
Service Barriers

Approximately 14 percent of Americans are employed in tradable business service firms; manufacturing firms, by comparison, employ only 10 percent of the total US workforce (Jensen 2011).¹ In 2007 business service sector jobs paid an average salary of \$56,000, some \$10,000 more than the average salary in manufacturing. But largely because of high nontariff barriers (NTBs), only 5 percent of US business service firms engage in exporting, compared to 25 percent of US manufacturing plants (Jensen 2011). US manufacturing firms export approximately 20 percent of their annual output, but US business service firms export only 4 percent. That said, in 2013, US service exports amounted to \$681 billion, and the US service trade surplus was approximately \$229 billion.² In short, the United States has a latent, but strong, comparative advantage in exporting business services.³

1. Sherry M. Stephenson made a major contribution to this chapter. Stephenson is a senior fellow at the International Centre for Trade and Sustainable Development (ICTSD) in Geneva and a senior advisor for services trade at the Organization of American States (OAS) in Washington.

2. Moreover, official statistics often undercount the direct service exports that they purport to measure, such as McKinsey consulting services for foreign clients. Official statistics can be found at US Bureau of Economic Statistics. See US Department of Commerce, Bureau of Economic Analysis, “International Economic Accounts,” www.bea.gov (accessed on May 29, 2014).

3. Of course many services—haircuts, taxi rides, restaurant meals—remain nontradable, in the sense of cross-border supply, because consumption and production must be performed at the same place and at the same time. Such services may, however, be delivered abroad through direct investment, discussed in chapter 13. Ernest Preeg (2014) of the Manufacturers Alliance argues that the US surplus in services has peaked, mainly because royalties and licenses represent around one-third of the surplus in business services, and those receipts have been roughly flat at \$82 to

Official statistics do not measure indirect services embodied in manufactured exports, such as software services purchased from Oracle,⁴ nor do they count the sale value of services delivered by American establishments operating abroad, such as retailing by Wal-Mart and McDonalds, or financial services by JPMorgan Chase and Citigroup. However, earnings by American establishments operating abroad do show up in the current account. Box 7.1 surveys these indirect exports. That they loom large in the overall picture underscores US comparative advantage in the services sectors. Yet high foreign barriers clearly limit US direct cross-border exports of services.

Jobs supported by merchandise exports are highly visible, and for a long time were considered the hallmark of a strong economy. Goods shipped from a manufacturing plant and containers stacked at ports tell their own story. Airplanes, tractors, and CAT scan equipment sold abroad are easy to visualize. In contrast, managerial or technical services jobs supported by service exports are not always obvious. But solid positions are at stake. When foreign visitors rent US cars or stay in US hotels, those service exports support US jobs. The same is true in higher education, when foreign students study in a US classroom or purchase distance learning delivered over the internet. Commercial presence in a foreign country, as when the law firm White & Case sets up an office in Paris, also creates US service exports, made possible by direct investment abroad.

Fees paid to an architectural firm for designing a building abroad count as an export, as do fees paid to Bechtel when it designs and builds a bridge or a power plant in another country. American project managers who supervise construction jobs abroad are US exporters. Research and development conducted by a foreign firm in the United States likewise counts as an export. When the Boston Consulting Group provides managerial advice to foreign firms it is exporting, as it is when Young & Rubicam rolls out an advertising portfolio for a foreign client. Any doctor in the United States who operates on a foreigner is providing services that count as exports. Computer programmers who design ATM software used abroad are exporting their services. So are accountants who audit the books of foreign firms. An engineering firm that cleans water sources abroad is exporting a service. Express delivery firms such as FedEx and UPS are major service exporters when they deliver documents and goods around the world.

Movies and music loom large in US service exports. Feature-length films and TV shows screened and broadcast abroad, as well as US music sold to foreign customers, generate huge revenue streams for the US entertainment industry. Similarly, software producers, ranging from large corporations such as Microsoft to small developers of smartphone apps, are significant US exporters.

\$85 billion over the past three years. However, Preeg's forecast does not contemplate dramatic liberalization of barriers to cross-border trade in business services.

4. See OECD, "OECD-WTO Database on Trade in Value-Added," fact sheet, May 2013, www.oecd.org (accessed on May 29, 2014).

Box 7.1 Indirect exports of services

Although recorded direct cross-border services exports account for less than 30 percent of US exports of goods and services—some \$632 billion in 2012—service firms make an indirect contribution not reflected by that statistic. This was revealed by a joint OECD-WTO report measuring domestic value added as a proportion of export value and examining the sources of that value added.¹ The domestic value-added share was calculated by subtracting imported inputs from export values. In 2009 the US share of domestic value added was the highest among OECD countries, at 89 percent.

The OECD-WTO report further found that US service sectors—such as finance, engineering, and transportation—contribute 26 percent of the value added in US exports of manufactures. Likewise, service sectors contribute 29 percent to the value-added in agricultural exports. US efficiencies in services production are a major source of competitive advantage in US exports of manufactured and agricultural goods.

Based on the available data, in 2012 the indirect service contribution to gross US exports amounted to about \$340 billion. Thus, when indirect service exports are added to direct exports, the service sectors accounts for 44 percent of the value added embodied in US gross exports. The combined figure for US direct and indirect exports of services in 2012 was about \$970 billion.

The service story does not stop there. US direct investment abroad is concentrated in the service industries, accounting for 73 percent of the outward FDI stock in 2012 (\$3.3 trillion out of \$4.5 trillion). The foreign affiliates of US-based multinational corporations in the service sectors realized sales of \$2.6 trillion in 2011—in other words, a larger figure than the combined US direct and indirect service sector exports.

As well, at the global level services contribute a larger share of export value added than they do of gross exports. Table 7.1 gives basic statistics on merchandise and services trade for the years 1980, 1995, and 2008. Direct and indirect export value added by the service sectors, expressed as a share of total exports, expanded from 29 percent to 43 percent between 1980 and 2008. Unsurprisingly, given China's heavy involvement in manufacturing, its service sectors contribute a smaller share of value added to manufacturing exports than the US service sectors. Moreover, the value added by foreign services outweighs the contribution of domestic services in some Chinese industries. In the electrical equipment industry, Chinese services contributed about 13 percent of value while foreign services contributed 15 percent of value added. Foreign services also marginally outweighed domestic service contributions in the wood and paper industry, as well as the chemicals industry. Overall, services account for 30 percent of Chinese export value added. However, roughly one-third of that is value added by foreign services. Chinese service sectors account for less than 20 percent of value added in exports, less than half the comparable US figure.

1. OECD, International Trade and Balance of Payments, OECD-WTO Trade in Value Added (May 2013), stats.oecd.org (accessed on July 4, 2014).

Table 7.1 Global tradability of goods and services, 1980–2008
(percent)

		Share of world exports			Tradability ^a		
		1980	1995	2008	1980	1995	2008
Gross trade	Merchandise	83	80	80	43	53	85
	Services	17	20	20	7	7	10
Value added	Merchandise	71	62	57	30	33	47
	Services	29	38	43	10	11	16

a. Tradability is the property of a good or service that can be sold in another location distant from where it was produced.

Source: Subramanian and Kessler (2013).

Even though they are not officially counted as service exports, license and royalty fees collected from foreign users support thousands of US jobs.

The US finance industry is another major exporter, through fees paid to, say, Wilmington Trust for its wealth management services, or to the Vanguard Group for its mutual funds. Foreign companies that purchase casualty insurance from Chubb are importing US services. Financial services are so important, and so tightly linked with direct investment abroad, that we examine them separately in chapter 8.

Opportunities abound for the direct export of US services, as rising incomes in China and other fast-growing emerging markets increase the proportion of service expenditures in their GNPs. But high barriers to service imports have so far stifled the potential growth of US exports. Huge improvements to communications technology enable medical, legal, educational, engineering, and financial services to be delivered remotely and thus traded internationally. Based on the results presented in chapter 2, table 7.2 offers a very rough guess of the gains US services industries might make under a China–US trade and investment agreement (CHUSTIA) through direct exports. The guesses start with the baseline projected profile of US service exports in 2025 in the absence of a CHUSTIA (the baseline comes from chapter 2).⁵ Each service industry’s predicted share of the gains from a CHUSTIA equals its share of US services exports to the world. These are of course rough guesses and other methodologies could produce very different results.

Quantitative Estimates of Barriers

Expressing barriers to service imports as ad valorem equivalents (AVEs) is an art, not a science. The core reason is that nearly all the barriers are NTBs and

5. Projected service exports in chapter 2 are for total services. The division in table 7.2 between service industries conforms to the same proportions as 2012 actual service exports to China.

Table 7.2 Projected gains in US services exports to China

	US exports to China (billions of US dollars)		
	Baseline (2025)	Projected increase from CHUSTIA	Projected total (2025)
Total	126.0	218.0	344.0
Banking	10.4	27.5	37.9
Insurance	0.4	5.7	6.1
Transportation	11.5	29.6	41.1
Communications	0.5	4.7	5.2
Computer/information services	1.8	4.8	6.6
Royalties/licenses	20.2	44.9	65.1
Professional business services	5.4	49.9	55.4
Education	24.0	8.4	32.5
Travel	51.8	42.4	94.2

CHUSTIA = China–US trade and investment agreement

Source: Authors' calculations.

thus regulatory in nature. Many regulations create entry costs: The foreign supplier is not permitted to sell locally at all or is limited in the amount it can sell. FedEx and UPS are not permitted to deliver express packages between cities in China. Other regulations create an ongoing hassle by subjecting foreign suppliers to cumbersome paperwork as they try to expand. This is the situation with foreign banks that want to expand their branch networks in China. Such barriers are not easily expressed as a percentage of sales because, as the barrier is relaxed and sales increase, the AVE per sales unit drops.

Yet AVEs are an essential building block for quantitative calculations of the effects of liberalization, such as the computable general equilibrium (CGE) results presented in chapter 2. Moreover, AVEs provide convenient shorthand figures for comparing service trade barriers with merchandise trade barriers. For both reasons, scholars have expended a lot of effort attempting to translate domestic regulations, trade commitments, and observed trade patterns into AVEs. Early attempts led to quantitative estimates in the form of index values rather than AVEs. More recent work, based largely on observed trade patterns, has generated AVEs.

In the first phase, pioneered by Bernard Hoekman (1996), commitments that individual World Trade Organization (WTO) members made in the General Agreement on Trade in Services (GATS) were benchmarked against the most liberal extant provisions then known for a range of services and modes of delivery. The gap between commitments and benchmarks was assigned a numerical value between 100 and 0. Hoekman's numerical values are best interpreted

as indexes. Lionel Fontagné, Amélie Guillin, and Cristina Mitaritonna (2011) summarize the publications of other scholars who have followed Hoekman's lead. The World Bank's Services Trade Restrictiveness Index (STRI) represents one of the better methods for measuring service barriers. A more recent study, now at the forefront of indexes for measuring service barriers, was released in May 2014 by the Organization for Economic Cooperation and Development (OECD). The OECD's index (also called STRI) shows that China's barriers in 18 service sectors were generally more restrictive than the average scores for 40 other developed and developing economies. China was in the top 5 of the most restricted services sectors in 14 of the 18 categories: broadcasting, road freight transport services, commercial banking, couriers, computers, construction, distribution, insurance, legal, maritime transport, motion pictures, rail freight transport, sound recording, and telecoms.⁶ Table 7A.2 shows the OECD scores for the United States and China. Appendix 7A to this chapter describes both the World Bank and OECD indexes further.

In the second phase of research, pioneered by the Australian Productivity Commission (Warren 2000), indexes of commitments and regulatory barriers were compared with price-to-cost margins in selected sectors to generate AVEs. Fontagné, Guillin, and Mitaritonna (2011) also summarize additional studies in this phase, and appendix 7A presents selected results using the price-to-cost margin approach for US and Chinese AVEs.

The third phase of research, pioneered by Joseph Francois (1993) two decades ago but neglected until the mid-2000s, uses residuals from gravity model equations of trade patterns to infer AVEs on services trade. Numerous assumptions and complicated mathematics are required for this approach and needless to say, scholars differ as to the appropriate assumptions and mathematics. Fontagné, Guillin, and Mitaritonna (2011) once again summarize the literature and present their own estimates for nine service sectors in 65 countries. Appendix 7A presents selected results using the gravity model approach for US and Chinese AVEs.

There is an important difference between most of the index value estimates of service trade barriers and the gravity model estimates. Some of the index values combine barriers to cross-border trade with barriers to foreign direct investment (FDI) and barriers to the movement of natural persons. The gravity model AVE estimates, in contrast, reflect only barriers to cross-border services trade. Such cross-border AVE estimates are most appropriate for trade effect calculations.

Appendix table 7A.2 reports Chinese and US AVE values based on gravity model estimates used for the CGE analysis of trade effects reported in chapter 2.⁷ Those AVE estimates, based on research done five years ago, are embedded

6. China Trade Daily, "OECD Service Barrier Index Shows China with Above Average Score in All Covered Sectors," May 16, 2014.

7. The AVE values used in the CGE analysis are those reported by Hufbauer, Schott, and Wong (2010).

in thousands of CGE equations and will be revised only if the model is updated generally. However, research done in recent years has generated better AVE estimates, and appendix table 7A.2 reports the Chinese and US AVE values that we think are the best currently available: those that Fontagné, Guillin, and Mitaritonna (2011) calculated for China and those that Koen Berden and colleagues (2009) calculated for the United States. These newer estimates do not differ much from the older AVE estimates for China and the United States embedded in the CGE model.

As said at the beginning, however, AVE calculations of barriers to services trade remain an art, not a science. For that reason, chapter 2 reports trade effect estimates using AVE reductions that are only 40 percent of the estimated barriers shown in appendix table 7A.2. Additionally, chapter 2 estimates the effect for half of the original estimate for liberalization in services, called less services liberalization (LSL). Service barriers come in many flavors, are deeply embedded in regulatory practices, and are not eliminated nearly as easily as tariffs. Thus the assumed reduction in service barriers, under a CHUSTIA, is much smaller than the AVE values currently reported. We turn now to review the liberalization commitments previously scheduled in the WTO GATS and in US and Chinese free trade agreements (FTAs).

WTO Rulebook

The GATS

The GATS—a key feature of the Marrakesh Agreement signed in 1994 and one of the pillars of the World Trade Organization—classified all services trade into four modes. Mode 1 trade is similar to trade in goods: The consumer and producer remain in their respective home countries and services are delivered across the border by telecommunications or post rather than ships. Medical advice and distance learning received over the internet fall under mode 1. In mode 2, the purchaser travels to use a service supplied in another country. Tourism and study abroad are familiar examples. Less well known mode 2 service activities include ship and aircraft repairs when the craft is in a foreign port. In mode 3, a company establishes a subsidiary or branch abroad to sell into a foreign market, requiring FDI in a service activity. Citibank operating in Singapore is an example. Last, under mode 4, an individual leaves his home country for temporary employment abroad.

The GATS agreement in the WTO seeks to apply core merchandise trade principles of the GATT to trade in services. GATS signatories agreed to extend the most favored nation (MFN) and national treatment principles to services trade, but allowed ample room for one-time exceptions to the MFN principle. Moreover, national treatment is guaranteed only under the conditions scheduled for the sector and mode of supply in a country's commitments (the so-called positive list approach). When the Uruguay Round was concluded and the Marrakesh Agreement signed, WTO members generally did not expand

liberalization using the national treatment principle or other means of new market access in their schedules to the GATS. The main exceptions, where fresh liberalization was subsequently negotiated, were in telecoms and financial services.⁸ Similarly, lengthy negotiations in the Doha Round have not produced further liberalization. The GATS attempted to provide rules to govern services trade, but the limited scope of new commitments on market access in services trade over the past two decades reveals that GATS has not been very successful as a negotiating forum.

As with the GATT, the GATS does not preclude members from entering into a preferential agreement with other members, nor does it prevent members from granting one another mutual recognition of their regulatory standards and certification requirements. Accordingly, the limited amount of negotiated liberalization of services trade over the past two decades has largely taken place in bilateral FTAs. We examine this record in a later section.

Trade Facilitation

The most significant achievement of the ninth WTO ministerial conference, held in Bali, Indonesia, in December 2013, was the Trade Facilitation (TF) Agreement. Improved TF services could foster major increases in trade between China and the United States. A 2010 study found that, on a global basis, China-US two-way trade could expand by about \$200 billion from broadly defined trade facilitation.⁹ Sea freight and air cargo delivery can still be cumbersome between the United States and China. The United States needs major infrastructure improvements, including port and road upgrades. In China, customs clearance bottlenecks are common at ports; foreign transportation companies are hampered from efficient distribution inside China by overly strict regulations; and air cargo firms have little flexibility to adapt to changing patterns of demand. Adopting the World Customs Organization's standardized practices would significantly improve efficiency at Chinese ports. These standards reflect global best practice, and along with better rail and road connections, they would enable small firms and individuals to import goods on their own.

The General Administration of Customs (GAC), China's agency in charge of collecting customs duties, also protects China from illegal imports. Recent regulations to deter illegal imports have raised the general level of barriers to legal imports. All importers and exporters must register with the customs administration to obtain a customs registration code.¹⁰ Additionally, the previous

8. The telecom and the financial services negotiations both concluded in 1997 and were incorporated into the GATS through Protocols IV and V.

9. Hufbauer, Schott, and Wong (2010), based on Wilson, Mann, and Otsuki (2005). See also Hufbauer and Wong (2011). The broad definition of trade facilitation includes the estimated gains from services infrastructure, port efficiency, customs environment, and regulatory environment.

10. For GAC Order 197, see ETCN, "Decree no. 97 of the General Administration of Customs of the P.R. China," November 25, 2010, www.e-to-china.com (accessed on May 29, 2014).

exemption of de minimis duty exemptions was reduced from 400RMB (\$65) to 50RMB (\$6), creating an unnecessary burden for small shipments.¹¹ By comparison, the US de minimis figure is \$200, and legislation under consideration would raise that level to \$800.¹² As China implements the TF agreement over the next five years, these and other improvements should improve the trade landscape, for both goods and services.

The Trade in Services Agreement

The Trade in Services Agreement (TiSA) is a plurilateral pact launched by the Really Good Friends (RGF), a group of WTO members that opened negotiations in 2012. The group includes the world's largest advanced nations, accounting for more than two-thirds of global trade in services (Hufbauer et al. 2012). Motivated by the longstanding stalemate in the WTO's Doha Development Agenda (DDA) and primarily pressured by the business community, which is fully aware of the importance of services in modern economies, the RGF group seeks an agreement that will reduce barriers to services trade among TiSA members. The negotiation is not a part of the Doha Round, but it is a plurilateral effort designed to meet the conditions laid out in GATS Article V. An agreement under Article V is required to have "substantial sectoral coverage" with respect to the volume of services trade, number of sectors, and modes of supply, and to eliminate "substantially all discrimination" among members.

TiSA's effects on US-China relations remain to be seen. China expressed interest in joining TiSA negotiations in September 2013, and the United States and other TiSA members are considering their response.¹³ While China's interest could be driven by a fresh appreciation that services imports support manufacturing and improve the quality of life, it might also reflect China's rising competitiveness in some services industries. Higher educational attainment and improved labor productivity will foster greater competitiveness in the Chinese tradable service sectors. According to China's National Board of Statistics, production of services exceeded industrial output as a share of GDP in 2013, a remarkable milestone.¹⁴ These circumstances should give Chinese service firms an export interest in lowering barriers worldwide.

11. For GAC Order 33, see FedEx, "Notice of New Regulation: Import and Export of Samples and Advertising Materials," July 2, 2010, www.fedex.com (accessed on May 29, 2014).

12. The Customs Modernization Act of 1993 Section 321 set the rate at \$200. See HR 1020 for the proposal to increase the level to \$800: Library of Congress, "Bill Text, 113th Congress (2013-2014), HR 1020 IH," thomas.loc.gov (accessed on May 29, 2014).

13. Shawn Donnan, "China in Push to Join US-led \$4tn Services Trade Talks," *Financial Times*, September 23, 2013.

14. S.C., "Doing Stuff, Not Making Stuff," *Economist*, January 20, 2014.

China has been increasingly active on the international construction scene, including in the United States. China Construction America, a subsidiary of China State Construction Engineering, has recently undertaken public works contracts at the state and local levels. In 2011 the company won a contract to renovate New York City's Alexander Hamilton Bridge.¹⁵ What TiSA or a CHUSTIA will mean for Chinese construction companies is unclear, as Chinese construction firms are more likely to pursue state and local projects. Generally, the states are bound by US FTAs only to the extent they agree. Customarily they resist new obligations in US FTAs, but for reasons of state self-interest such resistance could weaken.

Before China's recent change of heart, all five BRICS—Brazil, Russia, India, China, and South Africa—had shown little interest in a plurilateral agreement on services trade.¹⁶ At the moment, the other BRICS remain skeptical. These countries account for a large portion of the one-third of international services trade that current RGF members do not cover. As figure 7.1 shows, the BRICS tend to have relatively high barriers to services imports, whether measured by AVEs or by mode 1 index values in the Services Trade Restrictiveness Index (STRI). Bringing the BRICS into TiSA could lead to substantial gains. With that in mind, the RGF negotiators are drawing on many features of the GATS to make TiSA as familiar as possible to developing members of the WTO.

TiSA negotiations are still at an early stage, so exactly what form the agreement will take is not clear. However, some features are emerging. While GATS applied a positive list approach to schedule commitments for services trade, TiSA is moving toward a hybrid approach.¹⁷ Members will still schedule market access commitments under the positive list approach, but national treatment obligations will be handled under a negative list approach, in which members commit to national treatment in all sectors except those where an exception is scheduled.

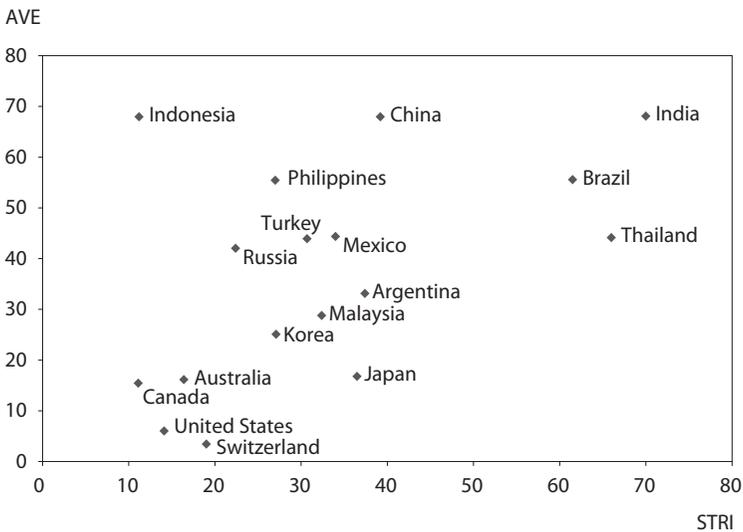
As mentioned earlier, US manufacturing firms export around 20 percent of their output, compared to 4 percent for services firms (through direct exports). If TiSA liberalization is sufficiently ambitious over a period of 5 to 10 years, the export-sales ratio in services might rise to 10 percent—half the figure for manufactures. At that ratio, service export gains would be substantial. OECD countries might see an estimated \$720 billion in increased exports; of this amount, US exports would increase by nearly \$300 billion. Exports of this magnitude would support approximately 1.5 million new jobs in the United States (Hufbauer, Jensen, and Stephenson 2012).

15. Kirk Semple, "Bridge Repairs by a Company Tied to Beijing," *New York Times*, August 10, 2011.

16. However, China signed a services agreement with Taiwan on June 21, 2013. See Cindy Wang, "China Signs Pact with Taiwan to Open Services Trade Sectors," *Bloomberg*, June 21, 2013.

17. Inside U.S. Trade, "U.S. Proposes Alterations To TISA Text, Delaying Market Access Offers," July 3, 2013.

Figure 7.1 AVE tariff levels and World Bank STRI



AVE = ad valorem equivalent; STRI = Services Trade Restrictiveness Index

Sources: World Bank STRI database, iresearch.worldbank.org (accessed on July 4, 2014); Fontagné, Guillin, and Mitaritonna (2011).

US and Chinese FTA Commitments

On the basis of information put together by the WTO Secretariat, all major countries that have negotiated regional or preferential trade agreements over the last 20 years have gone beyond their GATS services commitments agreed in 1994, in many cases very significantly (Roy 2011). This is also the case for the United States and China, which have subjected several new subsectors to new or improved commitments in their FTAs (see tables 7.3 and 7.4). Aside from its FTA commitments, the United States made extensive commitments in telecom and financial services agreements in 1997. China made several commitments in its WTO accession protocol in December 2001. The difference between the GATS and the new bilateral agreements is most striking for China in mode 3 (FDI), where Chinese FTAs have scheduled greater opening for direct investment.

New US negotiating initiatives that encompass services include the TiSA effort in the margins of the WTO, the Trans-Pacific Partnership (TPP) with countries in Asia and the Pacific, and the Transatlantic Trade and Investment Partnership (TTIP) with the European Union. Nearly all the negotiating proposals remain confidential, but some information has been leaked to specialized trade reports. China is not yet participating in any of the three megaregional negotiating initiatives, but has expressed interest in joining TiSA talks. China is participating in the Regional Comprehensive Economic Partnership (RCEP)

Table 7.3 Services commitments in US FTAs (percent subsectors covered)

Partner	United States			Partner		
	GATS+ ^a		Full liberalization ^b (FTA total)	GATS+ ^a		Full liberalization ^b (FTA total)
	Market access	National treatment		Market access	National treatment	
Australia	50.8	52.9	63.2	57.9	55.4	62.3
Bahrain	51.0	53.7	65.0	69.2	80.0	48.2
Chile	49.7	51.4	62.1	44.8	69.7	27.4
Jordan	4.7	4.5	30.3	30.5	30.2	33.5
Morocco	51.1	50.8	61.9	87.9	87.1	63.1
Oman	49.4	51.1	62.3	42.4	68.9	64.0
Peru	48.2	50.9	60.2	87.6	85.3	59.7
Singapore	50.7	50.2	62.1	76.9	74.4	53.2
Average	44.5	45.7	58.4	62.2	68.9	51.4

FTA = free trade agreement; GATS = General Agreement on Trade in Services

a. GATS+ refers to the percent of subsectors in which a party made commitments beyond its GATS obligations in market access or national treatment.

b. Full liberalization refers to the percent of subsectors in which there were no market access or national treatment restrictions in the FTA.

Source: Miroudot, Sauvage, and Sudreau (2010).

Table 7.4 Services commitments in Chinese FTAs by partner (percent)

Partner	China			Partner		
	GATS+ ^a		Full ^b (FTA total)	GATS+ ^a		Full ^b (FTA total)
	Market access	National treatment		Market access	National treatment	
Hong Kong	16.9	5.0	20.5	n.a.	n.a.	n.a.
Macau	16.6	4.8	20.5	n.a.	n.a.	n.a.
New Zealand	17.6	17.1	18.5	18.7	18.7	24.8
Singapore	19.7	19.2	18.2	17.4	20.8	37.4
Average	17.7	11.5	19.4	18.1	19.8	31.1

FTA = free trade agreement; GATS = General Agreement on Trade in Services; n.a. = not applicable

a. GATS+ refers to the percent of subsectors in which a party made commitments beyond its GATS obligations in market access or national treatment.

b. Full refers to the percent of subsectors in which there were no market access or national treatment restrictions in the FTA.

Source: Miroudot, Sauvage, and Sudreau (2010).

in the Asia-Pacific region, a compact between the Association of Southeast Asian Nations (ASEAN) and six major Asian economies. However, RCEP is not as advanced as the TPP or TiSA and no agreement has yet been reached on the negotiating modality for services.

Because TiSA and the megaregional texts remain confidential, we draw on the FTAs that the United States and China have concluded to survey their respective barriers.

Overview of US Services Restrictions

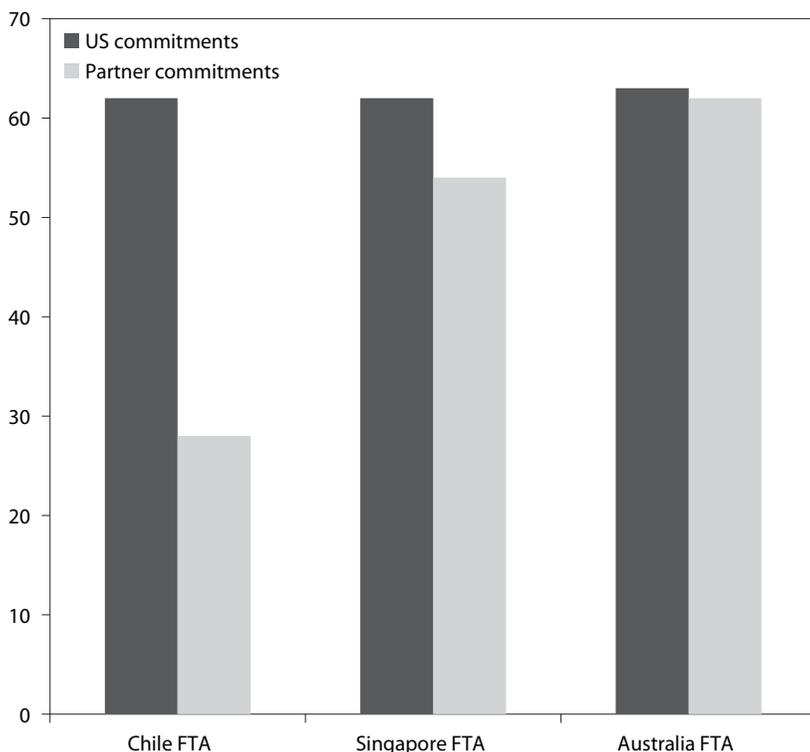
There has been very little variation in the level of services commitments that the United States has offered and bound in its various FTAs. Figure 7.2 illustrates the level of services commitments between the United States and three of its FTA partners: Chile (2004), Singapore (2004), and Australia (2005). US commitments are nearly the same in all 3 agreements and quite similar in all 12 of its FTAs, with the exception of the US–Jordan FTA (see table 7.3). This suggests that the United States would most likely offer a similar level of services commitments in a possible FTA with China.

The best way to obtain an overview of services restrictions in the US economy is by examining the information in US commitments in the FTA negotiated with Korea in March 2012. The United States has negotiated the services components of its FTAs under a negative list format, so that the restrictions listed in the annexes of nonconforming measures reflect restrictions that are applied in practice. References to actual laws and regulations accompanying the description of each measure support the listed restrictions. Four annexes in US FTAs, including the FTA with Korea (KORUS), correspond to restrictions on services and investment. These cover different types of measures and encompass several restrictions.

Annex I, on standstill measures, involves existing measures that violate one or more of the core disciplines of the given FTA: the principles of national treatment, market access, and most favored nation (MFN) status. The annex also addresses measures that violate rules against local presence requirements and performance requirements, as well as rules that prevent senior managers and directors from entering a country along with FDI. These measures are subject to a ratchet; if unilaterally liberalized, the liberalization should not be subsequently withdrawn. Annex II, on optional restrictions and exclusions, deals with measures or sectors for which the signatory may retain existing restrictions and impose future new restrictions, and even permanently exclude these measures or sectors from the FTA in question. Annexes III A and III B, on financial services standstill measures and optional restrictions and exclusions, respectively, follow annexes I and II for financial services, including ratchet provisions.

The annexes of nonconforming measures for the United States in the KORUS FTA, which can be taken as a proxy for other recent US FTAs, indicate that restrictive measures in annexes I, II, and III A and B are few in number.

Figure 7.2 GATS+ commitments in US FTAs (percent of subsector)



FTA = free trade agreement; GATS = General Agreement on Trade in Services
Source: Miroudot, Sauvage, and Sudreau (2010).

At face value, this would seem to indicate that restrictions on services in the US economy are not that great, given that fairly few sectors and measures are actually listed. However, judging the services panorama by the number of entries alone does not give an accurate picture of how much the US economy may be protected in the services area. To evaluate protection, it is necessary to qualitatively assess the degree of potential restrictiveness of the respective measures.

Annex I: Standstill Measures for Services Trade and Investment

There are only 12 US entries in annex I. Nine of these are related to sectors and most are linked to some type of strategic or security concern. The latter include measures covering atomic energy; mining and pipeline transportation, including oil and gas pipelines; air transport, as domestic air space is restricted to operations by US carriers only, and the same applies to specialty air services

and customs brokers for air transport; communications, restricting radio licenses for foreigners; and professional services, restricting practice before the US Patent and Trademark Office to US citizens or lawful aliens for which there is a reciprocity requirement.

However, 3 of the 12 measures listed in the US annex are of a different nature, covering all sectors in the US economy rather than specific sectors. These measures refer to cross-border trade and investment. Cross-border trade and investment in services covers all existing measures maintained at the state and local level. In other words, existing state and local measures are exempt from FTA disciplines for services and investment. In investment, foreign firms cannot use small business registration forms and thus cannot qualify for small business benefit programs. Foreign firms also cannot take advantage of Overseas Private Investment Corporation (OPIC) insurance and loan guarantees.

The above three horizontal reservations affect the entire operation of the FTA for services and investment. States are bound to the current level of openness in their laws and regulations, and a ratchet applies to new liberalization that they may implement. But because the FTA does not require states to dismantle existing measures, as a practical matter the scope of new FTA disciplines is limited to the federal level. As many professional services, as well as education and health services, are certified and accredited at the state level, this creates a huge gap in the coverage of disciplines in the United States.

Annex II: Optional Restrictions and Exclusions for Services Trade and Investment

In annex II the United States has listed only six measures. This would seem to indicate that it has excluded very few services from FTA disciplines. Two of the measures in question cover areas typically reserved for governments in services agreements, namely social services and minority affairs. Two of the measures cover sectors that either could be considered sensitive and related to national security or have become subject to entrenched protectionism, depending upon one's perspective: communications (e.g., sharing of radio spectrum, satellite, and digital audio services) and maritime transport (e.g., reservation of internal US waterways, which includes coastal shipping, to US vessels under the Jones Act).

However, the remaining two measures apply to all sectors. One exemption relates to the MFN obligation. It effectively exempts all trade agreements signed before the KORUS from MFN treatment with respect to Korea, but it exempts trade agreements signed after the KORUS from the MFN obligation in only three areas: aviation, fisheries, and maritime matters. The second exemption is very broad, applying to all cross-border services trade. As it states: "The US reserves the right to adopt or maintain any measure that is not inconsistent with US' obligations under Article XVI of the GATS."¹⁸ This would

18. See annex II of the KORUS agreement, www.ustr.gov (accessed on June 24, 2014).

appear to give the United States a blanket exemption to undertake new restrictions in the area of market access for any measure not identified in the GATS. However, since the United States took on significant market access obligations in the GATS, in what way this exemption will actually be used remains to be seen.

Annex III A: Financial Services Standstill Measures

Annex III A contains 16 entries, of which 13 apply to banking services and three to insurance services. The restrictions on banking affect primarily market access and national treatment and define several banking activities that are controlled or unavailable to foreign banks, including interstate banking. Two restrictions affect the operations of foreign insurance companies for activities in the US market. Additionally, two horizontal measures are included in the annex, and these affect all core disciplines for all banking and insurance activities and exempt “all existing non-conforming measures of all states, DC and Puerto Rico.” Thus, in a similar manner to the measures exempted in annex I, all existing state and local measures are exempt from the scope of the trade agreement, but they cannot be made more restrictive and if subsequently liberalized, the ratchet applies.

Annex III B: Optional Restrictions or Exclusions for Financial Services

In annex III B the United States has included only one measure relating to market access for insurance firms, which states “the US reserves the right to adopt or maintain any measure that is not inconsistent with the US’ obligations under Article XVI of the GATS.” As in annex II, this would appear to give the United States a blanket exemption to undertake new restrictions in the area of market access on insurance for all measures not identified in the GATS. However, again, because the United States took on significant market access obligations in the GATS, in what way this broad exemption will actually be used remains to be seen.

Summarizing the US Annexes

The qualitative examinations of the most recent US FTAs for their commitments on services and investment suggests that US service sectors are generally open to modes 1 and 3, exactly as the World Bank’s STRI database and most AVE calculations indicate (see appendix 7A). The two services sectors that remain highly protected are the transport sector (both maritime and air) and the professional services sector (mode 4). The practice of exempting existing measures at the state and local level from the disciplines of trade agreements implies little liberalization of professional services. Financial services also show more restrictions than other sectors and further liberalization may be difficult in the near term, given the continued fallout of the 2008–09 financial

crisis. However, compared to other countries, the US financial service sector has many foreign players.

Perhaps the highest federal barriers to Chinese services in the United States are represented in the actions against the Chinese firms Huawei and ZTE Corporation. In October 2012 the US House Intelligence Committee issued a report in which US firms were “strongly encouraged to consider the long-term security risks associated with doing business with either ZTE or Huawei for equipment or services.”¹⁹ An article in Xinhua called the report “far from convincing” and both companies fought back, saying they had been unfairly targeted.²⁰ US companies are not expressly forbidden from purchasing equipment or services from Huawei and ZTE, although several departments in the US government are.²¹

Overview of Chinese Services Restrictions

The best way to obtain an overview of services restrictions in the Chinese economy is by examining its schedule of commitments in recent high-quality trade agreements. For China, these are the FTAs negotiated with Chile (2006) and Costa Rica (2011). The normative text and nearly all the content of China’s services schedules are similar in these two agreements. The FTAs that China has negotiated with partners in Asia, particularly ASEAN, have been less ambitious and contain less comprehensive sectoral coverage.

China has preferred to negotiate the services component of its FTAs under the positive list format. Under this approach, restrictions that could (and usually do) affect services and investment are set out differently than under a negative list approach. Measures affecting the entire economy are listed under the horizontal limitations section, while measures affecting individual service sectors are listed according to the 12 main sectors and 157 subsectors that the WTO has defined in Classification List W/120.²² MFN limitations are listed at the end of the schedule. As the positive listing does not require comprehensive sectoral coverage for services, it is impossible to know if the entries in China’s schedules cover all its existing services restrictions. Most

19. Simon Montlake, “U.S. Congress Flags China’s Huawei, ZTE as Security Threats,” *Forbes*, October 8, 2012, www.forbes.com (accessed on May 29, 2014).

20. Cao Kai, “US Congress Report on Huawei, ZTE Is Far from Convincing,” news.xinhuanet.com, October 15, 2012 (accessed on May 29, 2014).

21. Section 516 of the Consolidated and Further Continuing Appropriations Act of 2013 bars NASA, the National Science Foundation, and the Departments of Justice and Commerce from purchasing systems made by companies with any connection to the Chinese government from March to September 2012. See www.govtrack.us/congress/bills/113/hr933/text (accessed on June 24, 2014).

22. The Services Sectoral Classification List is WTO document MTN.GNS/W/120, i-tip.wto.org/services (accessed on June 24, 2014).

likely this is not the case, although the ambitious FTAs mentioned have built on China's GATS schedule, which was considered to be quite comprehensive at the time of China's accession to the WTO (2002), particularly for infrastructure services (telecoms, financial services, distribution, and transport). Thus an examination of the content of China's schedule of commitments in the Chile and Costa Rica FTAs provides a reasonably robust picture of existing restrictions.²³

Horizontal Measures Affecting Services Trade and Investment

Horizontal commitments indicate what treatment China gives to service sectors across the board. China has maintained the same horizontal commitments in its FTAs that it set out in its GATS services schedule of 2002. Limitations in this section apply to two areas: FDI (mode 3) and labor movement (mode 4). In FDI, China imposes a minimum equity of 25 percent for joint ventures and no horizontal equity ceiling, though ceilings are specified for individual sectors. There is no guarantee that foreign firms can establish branches in China unless indicated for specific sectors. As land is state-owned in China, foreign firms cannot purchase land but must lease, and leases have specific term lengths: 70 years for residential use, 50 years for industrial, and only 30 years for commercial, tourist, and recreational purposes. This last factor might deter certain types of investment that require long amortization periods.

Foreign firms in several enumerated sectors—among them, audiovisual, aviation, and medical—and in new service sectors cannot obtain subsidies. China offers only limited possibility for labor movement (mode 4) under its GATS and FTA schedules, defining only three categories of natural persons eligible for movement: intracorporate transferees, senior employees of foreign firms, and salespersons. The maximum stay in each category is three years.

Sectoral Measures Affecting Services Trade and Investment

With respect to commitments by sector, China has offered nearly identical schedules in its FTAs with Chile and Costa Rica. Most of the restrictions by sector are found on mode 3 (commercial presence, usually FDI). Investment restrictions affecting several services activities could be worrisome to US services firms. In legal advisory services, foreign law firms can provide legal services only in the form of representative offices and can give advice only on the legislation of their own country or international conventions. Joint ventures are required for professionals in the areas of taxation, medical and dental services, market research activities, photographic services, convention

23. While this is true for most sectors, the area of financial services has been omitted from China's FTAs with Chile and Costa Rica, and the area of telecommunications has been omitted from the China-Chile FTA. Nonetheless WTO commitments continue to apply in these sectors.

services, environmental services, business services (i.e., those incidental to agriculture, forestry, hunting, fishing, and mining), and oil and gas exploration. In the construction sector, China imposes a restriction on the types of construction activities that foreign investors can undertake, limiting these essentially to those funded by foreign sources or those in which Chinese expertise is limited. Regarding distribution, in the area of retail sales, China imposes restrictions on the number of retail outlets (less than 30). Additionally, no wholly foreign-owned retailers are permitted for chain stores. An education requirement calls for the establishment of joint schools. The areas of telecoms, transport, and financial services (securities only) operate under limits on FDI (see discussion below).

In addition to the above mode 3 restrictions, there are gaps in China's services schedule where mode 1 (cross-border trade) is left unbound (meaning no commitment) or is restricted. In education, there is no commitment on cross-border or online education services by foreign educational establishments. The advertising sector faces restrictions on foreigners providing cross-border advertising services. In air transport, there are restrictions on computer services for online reservation services, flight schedules, and other operations.

Despite the requirement that China imposes on investors to establish a joint venture in many service sectors, there is nonetheless no equity limit for many of these activities and 100 percent equity participation is often possible. Wholly foreign-owned enterprises are permitted for most professional services. Relatively few equity ceilings remain in China's FTA schedules on service activities. Wholly foreign-owned subsidiaries are also permitted in the tourism and travel sector for hotels, restaurants, and tour operators, other than those dealing with trips to Hong Kong, Macao, and Chinese Taipei. There are no restrictions on recreational, cultural, and sporting services activities for cross-border trade or FDI.

Besides the restrictions listed above, the situation in China deserves mention for four infrastructure sectors of particular importance: telecoms, transport, financial services, and digital services, though express delivery, legal services, and journalism are also significant.

Telecom Services

The Chinese Ministry of Industry and Information Technology (MIIT) regulates information and communications technology (ICT) firms and companies must generally get approval from it in order to operate. Under China's WTO commitments, it should not impede market access to foreign suppliers of computers and related services. But in 2013 MIIT released an updated catalogue of telecommunication services, subjecting four new categories to licensing requirements: long-term evolution (LTE) 4G, wire access infrastructure services, satellite-based fixed communication services, and mobile resale. In addition, a catch-all category with general wording might apply to a much

broader area.²⁴ Foreign firms doing business in these categories will need a license from MIIT to operate in the named subsectors, and must use a joint venture with no more than 50 percent foreign ownership. The ministry has approved only four joint ventures since 2003.²⁵

In software licensing, there has been progress in persuading the central government to require companies to purchase rather than simply copy software products, but progress has proven more elusive in provincial and local governments. China has agreed that state-owned enterprises (SOEs) will purchase legal software from companies such as Microsoft and Adobe, but these companies say that sales in China remain steady, so it is difficult to verify whether the new edicts have had much effect.

Telecommunication services are highly restricted, with a complete ban on foreign companies. China Mobile, China Unicom, and China Telecom—all SOEs—dominate the industry. Many other ICT services must be evaluated under the Multi-Level Protection Scheme (MLPS), a system that rates services in terms of their effects on national security, among other features. The rating runs from one to five, five needing the most protection, but any item scoring a three, four, or five is required to be secured by domestic IT security products. Loosening these restrictions would benefit both China and the United States, as newer areas such as cloud computing can bring significant efficiency advantages to users. However, recent disclosures about extensive US National Security Agency (NSA) surveillance make Chinese liberalization a remote proposition.

China's services schedule for telecoms in its FTA with Costa Rica is considerably simpler than its WTO GATS schedule of a decade earlier. Many telecom activities included in the earlier W/120 classification list²⁶ have changed with rapid technological advances in the ICT sector; hence a simplified schedule that encompasses all telecom activities is a useful innovation. China imposes limits on FDI in telecoms of no more than 50 percent, 49 percent, or 25 percent equity, depending on the activity. Joint ventures are required for mobile voice and data services. Domestic services are subject to geographical restrictions that will be lifted over time. Cross-border provision of telecom services is linked to FDI. For audiovisual technology (cinemas), FDI is limited to 49 percent equity. FDI limitations in telecoms and audiovisual technology will certainly be the subject of negotiation in any future FTA with the United States.

24. A summary of the changes can be found in Gordon Milner, Paul D. McKenzie, Sherry Yin, and Jing Bu, "China's MIIT Releases Long-Awaited Draft Amended Telecoms Catalogue for Public Comment," Morrison/Foerster client alert, June 13, 2013, www.mofo.com (accessed on May 29, 2014).

25. James Seng, "Making Sense of MIIT's Category of Telecommunications Services," CircleID, July 31, 2013, www.circleid.com (accessed on May 29, 2014).

26. See WTO, Services Sectoral Classification List.

Transport Services

In the area of transport services, China's FTAs exclude passenger transport (as do US FTAs). There are no restrictions on rail or road transport in China's schedule and wholly owned foreign subsidiaries are permitted, though maritime transport and air transport are restricted. Less than 49 percent equity participation in FDI is allowed in maritime shipping as well as in auxiliary services for maritime, and ships are able to operate only under China's national flag. Shipping on inland waterways by foreign vessels is not permitted, a restriction that mirrors the US Jones Act.

The United States and China signed their latest air transport agreement (ATA) on July 9, 2007. It modestly expanded an earlier agreement covering routes for passenger and cargo flights between the countries.²⁷ Since then, a few additional routes have been agreed, but a full open-skies agreement has proved elusive.²⁸ The absence of coordination between China's Civil Aviation Administration (CAAC) and the GAC has unnecessarily restricted access to select areas of China. The CAAC also restricts changes of airplane size, the switching of planes on a single flight number, and the right to serve two points on the same flight. None of these restrictions are consistent with the ATA.

Foreign companies are only allowed minority equity shares in aircraft repair. Computer reservation activities for air transport can only be carried out cross-border, in cooperation with Chinese aviation agents. Direct access and use of foreign reservation systems need approval from the CAAC. For freight forwarding agencies across all forms of transport, joint ventures are required and are subject to an operating term of 20 years.

Financial Services in China

China did not include updated financial services commitments in its FTAs with Chile and Costa Rica. The baseline accordingly reflects China's WTO schedule of commitments, in effect since 2002. Several areas of China's financial services sector seem relatively open according to its WTO commitments. There are no equity limits, geographical limitations, or clientele limitations on FDI in insurance lines—with the overriding exception of life insurance. While licenses must be obtained for nearly all financial activities, they are issued without quantitative restrictions, but they require compliance with prudential standards, which Chinese (and US) authorities flexibly interpret. That said,

27. The updated agreement can be found at US Department of State, "U.S.–China Air Transport Agreement of July 9, 2007," www.state.gov (accessed on May 29, 2014).

28. The United States has concluded open skies agreements with over 100 countries. These give airlines far greater control over decisions about routes, capacity, and pricing, enabling more competitive and efficient passenger and cargo transport. Details about these agreements can be found at the US State Department website, www.state.gov.

US financial firms are seriously concerned about multiple aspects of Chinese financial regulation. These issues are examined in chapter 8.

Digital Services in China

In the decade since China's WTO accession, the role of the internet has greatly expanded. China had 23 million internet users in 2000, or under 2 percent of the total population. By 2012 that number had grown to 538 million, or over 40 percent of China's population, giving China the world's largest number of web users.²⁹ The United States has seen major growth as well, with internet use growing from 33 percent to nearly 80 percent of the population over the same time period. Globally, over a third of people were classified as internet users in 2012. With rapid growth in the world's population of internet users, restrictions on digital commerce have become increasingly important, for both domestic and international networks.

Unconstrained data flows are responsible for tremendous economic gains. The McKinsey Global Institute calculated that open data could generate as much as \$3 trillion more in global income annually, in just seven sectors of the world economy (Manyika et al. 2013). Open data are available without restrictions; are fundamental to new business models, from analysis of big data to cloud computing; and drive innovation, especially in small businesses.

The rules governing cross-border data flows are incomplete and therefore bilateral and regional agreements present an opportunity to create a framework for open data and to push for constructive policies. A National Foreign Trade Council (NFTC) report, which many US information technology firms endorsed, listed data flow priorities for the business community.³⁰ Three of these are among the report's key objectives. First is to expressly prohibit restrictions on legitimate cross-border information flow. Blocking access to information services and websites such as Twitter, Facebook, YouTube, and WordPress, as well as document sharing sites such as Dropbox and Google Drive, seriously impedes the conduct of business. Second is to prohibit local infrastructure or investment mandates. In pursuit of promoting local businesses, China has enacted policies that link market access to indigenous innovation policies. Quite often such policies seek the localization of servers and other IT equipment. Third is to promote international standards, dialogues, and best practices. Regulations that favor local providers of data services, or national standards that differ from international norms, contradict the goals of free and fair trade.

29. Miniwatts Marketing Group, "Top 20 Countries with the Highest Number of Internet Users, 2012," June 30, 2012.

30. See National Foreign Trade Council, "Promoting Cross-Border Data Flows: Priorities for the Business Community," www.nftc.org (accessed on May 29, 2014).

The NFTC's objectives are targeted at several practices found in emerging economies. Common restrictions include localization requirements, by which a country explicitly or implicitly requires a company to use local digital products and services when doing online business in the domestic market; thus credit and debit card data processing must take place within China (USTR 2012). More broadly, Chinese banks are not permitted to use any offshore data processing services for domestic noncorporate customer data (USITC 2013). China also requires data to be stored locally in some cases and directly supports Chinese cloud computing firms.

China's aforementioned MLPS covers banking, energy, telecommunications, education, and transit, placing heavy restrictions on certain industries. On its scale of one to five in terms of importance to national security, systems that receive a rank of three or higher must be provided by "a Chinese company, owned by Chinese citizens, and use core technology based on Chinese intellectual property" (USITC 2013). Ranks of three or higher are not uncommon, so this system creates a meaningful barrier to digital and physical commerce.

In the United States, legislation to protect open data is on the congressional agenda. The proposed Digital Trade Act of 2013 seeks to advance most of the NFTC's goals in future trade agreements and requires the president to prioritize digital trade. But the United States is not helping itself with some of its current policies. The continuing resolution to fund the government (HR 933), signed by the president on March 26, 2013, states that the Departments of Commerce and Justice, as well as the National Aeronautics and Space Administration (NASA), are barred from procuring IT systems that were produced, manufactured, or assembled by an entity that is owned, directed, or subsidized by China, unless federal law enforcement agencies give their approval.³¹ Such legislation clearly lends itself to retaliation and invites restrictions on open data.

Express Delivery

China's Express Delivery Service (EDS) is one of the largest in the world, with estimated sales of around \$5 billion in 2010.³² But foreign companies are stifled by GAC rules that prevent them from connecting some cities in China to their major hubs in other regions. The GAC also requires that foreign carriers use domestic service contractors for localized services, limiting their ability to operate and expand. Moreover, the requirement that 100 percent of EDS packages be opened for inspection significantly slows imports of small packages. Relaxing some of these regulations and adopting global practices would permit more rapid and cheaper delivery within China.

31. The language is found in section 516 of the Commerce, Justice, Science, and Related Agencies Appropriations Act of the continuing resolution.

32. US Department of Commerce, "2nd U.S.–China Joint Commission on Commerce and Trade Fact Sheet," November 21, 2011, www.commerce.gov (accessed on May 29, 2014).

Legal Services

Advisory services face an array of restrictions when trying to operate in China. This is counter to the principle of reciprocity, as Chinese advisory firms are allowed to set up offices and export services to other trading partners, although with broad limits.³³ International law firms face strict regulations when trying to establish a representative office and the process can be unpredictable and lengthy. Moreover, after establishing its first representative office, the firm must wait an additional three years before opening another office. China restricts foreign lawyers from attending meetings between their clients and government agencies; this restriction conflicts with China's commitments under the WTO. International law firms are also subject to higher taxes than their domestic counterparts, ranging from an additional tax of 10 percent on repatriated profits to 45 percent on income paid to partners.

Journalism

From time to time, China blocks the English or Chinese versions of the *Wall Street Journal*, the *New York Times*, and Bloomberg. In December 2013, it became known that China was holding up the visas of journalists representing the *New York Times*, Bloomberg, and other publications. In November 2013, security officials visited Bloomberg offices in Shanghai and Beijing for unannounced inspections.³⁴ As James McGregor, former chief executive of Dow Jones in China, lamented, "it's getting to the point where these media companies and their ability to do business in China has been curtailed."³⁵ Chinese actions seem designed to make the foreign media more compliant in their reporting. But these actions also reduce ad revenue, making the Chinese measures a trade issue as well. US Vice President Joseph Biden, while in Beijing in December 2013, declared that the United States and China had "profound disagreements" on the role of journalism.³⁶ If US media firms cannot keep their reporters in China, if the firms are hassled by inspections, or if their English or Chinese websites are blocked, then obviously journalism faces high barriers in the Chinese market.

33. Around 10 Chinese law firms have established branches in the United States, and currently practice domestic US law. See AmCham China (2013).

34. Peter Elkind and Scott Cendrowski, "Chinese Authorities Conduct Unannounced Inspections of Bloomberg News," *CNN*, December 2, 2013, finance.fortune.cnn.com (accessed on May 29, 2014).

35. Kathy Chu and William Launder, "U.S. Media Firms Stymied in China," *Wall Street Journal*, December 6, 2013.

36. Margaret Talev, "Biden Prods Beijing on Journalists' Treatment as China Trip Ends," *Bloomberg*, December 5, 2013, www.bloomberg.com (accessed on May 29, 2014).

Summarizing China's Openness

China has not yet negotiated a services agreement on a negative list basis, so it is impossible to closely compare its restrictions with those of the United States. But China has excluded certain modes of supply from bound commitments in its recent FTAs, particularly cross-border trade (mode 1), and this would prove much more difficult under a negative list approach.

Some examples of China's nonbinding or effective exclusion from disciplines of cross-border services trade are in the areas of educational services, environmental services, distribution services, and incidental services related to mining. These represent gaps in China's commitments. Though mode 1 is not yet as important commercially as mode 3, it is fast gaining ground, and it would be important for China to bind mode 1 supply in future FTAs for sectors that have significant commercial promise (e.g., digital services).

Most restrictions in China's services schedules in its FTAs with Chile and Costa Rica are found on market access for FDI (mode 3, commercial presence). The most severe restrictions overall for foreign service suppliers in China are in the areas of foreign legal advisory services, telecoms, financial services, transport, distribution (retail chain stores), and construction (in the types of activities that can be undertaken).

Unbound entries appear in China's GATS schedule for national treatment. This means that China is not committing to any standard of treatment for foreign service suppliers; China could give better or worse treatment, and most foreign firms will fear worse. A few economic needs test (ENT) entries appear in China's schedule, with no criteria to illuminate how they might be applied.

Unlike the United States, China does not have blanket measures that exempt existing subfederal governments from coverage. On the contrary, the disciplines of the WTO GATS extend across the land. The obligation is repeated in China's FTAs with Costa Rica and Chile (Article 91.2 in both agreements on scope and coverage), which specify the following:

For purposes of this Section, measures adopted or maintained by a Party means measures adopted or maintained by:

- (a) central, regional or local governments and authorities; and
- (b) non-governmental bodies in the exercise of powers delegated by central, regional or local governments or authorities.

From this perspective, China's commitments on services, even with the incompleteness and gaps in the positive listing, go further than those of the United States in that they apply to all levels of its entire economy.

The Australia–China FTA and the Shanghai Free Trade Zone

Services liberalization has proved divisive in negotiations between China and Australia, which began in 2005 but have gone through 19 rounds without

resolution.³⁷ Since its WTO accession, China has been reluctant to liberalize its services sector any further. This frustrated Australia, which sees services, along with agriculture, as major areas where it stands to gain from an FTA with China. But China's service sector is immature compared to Australia's, and China is worried that Australian service firms will outcompete Chinese companies. The benefits of liberalization have not been persuasive to Chinese leaders and they prefer to take a slower approach. That is one reason for the new Shanghai Free Trade Zone (FTZ): to experiment with liberalization to determine how much is appropriate for China.

On September 29, 2013, China unveiled a new FTZ spanning some 29 square kilometers in Shanghai's commercial area. The goal of the zone is to transform the role of government in the market and economy. Many commentators see it as a testing area for further reforms that will be implemented across the nation, particularly in services. The State Council officially approved the FTZ in August 2013; the framework plan for the zone targets its implementation, mission, and measures. The administrative affairs and the pilot reforms are the responsibility of the Management Committee, an agency of the People's Government of Shanghai Municipality. One of the FTZ's core purposes is to improve administrative systems, focusing on the administration of trade, investment, finance, and supervision.

The FTZ will affect finance, insurance, shipping and transportation, and legal and professional services. Officials have stated that market access restrictions—such as requirements concerning the qualification of investors, limitations on foreign participation, and restrictions on business scope (except banks and ICT)—will be suspended or cancelled. Freer flows of capital in and out of the zone will facilitate outward- and inward-bound investment, and hopefully allow the market to play a decisive role in the economy.

China's first draft of a negative list scheduled over 190 business sectors that would be controlled in the zone, and foreign commentators viewed this as discouraging.³⁸ But in March 2014, Zhou Zhenhua, director of the Development Research Center of the Shanghai Municipal Government, stated that the negative list may be pared by as much as 40 percent, which would amount to very significant liberalization.³⁹ While several departments of the central government must approve the decision first, it shows a determination among Shanghai officials to open their service sector. The new regulations allow foreign investment in areas such as call centers, business communication services, and internet access providers. The regulations also allow up to 55 percent foreign ownership of virtual private networks and data and transaction processing firms. The State Council document also permits foreign enterprises to engage

37. This section draws from Jiang (2013).

38. James Areddy, "Name Game in Shanghai Trade Zone," *Wall Street Journal*, November 11, 2013.

39. Yiyao Wu, "Shanghai FTZ 'Negative List' May Be Cut by 40% to Boost More Interest," *China Daily*, March 25, 2014, usa.chinadaily.com.cn (accessed on May 29, 2014).

in the production and sale of electronic gaming equipment and assigns regulation of this topic to the Ministry of Culture.

Conclusions

The United States enjoys a significant comparative advantage in tradable services while estimates of the tariff equivalents of Chinese barriers consistently show high protection in this sector. With that in mind, it is not surprising that modeling exercises tend to show big gains for US exports if Chinese barriers were to be relaxed. Our computable general equilibrium (CGE) model (chapter 2) projects that US exports to China would expand by nearly \$165 billion by 2025 under a CHUSTIA, or \$55 billion under a less service liberalization model.

With such large prospective gains at stake, as well as China's relatively high barriers, one can certainly expect a strong offense from US negotiators. But China's willingness to compromise might be greater than one might expect. Chinese construction companies have accumulated an incredible amount of experience over the past decade and now regularly win contract bids in foreign countries. However, even as Chinese construction firms have become prominent in the United States, access to large federal US contracts has proved elusive for construction firms with ties to China, leading to the suspicion that some degree of discrimination is involved.⁴⁰ Some US observers would say that restricting investment by Chinese SOEs in the United States is justified, on the argument that SOEs receive unfair advantages in financing and regulation through their ties to the Chinese government. A service chapter in a CHUSTIA that limits discrimination against SOEs, coupled with agreeable operating rules for SOEs, could assuage both concerns.

There also seems to be increasing recognition in China that imported services can contribute to the economy in and of themselves. The FTZ experiment in Shanghai could encourage Chinese officials to expand liberalization to other areas if the Shanghai FTZ produces positive results. Both Chinese and foreign firms are anxious to learn the details and see the implementation of the Shanghai FTZ. Limited liberalization through the US–China Strategic and Economic Dialogue—particularly those discussed in the next chapter—could give further evidence that China is shifting away from a mercantilist view with respect to the services trade.

A future CHUSTIA would likely see a major focus on the services sector, given its tremendous importance for both trading partners, right now and in terms of future potential growth. The United States will probably insist on a negative list approach in the agreement. Liberalization of service barriers will depend much more on China than the United States, because Chinese barriers are much higher, services liberalization is more important for Chinese growth than US growth, and the remaining US barriers are highly resistant to

40. Michelle Caruso-Cabrera, "Proudly Built in the USA—by the Chinese," CNBC, May 22, 2013, www.cnbc.com (accessed on May 29, 2014).

liberalization. Thus it will be up to China to see that unequal liberalization serves its own economic interests. China should view a future FTA with the United States in the services area as a vehicle for achieving its own important objectives. Several factors suggest that this is a plausible scenario.

- *China's shift to domestic demand-led growth.* China has recognized the limitations of export-led manufacturing growth and has been reorienting its economy for the past two years toward an internal shift to domestic-led demand growth. This shift will favor a higher level of consumption of services, as well as a demand for better quality services in China.
- *Acknowledgment of new economic priorities.* In a major policy address on services by Chinese Premier Li Keqiang at the Global Services Forum Beijing Summit in June 2013, the premier recognized that the services sector in China is still weak in its contribution to value added (44.6 percent of China's GDP) and outlined the need for China's services industry to expand, reform, and liberalize. In the premier's words:⁴¹

The Chinese service industry has ample room for growth. Vigorous development of the service industry is very important for promoting the strategic restructuring of the economy, pressing ahead with reform and opening up, and expanding international cooperation. Not only is the service sector increasingly becoming an accelerator of global economy recovery, ushering in new driving forces and new directions in development, it is also a new engine, a new motive force for long-term sustainable and healthy development, optimization and upgrading in the Chinese economy.

As part of the policy prescriptions to further develop China's trade in services and further open up its service sector to the outside world, the Chinese premier stated that China would focus on services:

We will focus on expanding trade in services ... actively in fields such as information, logistics, finance, travel and tourism ... encourage businesses to take on more outsourcing work and welcome foreign companies that wish to engage in service outsourcing in China ... energetically promote investment in the service sector ... create an environment of fair competition for trade in services ... promote international liberalization and facilitation of trade in services ... oppose protectionism of every kind, eliminate trade barriers.... The development of the Chinese service sector has huge potential and a promising future, affording unlimited business opportunities.

This strong statement by the second-highest ranking official in China at a major international forum clearly signals a change in Chinese policy orientation, and foreshadows a willingness to further open the country's service

41. From Li Keqiang, keynote address at the Global Services Forum Beijing Summit and 2nd China Beijing International Fair for Trade in Services, June 2013, UNCTAD/DITC/TNCD/MISC/2013/17.

sector as part of a future growth strategy. This bodes well for key infrastructure service sectors in China, such as financial services, telecoms, and retail distribution. The Chinese authorities also recently expressed their interest in joining TiSA, alongside other major WTO service providers.⁴²

- *Rising wage levels in China.* Rapidly rising wage levels in China will push the economy and labor force into service sectors as manufacturing FDI goes elsewhere in Asia. Partly as a result of China's tremendous economic success, wages have been climbing and demands for a more skilled workforce have been increasing. Wages are rising for three reasons: a shortage of skilled workers in eastern China, where the majority of FDI-driven manufacturing still takes place; increasing experience and educational levels in the workforce; and government legal and regulatory measures to increase wage rates, embodied, for instance, in the Labor Contract Law of 2008. In essence, a combination of rising education and FDI has increased Chinese worker productivity. Together with a public policy of supporting higher incomes, these effects have translated into rising wages. In turn, higher wages will modestly discourage further FDI in the manufacturing sector and push Chinese firms to move up the value-added chain to increasingly skilled and technology-oriented production—activities that are primarily in the service sector.

References

- AmCham China (American Chamber of Commerce in the People's Republic of China). 2013. *American Business in China: 2013 White Paper*. Beijing.
- Berden, Koen G., Joseph Francois, Saara Tamminen, Martin Thelle, and Paul Wymenga. 2009. *Non-Tariff Measures in EU-US Trade and Investment: An Economic Analysis*. Rotterdam: Ecorys.
- Fontagné, Lionel, Amélie Guillin, and Cristina Mitaritonna. 2011. *Estimations of Tariff Equivalents for the Services Sector*. Paper 2011-24. Paris: Centre d'Etudes Prospectives et d'Informations Internationales.
- Francois, Joseph. 1993. Explaining the Pattern of Trade in Producer Services. *International Economic Journal* 7 (3) 23–31.
- Hoekman, Bernard. 1996. An Assessment of the General Agreement on Trade in Services. In *The Uruguay Round and the Developing Economies*, ed. Will Martin and L. Alan Winters. Cambridge, UK: Cambridge University Press.
- Hufbauer, Gary Clyde, J. Bradford Jensen, and Sherry Stephenson, assisted by Julia Muir and Martin Vieiro. 2012. *Framework for the International Services Agreement*. Policy Brief 12-10. Washington: Peterson Institute for International Economics.
- Hufbauer, Gary Clyde, Jeffrey J. Schott, and Woan Foong Wong. 2010. *Figuring Out the Doha Round*. Policy Analyses in International Economics 91. Washington: Peterson Institute for International Economics.
- Hufbauer, Gary Clyde, and Yee Wong. 2011. *Logistics Reform for Low-Value Shipments*. Policy Brief 11-7. Washington: Peterson Institute for International Economics.

42. See Donnan, "China in Push."

- Jensen, J. Bradford. 2011. *Global Trade in Services: Fear, Facts, and Offshoring*. Washington: Peterson Institute for International Economics.
- Jiang, Yang. 2013. *China's Policymaking for Regional Economic Cooperation*. London: Palgrave Macmillan.
- Manyika, James, Michael Chui, Peter Groves, Diana Farrell, Steve Van Kuiken, and Elizabeth Almasi Doshi. 2013. *Open Data: Unlocking Innovation and Performance with Liquid Information*. London: McKinsey Global Institute.
- Miroudot, Sébastien, Jehan Sauvage, and Marie Sudreau. 2010. *Multilateralizing Regionalism: How Preferential Are Services Commitments in Regional Trade Agreements?* Trade Policy Working Paper 106. Paris: Organization for Economic Cooperation and Development.
- Preeg, Ernest H. 2014. *U.S. Trade Surplus in Business Services Peaks Out*. Washington: Manufacturers Alliance for Productivity and Innovation.
- Roy, Martin. 2011. *Services Commitments in Preferential Trade Agreements*. Staff Working Paper ERSD-2011-18. Geneva: World Trade Organization.
- Subramanian, Arvind, and Martin Kessler. 2013. *The Hyperglobalization of Trade and Its Future*. Working Paper 13-6. Washington: Peterson Institute for International Economics.
- USITC (United States International Trade Commission). 2013. *Digital Trade in the US and Global Economies, Part 1*. Investigation no. 332-531. Washington.
- USTR (United States Trade Representative). 2012. *Report to Congress on China's WTO Compliance*. Washington.
- Warren, Tony. 2000. The Impact on Output of Impediments to Trade and Investment in Telecommunications Services. In *Impediments to Trade in Services: Measurement and Policy Implications*, ed. Christopher Findlay and Tony Warren. London: Routledge.
- Wilson, John S., Catherine Mann, and Tsunehiro Otsuki. 2005. Assessing the Benefits of Trade Facilitation: A Global Perspective. *World Economy* 28, no. 6: 841–71.

Appendix 7A

Quantitative Estimates of Barriers to Services Trade and Investment

World Bank Services Trade Restrictiveness Index

Table 7A.1 shows the Services Trade Restrictiveness Index (STRI) values for the United States and China, distinguishing between mode 1 (cross-border) and mode 3 (commercial presence, mainly foreign direct investment, FDI). The index awards each industry a score between 0 and 100, with 0 being essentially open and 100 essentially closed. The specific numbers are derived from a survey, looking at individual industry-mode combinations (note that not all modes are examined for each industry, and mode 2 is not examined at all). There are four modes for the services trade total: mode 1 (cross-border supply), mode 2 (consumption abroad), mode 3 (commercial presence, mainly FDI), and mode 4 (movement of natural persons). In the World Bank score for each relevant industry-mode combination, a country receives points based on what its laws permit or prohibit.

To obtain an overall score for each industry (not shown in table 7A.1), the World Bank weights the individual industry-mode scores based on the estimated importance of each mode to the industry. In using the World Bank's database to assess the prospective effects of liberalization, we take a different approach. For cross-border trade, we focus solely on barriers to mode 1. However, for sizing up barriers to direct investment (see chapters 8 and 13), we focus on mode 3. Table 7A.1 summarizes the mode 1 and mode 3 data for China and the United States for five industries. According to the World Bank database, China has higher barriers against both modes for all five industries, with the exception of mode 1 (cross-border) trade in professional services.

Table 7A.1 World Bank STRI

	United States		China	
	Mode 1	Mode 3	Mode 1	Mode 3
Finance	19.39	25.00	71.77	31.46
Telecommunications	n.a.	0	n.a.	50.00
Retail	n.a.	0	n.a.	25.00
Transportation	12.50	16.67	37.50	22.22
Professional services	8.33	50.00	0	70.00
Average	13.41	18.33	36.42	39.74

n.a. = not applicable; STRI = Services Trade Restrictiveness Index

Source: World Bank STRI database, iresearch.worldbank.org (accessed on July 4, 2014).

Table 7A.2 OECD STRI

	United States	China
Accounting	15	41
Architecture	16	26
Engineering	20	29
Legal	14	52
Motion pictures	6	45
Broadcasting	30	78
Sound recording	5	31
Telecoms	12	53
Air transport	58	59
Maritime transport	38	39
Rail freight transport	12	42
Road freight transport	14	38
Courier	37	87
Distribution	7	36
Commercial banking	13	49
Insurance	22	50
Construction	16	29
Computer	15	29
Simple average	19	45

OECD = Organization for Economic Cooperation and Development; STRI = Services Trade Restrictiveness Index

Note: Closer to 100 indicates more restrictive.

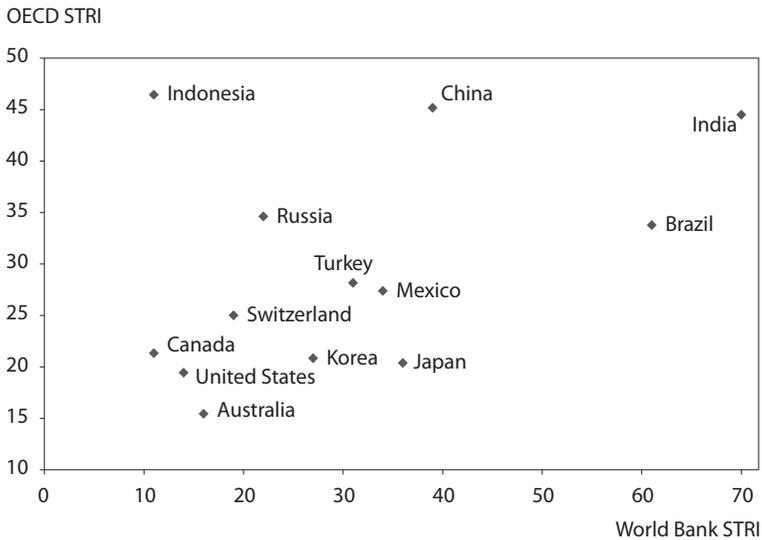
Source: OECD STRI, www.oecd.org (accessed on July 4, 2014).

Services Trade Restrictiveness Index

The STRI was released in May 2014 by the Organization for Economic Cooperation and Development (OECD) after preparation for seven years. Table 7A.2 shows the scores from this index for the United States and China. The STRI uses binary scoring, where answers to most measures are either yes or no. The OECD notes that in some cases the measures constitute hierarchies in which a combination might close a market segment or a mode of supply, while in other cases, one restriction would render other measures irrelevant. The database measures over 14,000 trade-related rules, regulations, and laws using this binary score.

The index covers the 34 OECD members plus Brazil, China, India, Indonesia, Russia, and South Africa. The measures are organized under five categories: restrictions on foreign market entry, restrictions on the movement of people, other discriminatory measures, barriers to competition, and regulatory

Figure 7A.1 OECD and World Bank STRIs



OECD = Organization for Economic Cooperation and Development; STRI = Services Trade Restrictiveness Index

Note: Scores for the OECD STRI were calculated by taking a simple average of the countries' scores in the 18 sectors. The closer to 100, the more restrictive.

Sources: OECD STRI, oecd.org (accessed on July 4, 2014). World Bank STRI database, iresearch.worldbank.org (accessed on July 4, 2014).

transparency. The OECD says that the index provides policymakers with a powerful tool for assessing services trade restrictiveness and diagnosing options for reform. The scatterplot in figure 7A.1 compares the World Bank's STRI scores with the OECD's STRI scores. Except for Indonesia, the correlation seems reasonably high between World Bank and OECD index scores for the selected countries.

Estimating the Effect of Trade Barriers

While the STRI is useful to compare countries' levels of restrictiveness, it does not indicate the extent to which those barriers increase the costs of imports. Estimating the effect of nontariff barriers in marking up the cost of imported services requires the estimation of tariff equivalents. We summarize the results of several of these studies in table 7A.3. The resulting estimates differ substantially based on modelling methodology and data availability. A study by the Australian Productivity Commission (Warren 2000), not shown in table 7A.3, reported that US barriers against mode 1 trade in telecommunications amounted to a 0.2 percent tariff equivalent against foreigners, while Chinese barriers were estimated at a 495 percent tariff equivalent. Dihel and Shepherd (2007), using a similar methodology, estimated that Chinese barriers in the

Table 7A.3 Services barriers, estimated AVE tariff (percent)

	Modes of service trade	Service industry	China	United States	Short description
Walsh (2006)	All	Overall	121.3	77.0	Relies on a gravity model, reports overall estimates. Results strongly influenced by data availability.
Dihel and Shepherd (2007)	Mode 1	Weighted average	71.3		This study relies on price-cost margins, as in the Australian Productivity Commission study (Warren 2000). The average is weighted by Chinese import data from the Ministry of Commerce. Distribution services consist primarily of retail and wholesale trade.
		Banking	2.0		
		Insurance	130.3		
		Telecommunications, fixed	18.0		
		Telecommunications, mobile	13.4		
		Engineering	91.9		
		Distribution	13.7		
Hufbauer, Schott, and Wong (2010)	Mode 1 and mode 2	Overall	67.9	6.0	Based on a very simple gravity model. No industry detail.
Miroudot, Sauvage, and Shepherd (2010)	Mode 1 and mode 2	Overall	183	144	Gravity model includes natural barriers in the index value, e.g., language, adjacent borders, and other features not controlled by independent variables.

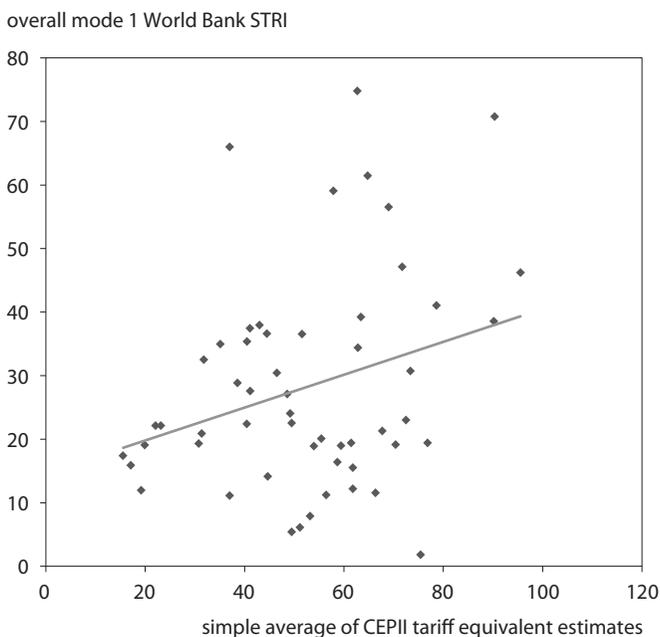
(continues on next page)

Table 7A.3 Services barriers, estimated AVE tariff (percent) (continued)

	Modes of service trade	Service industry	China	United States	Short description
Fontagné, Guillin, and Mitaritonna (2011)	Mode 1	Weighted average	77.7	36.2	Relies on a gravity model and reports sectoral estimates. US barriers are weighted by US imports, Chinese barriers weighted by US exports. (However, weighting by Chinese imports results in similar estimates.) Other includes education, health, defense, and public administration. Transportation refers to the movement of goods, rather than passengers. Trade services consist primarily of retail and wholesale trade.
		Communication	85.9	36.9	
		Construction	45.6	95.4	
		Finance	92.6	51.3	
		Insurance	40.7	43.7	
		Business	98.1	42.3	
		Other	59.6	8.8	
		Trade	32.9	61.5	
		Transport	52.8	17.5	
	Modes of service trade	Service industry	China	United States	Short description
Berdén et al. (2009)	Mode 1	Weighted average		14.5	Estimates barriers faced by EU services exporters. "Other business services" is a heterogenous group, but primarily made up of professional consulting services.
		Finance		31.7	
		Information and communication technology services		3.9	
		Insurance		19.1	
		Construction		2.5	
		Communication		1.7	
		Other business services		3.9	

AVE = ad valorem equivalent

Figure 7A.2 Relationship between World Bank STRI and AVEs



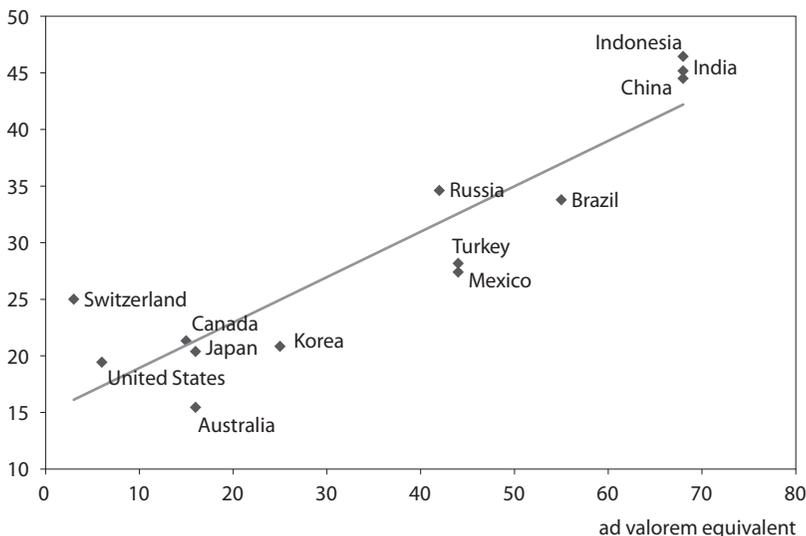
AVE = ad valorem equivalent; CEPII = Centre d'Etudes Prospectives et d'Informations Internationales; STRI = Services Trade Restrictiveness Index
 Notes: Equivalent estimates are of 55 countries. Pearson correlation coefficient = 0.29.
 Sources: World Bank STRI database, iresearch.worldbank.org (accessed on July 5, 2014)
 Fontagné, Guillin, and Mitaritonna (2011).

telecom sector are equivalent to a less than 20 percent tariff. Although the studies cover different time periods, it seems unlikely that Chinese barriers fell by such a large magnitude over the course of a few years.

Authors use several means to arrive at tariff equivalent estimates; we describe some of these methods briefly in chapter 7. The price-cost margin method, used in APC (Warren 2000) and Dihel and Shepherd (2007), identifies relevant trade barriers and estimates their effects based on price and cost data. They estimate Chinese tariff equivalent barriers for six sectors, with a weighted average of 71.3 percent for mode 1. Insurance is subject to the highest tariff equivalent barriers in their study, at 130 percent.

Other studies have sought to estimate trade barriers via a gravity approach. Walsh (2006) made an early contribution, but by the author's own admission, data availability led to questionable results. His study reported that Canada (81.7 percent) and New Zealand (82.8 percent) imposed barriers more than twice as restrictive as Argentina (39.2 percent). For the United States and China, the estimated tariff equivalents were 77.0 percent and 121.3 percent, respectively.

Figure 7A.3 OECD STRI and AVE tariff levels



AVE = ad valorem equivalent; STRI = Services Trade Restrictiveness Index

Note: The closer to 100, the more restrictive. Scores for the OECD STRI were calculated by taking a simple average of the countries' scores in the 18 sectors. Pearson correlation coefficient for AVE = 0.91.

Sources: OECD STRI, oecd.org (accessed on July 4, 2014); Fontagné, Guillin, and Mitaritonna (2011).

Later studies refined the gravity method and used more data on control variables, generating more reliable estimates of services barriers. Miroudot, Sauvage, and Shepherd (2010) estimated that foreign service providers selling into the US market faced 144 percent tariff equivalent barriers, while those selling in the Chinese market faced 183 percent tariff equivalent barriers. However, since their estimates included natural barriers, the policy implications are limited.

Fontagné, Guillin, and Mitaritonna (2011) offer, at this writing, the best estimates of the costs policy barriers impose on foreign services providers. The results are broken into eight service sectors. Weighting US barriers by US imports and Chinese barriers by US exports, we find that US barriers amount to a 36.2 percent tariff equivalent and Chinese barriers amount to a 77.7 percent tariff equivalent. Weighting Chinese barriers by Chinese imports (from 2009) yields a similar result, a 79.1 percent average tariff equivalent estimate for China. Figure 7A.2 shows the relationship between these ad valorem equivalent (AVE) estimates and World Bank STRI values for 55 countries. The tariff estimates and values appear to be weakly linked with a Pearson correlation coefficient of 0.29. However, in figure 7A.3, which shows the relationship between AVE estimates and OECD simple average STRI index values for 13 countries, the Pearson's correlation coefficient is 0.91, considerably higher.

Koen G. Berden and colleagues (2009) look specifically at nontariff measures affecting US–EU trade and include the effects of nondiscriminatory regulatory divergences. The study develops an index of nontariff measures facing various industries based on business surveys and the relevant literature, covering seven services sectors as well as numerous goods sectors. This index is used as an independent variable in a gravity model and the coefficient is used in their regression to generate tariff equivalent estimates. Weighting these estimates by US imports, we find that EU services exporters face US barriers equivalent to a 14.5 percent tariff. Calculations cited in Hufbauer, Schott, and Wong (2010) give the US average tariff equivalent barrier for all services as 6 percent, while for China the figure is nearly 68 percent. The Chinese figure may be high as, for lack of data, it was assumed to be the same as the tariff equivalent estimate for Indonesia. For purposes of projecting trade gains, the modeling exercises in chapter 2 assume that Chinese liberalization will cut 40 percentage points off its tariff equivalent barriers on services imports.

References

- Berden, Koen G., Joseph Francois, Martin Thelle, Paul Wymenga, and Saara Tamminen. 2009. *Non-Tariff Measures in EU-US Trade and Investment: An Economic Analysis*. Rotterdam: Ecorys.
- Dihel, Nora, and Ben Shepherd. 2007. *Modal Estimates of Services Barriers*. OECD Trade Policy Papers 51. Paris: Organization for Economic Cooperation and Development.
- Fontagné, Lionel, Amélie Guillin, and Cristina Mitaritonna. 2011. *Estimations of Tariff Equivalents for the Services Sector*. Paper 2011-24. Paris: Centre d'Etudes Prospectives et d'Informations Internationales.
- Hufbauer, Gary Clyde, Jeffrey J. Schott, and Woan Foong Wong. 2010. *Figuring Out the Doha Round*. Policy Analyses in International Economics 91. Washington: Peterson Institute for International Economics.
- Miroudot, Sébastien, Jehan Sauvage, and Ben Shepherd. 2010. *Measuring the Cost of International Trade in Services*. Working Paper (October 4). Paris: Groupe d'Economie Mondiale.
- Walsh, Keith. 2006. *Trade in Services: Does Gravity Hold? A Gravity Model Approach to Estimating Barriers to Service Trade*. Discussion Paper 183. Dublin: Institute for International Integration Studies, Trinity College.
- Warren, Tony. 2000. The Impact on Output of Impediments to Trade and Investment in Telecommunications Services. In *Impediments to Trade in Services: Measurement and Policy Implications*, ed. Christopher Findlay and Tony Warren. London: Routledge.