data on construction services. BEA data on affiliate transactions by “architecture, engineering, and related services” firms capture sales by and purchases from firms categorized in North American Industry Classification System (NAICS) 5413, which covers architecture services, engineering services (including industrial engineering services), building inspection, drafting, and landscape architecture services.

BEA has reportedly not made any significant changes to the way in which it compiles data on cross-border AE services trade since these data were first collected in 2006. Data on affiliate transactions may be impacted by changes stemming from the BEA’s benchmark surveys, which were most recently conducted for 2009 and 2014.^a These changes are frequently a result of improved affiliate coverage, rather than shifting trends in affiliate sales and purchases.^b

^a For 2014, the BEA conducted its benchmark survey for affiliate transaction data, which increased the number of firms responding to the survey and partially contributed to an apparent 24 percent rise in total U.S. services supplied through foreign affiliates. For more information, see USDOC, BEA, U.S. International Services: Trade in Services in 2015 and Services Supplied through Affiliates in 2014, 24.

^b BEA representative, email message to USITC staff, November 29, 2016, and telephone interview by USITC staff, December 2, 2016.

Figure 4.2: Architecture and engineering services: U.S. cross-border trade in architecture and engineering services resulted in a U.S. trade surplus each year during 2010–15



Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016). (See [appendix table B.14](#).)

Note: Includes industrial engineering.

U.S. exports of AE services posted an average annual growth rate of 4.3 percent during 2010–14. However, such exports fluctuated during the period, peaking at \$17.3 billion in 2012 before declining by 6.8 percent in 13. U.S. AE exports fell again in 15, dropping by 14.3 percent and essentially returning to the same level as in 2010. Decreases in U.S. AE exports after 2012 coincided with a steady decrease in international design revenues. Engineering News-Record (ENR) has attributed this decrease to lower demand for commodities—particularly metals and petroleum—which has affected the ability of resource-exporting countries to finance infrastructure projects.¹⁵⁴

Following a 27.7 percent jump during 11, U.S. imports of AE services continued to grow at a slower but steady pace throughout most of 2011–14, and increased by an additional 2.7 percent in 15. Foreign providers of AE services likely benefited from growth in the U.S. construction industry during 2010–15,¹⁵⁵ as AE services are a major input to construction projects.

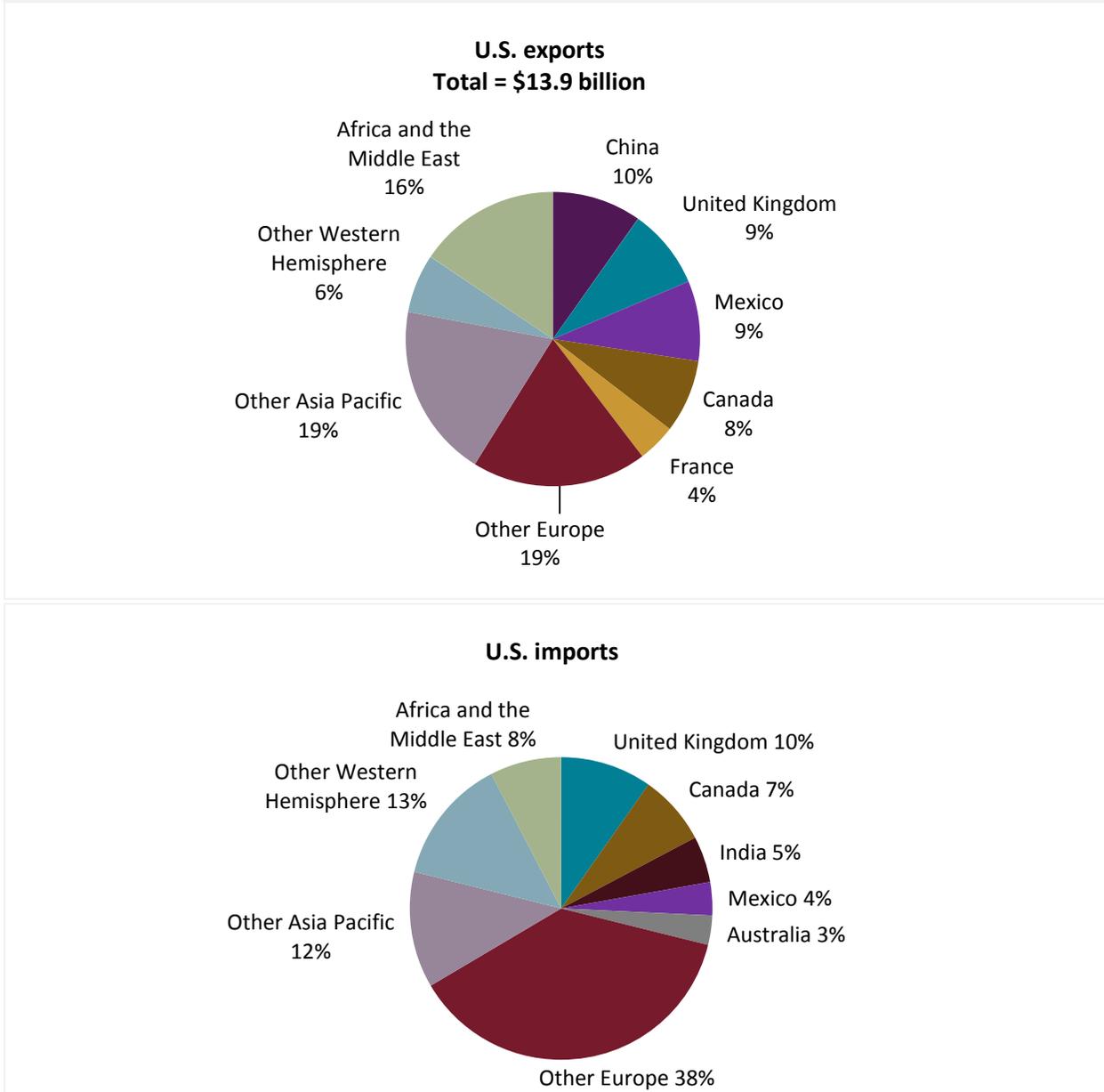
¹⁵⁴ Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 60.

¹⁵⁵ Value added in the U.S. construction industry increased at an average annual rate of 6.2 percent during 2010–15, from \$541.6 billion to \$732.1 billion. USDOC, BEA, “Real Value Added by Industry,” November 3, 2016.

China was the largest market for U.S. AE services exports in 2015 (accounting for 10 percent of such exports), followed by Mexico and the UK (with 9 percent each) (figure 4.3). This is a shift from 2012 (the earliest year for which comparable data are available), when Canada was the leading market for U.S. AE exports (with 15 percent of the total), followed by China (8 percent) and the UK (7 percent). Canada's decreased importance as an export market for U.S. AE services may be connected to a significant contraction in Canada's international design market in 2014 resulting from the global fall in oil prices and the associated slowdown in the Canadian oil sands market.¹⁵⁶

¹⁵⁶ Reina and Tulacz, "The Top 225: Ups and Downs," July 27/August 3, 2015, 72.

Figure 4.3 Architecture and engineering services: China was the leading market for U.S. cross-border exports, while the UK led imports, in 2015



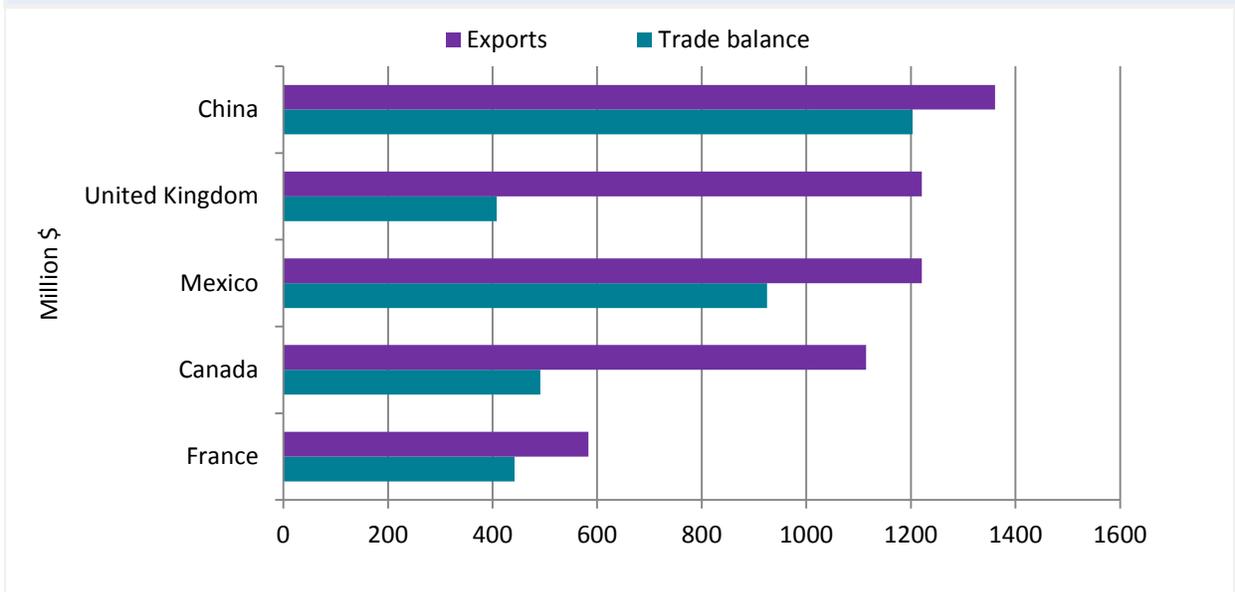
Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016). (See [appendix table B.15.](#))

Note: Includes industrial engineering.

The UK and Canada were the top two sources of U.S. AE imports in both 2012 and 2015, with Canada ranking first in 2012 (accounting for 11 percent of such imports) and the UK ranking first in 2015 (with 10 percent). UK-based and Canada-based AE firms have a significant presence in the United States, with two UK-based firms (Amec Plc and Atkins) and two Canadian firms

(WSP | Parsons Brinckerhoff¹⁵⁷ and Stantec Inc.) ranking among the top 10 foreign-based revenue earners in the U.S. design market in 2015.¹⁵⁸ Other top sources of U.S. AE imports in 2015 included India (with 5 percent), Mexico (4 percent), and Australia (3 percent). The United States posted cross-border trade surpluses with each of its top 5 export markets for AE services in 2015 (figure 4.4), the largest of which was with China (\$1.2 billion). While China has been characterized as a challenging market for foreign AE firms, its lack of local high-end design capability and foreign firms’ reputation for creativity, quality, and experience with green technologies have created opportunities for foreign providers of high-end AE services.¹⁵⁹ The United States—together with Germany and Hong Kong—is one of the leading sources of Chinese engineering services imports.¹⁶⁰

Figure 4.4: Architecture and engineering services: Of the top 5 export markets in 2015, the United States had its largest cross-border trade surplus with China



Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016). (See [appendix table B.16.](#))

Note: Includes industrial engineering.

¹⁵⁷ On ENR’s 2016 list of “The Top 225 International Design Firms,” WSP | Parsons Brinckerhoff is referred to as WSP Global Inc. Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 67.

¹⁵⁸ Reina and Tulacz, “The Top 225: Ups and Downs,” July 27/August 3, 2015, 76, 79.

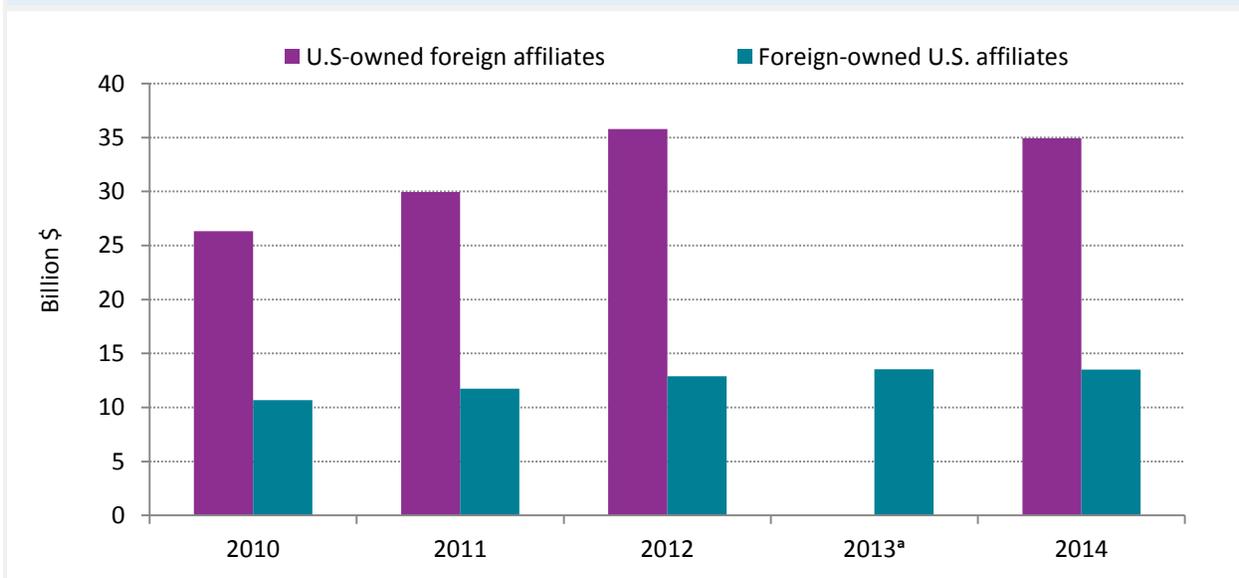
¹⁵⁹ Reina and Tulacz, “The Top 225: Ups and Downs,” July 27/August 3, 2015, 77; Dezan Shira & Associates, “Opportunities for a Foreign Architect or Firm in China,” December 3, 2015; IBISWorld, *Engineering Services in China*, July 2016, 14.

¹⁶⁰ IBISWorld, *Engineering Services in China*, July 2016, 14.

Affiliate Transactions

U.S. affiliate sales and purchases of AE services exceed cross-border trade by a sizeable margin. In 2014, U.S. sales of architecture, engineering, and related services through U.S.-owned foreign affiliates totaled \$35.0 billion. Those sales were significantly higher than U.S. purchases of these services from foreign-owned U.S. affiliates (\$13.5 billion) in that year (figure 4.5). While the change in affiliate sales of AE services during 2013–14 is unknown,¹⁶¹ such sales have increased significantly since 2010 when they totaled \$26.3 billion. U.S. affiliate purchases of AE services increased at an average annual rate of 8.2 percent during 2010–13, but decreased slightly (by 0.1 percent) in 2013–14. This decrease—which may be understated due to data adjustments resulting from the BEA’s most recent benchmark survey—mirrors a small decrease in U.S. cross-border imports of AE services during the same period.

Figure 4.5: Architecture and engineering services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14



Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1 “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO,” (accessed January 4, 2017). (See [appendix table B.17](#).)

Note: Includes industrial engineering.

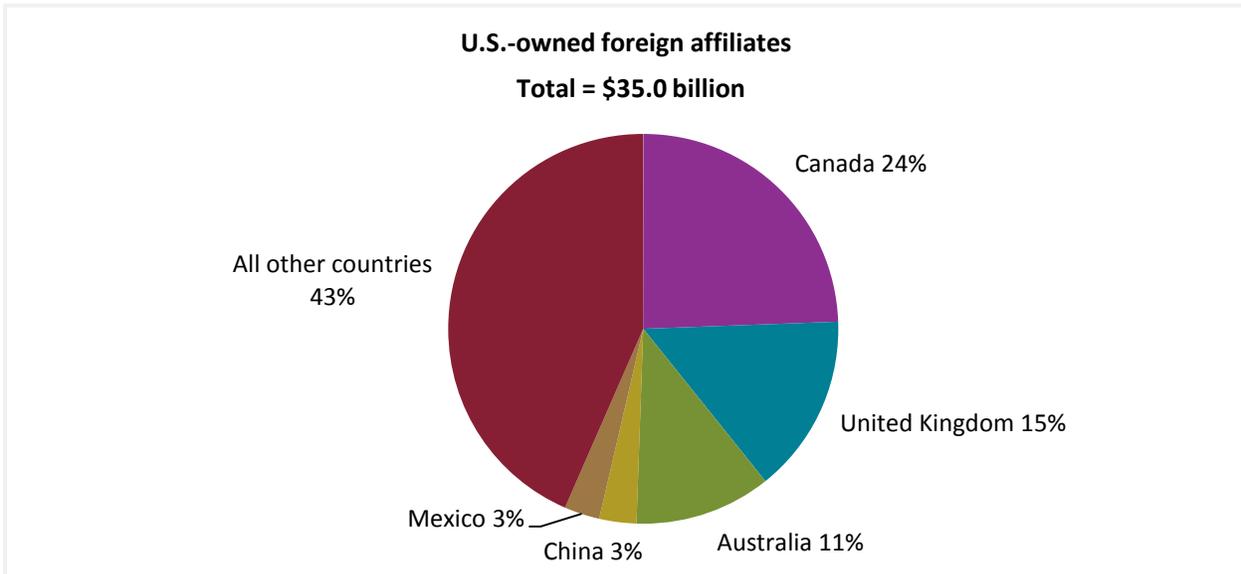
^a BEA suppressed data on U.S.-owned foreign affiliate sales of architecture and engineering services in 2013.

U.S. affiliate sales of AE services to Canada—the largest single-country market for such sales—increased at a compound average growth rate of 17.8 percent during 2010–14, reaching \$8.5 billion in 2014 and accounting for 24.4 percent of total U.S. affiliate sales of AE services in

¹⁶¹ It is not possible to calculate the change in U.S. affiliate sales of AE services during 2013–14, as BEA suppressed data on such sales for 2013. Data are sometimes suppressed to avoid disclosing financial information of individual companies.

that year (figure 4.6). Other countries accounting for significant shares of U.S. affiliate sales of AE services in 2014 include the UK (14.8 percent) and Australia (11.3 percent).

Figure 4.6: Architecture and engineering services: In 2014, Canada was the largest purchaser of architecture and engineering services from U.S.-owned foreign affiliates



Source: USDOC, BEA, table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017). (See [appendix table B.18.](#))

Note: Includes industrial engineering. Data may not add due to rounding.

Among those countries for which data are available, the UK, the Netherlands, and Canada accounted for the largest shares (17.7, 16.9, and 10.4 percent, respectively) of U.S. affiliate purchases of AE services in 2014.¹⁶² These three countries also were likely the top sources of U.S. affiliate purchases of AE services in 2010, although purchases from firms based in the Netherlands were slightly higher than purchases from U.K.-owned firms in that year.¹⁶³ Much like U.S. affiliate sales, U.S. purchases of AE services from Canadian-owned firms grew relatively quickly during 2010–14, increasing at a compound average growth rate of 18 percent (compared to 6.1 percent for total U.S. affiliate purchases of AE services).

The rapid increase in U.S. affiliate AE services transactions with Canada points to an increasingly close relationship between the U.S. and Canadian AE industries. ENR indicates that the U.S. share of international design revenues earned in the Canadian market rose from 51.4 percent in 2010 to 68.0 percent in 2014, while the Canadian share of international design revenues earned

¹⁶² Much of the country-specific data on U.S. affiliate purchases of AE services is suppressed, so it is not completely clear which countries’ affiliates account for the top shares of such purchases.

¹⁶³ In 2010, U.S. purchases of AE services from firms based in the Netherlands and the UK, respectively, accounted for 20.0 percent and 18.9 percent of total U.S. affiliate purchases on AE services.

in the United States rose from 19.6 percent to 26.2 percent.¹⁶⁴ Further, Bureau van Dijk identifies 59 completed mergers and acquisitions between U.S. and Canadian architecture, engineering, and related services firms during 2010–14,¹⁶⁵ 8 of which were valued at \$1 million or more.¹⁶⁶

Outlook

The outlook for the AE services industry is generally positive. Several sources expect demand for AE services in the United States to increase in the near future due to economic growth, improved business sentiment, and increased stability in the domestic economy.¹⁶⁷ In the architecture industry, demand in both the nonresidential and housing segments is expected to increase. Growing revenues are expected to lead additional operators to enter the market, while employment is expected to grow slowly, due to the offsetting impacts of technology-driven productivity gains and growth in hiring resulting from higher demand.¹⁶⁸ Increasing infrastructure investment (particularly by the private sector) and growing demand for green buildings and renewable energy may drive demand for engineering services.¹⁶⁹ However, despite current optimism, some AE services providers are concerned that market and regulatory uncertainty may curb industry growth.¹⁷⁰

The global AE services industry is also expected to experience overall revenue growth in the near term due to economic growth, rising per capita income, middle-class expansion, population growth, and accelerating urbanization.¹⁷¹ Industry observers anticipate that industry growth and trends will vary across markets. For example, European demand for AE services is not expected to be robust, as Brexit has increased market uncertainty. PPPs may be an increasingly common means of financing infrastructure projects in countries with high levels of government debt (particularly in certain European countries).¹⁷² Conversely, strong growth is

¹⁶⁴ Reina and Tulacz, “The Top 225: Ups and Downs,” July 27/August 3, 2015, 74; Reina and Tulacz, “The Top 200: International Design Firms,” July 25, 2011, 35.

¹⁶⁵ These include completed mergers and acquisitions involving acquiring firms and/or target firms that classify themselves in NAICS 5413, “Architectural, Engineering, and Related Services.”

¹⁶⁶ Bureau van Dijk, Zephyr database (accessed January 9, 2017).

¹⁶⁷ Blau, *Engineering Services in the US*, July 2016, 9; Morea, *Architects in the US*, June 2016, 9; industry representative, telephone interview by USITC staff, January 13, 2017.

¹⁶⁸ Morea, *Architects in the US*, June 2016, 9.

¹⁶⁹ Blau, *Engineering Services in the US*, July 2016, 9.

¹⁷⁰ Tulacz, “Most Markets on the Rise,” April 25/May 2, 2016, 50.

¹⁷¹ IBISWorld, *Global Engineering Services*, September 2016, 8; IBISWorld, *Global Architectural Services*, December 2015, 7; industry representative, telephone interview by USITC staff, January 10, 2017; Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 64–65.

¹⁷² IBISWorld, *Global Engineering Services*, IBISWorld industry Report, September 2016, 8; Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 61–62.

expected to continue in certain emerging markets.¹⁷³ In Asia, rapid urbanization and middle-class expansion may increase demand for infrastructure and production facilities.¹⁷⁴ Demand for AE services is also expected to increase in the Middle East.¹⁷⁵ While lower oil prices have impacted business in some countries in that region, demand in certain market segments—such as rail transportation—is reportedly strong.¹⁷⁶

¹⁷³ IBISWorld, *Global Engineering Services*, IBISWorld industry Report, September 2016, 8; Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 64–66.

¹⁷⁴ Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 65.

¹⁷⁵ IBISWorld, *Global Engineering Services*, September 2016, 8; industry representative, telephone interview by USITC staff, January 13, 2017.

¹⁷⁶ Tulacz, “The Top 225: Oil Prices Spur Market Downturn,” July 18, 2016, 65–66.

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Chapter 5

Legal Services

Summary

In 2015, the global legal services market was valued at \$593.4 billion, with the United States accounting for 48.8 percent of global revenue. After slow growth in the immediate aftermath of the 2008–09 recession, the U.S. legal services market grew at a compound annual rate of 4.2 percent from 2011 to 2015, reflecting rising demand for legal services across the country.

In 2015, U.S. exports and imports of legal services were valued at \$9.0 billion and \$2.2 billion, respectively, resulting in a trade surplus of \$6.9 billion. Although there was a U.S. trade surplus each year during 2010–15, the balance narrowed slightly after 2013, reflecting slower or negative export growth. In 2014, sales by U.S.-owned foreign affiliates, which were valued at \$6.8 billion, far exceeded purchases from foreign-owned U.S. affiliates, valued at \$0.1 billion.

Introduction

International trade in legal services typically involves foreign lawyers providing legal services related to their home country's law, international law, or third-country law. A fourth category, host-country law, is normally subject to local requalification requirements for foreign legal services providers or other restrictions. However, with a growing number of foreign affiliates supplying multi-jurisdictional advice regarding their local clients' international business dealings, an increasingly important area of international trade is the foreign provision of legal advice related to host-country law.¹⁷⁷

The preferred modes of delivery in foreign markets are through the establishment of a commercial presence (mode 3) and the temporary movement of people geographically (mode 4). Since policies related to the foreign provision of legal services tend to be the most restrictive of all those that affect professional services, differing regulations in various national markets have a significant impact on international trade in legal services.

¹⁷⁷ Geloso Grosso et al., "Services Trade Restrictiveness Index," 2014, 7–8. For example, a U.S. lawyer working in Panama might provide advice on aspects of U.S. law (home-country law), the law of the sea (international law), Canadian law (third country law), or Panamanian law (host-country law). Cross-border trade in legal services makes up a small portion of the global legal services market, and trade is limited in many areas of legal services that tend to be country- or locality-specific, such as family law (divorce, child custody, etc.), criminal law, property law, and litigation in national or local courts.

Market Conditions

In 2015, the global legal services market was valued at \$593.4 billion (table 1). This market grew by 3.7 percent in 2015, in line with the 3.9 percent compound annual growth seen during 2011–14.¹⁷⁸ The United States accounted for 48.8 percent of global revenue in 2015, followed by Europe (27.2 percent) and Asia-Pacific (14.4 percent).¹⁷⁹ The United Kingdom, France, Germany, and Italy each accounted for more than 10 percent of Europe's share, while China, Australia, and India each accounted for more than 10 percent of the Asia-Pacific share.

Table 5.1: Global and country/regional revenues in legal services

Country or region	2014 revenue (billion \$)	2015 revenue (billion \$)	Growth, 2015 (%)	Share of global revenue, 2015 (%)	Share of regional revenue, 2015 (%)
United States	278.6	289.8	4.0	48.8	*
Europe	156.0	161.2	3.4	27.2	*
United Kingdom	46.0	49.5	7.5	8.3	30.7
France	24.3	24.9	2.4	4.2	15.4
Germany	22.6	22.7	0.4	3.8	14.1
Italy	*	21.0	*	3.5	13.0
Spain	*	10.2	*	1.7	6.3
Rest of Europe	*	32.9	*	5.5	20.4
Asia-Pacific (A-P)	82.1	85.3	3.9	14.4	*
China	*	39.8	*	6.7	46.7
Australia	14.3	14.0	-2.0	2.4	16.4
India	*	8.8	*	1.5	10.3
South Korea	*	5.2	*	0.9	6.1
Japan	3.0	3.0	0.2	0.5	3.5
Rest of A-P	*	14.5	*	2.4	17.0
Middle East	*	6.2	*	1.0	*
Rest of the world	*	50.8	*	8.6	*
Total	572.0	593.4	3.7	100.0	*

Source: MarketLine, *Global Legal Services*, June 2016, 9–11; MarketLine, *Legal Services in the United States*, June 2016, 8; MarketLine, *Legal Services in Europe*, June 2016, 8; MarketLine, *Legal Services in the United Kingdom*, June 2016, 8; MarketLine, *Legal Services in France*, June 2016, 8; MarketLine, *Legal Services in Germany*, June 2016, 8; MarketLine, *Legal Services in Asia-Pacific*, June 2016, 8; MarketLine, *Legal Services in Australia*, June 2016, 8; MarketLine, *Legal Services in Japan*, June 2016, 8.

Note: * = not available. As indicated in MarketLine, *Global Legal Services*, June 2016, 7, “The market's value is calculated as the total revenue received by law companies for services rendered.” The share of global revenue adds up to 100 percent when Europe and Asia-Pacific (which have country shares listed) are not included in the sum. The share of regional revenue adds up to 100 percent separately for Europe and Asia-Pacific. Note that 2015 is the latest available year for all countries.

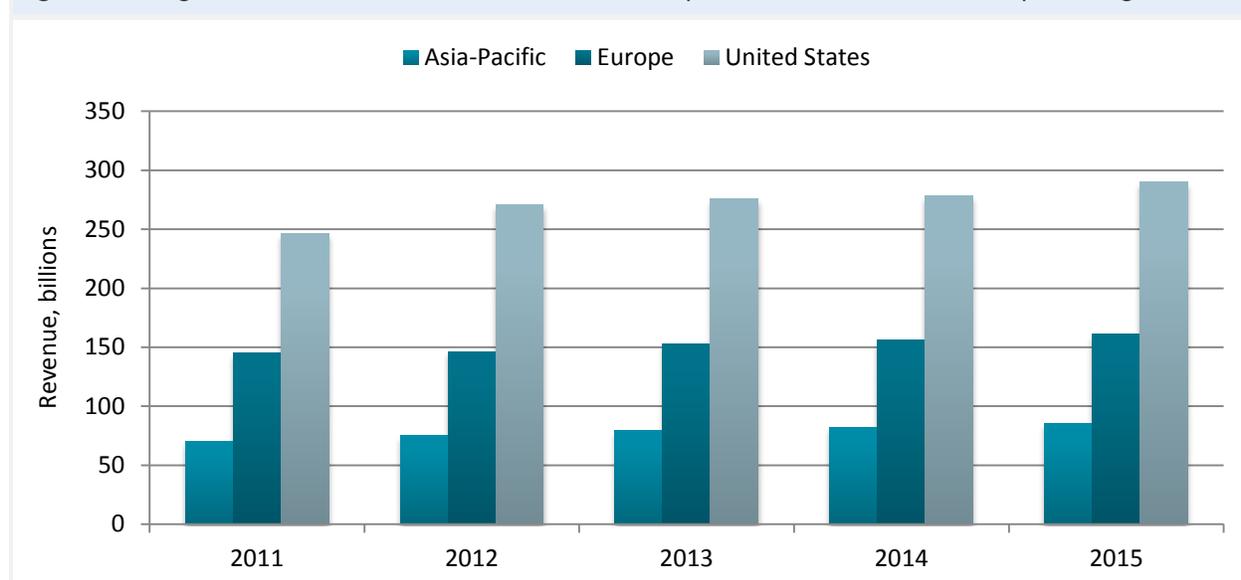
Europe comprises Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and the UK; Asia-Pacific comprises Australia, China, Hong Kong, India, Indonesia, Kazakhstan, Japan, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam; the Middle East comprises Egypt, Israel, Saudi Arabia, and the United Arab Emirates.

¹⁷⁸ MarketLine, *Global Legal Services*, June 2016, 9–11.

¹⁷⁹ Though not strictly comparable due to differences in the country samples in earlier publications, these shares in 2009 were United States (47.6 percent), Europe (30.4 percent), and Asia-Pacific (10.4 percent). Datamonitor, *Legal Services in the United States*, July 2010, 9.

The U.S. legal services market rose by 9.8 percent in 2012, but grew more modestly thereafter. Overall, the U.S. market expanded at a compound annual growth rate of 4.2 percent from 2011 to 2015 (figure 5.1). These trends reflect a return to faster growth in U.S. consumption of legal services in the post-recessionary period. Nonetheless, the growth rate is still lower than during the 2004–07 pre-recessionary period (when demand grew at a compound annual rate of 5.0 percent¹⁸⁰), and a larger share of firms reported declines and instability in demand in the post-recessionary period.¹⁸¹ In comparison, during 2011–15 the Asia-Pacific and European markets grew at compound annual growth rates of 5.0 and 2.7 percent, respectively.

Figure 5.1: Legal services revenue: The United States surpassed Asia-Pacific and Europe during 2011–15



Source: MarketLine, *Legal Services in the United States*, June 2016, 8; MarketLine, *Legal Services in Europe*, June 2016, 8; MarketLine, *Legal Services in Asia-Pacific*, June 2016, 8. (See [appendix table B.19](#).)

France and Germany showed similar growth in their legal services markets, with 2011–15 compound annual growth rates of 2.1 and 2.0 respectively, while the UK grew much faster (5.6 percent) over the same period.¹⁸² Within the Asia-Pacific region, the Chinese market experienced strong growth, increasing at a compound annual growth rate of 7.1 percent during 2011–15, while Australia’s and Japan’s markets both declined (falling at rates of 0.9 and

¹⁸⁰ U.S. Census Bureau, “Quarterly Services Survey” (accessed March 10, 2017). Data are seasonally adjusted. For comparison, compound annual growth from 2009 to 2014 was only 2.5 percent, with growth accelerating to 4.0 percent in 2015.

¹⁸¹ Hildebrandt and Citi, “2017 Client Advisory,” 3–4. See publication for information on underlying firm surveys used to assess law firm demand, which appears to be related to the number of billable hours.

¹⁸² MarketLine, *Legal Services in Europe*, June 2016, 7-8; MarketLine, *Legal Services in France*, June 2016, 8; MarketLine, *Legal Services in Germany*, June 2016, 8; MarketLine, *Legal Services in the United Kingdom*, June 2016, 8.

2.4 percent, respectively).¹⁸³ Growth in China's legal services market has been boosted by continued—albeit decelerating—growth in the country's overall economy.¹⁸⁴ It is reported that the Indian legal services market also expanded over this period, though comparable data are not available.¹⁸⁵

Firms in the United States and the UK accounted for 93 of the world's 100 top-grossing firms, and for 9 of the top 10 law firms in 2016 (table 5.2).¹⁸⁶ The Chinese firm Dentons was also on the top 10 list; this firm recently completed multiple mergers—including with China's Dacheng—to become the world's largest law firm by number of lawyers at over 6,500 attorneys.¹⁸⁷ Based on revenue from 2015, the top 100 firms also included two Canadian firms, one other Chinese firm, and one firm each from Australia, Germany, and South Korea (the first time a South Korean firm has appeared on the list). Illustrating the globalization of large law firms, the top 100 firms have, on average, a presence in 10 countries.

Table 5.2: Top 10 global law firms by 2015 revenue

Firm	Country base	Revenues (billion \$)	Share of global 100 total (%)
Latham & Watkins	United States	2.650	2.74
Baker & McKenzie ^a	United States	2.620	2.71
DLA Piper	United States	2.543	2.63
Skadden, Arps, Slate, Meagher & Flom	United States	2.410	2.49
Kirkland & Ellis	United States	2.305	2.39
Dentons ^a	China	2.120	2.19
Clifford Chance	United Kingdom	2.119	2.19
Freshfields Bruckhaus Deringer	United Kingdom	2.028	2.10
Allen & Overy	United Kingdom	2.003	2.07
Linklaters	United Kingdom	2.003	2.07

Source: *American Lawyer*, "The Global 100, Most Revenue," September 26, 2016, and USITC calculations.

Note: Revenues refer to the most recent fiscal year (2015) and the ranking refers to 2016. Share of Global 100 total is calculated by listed revenue as a share of gross revenue for the top 100 global firms (\$96.4 billion). The Global 100 lists the country with the most lawyers, which usually coincides with the country base/headquarters, but may not when firms have alternate firm structures, as indicated in the table.

^a The firm structures for Baker & McKenzie and Dentons differ from those of other firms on this list as related to profit sharing.

¹⁸³ MarketLine, *Legal Services in Asia-Pacific*, June 2016, 7–8; MarketLine, *Legal Services in Australia*, June 2016, 8; MarketLine, *Legal Services in Japan*, June 2016, 8.

¹⁸⁴ World Bank, World Development Indicators database (accessed January 4, 2017); Johnson, "Global Law Firms Face a World of Questions," January 4, 2017. Also see Zhang, "China's Biggest Firms," October 2016, 87.

¹⁸⁵ MarketLine, *Legal Services in Asia-Pacific*, June 2016, 7–8.

¹⁸⁶ Information in this paragraph is from *American Lawyer*, "The Global 100, Most Revenue," October 2016, 75–77, and *American Lawyer*, "The Global 100" (accessed December 16, 2016). The United States and the UK accounted for 81 and 12 of the world's 100 top-grossing firms, respectively.

¹⁸⁷ See *American Lawyer*, "The Dentons Effect," October 2016, 73.

Emerging Supply and Demand Trends

Policies affecting the foreign provision of legal services tend to be the most restrictive of all those affecting professional services industries.¹⁸⁸ Nationality and/or residency requirements, along with lack of recognition of foreign qualifications, are significant impediments that affect all modes of trade.¹⁸⁹ Countries commonly restrict foreign firms from practicing domestic (host-country) law—for example, by limiting foreign ownership of law firms that practice domestic law or through limits on commercial association between locally and non-locally licensed attorneys.¹⁹⁰

Among countries that restrict but do not completely prohibit trade in legal services, China provides an interesting case study. Foreign law firms are permitted to establish representative offices to practice foreign and international law in China, but are not allowed to practice Chinese law or hire Chinese lawyers.¹⁹¹ Only locally qualified Chinese nationals are permitted to practice Chinese law.¹⁹² However, recent reforms allow foreign and Chinese firms to operate jointly in free trade zones.¹⁹³

These regulations, along with other factors, restrict the growth and profitability of foreign law firms operating in China. For example, because foreign law firms are limited to certain practice areas (they mostly advise on international transactions such as mergers and acquisitions), their opportunities are few and their need for additional lawyers is limited.¹⁹⁴ It is reported that while such firms are unprofitable, they nevertheless maintain a presence in China because they are already licensed to operate in the country and are optimistic that future liberalization may

¹⁸⁸ Information on restrictions is based on Geloso Grosso et al., “Services Trade Restrictiveness Index,” 2014, 9–10, and OECD, “STRI Sector Brief,” 2016, 2.

¹⁸⁹ Some countries have implemented limited-licensing schemes which allow foreign attorneys to practice in their qualified areas of law (typically as foreign legal consultants) without being licensed in the host country. Temporary practice rules adopted by some jurisdictions are an additional avenue for foreign attorneys to practice law.

¹⁹⁰ Restrictions on commercial association can impede the ability of foreign firms to partner with or employ local lawyers to advise their clients on host-country law, eliminating the need for foreign lawyers to requalify in host-country markets.

¹⁹¹ In this case, host country law (also called domestic law) refers to Chinese law. Foreign law typically refers to the laws of the country in which the foreign attorney is qualified. According to the OECD, “International law includes advisory services in home country law, third country law, international law, as well as a right to appear in international commercial arbitration. Domestic law extends to advising and representing clients before a court or judicial body in the law of the host country.” OECD, “STRI Sector Brief,” 2016, 1.

¹⁹² OECD Services Trade Restrictiveness Index Simulator, <http://sim.oecd.org/default.ashx> (accessed December 19, 2016).

¹⁹³ Hong Kong’s Closer Economic Partnership Arrangement (CEPA) and Shanghai Free Trade Zone (SFTZ). Hildebrandt and Citi, “2016 Client Advisory,” 2016, 6; Johnson, “Global Law Firms Face a World of Questions,” January 4, 2017. The Shanghai reform (a pilot program) was initiated in 2014, and three international firms are in joint operations with Chinese firms. Zhang, “Will More Law Firms Look to Joint Ventures?” October 24, 2016.

¹⁹⁴ Stern and Li, “The Outpost Office,” 2015, 9, 16–17.

increase opportunities for foreign law firms.¹⁹⁵ Apart from regulations, competition from Chinese and other international law firms, as well as the profit-sharing structure of most surveyed law firms, act as further limits on growth.¹⁹⁶

These constraints are evident in that, among the top five countries purchasing U.S. legal services through affiliates, foreign purchases in China account for the smallest share of total domestic legal services revenues (see the affiliate transactions section for more information).¹⁹⁷ China's relatively low share is also interesting given the healthy presence of U.S. law firms there: in 2012, there were 81 U.S. law firms in China (accounting for 57 percent of all foreign law firms in the country).¹⁹⁸

In general, the availability of data on legal services trade by specific countries is limited, but a higher level of restrictions (as measured by the OECD Services Trade Restrictiveness Index, or STRI) is estimated to significantly curb cross-border exports of legal services.¹⁹⁹ Similarly, a quantitative analysis of the impact of restrictions on trade across services industries (as measured by the World Bank Services Trade Restrictions Index) shows that these restrictions have a negative and significant impact on foreign affiliate sales of U.S.-owned companies located abroad.²⁰⁰ Partial equilibrium modeling of the effects of trade liberalization on services industries, including legal services, also suggests that reducing the fixed costs of trade can significantly expand cross-border imports and foreign affiliate purchases (see box 5.1).

¹⁹⁵ Stern and Li, "The Outpost Office," 2015, 6, 9, 11, 21.

¹⁹⁶ Stern and Li, "The Outpost Office," 2015, 12, 16–18. Additionally, differences among firms, such as length of time in China, are correlated with foreign law firm size in China.

¹⁹⁷ Among the top five purchasers of legal services from U.S.-owned foreign affiliates (the UK, Germany, France, Japan, and China), China maintains the highest level of restrictions in legal services international trade; OECD Services Trade Restrictiveness Index Simulator, <http://sim.oecd.org/default.ashx> (accessed January 17, 2017).

¹⁹⁸ Stern and Li, "The Outpost Office," 2015, 4.

¹⁹⁹ Nordås and Rouzet, "The Impact of Services Trade Restrictiveness," 2015, 17. The Services Trade Restrictiveness Index compiled by the OECD uses more indicators of restrictiveness than the World Bank's STRI, but contains far fewer countries.

²⁰⁰ Riker, "The Impact of Restrictions on Mode 3," 2015. Though Riker analyzes total foreign affiliate sales and does not look specifically at legal services, the results, which indicate positive trade effects from liberalization, would likely hold in the case of legal services, given the prevalence of restrictions on legal services in foreign markets. While Riker finds that restrictions on mode 3 reduce foreign affiliate sales, restrictions on mode 1 increase foreign affiliate sales, which suggests substitution between different modes of supply.

Box 5.1: Effects of Trade Liberalization on Professional Services Markets in the United States

Quantitative analysis of services trade, including computable general equilibrium modeling and econometric estimation, are often hampered by the limited availability of data. Partial equilibrium models provide a helpful tool to focus on policies and outcomes in a particular segment of the economy, and therefore are especially useful for assessing the effects of industry-specific changes in trade policy. The modest data requirements of this type of model also accommodate the sparseness of available trade data on services.

A USITC staff research paper by Khachaturian and Riker (2016)^a provides an interesting case study on the potential market effects of a hypothetical liberalization in two professional services industries: legal services and architecture and engineering services. This research paper—and its companion piece on the EU professional services market^b—uses a partial equilibrium model approach similar to the Helpman, Melitz, and Yeaple (HMY) model of cross-border trade and horizontal foreign direct investment, and extends previous literature on estimating the effect of services trade liberalization by incorporating multiple modes of supply for trade in professional services.^c In professional services, including architecture and engineering services and legal services, services are supplied through multiple modes of delivery (e.g., architectural designs can be provided digitally, the architect may visit the project site, or firms may establish a commercial presence). Further, there are significant NTMs across countries (e.g., trade in legal services may be hobbled by lack of recognition of foreign qualifications). And finally, firms provide differentiated services (e.g., firms specialize in certain practice areas or subcategories of services and have distinct reputations).

Khachaturian and Riker simulate the impact of trade liberalization on the U.S. professional services market. The authors estimate the impact of reducing two types of fixed costs faced by foreign firms that provide services to the U.S. market—those related to cross-border trade, and those related to provision via foreign affiliates—on cross-border imports, purchases from foreign-owned affiliates, sales of domestic suppliers, and prices.^d The model results show large potential effects in percentage terms on the value of cross-border imports into the U.S. market and on purchases from foreign affiliates in the U.S. market, but only small effects on the sales of domestic producers and on overall prices of professional services in the U.S. market.

The small estimated percentage changes in sales of domestic producers and the average industry price in the U.S. market reflect the relatively small share of the U.S. market held by foreign suppliers (combined foreign affiliate sales and cross-border trade account for less than 7% of the U.S. market). The relatively large percentage changes in both U.S. cross-border imports and purchases from foreign affiliates are from a small base and do not represent much movement in the market share of foreign suppliers. For example, holding the incremental fixed costs of provision via foreign affiliates constant, a 50 percent reduction in the fixed costs of exporting into the U.S. market would increase cross-border imports by about 52 percent (for architecture and engineering services) and 28 percent (for legal services), but would reduce average prices in the U.S. market for these industries by only 0.19 and 0.04 percent, respectively. Holding the fixed costs of exporting into the United States constant, a 50 percent reduction in the incremental fixed costs of provision by foreign affiliates would increase purchases from foreign affiliates in the United States by 27 percent (architecture and engineering services) and 28 percent (legal services), but would reduce average prices in the U.S. market for these industries by only 0.18 and 0.001 percent, respectively.

The analysis in Khachaturian and Riker focused on reducing fixed costs in the United States. However, there may be larger potential gains from liberalizing services markets in other countries with greater trade restrictions.

^a Khachaturian and Riker, “A Multi-Mode Partial Equilibrium Model of Trade in Professional Services,” November 2016. This is a USITC staff working paper and represents only the opinions and professional research of individual authors. Staff working papers are not meant to represent in any way the views of the U.S. International Trade Commission or any of its individual Commissioners.

^b Barbe, Chambers, Khachaturian and Riker, “Modeling Trade in Services: Multiple Modes, Barriers to Trade, and Data Limitations,” April 2017.

^c This model uses a partial equilibrium version of HMY model with modifications to the approach used for analyzing merchandise trade which better reflect the particular conditions of services trade. Trade in services is unique because firms provide highly differentiated services, can choose from alternative modes of supplying services in foreign markets, and face considerable overhead costs and nontariff measures (NTMs) when entering and operating in such markets. For more on the HMY model see Helpman, Melitz, and Yeaple, “Exports Versus FDI with Heterogeneous Firms,” 2004.

^d The paper does not measure the size of these costs, and assumes a hypothetical 50 percent reduction in total fixed trade costs without associating this reduction with specific policy changes. As an example of what the costs might refer to, the incremental fixed costs of providing services via a foreign affiliate consist of costs associated with setting up and maintaining a commercial presence abroad, including those stemming from complying with barriers to trade (such as restrictions on type of firms or requirements for local qualifications).

Trade Trends

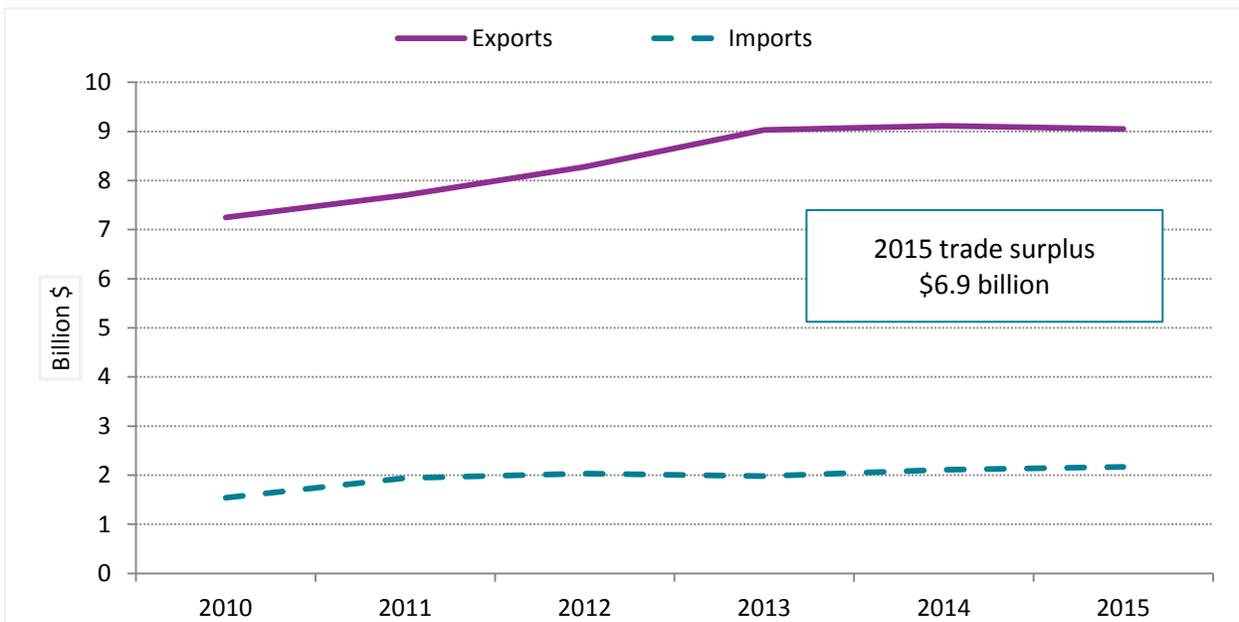
Cross-Border Trade

In 2015, U.S. cross-border exports and imports of legal services were valued at \$9.0 billion and \$2.2 billion, respectively, resulting in a trade surplus of \$6.9 billion. Although there has been a U.S. trade surplus each year during 2010–15 (see figure 5.2), the balance declined slightly after 2013, reflecting slower or negative export growth. Exports declined 0.7 percent in 2015, after posting a compound annual growth rate of 5.9 percent during 2010–14.²⁰¹ Exports to all regions except Latin America experienced a decline in 2015, with exports to Europe and Africa experiencing the largest decline. Imports grew 2.7 percent in 2015 after rising at a compound annual growth rate of 8.3 percent between 2010 and 2014.²⁰²

²⁰¹ Much of the growth during this period occurred from 2010 to 2013, with annual growth in 2011 (6.3 percent), 2012 (7.8 percent), and 2013 (9.1 percent) far exceeding annual growth in 2014 (0.9 percent).

²⁰² Imports experienced a large jump between 2010 and 2011, growing by 26.4 percent.

Figure 5.2: Legal services: U.S. cross-border trade resulted in a U.S. trade surplus in the sector each year during 2010–15



Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016). (See [appendix table B.20](#).)

Regionally, U.S. exports of legal services are concentrated in Europe and Asia-Pacific, which represented 47.9 and 30.2 percent of total exports in 2015, respectively. Overall, the top five U.S. export markets for legal services, which accounted for about half of all exports in 2015, were the UK, Japan, Canada, Germany, and Switzerland (figure 5.3). Export shares for the top five countries have remained relatively stable since 2010, with Japan's share dropping slightly (from 14.7 to 12.1 percent) and Switzerland's rising slightly (from 3.9 to 4.6 percent) as it overtook France to become the fifth-largest export market. Examining the overall growth in U.S. export values between 2010 and 2015, exports to all top five markets rose by at least 25 percent, except those to Japan, which grew by only 2.2 percent.²⁰³ Moreover, U.S. legal services exports to at least five countries (including two of the United States' free trade agreement partners) more than doubled during that time: Chile, Ireland, Malaysia, Singapore, and Venezuela.²⁰⁴

As with exports, Europe and Asia-Pacific accounted for the majority of U.S. imports of legal services, at 47.3 and 31.7 percent of total imports in 2015, respectively. The top five import

²⁰³ Total U.S. exports of legal services increased by 25 percent during 2010–15.

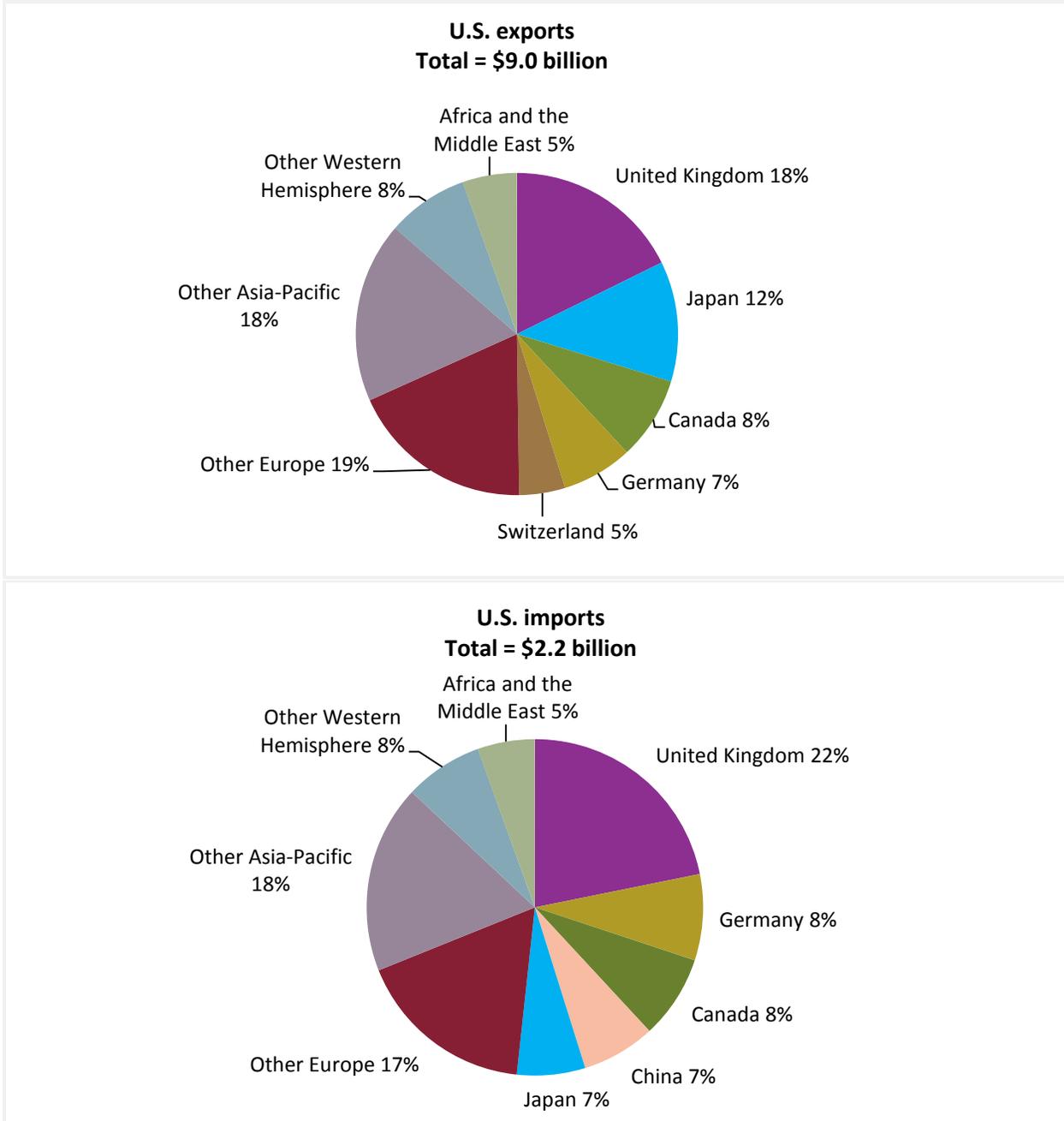
²⁰⁴ Growth is calculated as the difference between the 2015 and 2010 levels. For comparison, the compound annual growth rate rates for 2010–15 were 20.5 percent for Ireland, 42.1 percent for Chile, 15.3 percent for Venezuela, 17.1 percent for Malaysia, and 19.6 percent for Singapore.

sources, which together supplied just over half of all imports, were the UK, Germany, Canada, China, and Japan (figure 5.3).

Import shares for the top five countries have remained relatively stable since 2010, with a change in rank as China overtook Japan to become the fourth-largest import supplier. (Between 2010 and 2015, China's share of U.S. imports increased from 4.7 to 7.1 percent, while Japan's declined from 10.9 to 6.6 percent.) U.S. imports from four of these top five markets grew by at least 31 percent between 2010 and 2015, while U.S. imports from Japan experienced a decline. U.S. imports from China in 2015 were more than double those in 2010.²⁰⁵ During the same time period, at least four additional import suppliers (Bermuda, the Philippines, Thailand, and U.S. free trade agreement partner Singapore) doubled the value of their imports, while total U.S. imports from the Middle East nearly tripled from 2010 to 2015.

²⁰⁵ Growth is calculated as the difference between the 2015 and 2010 levels.

Figure 5.3: Legal services: The United Kingdom was the leading market for U.S. cross-border exports and imports of legal services in 2015



Source: USDOC, BEA, table 2.2, "U.S. Trade in Services, by Type of Services and Country or Affiliation" (accessed November 14, 2016). (See [appendix table B.21](#).)

Box 5.2: Understanding data on cross-border trade and affiliate Transactions in Legal Services

The Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce publishes data on both cross-border trade and affiliate transactions in legal services. BEA collects data through surveys, which differ in their methodologies. Cross-border trade surveys are collected by type of service, rather than by type of firm, and cover the provision of legal services regardless of whether the companies providing the services are law firms.^a By contrast, data on affiliate transactions are collected based on the industry classification of the parent or affiliate, rather than on the type of service provided. BEA data on affiliate transactions by legal services firms capture sales by and purchases from firms categorized in North American Industry Classification System (NAICS) 5411.^b

Due to these differences in approach, concordance issues may arise between cross-border trade and affiliate transactions statistics. However, in legal services there appears to be a strong agreement between the two types of statistics. This is because most of the companies that respond to the cross-border trade surveys provide only legal services,^c which suggests it is uncommon for law firms to export secondary activities (i.e., non-legal services) or for non-law firms to provide legal services abroad (though there may be some instances of this—for example, if a non-law corporation's in-house counsel provides legal services). Additionally, a majority of affiliates in the legal services industry do not report sales of other types of services, and affiliates in other industries tend not to supply legal services.^d Statistics in both instances are reported as an aggregate and do not differentiate among the specific categories of legal services that are traded.

Data on affiliate transactions may also be impacted by changes stemming from the BEA's benchmark surveys, which were most recently conducted for 2009 and 2014.^e These changes are frequently a result of improved affiliate coverage, rather than shifting trends in affiliate sales and purchases.^f

^a USDOC, BEA, form BE-125, "Quarterly Survey of Transactions in Selected Services and Intangible Assets with Foreign Persons"; USDOC, BEA, form BE-120, "Benchmark Survey of Transactions in Selected Services and Intellectual Property with Foreign Persons." Surveys BE-125 and BE-120 can be found at <http://www.bea.gov/surveys/pdf/be125.pdf> and <http://www.bea.gov/surveys/pdf/be120.pdf>.

^b Statistics for transactions by majority-owned legal services affiliates are collected through BEA's Annual, Quarterly, and Benchmark Surveys of Foreign Direct Investment in the United States and through its Annual, Quarterly, and Benchmark Surveys of U.S. Direct Investment Abroad, which can be found at <http://www.bea.gov/surveys/fdiusurv.htm> and <http://www.bea.gov/surveys/diasurv.htm>.

^c BEA representative, email message to USITC staff, December 9, 2016.

^d BEA representative, email message to USITC staff, January 11, 2017. In the cross-border trade statistics, secondary activities exported by law firms would be reported as a separate activity type, while legal services by non-law firms would be combined with legal services provided by law firms. In the affiliate transactions statistics, any secondary activities by law firms would be aggregated into the overall sales of the affiliate, while legal services by non-law firms would be reported under the industry of the affiliate.

^e For 2014, the BEA's benchmark survey for affiliate transactions data increased the number of firms responding to the survey and partially contributed to an apparent 24 percent rise in total U.S. services supplied through foreign affiliates. For more information, see USDOC, BEA, "U.S. International Services," December 2016, 24.

^f BEA representative, email message to USITC staff, November 29, 2016, and telephone interview by USITC staff, December 2, 2016.

Affiliate Transactions

Sales of legal services by U.S.-owned foreign affiliates (U.S. companies with a commercial presence in a foreign country) were valued at \$6.8 billion in 2014, compared to \$5.3 billion in 2013. Note, however, that the change in sales from 2013 to 2014 is largely attributable to improved coverage of reporting enterprises in BEA’s benchmark survey and should not be interpreted as an actual increase in the amount of services supplied; before this change in coverage, sales grew at a compound annual rate of 2.1 percent between 2010 and 2013.²⁰⁶ Purchases from foreign-owned U.S. affiliates were valued at \$0.1 billion in 2014, and grew at a compound annual rate of 1.5 percent during 2010–13.²⁰⁷ U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14 by a wide margin (figure 5.4).

Figure 5.4: Legal services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14



Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (both accessed January 4, 2017). (See [appendix table B.22.](#))

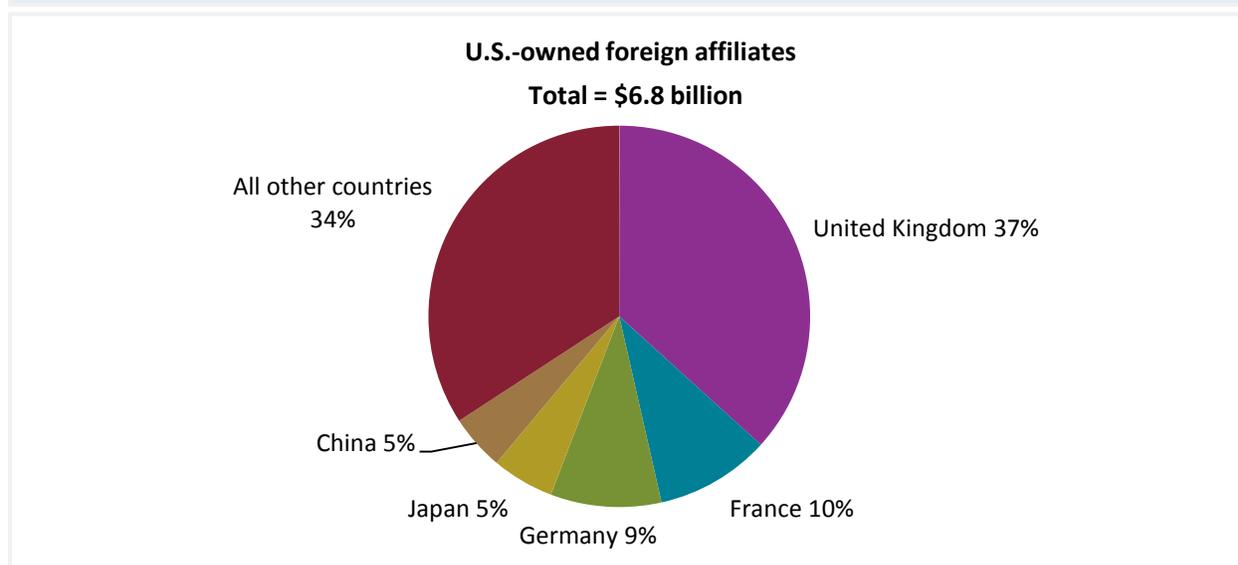
In 2014, Europe was the largest regional market for U.S. affiliate sales of legal services with \$5.0 billion (73.4 percent of the total). The UK accounted for \$2.5 billion in 2014 (about half of U.S. sales to Europe that year) and for 36.7 percent of the global total (figure 5.5). Other top five markets for sales of legal services by U.S.-owned foreign affiliates in 2014 include France

²⁰⁶ USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate” (accessed January 9, 2017); USDOC, BEA, “U.S. International Services,” December 2016, 24. For example, between 2013 and 2014, foreign affiliate sales of services in Canada increased by 100 percent and in Brazil by over 200 percent.

²⁰⁷ USDOC, BEA, table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 9, 2017).

(\$0.7 billion or 9.7 percent of total U.S. sales), Germany (\$0.6 billion or 9.4 percent), Japan (\$0.4 billion or 5.3 percent), and China (\$0.3 billion or 4.7 percent). Among the top five markets for U.S. sales, U.S. affiliate sales accounted for 10.5 percent of total legal services revenue in Japan, 5.0 percent in the UK, and 2.3 percent in both France and Germany, but only 0.8 percent in China. (See the “Market Conditions” section for more information on the regulatory environment in China.)²⁰⁸

Figure 5.5: Legal services: In 2014, the UK was the largest market for sales legal services by U.S.-owned foreign affiliates



Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate” (accessed January 4, 2017). (See [appendix table B.23.](#))

Outlook

The U.S. legal services industry is expected to grow modestly, continuing its post-recession trend. Many factors are expected to contribute to volatility in the demand for traditional legal services providers. Among these factors are those relating to the impacts of Brexit and the new U.S. administration, along with increasing competition from in-house legal departments of corporations, alternative legal suppliers,²⁰⁹ and the Big Four accounting firms.²¹⁰ A wider application of technology is expected to improve firm efficiency and competitiveness.

²⁰⁸ MarketLine, *Legal Services in Europe*, June 2015, 10; MarketLine, *Legal Services in Asia-Pacific*, June 2015, 10. It is not clear whether legal services revenue data from MarketLine include both domestic and foreign-owned firms.

²⁰⁹ Alternative legal service providers include firms such as Axiom, which is not structured as a law firm and does not practice law, but provides various cost-effective legal services to corporations. For more information, see Axiom website, <http://www.axiomlaw.com/>, and Dzienkowski, “The Future of Big Law,” 2014.

²¹⁰ Hildebrandt and Citi, “2017 Client Advisory,” 5–6 (accessed December 6, 2016).

Regional outlooks in Asia and Latin America are generally more positive than in Europe, where Brexit has created uncertainty. Future demand for legal services by international law firms in these two regions centers on growth in investment and infrastructure projects. Additionally, though their collaboration is limited to free-trade zones, international and Chinese law firms are anticipated to work more closely together as a result of the changes in the country's regulations governing foreign legal firms (see previous section). Similarly, if the Indian legal services market liberalizes (as was initially proposed by that country's legal regulatory body), international law firms are expected to begin opening offices in that country.²¹¹

²¹¹ Plans for liberalization are currently on hold pending further review by India's Supreme Court. Coe, "Plans to Open Up Legal Sector," October 4, 2016; Johnson, "Global Law Firms Face a World of Questions," January 4, 2017. See also Bruch, "The Forecast for Big Law in 6 Key Markets," September 26, 2016.

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Chapter 6

Management Consulting Services

Summary

The United States is the world's leading market for management consulting services, accounting for over half of global revenues in 2016. It is also home to four of the seven largest global management consulting firms by revenue. The digital revolution and increased global competition are transforming the industry as clients are becoming more cost conscious, selective, and “modular” in their demand for management consulting services. This trend is providing opportunities for small and medium-sized (SME) management consulting firms, including those that specialize in niche industry segments and geographic areas.

U.S. trade in management consulting services is conducted primarily through cross-border transactions, which accounted for about two-thirds of the total value of U.S. management consulting trade in recent years. Europe was both the largest destination for U.S. exports and the largest source of U.S. imports of management consulting services during 2012–15. The United States is expected to be the largest and most innovative market for consulting services in the coming years. Digital and other technological advancements will likely accelerate the specialization and multisourcing of consulting, a trend that should benefit SMEs.

Introduction

Management consultants provide advice to businesses, public sector entities, and nonprofits on a range of key operational functions such as organizational design, corporate strategy, human resources, information technology, marketing, sales, finances, and logistics.²¹² Many of these services overlap with other services such as accountancy, computer systems design, and investment planning.²¹³ The range and complexity of services supplied by management consultants is expanding rapidly as the global economy has become more interconnected and competitive, while the growth of digital technologies such as data analytics²¹⁴ has provided new

²¹² U.S. Census, Industry Statistics Portal, “2012 NAICS: 54161—Management Consulting Services,” n.d. (accessed January 12, 2017).

²¹³ Management consulting services are provided by a range of professional services firms. For example, accounting firms are expanding into management consulting (see chapter 3). The sector excludes administrative services; recruitment; public relations; training, engineering, and computer systems design; and investment advice, which are covered by other areas. U.S. Census, Industry Statistics Portal, “2012 NAICS: 54161—Management Consulting Services,” 2012; IBISWorld, *Management Consulting in the U.S.*, May 2016.

²¹⁴ The examination of datasets to draw inferences and conclusions using digital technologies and software.

opportunities for consulting firms. The customer base for management consulting is also widening, given that an increasing number of businesses—including SMEs and public sector entities—are seeking advice.

Demand for management consulting services reflects broad conditions in the economy, such as business revenues and expectations of future economic growth. Demand is also driven by dynamic trends such as (1) the opportunities and challenges brought about by the digital revolution, which have prompted businesses and other entities to develop strategies for dealing with rapidly changing technology,²¹⁵ and (2) a changing regulatory environment since the 2008–09 recession, as regulations like Dodd-Frank have spurred demand for advisory services on the part of the U.S. finance and insurance sectors.²¹⁶

The industry is largely made up of SMEs,²¹⁷ most of which are individual consultants (non-employer operators). However, multinational firms account for a large share of both revenue and employment. Management consulting services are supplied by a myriad of providers, ranging from well-known multinational firms like Accenture, McKinsey, and PwC, which provide a full range of consultancy services to clients worldwide, to individual non-employer operators focusing on niche areas and geographic locations.

Market Conditions

Global management consulting revenues were estimated at \$553.8 billion in 2016 (figure 6.1). Business strategy consulting, which focuses on an organization’s overall strategy and direction, was the leading global consulting activity, with revenues of \$176.1 billion that year. Supply chain management consulting, which helps firms manage the procurement of goods and services by assisting them with inventory management, distribution systems, and logistics, was the second leading activity (\$92.5 billion). Ranking a close third was financial management consulting (\$91.9 billion), which provides advice regarding banking, insurance, wealth management, securities distribution and investment, and accounting to a range of clients.²¹⁸ Digital and information technology have been the fastest-growing areas of business for management consultants in recent years, as clients seek to manage ever-changing technology.²¹⁹

²¹⁵ For example, retailers developing strategies to improve their interfaces with mobile phone technology.

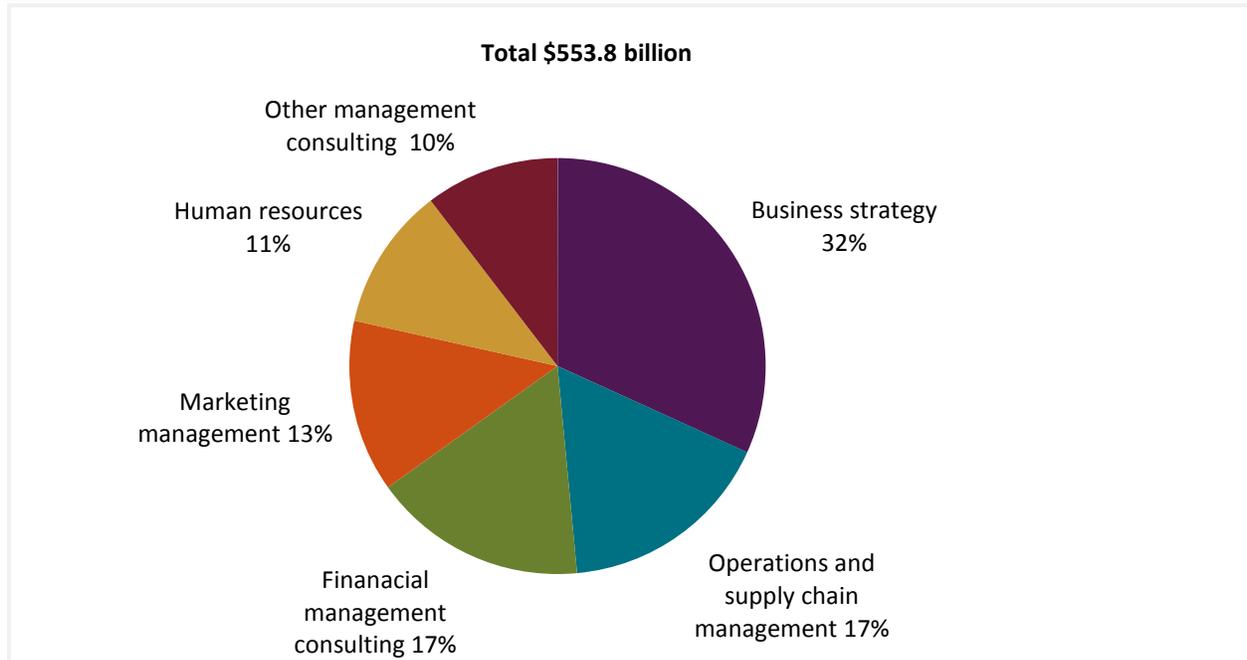
²¹⁶ IBISWorld, *Global Management Consultants*, June 2016.

²¹⁷ SMEs are defined as firms with less than 500 employees, which represent the overwhelming majority of U.S. and global consulting firms.

²¹⁸ IBISWorld, *Global Management Consultants*, June 2016.

²¹⁹ Hazari, “Uberization and Consulting,” November 7, 2016; Source Global Research, “U.S. Consulting Market Growing Strongly,” June 9, 2016.

Figure 6.1: Management consulting services: Business strategy had the largest projected global revenue by activity in 2016



Source: IBISWorld, *Global Management Consultants*, June 2016. (See [appendix table B.24](#).)

The private sector accounts for nearly 90 percent of global demand for management consulting services,²²⁰ but public sector and nonprofit customers are an important revenue base for many of the largest consulting firms.²²¹ By industry, the leading purchaser of consulting services was the financial services industry, which accounted for an estimated 27.7 percent of total demand in 2016. That industry was followed by manufacturing (17.8 percent), consumer products²²² (14.3 percent), telecommunications (10.9 percent), and energy and utilities (9.4 percent).²²³

Market share is geographically concentrated in developed countries, but industry concentration is low: the leading seven global companies make up around 12.5 percent of the global market. The United States accounts for roughly half of the number of global suppliers and industry revenues.²²⁴ Although developed countries generate the majority of management consulting revenues, the strongest recent revenue growth has been in the fast-growing economies of

²²⁰ IBISWorld, *Global Management Consultants*, June 2016, 15.

²²¹ Accenture public service website, <https://www.accenture.com/us-en/ps-industry-index>; PwC public sector website, <https://www.pwc.com/us/en/public-sector.html> (both accessed November 13, 2016).

²²² Consumer products include merchandise bought by individuals or households for private use.

²²³ IBISWorld, *Global Management Consultants*, June 2016, 15.

²²⁴ MarketLine, *Management and Marketing Consultancy in the United States*, September 2016, 10. According to IBISWorld, North America (49.3 percent) and Europe (27.2 percent) accounted for over three-quarters of all consulting establishments worldwide. IBISWorld, *Global Management Consultants*, June 2016, 17.

China and India.²²⁵ During 2012–16, global revenue growth accelerated as the global economy recovered from the 2008–09 recession, expanding at an average annual rate of 6.4 percent.²²⁶

Table 6.1 lists the leading global management consultant firms by revenue. Many of the largest consulting firms are also the world’s leading accounting firms: Deloitte Touche Tohmatsu, PricewaterhouseCoopers, and KPMG all rank among the “Big Four” global accounting firms.²²⁷ In addition, four of the top seven global consulting firms by revenue are headquartered in the United States. During 2012–16 most of the top firms experienced robust revenue growth, ranging between 4 and 8 percent annually.²²⁸

Table 6.1: Leading global management consulting firms by revenue, by recent period

Firm	Country	Revenues (billion \$)	Period	Global market share (%)	Number of countries where firm operates
Accenture Ltd.	United States ^a	16.8	2015/2016	2.9	55
Deloitte Touche Tohmatsu	United Kingdom ^b	16.7	2016/2017	2.9	150
PricewaterhouseCoopers (PwC)	United Kingdom	12.2	2016/2017	2.1	157 ^c
KPMG International ^d	*	9.2	2015/2016	1.7	152
McKinsey & Company	United States	9.0	2016	1.5	50
Boston Consulting Group	United States	5.5	2016	1.0	46
Bain & Company	United States	2.4	2016	0.4	34

Source (except as noted): IBISWorld, *Global Management Consultants*, June 2016, 28–33.

^a The company is chartered in Ireland.

^b Global operations are reportedly run from the New York office.

^c PwC website, pwc.com (accessed November 13, 2016).

^d KPMG International is a cooperative with 9,000 partners worldwide. Each national firm is an independent legal entity.

The United States is the largest supplier and consumer of management consulting services, with the majority of suppliers of consulting services being SMEs. In 2016, an estimated 376,866 U.S. management consultant establishments employed a total of 1.2 million people, with the smallest firms (with 1 to 4 employees) and the largest (with more than 500 employees) leading the U.S. industry by number of employees and sales in 2016. Small consulting firms accounted for 29.9 percent of total establishments (112,651 establishments), 23.5 percent of employment (281,628 employees), and \$23.6 billion in sales. Large consulting firms accounted for less than

²²⁵ Barnes Reports, *Management Consulting Services Industry*, 2016.

²²⁶ Revenues for 2016 are IBISWorld estimates. IBISWorld, *Global Management Consultants*, June 2016, 5.

²²⁷ Ernst & Young (EY) is the other “Big Four” accounting firm; it also provides consulting services but is not among the top seven consultants. Accounting services represent a substantial share of these firms’ revenues, which are excluded from the estimates provided in table 6.1. For example, Accenture’s total revenue for fiscal year 2015 was \$31.0 billion, while its consulting revenues were \$16.2 billion in 2016. IBISWorld, *Global Management Consultants*, June 2016, 29. See chapter 3 for a discussion of the accounting industry.

²²⁸ IBISWorld, *Global Management Consultants*, June 2016, 10, 28–33.

1 percent of firms (only 162 establishments), but were responsible for 11.3 percent of employment (138,625 employees) and \$27.7 billion in sales.²²⁹

Emerging Supply and Demand Factors

The digital revolution and increased global competition are transforming the management consulting industry and providing opportunities for small-scale management consultants. Traditionally, management consulting used a “solution-shop” model, where large global consultancy firms developed long-term relationships with clients and sent staff for a fixed period of time to provide comprehensive advice and recommendations.²³⁰ In contrast, a new model facilitated by digital technology focuses on specialization, flexibility, and collaboration, as businesses face an increasingly competitive and volatile global economy. (See box 6.1 for a discussion of technology in consulting.) This new model has enabled SME consultants, including new entrants and nontraditional boutique firms, to emerge as strong competitors to large established multinational consulting firms.²³¹

SME consultants are an important part of the management consulting market. Firms with less than 500 employees accounted for a much greater share of U.S. sales than large firms in 2016, with SMEs earning \$105.9 billion in revenue, compared to \$27.7 billion for large firms. Moreover, total sales by the smallest management consultant firms (less than 4 employees) rivaled that of large firms (over 500 employees) in 2016.²³² Firm-level data indicate that small-scale consultants are the largest and fastest-growing segment in the industry.²³³

²²⁹ For a complete breakdown of employment and sales by enterprise size for the U.S. management consulting industry, see Barnes Reports, *Management Consulting Services Industry*, 2016, 155.

²³⁰ LexisNexis, “Seven Predictions for the Consulting Industry in 2016,” 2016.

²³¹ MarketLine Industry Profile, *Management and Marketing Consultancy in the United States*, September 2016, 7.

²³² Barnes Reports, *Management Consulting Services Industry*, 2016, 155.

²³³ Firms of unknown size had revenues of \$22.9 billion in 2016. Barnes Reports, *Management Consulting Services Industry*, 2016, 155.

Box 6.1: Digital Technology Is Transforming the Management Consulting Industry

Big data analytics and artificial intelligence (AI) are key technologies transforming the traditional strategy consulting business. Big data analytics can evaluate enormous amounts of data and identify relevant quantifiable insights. AI helps consultants efficiently organize vast amounts of data and information, freeing time for deeper human analysis and interpretation. These labor-saving technologies are reducing the role of junior- and medium-level analysts and transforming the work of consultants, who previously devoted 80 percent of their time to gathering and organizing data and only 20 percent to analysis.^a These data science technologies are being used across all consulting business sectors, and reliance on them is expected to intensify in the coming years.^b

Digital technology and the Internet are also allowing clients to handle many traditional consulting services in-house at lower cost, including market research and certain data analytics. This enables these clients to be more selective in their demand for consulting services and contributes to the modularization of the industry (discussed in the text below). The Internet is also allowing clients to source from online providers and from small and freelance providers who supply niche consulting services.^c

SMEs are using this technology to contribute to the transformation of the industry, as providers are increasingly organizing themselves into digitally connected global professional networks.^d For example, Internet platforms like Wikistrat and HourlyNerd provide access to independent and freelance consultants.^e In this model, clients log onto a website, specify a request, review candidates, hire consultants, and reportedly receive high-quality services, often at much lower cost and more quickly than when using a traditional firm.^f Small businesses as well as large firms, including Fortune 1000 firms, are increasingly using such platforms to contract with SMEs on a range of issues.^g The substitution of digital infrastructure for physical infrastructure lowers overhead and fixed costs. Consulting teams work together using digital programs like Dropbox, Google Docs, and other cloud-based applications. Other relatively new entrants such as Eden McCallum and Business Talent Group are using a similar model by maintaining networks of freelance and independent consultants that are assembled for individual projects to offer strategy work similar to that provided by global incumbents.^h

Large incumbent firms, such as McKinsey, Deloitte, PwC, and others have responded to this digital disruption by providing new consulting services that rely on technology in addition to human capital.ⁱ For example, McKinsey has “McKinsey Solutions,” which uses proprietary software and analytics embedded in clients’ data networks to provide ongoing analysis and support that is not specifically project based, but rather a source of ongoing information and advice.^j Deloitte Digital uses customer relationship management (CRM) technologies, which manage and analyze customer interactions and data.^k Large incumbents are also drawing on crowdsourced options, such as Deloitte Pixel and PwC Talent Exchange, for their clients. These resources match freelance consultants with firms’ particular consulting projects.^l Moreover, large incumbents are using digital technology to automate various functions and balance the mix of services across their global offices in order to lower costs.^m

^a Mikesell, “The Commoditization of Consulting: Fact or Fiction?” January 25, 2014; MCA, “UK Consulting Industry Statistics, 2016,” 2016, 10.

^b MCA, “UK Consulting Industry Statistics,” 2016, 10.

^c Hill, “When McKinsey Met Uber,” October 6, 2016; InfoDesk, “Key Trends in 2016,” February 11, 2016.

^d Srinivasan, “The Management Consulting Industry,” October 23, 2014.

^e Wood, “Key Trends in 2016 for the Consulting Industry,” February 11, 2016; LexisNexis, “Seven Predictions for the Consulting Industry in 2016,” 2016; Culler, “The Uberization of Consulting,” May 2015.

^f Wood, “The Rise of Crowdsourced Consulting Services,” September 21, 2016.

^g For example, HourlyNerd counts among its clients Pfizer, Staples, GE, and Microsoft. HourlyNerd website, <https://hourlynerd.com/your-matches> (accessed January 12, 2017).

^h Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2013.

ⁱ Mikesell, “The Commoditization of Consulting: Fact or Fiction?” January 25, 2014.

^j Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2013.

^k Gartner named Deloitte the leading global provider of CRM technology; PRnewswire, “Deloitte Named a Leader in CRM,” January 23, 2017.

^l PwC Talent Exchange website, <https://talentexchange.pwc.com/about> (accessed February 12, 2017); Wood, “The Rise of Crowdsourced Consulting Services,” September 21, 2016.

^m LexisNexis, “Seven Predictions for the Consulting Industry in 2016,” 2016.

Clients of all sizes are becoming much more selective and “modular” in their demand for management consulting services.²³⁴ Also known as commoditization, modularization refers to the unbundling of consulting services (i.e., separating consulting tasks); it is driven by the growing sophistication of clients who increasingly seek targeted advice as well as lower costs. This trend has reduced clients' reliance on traditional providers²³⁵ and has increased demand for SMEs that target specific niches. Such niches are found, for example, in certain information technology areas such as medical technology and cybersecurity, which require high levels of expertise in specific disciplines.²³⁶

Although large incumbent firms are still employed by corporations and public sector clients that need advice and solutions for significant challenges or overarching strategies, much of the new business is tightly focused.²³⁷ By one estimate, traditional strategy work among the leading global consulting firms currently accounts for only 20 percent of the total consulting market, down from 60 to 70 percent in the 1980s.²³⁸ This change is reflected in industry revenues: the market shares of operations management (27 percent) and information technology (20 percent) both exceeded that of corporate strategy (14 percent) in 2016.²³⁹

Clients are benefiting from the increasing availability of online information and do-it-yourself data analytics to manage challenges internally, making them less likely to employ traditional full-service consultants for many traditional activities.²⁴⁰ For example, market data that were traditionally provided by large consulting firms are now being purchased from research firms

²³⁴ Parakala, “Global Consulting and IT Service Provider Trends,” December 2015.

²³⁵ Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2016.

²³⁶ MarketLine Industry Profile, *Management and Marketing Consultancy in the United States*, September 2016, 18.

²³⁷ In some cases consultants focus on “one specific link in the value chain.” Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2016, 9–10.

²³⁸ Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2013, 3.

²³⁹ MarketLine Industry Profile, *Management and Marketing Consultancy in the United States*, September 2016, 9.

²⁴⁰ Such activities include gathering data on markets and competitors. Christensen, Wang, and van Bever, “Consulting on the Cusp of Disruption,” October 2016, 9; Naden, “Taking Management Consultancy to Another Level,” May 9, 2016.

such as Gartner and Forrester.²⁴¹ Businesses are also buying data analytics from a host of specialized analytics firms, many of which are SMEs. Examples include InsightSquared (which connects data applications such as Salesforce, QuickBooks, and others); Tranzlogic (which provides credit card data analysis); and ClearStory Data (which combines insights from internal firm data with publicly available data).²⁴²

The shift towards specialization and commoditization has also transformed the pricing model away from a per-diem structure to value-based pricing (i.e., pricing based on tasks and outcomes).²⁴³ The new, more cost-effective consulting model requires consultants to work closely with clients, who now significantly contribute to the approach and determine the desired outcome of their projects.²⁴⁴ Moreover, clients are increasingly hiring teams of small consultants who partner with each other on large and complex projects that might have been previously handled by a single large firm.²⁴⁵

Another important factor benefiting SMEs and nontraditional providers is that barriers to entry and startup costs for consultants are low, especially compared with other professional services. There are no industry-wide guidelines or regulations that apply to management consultants, as there are for other professional services providers such as lawyers and accountants, who must meet comprehensive licensing and certification requirements. Moreover, there are few professional organizations in the sector that promote industry standards.²⁴⁶ Although certain organizations provide accreditation, such as the Institute of Consultants USA,²⁴⁷ consultants do not need licenses to operate in the United States or most foreign markets. The ease of entry has allowed many alumni of large established firms to work as freelance consultants.²⁴⁸ This factor, combined with increased opportunities and flexibility, is expected to contribute to the growth of freelance consultancies in the coming years.²⁴⁹

²⁴¹ Mikesell, "The Commoditization of Consulting: Fact or Fiction?" January 25, 2014.

²⁴² Angeles, "Eight Big Data Solutions for Small Businesses," October 24, 2016.

²⁴³ Another advantage of SMEs is their lower cost structure compared with the large global firms, which can charge a premium and in many cases bundle consulting services. ConsultingFact.com, "What is the Future of Management Consulting?" (accessed December 2, 2016).

²⁴⁴ Mikesell, "The Commoditization of Consulting: Fact or Fiction?" January 25, 2014.

²⁴⁵ Ibid.

²⁴⁶ Srinivasan, "The Management Consulting Industry," October 23, 2014.

²⁴⁷ Institute of Management Consultants USA website, <http://www.imcusa.org/?page=GOVERNANCE> (accessed February 2, 2017).

²⁴⁸ Vermeulen, "What Happens When All Employees Work When They Feel Like It," December 17, 2014.

²⁴⁹ Hill, "When McKinsey Met Uber," October 6, 2016.

Trade Trends

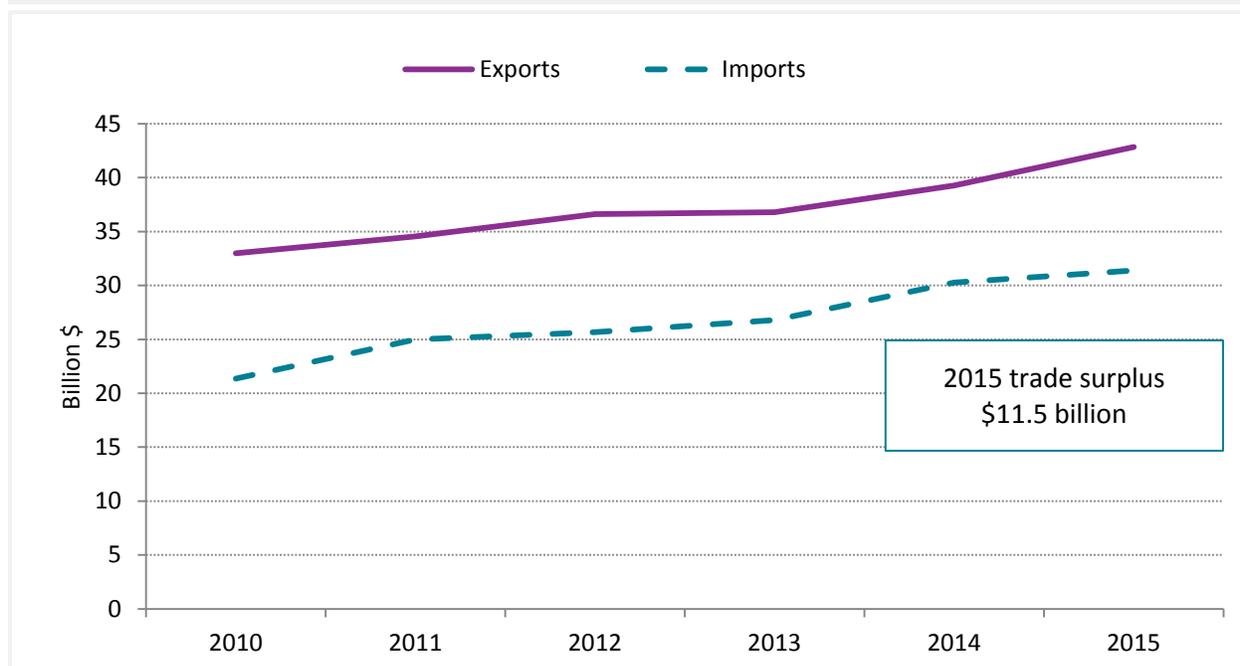
Cross-Border Trade

Total U.S. cross-border trade in management consulting services in 2015 was \$75.2 billion, which represented about three-quarters of the total value of U.S. business and management consulting trade. U.S. exports of management consulting services were \$42.8 billion in 2015, up from \$33.0 billion in 2010. These exports rose by an average of 4.5 percent annually during 2010–14, and by 9.0 percent during 2015. Imports also grew, rising to \$31.4 billion in 2015 from \$21.4 billion in 2010 (figure 6.2). This represented an average annual increase of 8.0 percent, attributed to strong demand from U.S. firms.

The expansion of U.S. trade in management consulting services, and the large U.S. cross-border trade surpluses during 2010–15, reflect the continued strengthening of the U.S. and global economies since the 2008–09 recession, as well as the preeminent global position of the U.S. management consulting industry.²⁵⁰ A portion of the recent expansion in U.S. consulting services trade may have been generated by U.S. SME suppliers, which dominate the industry by number and accounted for a substantial share of industry revenue. However, the shares of U.S. trade accounted for by SMEs and by large U.S. multinational consulting firms are not currently published by the U.S. Bureau of Economic Analysis (BEA) (box 6.2).

²⁵⁰ IBISWorld, *Global Management Consultants*, June 2016, 5.

Figure 6.2: Business and management consulting services: U.S. cross-border trade resulted in a U.S. trade surplus in this sector each year during 2010–15



Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016). (See [appendix table B.25](#).)

Box 6.2: Understanding data on Cross-Border Trade and Affiliate Transactions in Management Consulting Services

Official U.S. statistics on cross-border trade and affiliate transactions in management consulting services are compiled by the Bureau of Economic Analysis (BEA) at the U.S. Department of Commerce. Data are collected through surveys, which differ in their methodologies. Cross-border trade surveys are collected by type of service rather than type of firm, and encompass the provision of management consulting services irrespective of whether the companies supplying these services are management consulting firms. Data on affiliate transactions, on the other hand, are collected based on the industry classification of the parent or affiliate, rather than on the type of service provided. As such, affiliate transaction data include secondary services provided by management consulting firms.

The BEA publishes data on cross-border trade in management, consulting, and public relations services, which it defines as payments related to the general operations and management of a business.^a These services exclude specific business services listed in other categories (e.g., accounting, advertising, and legal services).^b BEA data on affiliate transactions in management consulting services are collected in the general “management, scientific, and technical consulting” category, which corresponds to NAICS 5416 and is a broader category than that used for cross-border trade.

Data on affiliate transactions may be impacted by changes stemming from upgrades in the BEA’s benchmark surveys, which were most recently conducted for 2009 and 2014.^c These changes are frequently a result of improved affiliate coverage, rather than shifting trends in affiliate sales and purchases.^d

^a Public relations services are not explicitly covered in this report.

^b BEA representative, email message to USITC staff, October 11, 2016.

^c This survey is filed by U.S. persons who had transactions—receipts and/or payments—with affiliated and unaffiliated foreign persons during the reporting period. BEA, “U.S. International Accounts,” June 2014, 13-4, 13-5.

^d BEA, “A Guide to BEA’s Services Surveys,” n.d., 14, 15 (accessed December 8, 2016).

^e BEA, Form BE 120 Survey, 2; BEA, “A Guide to BEA’s Services Surveys,” n.d., 14, 15 (accessed December 8, 2016).

^f See BEA, “A Guide to BEA’s Direct Investment Surveys,” n.d., 1-1 (accessed December 8, 2016).

^g For 2014, the BEA conducted its benchmark survey for affiliate transaction data, which increased the number of firms responding to the survey and partially contributed to an apparent 24 percent rise in total U.S. services supplied through foreign affiliates. For more information, see USDOC, BEA, “U.S. International Services: Trade in Services in 2015 and Services Supplied through Affiliates in 2014,” 24.

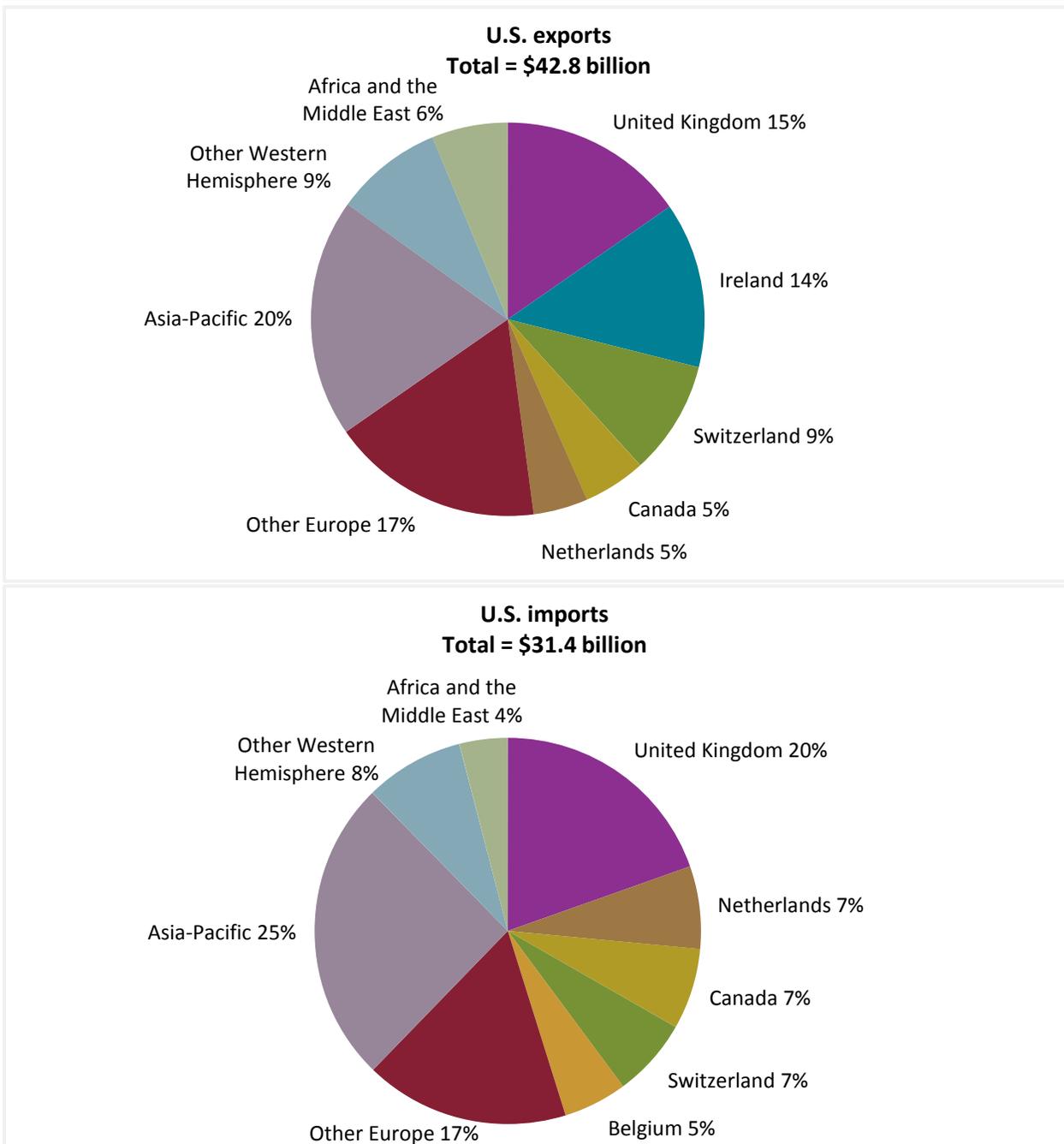
^h BEA representative, email message to USITC staff, November 29, 2016, and telephone interview by USITC staff, December 2, 2016.

The United States recorded cross-border trade surpluses in business and management consulting services with most of its leading trade partners. The United Kingdom was the largest U.S. export market, accounting for \$6.6 billion in 2015 (figure 6.3). The size of the UK market for U.S. consulting services exports reflects the importance of the financial sector in the UK: the financial sector is a leading consumer of consulting services.²⁵¹ Ireland (\$5.8 billion) was the second-largest U.S. export market. Like the UK, Ireland is an important business center for U.S. and other global firms operating in the EU. Other top U.S. export markets in 2015 were Switzerland (\$4.0 billion) and Canada (\$2.2 billion). The Netherlands was the fifth-largest U.S. export market in 2015 (\$1.9 billion) and the only leading trade partner with which the United States had a trade deficit (\$259 million) that year. Many of the leading foreign markets for exports were also the leading foreign suppliers of U.S. imports in 2015, including the UK (\$6.1 billion), which is home to the second-largest concentration of business and management consulting firms after the United States;²⁵² the Netherlands (\$2.2 billion); Canada (\$2.1 billion); and Switzerland (\$2.1 billion).

²⁵¹ IBISWorld, *Global Management Consultants*, June 2016, 2.

²⁵² *Ibid.*, 24.

Figure 6.3: Business and management consulting services: The United Kingdom was the leading single-country market for U.S. cross-border exports and imports in 2015

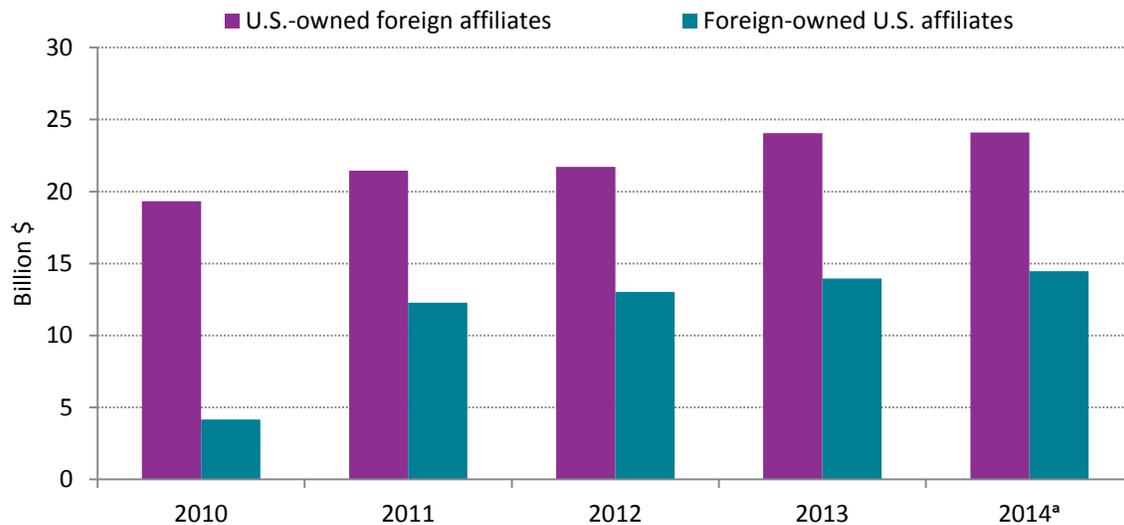


Source: USDOC, BEA, table 2.2, "U.S. Trade in Services, by Type of Services and Country or Affiliation" (accessed November 14, 2016). (See [appendix table B.26.](#))

Affiliate Transactions

In 2014, the United States sold over \$24.1 billion of management consulting services through its overseas affiliates, while purchases from U.S. affiliates of foreign firms were \$14.5 billion (figure 6.4).²⁵³ The UK (\$4.4 billion), Switzerland (\$ 4.2 billion), Germany (\$2.5 billion), and Japan (\$1.2 billion) were the largest individual markets for sales by U.S.-owned affiliates. By region, European countries accounted over half of total U.S. sales in foreign markets (\$14.7 billion) in 2014, and Europe is estimated to account for roughly three-quarters (\$11.0 billion) of total U.S. purchases from affiliates of foreign-owned firms in 2014.²⁵⁴

Figure 6.4: Management consulting services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14



Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017). (See [appendix table B.27.](#))

^a The total value for U.S.-owned foreign affiliate sales in 2014 is not available due to suppression of data.

²⁵³ The total value of services supplied by foreign affiliates of U.S. management, scientific, and technical consulting firms is not available due to BEA suppression of data for Latin America and Other Western Hemisphere countries in 2014 to avoid disclosing information on individual survey respondents; however, services supplied by U.S. firms to other regions totaled \$24.1 billion.

²⁵⁴ Most individual country data has been suppressed by the BEA to avoid disclosure of information on individual survey respondents.

Outlook

Industry sources expect global revenue to remain strong through the next five years, with growth moderating slightly to match the expected slower growth in the global economy.²⁵⁵ The United States is expected to continue to be the largest and most innovative market for consulting services and to drive global growth during the period. Brazil, Russia, India, and China (the BRIC countries) are expected to increase their demand for management consulting services as businesses look to adapt to slowing domestic economic growth. The eurozone is expected to demand more management consulting services; merger and acquisition activity is expected to increase in Germany and other developed EU markets, while demand in Eastern Europe is expected to grow quickly from a low base.²⁵⁶ Brexit may increase demand for consulting services as UK firms prepare to operate in the new environment; on the other hand, UK businesses may cut back on consulting services as part of a general decline in investment.²⁵⁷

SME consultants are likely to represent an increasing share of the consulting market as suppliers, and to contribute to future growth as clients. Financial advice (tax and legal consulting) and operational advice (e.g., on developing marketing strategies and conducting market research) are expected to be key advisory services demanded by SMEs as they seek to hone their marketing approaches, search for business partners, and refine market research.²⁵⁸ Digital and other technological advancements will likely continue to pave the way for “multisourcing” (the employment of many different niche advisors) in the coming years.

²⁵⁵ IBISWorld, *Global Management Consultants* June 2016, 7.

²⁵⁶ *Ibid.*, 9.

²⁵⁷ Belton, “Brexit Effect Brings Good and Bad Tidings,” December 6, 2016.

²⁵⁸ MarketLine, *Management and Marketing Consultancy in the United States*, September 2016, 7.

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Chapter 7

Services Roundtable

The Commission hosted its 10th annual Services Roundtable on November 17, 2016.²⁵⁹ These roundtable discussions are held regularly to encourage dialogue among individuals from government, industry, and academia about issues affecting trade in services. This year's event focused on the usefulness of the "modes of supply" structure set out by the General Agreement on Trade in Services (GATS) for structuring commitments on services trade.²⁶⁰ The four GATS modes of supply are as follows: mode 1, cross-border trade; mode 2, consumption abroad; mode 3, commercial presence; and mode 4, presence of natural persons.²⁶¹

The roundtable also examined the importance of initiatives to harmonize regulations and to liberalize services trade, as well as how these initiatives may interact. Commissioner Meredith Broadbent moderated the first half of the discussion, and Commissioner Rhonda Schmidlein moderated the second half.

GATS Modes of Supply

The first half of the roundtable focused on the GATS modes of supply as a framework for understanding services trade. Multiple panelists stated that since the GATS agreement entered into force in 1995, the Internet has facilitated the expansion of services supplied through mode 1, cross-border trade. One participant also remarked that the Internet has made foreign markets more accessible to small and medium-sized enterprises since the GATS agreement's implementation, meaning that smaller firms, too, are now affected by cross-border barriers to trade in services. Participants cited examples of small firms trading globally, including software developers whose applications can be downloaded globally and small retailers who can sell to consumers in different countries through e-commerce platforms.

Roundtable participants discussed many sectors that rely on multiple modes of supply to sell their services in foreign markets. One attendee noted that it is difficult to limit trade to a single mode in Internet-based services like cloud computing, since a company may purchase a service cross-border (mode 1), but may also need a local sales representative at a foreign affiliate to

²⁵⁹ The Services Roundtable is an off-the-record event. As such, its participants are not named in this summary and no transcript is available to the general public.

²⁶⁰ The GATS is an agreement under which members of the World Trade Organization (WTO) schedule commitments to liberalize services trade.

²⁶¹ For a more detailed explanation of the modes of supply see chapter 1, box 1.1.

facilitate the transaction (mode 3), as well as a specialist from headquarters to travel on-site to help customize the service (mode 4). Another participant distinguished between advertising services and free services like search engines. While the advertising segment, which provides revenue for the service provider, might require a local affiliate to sell targeted ads in a foreign market, search engine users in foreign markets do not need that company to be present in order to access search services. The participant pointed out that language differences lead to some localization of Internet services. A third panelist noted that although Internet services are generally considered mode 1, users actively seek out new computer applications when they are created, regardless of geographic location. Such transactions resemble mode 2 trade, where customers travel to consume a service abroad.

Other panelists discussed the complementarity of different modes of supply in traditional services industries. One attendee noted that mode 3 sales of consumer insurance are supported by mode 1 trade in reinsurance. Another said that in the retail industry, particularly because of e-commerce, accommodating consumer preferences requires the seamless integration of mode 1 and mode 3. The participant gave the example of a customer ordering groceries online (mode 1) and then picking them up at a local store (mode 3). A third participant stated that in transportation services, networks of affiliates in foreign markets (mode 3) tend to be more efficient than networks that involve partnerships with outside firms.

One attendee noted that services provide most of the value added in agricultural goods trade (up to 85 percent for some agricultural goods), and that this was likely also true for manufacturing. However, while participants discussed the possibility of expanding the GATS mode classification to include services embedded in goods traded across borders as its own category (“mode 5”), they did not state a firm preference.

The panel also discussed the limits that data localization requirements place on mode 1 services trade.²⁶² Multiple industry participants stated that their services would be impossible to provide without the free flow of data across borders. One attendee pointed out that there are cases where customer data, financial data, and data on employees all need to be accessed globally for both business and regulatory purposes. Another participant asserted that data localization requirements have frequently been motivated by a desire to champion a local provider, as well as by national security and consumer protection concerns. A third participant stated that some countries argue that cross-border data flows are unnecessary, given local capacity for data storage. Participants also raised other regulatory challenges, such as antimonopoly regulations being applied to cross-border services trade, and restrictions on mode 3 aimed at limiting competition.

²⁶² Data localization requires companies to store and access data exclusively in the country where it was gathered.

Finally, panelists discussed possible improvements to regulations in services trade. One panelist stated that the Trans-Pacific Partnership (TPP) would improve services trade provisions by consolidating services provisions into a single chapter in the agreement, and by banning data localization requirements in every sector but financial services. The participant also noted that provisions surrounding intermediary liability (holding Internet platforms liable for content posted on their sites) were set to come into effect two years after the TPP would enter into force. Another participant added that the e-commerce chapter in the TPP includes provisions for services such as e-signatures, a moratorium on duties, and nondiscriminatory treatment of digital products that could serve as models for future agreements. Outside of the TPP, participants also noted that the Trade in Services Agreement (TiSA) and negotiations in the World Trade Organization (WTO) could be avenues to clarify regulations on trade in services.

Regulatory Harmonization

The second half of the roundtable focused on developments in services trade regulations and efforts to achieve both regulatory harmonization and regulatory cooperation in the services sector. Regulatory harmonization involves changing regulations so that they are identical across countries, while regulatory cooperation recognizes that different regulations are equivalent if they fulfill the same purpose.

One panelist noted that some online and digital services were completely unregulated when they first came on the market, while others fell under existing regulations because they resembled traditional services. The panelist explained that when Internet companies were small, they were allowed to operate outside of regulatory regimes, but now some are too large to be ignored by regulators. Going forward, countries can either expand general regulations to cover new services or create specific regulations for each new service. The panelist stated that most firms prefer broad regulations governing consumer protection and competition over specific regulations by industry. Another attendee noted that current regulations assume that services, such as banking, are non-tradable, even though consumers no longer have to visit a bank location to consume banking services. Short-term home rentals and ridesharing services are other examples of this regulatory mismatch. A third participant noted that data protection and cybersecurity regulations are examples of broad regulatory regimes, which are necessary for consumer protection, but may also constrain competition.

One participant brought up the example of state-owned enterprises (SOEs), such as the Japan Post (which provides insurance as well as postal services). SOEs may fall under regulatory regimes that are less strict than those applied to their non-SOE competitors, potentially creating situations where clients favor the less regulated company. A second attendee raised the issue of previously non-tradable services, such as telecommunications, being historically

regulated like public utilities to ensure that they were widely provided despite the high cost of physical infrastructure. This attendee noted that online equivalents of these services, such as voice calling over the Internet, do not have the same high fixed costs of entry and therefore should probably not be regulated in the same way.

Another participant stated that for certain services, such as insurance, developing countries need strong regulations in order to provide high-quality services that are competitive in the global market. On the other hand, this participant noted that transportation services firms that meet international standards for quality are unable to compete when other firms do not face the same environmental or labor regulations. The participant added that developing countries also struggle with a limited institutional capacity to implement changes in regulations.

A second theme of this discussion was movement towards cooperation in existing regulation. One participant explained that regulatory harmonization tends to be very difficult to achieve since it involves making regulations identical, while regulatory cooperation allows countries to accept each other's regulations as effectively achieving the same objective without changing the regulations themselves. Another participant added that different countries have different preferences about ways to regulate risk, which makes harmonization challenging. The panelist also suggested that a lack of movement on regulatory cooperation in professional services, such as legal services, may be due to the small share of professionals who do international work.

Finally, panelists discussed current regulatory cooperation efforts. One attendee mentioned the Services Competitiveness Roadmap developed by the Asia-Pacific Economic Cooperation (APEC) forum as a potential channel for regulatory cooperation, along with existing free trade agreements that have provisions for regulatory cooperation. Another participant noted a measure in the U.S. Dodd-Frank Act as another step towards regulatory cooperation; the measure allows the United States to negotiate a covered agreement (an agreement recognizing equivalence of risk regulation) on insurance with the European Union (EU).

Multiple participants voiced concerns that the interests of regulators may not be in line with trade agendas or industry concerns. In the context of TiSA, another participant stated that regulations tend to gravitate towards either U.S. standards or EU standards, making harmonization challenging. Along the same lines, one panelist expressed concern that EU insurance regulations will be prioritized going forward due to the Solvency II Directive. This 2009 EU law requires that a non-EU country's regulations must be deemed equivalent to EU rules in order for companies from those non-EU countries to sell insurance in the EU market. U.S. regulations have not yet been found equivalent under Solvency II, which presents an advantage in Europe for countries, such as Japan, whose regulations have been found equivalent. This may incentivize other countries to tailor their regulations to EU standards in order to gain more rapid approval to operate in the EU market.

Appendix A

Summary of Selected Services Research

Selected Services Research

This appendix provides summaries and links to recent U. S. International Trade Commission reports that feature topics in services trade, and lists several forthcoming Commission reports that include information on the services sector. Services-related reports and investigations were prepared under section 332(g) of the Tariff Act of 1930 (19 U.S.C. § 1332(g)) in response to requests from the U.S. Trade Representative, the U.S. House of Representatives Committee on Ways and Means, and/or the U.S. Senate Committee on Finance. Executive Briefings on Trade, articles in the *Journal of International Commerce and Economics*, and other staff publications and working papers reflect the opinions and research of individual authors and are not the views of the U.S. International Trade Commission or any of its Commissioners.

“Nigeria’s Services Economy: The Engine for Future Growth”

Erick Oh, March 2017

https://www.usitc.gov/sites/default/files/publications/332/executive_briefings/nigeria_srv_ebot_oh-final.pdf

The Nigerian services sector has shown impressive gains amid tough economic circumstances. This program has been spearheaded by a number of services industries: retail and wholesale trade, telecommunications, banking, and motion pictures (“Nollywood”). Spurred by favorable government policies and increased foreign direct investment, growth in these industries has helped to diversify Nigeria’s economy, which a major statistical rebasing in 2014 revealed to be the largest in sub-Saharan Africa (SSA).

“Trade in Services: A Small but Growing Part of Sub-Saharan African Trade”

Jennifer Powell and Cynthia Payne, April 2017

https://www.usitc.gov/sites/default/files/publications/332/executive_briefings/ssa_services_trade_ebot_final.pdf

While sub-Saharan Africa (SSA) accounts for a small share (1.8%) of global commercial services trade volume, SSA services trade volume has grown rapidly in recent years, accounting for 18% of total SSA trade in 2014. South African trade flows dominate within SSA, and travel services continue to account for the largest share of African services trade. U.S. services trade with the African continent has also grown rapidly in recent years.

Staff Publications and Working Papers

“The Impact of U.S. Trade Agreements on Growth in Output and Labor Productivity of FTA Partner Countries”

Tamar Khachaturian and David Riker, October 2016

https://www.usitc.gov/sites/default/files/publications/332/ec_wp_2016-10-a_12-13-16.pdf

Abstract

U.S. bilateral and regional trade agreements contain many provisions that may affect the economies of partner countries. Through the transfer of technology and increases in capital expenditure, the trade agreements can be growth enhancing. In this paper, we report a series of econometric models that estimate the effects of U.S. bilateral and regional trade agreements on real gross domestic product per capita growth in the partner countries. Since there is conflicting evidence in the literature about the timing of these effects, we consider several versions of the econometric model that vary in their assumptions about the immediacy and persistence of these effects. We find that the U.S. trade agreements have had a positive and significant impact on partner countries’ growth rates, though the increases in growth rates occur with a delay and appear to be only temporary.

“A Multi-Mode Partial Equilibrium Model of Trade in Professional Services”

Tamar Khachaturian and David Riker, November 2016

https://www.usitc.gov/sites/default/files/publications/332/multi-mode_pe_model_of_trade_in_services_12-12-16_v2.pdf

Abstract

We develop a partial equilibrium analysis of trade in services based on the theoretical model with firm heterogeneity and multiple modes of supply in Helpman, Melitz, and Yeaple (2004). We calibrate the model to the U.S. markets for architecture and engineering services and legal services, and then we estimate the economic impact of reducing fixed costs of supplying U.S. markets for these two types of professional services through cross-border trade and affiliate transactions. For example, we estimate that 50 percent reductions in the fixed costs of trade in these professional services would have large effects on the value of cross-border imports into the U.S. market and on foreign affiliate purchases in the U.S. market but would have only small effects on the sales of domestic producers and on overall prices of the services in the U.S.

market. The modeling framework can be easily reapplied to other national markets and other types of services (or goods) with multiple modes of supply if industry data are available.

“Firm Level Analysis of Services Trade Restrictions in the Life Insurance Industry”

Tamar Khachaturian and Sarah Oliver, December 2016

https://www.usitc.gov/sites/default/files/publications/332/ajhlife_insurance_working_paper_id_045_cover_finalrev121216.pdf

Abstract

This paper presents a simple econometric framework to assess the impact of barriers on the profitability and the number of firms (participation) that supply life insurance services across countries. The average impact of restrictions on participation is negative and statistically significant in some specifications, lending modest support for the hypothesis that restrictions limit firm participation across countries. However, we do not find a statistically significant relationship between restrictions and average life insurance profitability, which may be due to the unique business models of life insurance firms. Depending on data availability, avenues for future research include examining profitability over a longer time horizon and differentiating the impact of restrictions on foreign versus domestic firms.

“The Effects of U.S. Trade Agreements on Foreign Affiliate Transactions in Services”

Tamar Khachaturian and David Riker, March 2017

https://www.usitc.gov/sites/default/files/publications/332/fta_mt.pdf

Abstract

We examine the impact of U.S. bilateral and regional trade agreements on U.S. companies’ foreign affiliate sales of services. The predictions of economic theory are ambiguous: the agreements can increase foreign affiliate sales by facilitating investment abroad, but they can also reduce foreign affiliate sales by removing barriers to the cross-border supply of services. Which of these effects dominates is an empirical question. We report an econometric analysis that introduces a new measure of the extent of liberalization in each trade agreement, based on a detailed scoring of the industry-specific exceptions to investment provisions found in the agreements’ annexes of nonconforming measures. We estimate that the agreements initially reduce foreign affiliate sales but after a short period increase these sales as investments adjust

to the liberalizing provisions of the agreements and the greater certainty generated by the agreements. We estimate that the increase in foreign affiliate sales ten years after the trade agreements entered into force range from 12 percent for the U.S.-Korea FTA to 21 percent for the U.S.-Peru FTA, with an average increase of 16 percent over the ten trade agreements included in the econometric analysis.

“Modeling Trade in Services: Multiple Modes, Barriers to Trade and Data Limitations”

Andre Barbe, Arthur Chambers, Tamar Khachaturian, David Riker, April 2017

https://www.usitc.gov/sites/default/files/publications/332/bckr_april_2017.pdf

Abstract

We develop a model of trade in services that includes firm heterogeneity and multiple modes of delivery, including cross-border trade and foreign affiliate transactions. We then use the model to estimate the effect of a 50 percent reduction in the barriers faced by non-EU services providers in EU markets. We find that this liberalization would increase the value of cross-border imports into the EU and purchases from foreign affiliates in EU countries. This sales increase ranges from 21.7 to 27.3 percent, depending on the services category and EU country. However, the liberalization would only decrease the sales of domestic producers by 0.4 to 6.1 percent, and reduce overall prices of the services in EU countries by 0.1 to 1.2 percent.

Journal of International Commerce and Economics Articles

“The Impact of Liberalizing International Trade in Professional Services”

Tamar Khachaturian and David Riker, May 2017

https://www.usitc.gov/publications/332/journals/the_impact_of_liberalizing_international_trade_in_professional_services_khachaturian_riker.pdf

Abstract

We analyze trade in services using the economic model in Helpman, Melitz, and Yeaple (2004), which features multiple modes of supply and firm heterogeneity. We calibrate the model to the U.S. markets for architecture and engineering services and legal services, and then we estimate the economic impact of reducing fixed costs of supplying U.S. markets for these two types of

professional services through cross-border trade and, alternatively, through affiliate transactions. Among other results, we estimate that reducing the fixed costs of trade in these professional services by half would have large effects on the value of cross-border imports into the U.S. market and on foreign affiliate sales in the U.S. market, but would have only small effects on the sales of domestic producers and on overall prices of the services in the U.S. market.

Forthcoming Research

332 Investigations

Global Digital Trade I: Market Opportunities and Key Foreign Trade Restrictions

Investigation No. 332-561, August 2017 (tentative)

Global Digital Trade 2: The Business-to-Business Market, Key Foreign Trade Restrictions, and U.S. Competitiveness

Investigation No. 332-562, October 2018 (tentative)

Global Digital Trade 3: The Business-to-Consumer Market, Key Foreign Trade Restrictions, and U.S. Competitiveness; Institution of investigations

Investigation No. 332-563, March 2019 (tentative)

Appendix B

Data Tables for Figures

Table B.1: Global services: The United States led the world in cross-border exports and imports of commercial services in 2015

Country/region	Exports (million \$)	Country/region	Imports (million \$)
United States	690,061	United States	469,110
United Kingdom	345,052	China	466,330
China	285,476	Germany	289,475
Germany	247,309	France	228,159
France	239,682	United Kingdom	207,704
Netherlands	178,068	Japan	173,689
Japan	157,863	Netherlands	157,116
India	155,288	Ireland	151,566
Singapore	139,335	Singapore	143,268
Ireland	127,713	India	122,225
All other countries	2,188,163	All other countries	2,203,058
Total exports	4,754,010	Total imports	4,611,700

Source: WTO, Statistics database, Time Series on International Trade, Trade in Commercial services, 2005–onward (BPM6) <http://stat.wto.org/StatisticalProgram/WSDBStatProgramSeries.aspx?Language=E> (accessed December 14, 2016).

Notes: The value of global exports and imports differ due to several factors, including time lags, differences in collection methodology, and other measurement error. Excludes public sector transactions. Corresponds to [figure ES.1](#) and [figure 1.1](#).

Table B.2: U.S. services: Sales and purchases of services through affiliate transactions are more than twice the value of cross-border trade in services in 2015

Year	Services supplied by		U.S. cross-border exports (million \$)	U.S. cross-border imports (million \$)
	U.S. firms' foreign affiliates (million \$)	U.S. affiliates of foreign firms (million \$)		
2007	1,019	684	467	344
2008	1,117	702	514	380
2009	1,072	669	492	355
2010	1,155	701	544	377
2011	1,247	782	606	404
2012	1,286	813	634	424
2013	1,322	892	679	436
2014	1,503	919	723	457
2015	*	*	731	467

Source: USDOC, BEA, table 2.1, “U.S. Trade in Services, by Type of Service,” October 24, 2016; table 4.1: “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” December 19, 2016; and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO,” December 19, 2016. <http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: * = Not available. Corresponds to [figure 1.2](#). Excludes public sector transactions.

Table B.3: U.S. services: Travel and passenger fares accounted for the largest share of U.S. cross-border trade in 2015

Services industry	Exports (million \$)	Imports (million \$)
Travel and passenger fares	246,227	148,366
Professional	139,651	90,986
Financial	119,603	72,934
Charges for the use of intellectual property	103,357	31,540
Electronics	57,203	44,395
Distribution	47,045	62,893
Other	17,504	16,027
Total	730,590	467,142

Source: USDOC, BEA, Interactive Data, International Data, International Services, table 2.1., "U.S. Trade in Services, by Type of Service," October 15, 2015.

<http://www.bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=6&isuri=1&6210=4&6200=160>.

Note: Excludes public-sector transactions. Total exports and imports by sector are based on the latest BEA data for which all sectors are available. Corresponds to [figure 1.3](#).

Table B.4: U.S. services: Distribution accounted for the largest share of U.S. affiliate transactions in 2014

Services industry	Services supplied by foreign affiliates of U.S. firms (million \$)	Services to U.S. persons by foreign firms (million \$)
Distribution ^a	373,262	256,181
Financial services	278,827	191,783
Electronics ^b	102,073	125,623
Professional services ^c	124,821	90,659
Manufacturing ^d	33,217	89,715
Other services (includes suppressed data)	591,168	164,746
Total	1,503,368	918,707

Source: USDOC, BEA, table 4.1, "Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate," and table 5.1, "Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO," December 19, 2016.

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Notes: For "Services supplied by foreign affiliates of U.S. firms": Under the distribution category, data for trucking and warehousing were suppressed; under electronic services, data for motion picture and sound recording industries, telecommunications, broadcasting (except Internet) and data processing, hosting, and related services were suppressed; and under professional services, data for management, scientific, and technical consulting, other professional, scientific, and technical services, and waste management and remediation services were suppressed. Under the "Services supplied to U.S. persons by foreign firms" category, data for waste management and remediation services and health care and social services for professional services were suppressed. Corresponds to [figure 1.4](#).

^a Data are underreported by the BEA to avoid disclosing individual companies' information.

^b Data are underreported by the BEA to avoid disclosing individual companies' information.

^c Data are underreported by the BEA to avoid disclosing individual companies' information.

^d Includes ancillary services provided by goods manufacturers, such as computer hardware services.

Table B.5: U.S. professional services: Business and management consulting services led cross-border exports and imports of professional services in 2015

Services industry	Exports (million \$)	Imports (million \$)
Business and management consulting and public relations services	42,838	31,388
Research and development services	34,526	32,022
Maintenance and repair services n.i.e.	24,036	8,996
Advertising	11,561	3,937
Architecture and engineering services	11,417	5,623
Other professional services	15,273	9,020
Professional services total	139,651	90,986

Source: USDOC, BEA, table 2.1, "U.S. Trade in Services, by Type of Service" (accessed November 14, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Notes: n.i.e. = not included elsewhere. Data exclude public-sector transaction. Corresponds to [figure 2.1](#).

Table B.6: U.S. professional services: Architecture, engineering, and related services were the largest category of professional services sales by foreign affiliates of U.S. firms in 2014, while management, scientific, and technical consulting were the largest category of purchases from U.S. affiliates of foreign firms

Services industry	Services supplied by foreign affiliates of U.S. firms (million \$)	Services supplied to U.S. persons by foreign firms (million \$)
Architecture and engineering services	34,950	13,518
Management, scientific, and technical consulting	24,105	14,467
Accounting and related services	13,514	154
Health care and social assistance	6,941	13,652
Legal services	6,774	111

Source: USDOC, BEA, International Data, International Services, table 4.1, "Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate," and table 5.1, "Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO" (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Notes: Advertising and related services accounted for the largest share of purchases (\$36.5 billion) but was not covered by this year's report and therefore was not included. The total value of services supplied by foreign affiliates of U.S. firms for management, scientific, and technical consulting is not available due to BEA suppression of data for Latin America and Other Western Hemisphere countries in 2014. However, services supplied by U.S. firms to other regions totaled \$24,105 billion. Corresponds to [figure 2.2](#).

Table B.7: Share of global revenue in consulting/advisory services, big four accounting firms, 2011–16

Region	2011	2012	2013	2014	2015	2016
	%	%	%	%	%	%
PwC	26	28	29	30	32	32
Deloitte	*	31	32	33	35	36
KPMG	33	34	36	37	37	*
EY	22	18	22	24	25	26

Sources: USITC staff calculations using data from Deloitte, *2016 Global Report*, 2016; Deloitte, *FY 15 Performance Table*, 2015; Deloitte, *2012 Global Report*, 2012; KPMG, *International Annual Review 2015*, 2015; KPMG, *International Annual Review 2014*, 2014; KPMG, *International Annual Review 2012*, 2012; PwC, *Global Annual Review 2016*, 2016; PwC, *Global Annual Review 2015*; EY "Global Review 2016 Facts and Figures," 2016; EY, *Global Annual Review 2014*, 2014; EY, *Global Annual Review 2013*, 2013; EY "EY Reports 2012 global revenues of US\$24.4 billion," October 2, 2012.

Note: * = Not available. Corresponds to [figure 3.1](#).

Table B.8: Accounting, auditing, and bookkeeping services: U.S. cross-border trade resulted in a U.S. trade deficit each year during 2010–15

	2010	2011	2012	2013	2014	2015
	Million \$					
Exports	1,036	1,116	1,214	1,202	1,395	1,465
Imports	2,373	2,246	2,211	2,449	2,668	2,944
Trade balance	-1,337	-1,130	-997	-1,247	-1,273	-1,479

Source: Source: USDOC BEA, International Data, International Services, “Table 2.2. U.S. Trade in Services, by Type of Services and Country or Affiliation”

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1> (accessed November 14, 2016).

Note: Corresponds to [figure 3.2](#).

Table B.9: Accounting, auditing and bookkeeping services: The United Kingdom was the leading market for U.S. cross-border exports and imports in 2015

Country/region	Exports (million \$)	Country/region	Imports (million \$)
United Kingdom	228	United Kingdom	444
Canada	201	India	425
India	179	Canada	340
Bermuda	111	Belgium	247
Switzerland	78	China	128
All other		All other	
Other Europe	306	Other Europe	651
Other Asia-Pacific	220	Other Asia-Pacific	397
Other Western Hemisphere	114	Western Hemisphere	259
Africa and the Middle East	27	Africa and the Middle East	54
Total all other	667	Total all other	1,361
Total	1,464	Total	2,945

Source: USDOC BEA, International Data, International Services, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation”

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1> (accessed November 14, 2016).

Note: Corresponds to [figure 3.3](#).

Table B.10: Accounting, auditing, and bookkeeping services: In 2015, the United States had its largest cross-border trade deficit with India

Country	Exports (million \$)	Trade balance (million \$)
United Kingdom	228	-216
Canada	201	-139
India	179	-246
Bermuda	111	105
Switzerland	78	15

Source: USDOC BEA, International Data, International Services, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation”

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1> (accessed November 14, 2016).

Note: Corresponds to [figure 3.4](#).

Table B.11: Accounting, auditing, and bookkeeping services: Sales by U.S.-owned foreign affiliate outpaced purchases from foreign-owned U.S. affiliates

Year	U.S.-owned foreign affiliates (million \$)	Foreign-owned U.S. affiliates (million \$)
2010	12,065	135
2011	12,947	154
2012	13,782	175
2013	13,672	156
2014	13,514	154

Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO”

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1> (accessed January 4, 2017).

Note: Corresponds to [figure 3.5](#).

Table B.12: Accounting, auditing, and bookkeeping services: In 2014, the United Kingdom was the largest market for sales of accounting services by U.S.-owned foreign affiliates

Country	U.S.-owned foreign affiliates (million \$)
United Kingdom	1,317
Canada	760
Mexico	71
Germany	48
All other countries	11,318
Total	13,514

Source: USDOC, BEA, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate”

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1> (accessed January 4, 2017).

Note: Corresponds to [figure 3.6](#).

Table B.13: Green project revenue earned by the leading 100 U.S.-based green design firms rose during 2010–15

	2010	2011	2012	2013	2014	2015
	Million \$					
Domestic	3,300	3,910	3,540	3,880	4,110	4,270
Overseas	440	590	720	860	1,100	1,100
Total	3,740	4,500	4,260	4,740	5,210	5,370

Source: USITC staff calculations based on data obtained from Tulacz, “The Top 100 Green Buildings Contractors and Green Buildings Design Firms,” August 8/15, 2016, 76; Tulacz, “The Top 100 Green Buildings Design Firms,” August 11/18, 2014, 2; Tulacz, “The Top 100,” July 8, 2013, 2; Tulacz, “The Top 100,” July 2, 2012, 2; and Tulacz, “The Top 100 Green Design Firms,” July 4, 2011, 38.

Note: Includes industrial engineering. Corresponds to [figure 4.1](#).

Table B.14: Architecture and engineering services: U.S. cross-border trade in architecture and engineering services resulted in a U.S. trade surplus each year during 2010–15

	2010	2011	2012	2013	2014	2015
	Million \$					
Exports	13,669	17,017	17,306	16,126	16,186	13,877
Imports	6,301	8,046	8,310	8,360	8,103	8,322
Trade balance	7,368	8,971	8,996	7,766	8,083	5,555

Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>

Note: Includes industrial engineering. Corresponds to [figure 4.2](#).

Table B. 15: Architecture and engineering services: China was the leading market for U.S. cross-border exports while the United Kingdom led in imports in 2015

Country/region	Exports (million \$)	Country/region	Imports (million \$)
China	1,361	United Kingdom	813
Mexico	1,221	Canada	623
United Kingdom	1,221	India	410
Canada	1,114	Mexico	296
France	583	Australia	260
All other		All other	
Other Europe	2,669	Other Europe	3,131
Other Asia-Pacific	2,648	Other Asia-Pacific	1,033
Other Western Hemisphere	899	Other Western Hemisphere	1,121
Africa and the Middle East	2,161	Africa and the Middle East	635
Total all other	8,377	Total all other	5,920
Total	13,877	Total	8,322

Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>

Note: Includes industrial engineering. Corresponds to [figure 4.3](#).

Table B. 16: Architecture and engineering services: Of the top 5 export markets in 2015, the United States had its largest cross-border trade surplus with China

Country	Exports (million \$)	Trade balance (million \$)
China	1,361	1,203
United Kingdom	1,221	408
Mexico	1,221	925
Canada	1,114	491
France	583	442

Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed December 7, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>

Note: Includes industrial engineering. Corresponds to [figure 4.4](#).

Table B. 17: Architecture and engineering services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14

	2010	2011	2012	2013	2014
	Million \$				
Sales	26,324	29,952	35,780	*	34,950
Purchases	10,674	11,736	12,874	13,529	13,518

Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: * = not available. Corresponds to [figure 4.5](#).

Table B.18: Architecture and engineering services: In 2014, the Canada was the largest purchaser of architecture and engineering services from U.S.-owned foreign affiliates

Country	U.S.-owned foreign affiliates (million dollars)
Canada	8,536
United Kingdom	5,181
Australia	3,949
China	1,077
Mexico	1,029
All other countries	15,178
Total	34,950

Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate” (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 4.6](#).

Table B.19: Legal Services Revenue: The United States surpassed Asia-Pacific and Europe during 2011–15

Country	2011	2012	2013	2014	2015
	Billion \$				
United States	145.2	146.3	152.6	156	161.2
Europe	70.1	74.9	79.3	82.1	85.3
Asia-Pacific	246.2	270.4	275.8	278.6	289.8

Source: MarketLine, *Legal Services in the United States*, June 2016, 8; MarketLine, *Legal Services in Europe*, June 2016, 8; MarketLine, *Legal Services in Asia-Pacific*, June 2016, 8.

Note: Corresponds to [figure 5.1](#).

Table B.20: Legal services: U.S. cross-border trade resulted in a U.S. trade surplus each year during 2010–15

	2010	2011	2012	2013	2014	2015
	Million \$					
Exports	7,247	7,704	8,280	9,032	9,112	9,047
Imports	1,537	1,943	2,033	1,981	2,111	2,167
Trade balance	5,710	5,761	6,247	7,051	7,001	6,880

Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 5.2](#).

Table B.21: Legal services: The United Kingdom was the leading market for U.S. cross-border exports and imports of legal services in 2015

Country/region	Exports (million \$)	Country/region	Imports (million \$)
United Kingdom	1,601	United Kingdom	473
Japan	1,091	Germany	179
Canada	753	Canada	174
Germany	641	China	153
Switzerland	417	Japan	142
All other		All other	
Other Europe	1,674	Other Europe	372
Other Asia-Pacific	1,639	Other Asia-Pacific	392
Other Western Hemisphere	738	Other Western Hemisphere	163
Africa and the Middle East	493	Africa and the Middle East	119
Total all other	4,544	Total all other	1,046
Total	9,047	Total	2,167

Source: USDOC, BEA, table 2.2, “U.S. Trade in Services, by Type of Services and Country or Affiliation” (accessed November 14, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 5.3](#).

Table B.22: Legal services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14

	2010	2011	2012	2013	2014
	Million \$				
U.S.-owned foreign affiliates	4,997	5,284	5,125	5,322	6,774
Foreign-owned U.S. affiliates	111	117	134	116	111

Source: USDOC, BEA, International Data, International Services, table 4.1, “Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate,” and table 5.1, “Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO” (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 5.4](#).

Table B.23: Legal services: In 2014, the United Kingdom was the largest purchaser of legal services from U.S.-owned foreign affiliates

Country	U.S.-owned foreign affiliates (million dollars)
United Kingdom	2,488
France	658
Germany	636
Japan	356
China	319
All other countries	2,317
Total	6,774

Source: USDOC, BEA, International Data, International Services, table 4.1, "Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate," and table 5.1, "Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO" (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 5.5](#).

Table B.24: Management consulting services: Business strategy had the largest projected global revenue by activity in 2016

Country	Global Revenue (billion \$)
Business strategy	171.6
Operations and supply chain management	92.5
Financial management consulting	91.9
Marketing management	74.2
Human resources	61.5
Other management consulting	57.6
Total	553.8

IBISWorld, *Global Management Consultants*, June 2016.

Note: Revenue totals are calculated based on shares provided by IBISWorld. Corresponds to [figure 6.1](#).

Table B.25: Business and management consulting services: U.S. cross-border trade resulted in a U.S. trade surplus each year during 2010–15

	2010	2011	2012	2013	2014	2015
	Million \$					
Exports	32,988	34,551	36,624	36,795	39,284	42,838
Imports	21,367	24,996	25,680	26,784	30,280	31,388
Trade balance	11,621	9,555	10,944	10,011	9,004	11,450

Source: USDOC, BEA, table 2.2, "U.S. Trade in Services, by Type of Services and Country or Affiliation" (accessed November 14, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 6.2](#).

Table B.26: Business and management consulting services: The United Kingdom was the leading market for U.S. cross-border exports and imports in 2015

Country/region	Exports (million \$)	Country/region	Imports (million \$)
United Kingdom	6,562	United Kingdom	6,144
Ireland	5,827	Netherlands	2,170
Switzerland	4,004	Canada	2,130
Canada	2,211	Switzerland	2,062
Netherlands	1,911	Belgium	1,674
All other		All other	
Asia-Pacific	8,387	Other Asia-Pacific	7,975
Other Europe	7,468	Other Europe	5,360
Other Western Hemisphere	3,785	Other Western Hemisphere	2,606
Africa and the Middle East	2,680	Africa and the Middle East	1,267
Total all other	22,320	Total all other	17,208
Total	42,838	Total	31,388

Source: USDOC, BEA, table 2.2, "U.S. Trade in Services, by Type of Services and Country or Affiliation" (accessed November 14, 2016).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: Corresponds to [figure 6.3](#).

Table B.27: Management consulting services: U.S.-owned foreign affiliate sales outpaced purchases from foreign-owned U.S. affiliates during 2010–14

	2010	2011	2012	2013	2014
	Billion \$				
Sales	19,326	21,440	21,715	24,060	24,105
Purchases	4,163	12,285	13,034	13,963	14,467

Source: USDOC, BEA, International Data, International Services, table 4.1, "Services Supplied to Foreign Persons by U.S. MNEs through Their MOFAs, by Industry of Affiliate and by Country of Affiliate," and table 5.1, "Services Supplied to U.S. Persons by Foreign MNEs through Their MOUSAs, by Industry of Affiliate and by Country of UBO" (accessed January 4, 2017).

<http://bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=7&isuri=1&6221=0,1&6220=1,2,3,4,5,6&6210=4&6200=246&6224=&6211=255&6223=0&6222=62&6231=1>.

Note: The total value of services supplied by foreign affiliates of U.S. firms for management, scientific, & technical consulting is not available due to BEA suppression of data for Latin America and Other Western Hemisphere countries in 2014; however services supplied by U.S. firms to other regions totaled \$24,105 billion. Corresponds to [figure 6.4](#).