Chapter 6
International Trade Issues and Status for China and the U.S.

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6.1 Trade Makes the World Go 'Round'

Taken collectively, the importance of domestic economic activities in China and the United States far exceeds the monetary benefits accrued from international trade. This is common ground for our nations, but uncommon for the nations of the world at large. Overall, the United Nations estimates that global merchandise trade will grow at an average of 7.6 % over the years from 2011–2013 (United Nations 2012). This is only an estimate and tracking international trade volumes in the new millennium is similar to riding a "roller coaster"! The growth of world exports in percentage terms for 2010 was the highest on record going back to 1950 while 2009, just a year earlier, experienced one of the greatest drops in global trade levels in history. In 2010, world merchandise exports were up 22 % over 2009, rising from US$ 12.5 to 15.2 trillion in a single year, while world exports of commercial services rose 8 %, from US$ 3.4 to 3.7 trillion (WTO 2012). All nations are impacted by these fluctuations as the current fiscal crisis within the EU clearly shows, but for those nations that have disproportionately large manufacturing sectors dependent on international exports such as China, global recession can be especially daunting. Further, as supply chains grow in complexity, those nations that supply raw materials and/or product components to China for processing and assembly are also negatively impacted by fluctuations in the global trade in manufactured goods (Dunaway 2009).

Fortunately, for two such land extensive and populous nations as China and the U.S., the importance of the domestic market for manufactured goods and services will probably always be paramount with respect to GDP and economic stability. However, the positive and negative effects of international trade—the topic for this chapter—for both nations is indisputable, and cannot be overlooked in any assess-

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ment of the economic geographies of these two great nations. International trade not only generates revenue and employment opportunities, it also aids all nations in myriad additional ways including elevated international status, technology transfers, improvements to human capital and domestic product development (Mikic 1998). The clear benefit of international trade comes as no surprise to economic geographers. What might surprise readers is how, increasingly, national statistics related to the proportional share of international trade, especially for merchandise, for our two nations appear to be converging. While wealthier nations such as the U.S., Japan, and the EU nations have service-sector domestic economies, services still account for a minority share of international trade. This chapter, then, largely concentrates on the "lion's share" of international trade; that is trade in manufactured goods (Miroudot et al. 2010). In 1993, China's share of total international trade (imports and exports) was estimated by the WTO to be approximately 5.5% of the world's total, while the U.S. claimed 28.5% for the same year. However, by 2009, the U.S. share had declined to 21.6%, of total merchandise trade while China's share had increased to 18.0%. Since then, the relative shares achieved by China from 2009 to 2011 of total imports and exports have remained around 10–11% for both vis-à-vis global totals (United Nations 2012). Broken down by merchandise imports and exports, the pattern is all the more striking. China's arrival as a major trading nation is immediately apparent (Ministry of Commerce 2010). In 1993, China and the United States accounted for 2.5 and 12.6% of world merchandise exports respectively. As of 2011, these figures had shifted dramatically with China accounting for 9.9% of merchandise exports, while the U.S. share declined to 8.7% (WTO 2012; United Nations 2012). The case is similar for imports. In 1993, the United States imported 15.9% of all merchandise traded internationally, while China imported only 2.7%. As with exports, these shares shifted significantly by 2010 when the U.S. share of global merchandise imports declined to 12.9% while China's imports rose to 8.1% of the world total (WTO 2012).

Indisputably, trade is an essential component in China's remarkable rise after the late 1970s (Yao and Luo 2010). The shifts in the above numbers reflect mercurial changes in the global trading system; changes all the more remarkable considering that total global merchandise trade (imports and exports) grew from $ 7.46 trillion US$ in 1993 to US$ 18.2 trillion in 2011, surpassing the previous peak of US$ 16.2 trillion from 2008 (Hsu 2012). In short, since the mid-1990s, the global trade "pie" has almost tripled in size, while the combined share of the "trade pie" for China and the U.S., just for merchandise now accounts for almost 40% of total trade. Trade, then, is essential for both nations, and the many nations within supply chains of Chinese and American firms (Gao and Cai 2008). The high level of trade between the two nations is certainly one of the most important aspects of the complex relationship that has developed between the two states (Francois 2010). This is not to say that international trade and trade issues are viewed in similar fashion by the citizens of the two nations. In the following sections, we hope to illustrate some basic similarities and differences in these perceptions.

Table 6.1 China's foreign trade: 1990–2010 (in billion US$). (China State Statistics Bureau 2011; MOFCOM 2011)

Year	GDP	Foreign trade	Exports	Imports	Balance	Export/ GDP
1990	390.28	125.24	67.79	57.45	10.35	17.37
1991	409.28	146.50	78.81	67.69	11.12	19.26
1992	409.17	183.83	94.04	89.79	4.26	22.98
1993	488.22	218.30	102.74	115.56	-12.82	21.04
1994	559.22	268.82	137.41	131.41	5.99	24.57
1995	727.98	323.86	167.18	156.68	10.50	22.96
1996	856.08	332.88	171.65	161.23	10.42	20.05
1997	952.68	377.36	207.29	170.07	37.22	21.76
1998	1,019.46	374.35	207.61	166.74	40.88	20.36
1999	1,083.28	417.83	221.13	196.70	24.43	20.41
2000	1,198.47	540.30	279.30	260.99	18.31	23.30
2001	1,324.82	581.55	299.00	282.55	16.45	22.57
2002	1,453.82	706.27	364.50	341.27	23.73	25.07
2003	1,640.97	952.29	484.63	467.66	16.97	29.53
2004	1,931.64	1,288.26	655.43	632.83	22.60	33.93
2005	2,236.62	1,579.00	835.85	743.15	92.70	37.37
2006	2,658.41	1,952.13	1,060.37	891.76	168.61	39.89
2007	3,383.82	2,425.59	1,340.34	1,085.25	255.09	39.61
2008	4,329.24	2,866.13	1,575.05	1,291.07	283.96	36.38
2009	4,990.52	4,822.91	2,207.53	1,201.61	1,005.92	37.55
2010	5,879.06	5,720.81	2,953.99	1,557.75	1,396.24	59.19

6.1.1 International Trade and China

6.1.1.1 The Growth of Chinese Trade 1990–2010

Over the past few decades, the expansion of international trade has served as one of the important "engines of growth" for China and the Chinese people. Many Chinese families, especially in new manufacturing regions such as those for high tech or pharmaceuticals have seen their real wages grow at amazing rates due to international trade in these products. As noted in many other chapters, GDP in China has grown at nearly 10% per year since reform and opening-up began in December of 1978, and international trade is an important part of this miracle. Exports in 1980 were valued at 18.27 billion $ which was only 0.9% of total world exports, ranking the nation 26th in the world. Since China's entry to the WTO in 2001, international trade has grown at an ever quickening pace. Foreign trade in 2010 reached 2.97 trillion $ (China State Statistics Bureau 2011). Due, in part, to the 2008–2009 global financial crisis, China has replaced Germany to become first with respect to the total value of commodity exports. For the past decade, the annual growth of commodity exports exceeded 15–20%, more than double the growth rate of GDP (Table 6.1 and Figs. 6.1 and 6.2). Imports in 2008 were 1.29 trillion $ accounting for 6.7% of world imports for that year good for third among all nations. In 2010, international

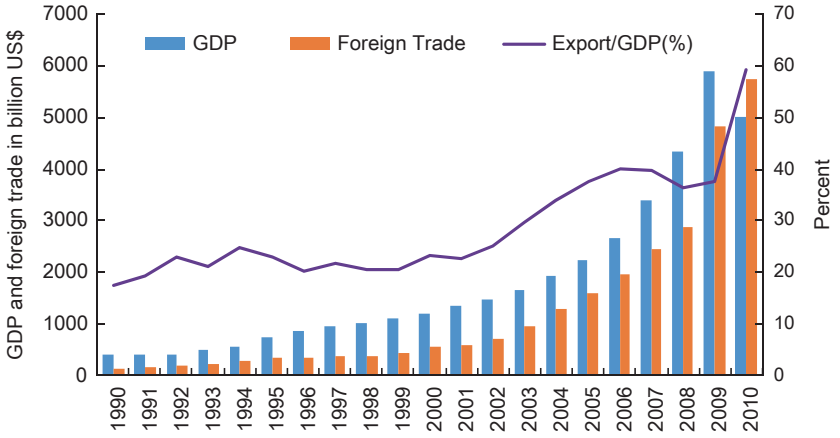

Fig. 6.1 GDP, Trade, and export as a share of GDP for China: 1990–2010

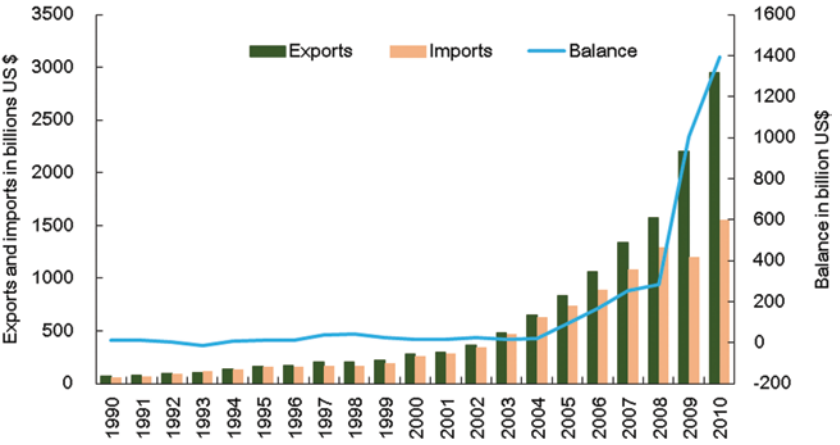

Fig. 6.2 Export, import, and trade balance for China: 1990–2010. (China State Statistics Bureau 2009; 2011)

trade accounted for approximately 1/3 of China's GDP. Most Chinese people, then, recognize the benefits of the explosion of international trade that has occurred since the December 1978 reforms were initiated to themselves and their nation.

6.1.1.2 The Geographical Distribution of Principal Trading Partners

At the continental scale, the principal destinations for Chinese goods are nations/districts within Asia, Europe, and North America. Trade with Asian nations/districts reached $ 1.57 trillion in 2010, accounting for 52.69 % of total trade volume while European trade was over $ 573 billion or 19.27 % of the total for the same year.

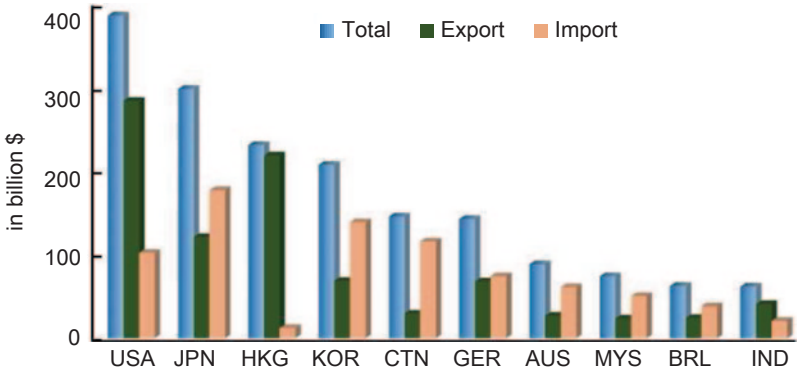

Fig. 6.3 Major partners and their foreign trade volume, 2008. (MOFCOM 2011)

North America accounted for $ 423 billion in trade (14.22 % of total). Other regions including Latin America, Africa, and Oceania combined for almost $ 410 billion in 2010 or 13.82 % of the China's total trade (imports/exports) volume (Table 6.2; Fig. 6.3).

Based on official statistics, the top five trading "blocks" or trading partners for mainland China in 2010 include the EU, the U.S., Japan, Hong Kong (China), and the ASEAN nations taken collectively. Of these nations or trade blocks, mainland China has a trade surplus with Hong Kong, the U.S. and the EU and a trade deficit with the ASEAN group and Japan. Looking only at exports, the main partners do not change: the U.S., the EU, Hong Kong (China), Japan, and ASEAN. With respect to imports, the top five import partners of mainland China include Japan, the EU, the Republic of Korea, ASEAN and Chinese Taiwan. Based on individual tariff regions, the top five trading partners for mainland China include the U.S., Japan, Hong Kong, the Republic of Korea, and Chinese Taiwan (Fig. 6.3). Mainland China has a trade surplus with Hong Kong and the U.S. but deficits with Japan, Korea and Chinese Taiwan. By nation, the top five export partners of mainland China are U.S., Hong Kong, Japan, Korea and Germany, and the top five import partners of mainland China are Japan, Korea, Chinese Taiwan, U.S., and Germany.

6.1.2 International Trade and the United States

6.1.2.1 The Benefits of Trade to the U.S. Economy

The official population of the United States in mid- 2012 was 314.3 million representing less than 5 % of the world population, yet the civilian workforce of approximately 155–165 million which is still increasing generated more than 20 % of the total global value of goods and services (Bureau of Economic Analysis 2010; Fig. 6.4). Of course, as noted in the introduction, much of this wealth in U.S. was

Table 6.2 Major trading partners of mainland China in 2010 (in billion US$, % share of total)

Country (region)	Total	Exports	Imports	Share of total (%)	Share of exports (%)	Share of imports (%)
Total	2,973.99832	1,577.75432	1,396.24401	100.00	100.00	100.00
Asia	1,566.91107	731.95484	834.95623	52.69	46.39	59.80
Africa	127.04602	59.95405	67.09196	4.27	3.80	4.81
Europe	573.05809	355.18797	217.87012	19.27	22.51	15.60
Latin America	183.63967	91.79803	91.84164	6.17	5.82	6.58
North America	422.91973	305.84271	117.07703	14.22	19.38	8.39
Oceanic and Pacific Islands	99.03469	33.01671	66.01798	3.33	2.09	4.73
Others	1.38905	0	1.38905	0.05	0.00	0.10
Major economics						
United States	385.38529	283.28655	102.09873	12.96	17.96	7.31
Japan	297.77959	121.04349	176.73610	10.01	7.67	12.66
Hong Kong, China	230.56247	218.30205	12.26042	7.75	13.84	0.88
Korea Rep.	207.11512	68.76626	138.34885	6.96	4.36	9.91
Taiwan, China	145.41314	29.67449	115.73865	4.89	1.88	8.29
Germany	142.30840	68.04718	74.26122	4.79	4.31	5.32
Australia	88.34232	27.22026	61.12205	2.97	1.73	4.38
Malaysia	74.24884	23.80204	50.44680	2.50	1.51	3.61
Brazil	62.58587	24.46050	38.12538	2.10	1.55	2.73
India	61.76120	40.91496	20.84625	2.08	2.59	1.49
Singapore	57.07598	32.34723	24.72875	1.92	2.05	1.77
Netherlands	56.18320	49.70423	6.47897	1.89	3.15	0.46
Russia	55.53311	29.61207	25.92104	1.87	1.88	1.86
Thailand	52.93702	19.74108	33.19594	1.78	1.25	2.38
United Kingdom	50.07223	38.76704	11.30519	1.68	2.46	0.81
Italy	45.14624	31.13944	14.00680	1.52	1.97	1.00
France	44.75684	27.65139	17.10546	1.50	1.75	1.23
Saudi Arabia	43.19549	10.36644	32.82905	1.45	0.66	2.35
Indonesia	42.75028	21.95357	20.79672	1.44	1.39	1.49
Canada	37.13988	22.21613	14.92375	1.25	1.41	1.07

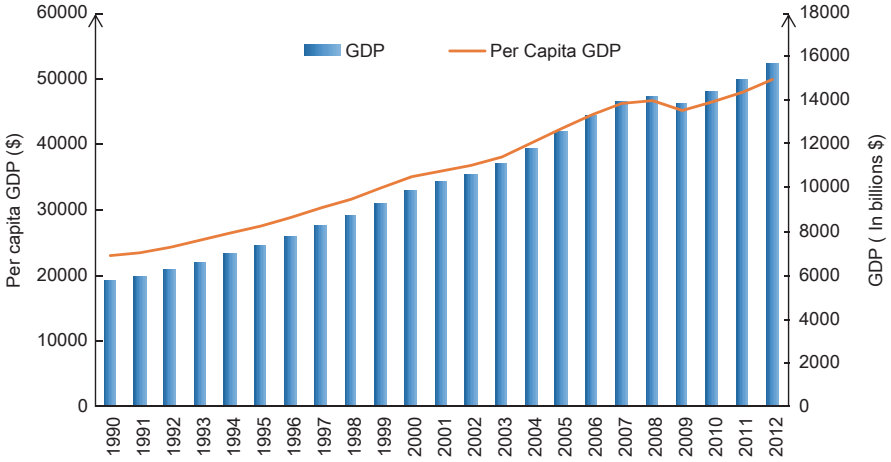

Fig. 6.4 GDP and per capita GDP for the United States from 1990 to 2010. (Source: http://www.usgovernmentrevenue.com/us_gdp_history#copypaste, http://data.un.org/Data.aspx?d=SNAAMA&f=grID%3A101%3BcurrID%3AUSD%3BpcFlag%3A1)

produced through domestic manufacturing and retail and most importantly through the provision of services and the licensing of intellectual property at home and abroad. Trade in raw materials, manufactured goods and agricultural products remains quite important, particularly in terms of employment in major industrial areas and for the maintenance of the farm sector.

Reading newspapers or listening to television commentators in the U.S., it is clear that many Americans do not always support policies and agreements that promote international trade. Particularly in the years since the most recent recession began in 2008, many issues related to international trade have been hotly debated throughout America. Indeed, trade-related issues such as the shift of manufacturing jobs "off-shore" were major points of debate in the fall 2012 presidential election. Domestic economic problems in the U.S. always seem to spur public debates on the benefits of "free trade" and it seems as if those espousing "protectionist" views at the present time have never been as vocal or as visible as in 2013.

Proponents of this "protectionist" view expect that tighter controls on trade will result in a national economy with lower levels of unemployment, more "steady" paychecks, and promising futures for industrial workers. Concerns ranging from the "outsourcing" of jobs to foreign nations, declining real wages, unprecedented high rates of unemployment, and declining tax revenues have fueled these protectionist views, especially in the old "Rust Belt" and Southern manufacturing regions that have lost the greatest number of jobs and fear losing more. This "geography" of opinion regarding "free trade" is an important component in understanding U.S. domestic politics.

Most professional economists in the U.S., however, agree that global trade and global trading institutions such as the GATT, WTO, and NAFTA have been essential for long-term American prosperity. Of course, globalization has certainly resulted in

important labor shifts that have caused many firms to close their doors, but the benefits of increases in international trade outweigh the problems. Ultimately, however, for the United States, the globalization of trade is rooted in local processes and local places and represents a "geographic" phenomenon where locational advantages or disadvantages create variable conditions whereby some U.S. regions have gained from growth in international trade while other regions have, in real terms, lost a great deal. This "geography" of the domestic "winners and losers" in any nation is important to consider, and accounts for variable degrees of political support for "free trade" policies across the regions of any nation, including the U.S.

Despite research underscoring the positive effects of free trade on both income and GNP, a significant proportion of the American public remain skeptical about the benefits of free trade. This is a useful point of departure for readers in China who typically support all efforts to expand trade opportunities. In a recent (November 2009) PEW survey, a large portion of "the general public report negative opinions about the specific impacts of free trade agreements on jobs, economic growth and wages" (PEW Research 2009). 53 % of respondents to the PEW survey—a leading U.S. NGO (non-governmental organization) "think-tank"–believe free trade agreements lead to job losses. 53 % felt that international trade agreements lead to lower wages. Finally, 42 % of those surveyed associated free trade agreements with slower economic growth. When people were simply asked if they supported or did not support free trade, a significant portion of the population still remain opposed to "free trade" (32 % in 2009, but down from 43 % of respondents in 2008, perhaps due to the fall 2008 collapse as the survey is conducted each year in November). Somewhat counter-intuitively, of the persons surveyed by the annual PEW Research Survey on National Issues—a more general survey on many topics of national interest–43 % agreed with the more general statement "Free trade agreements are good for the country" (Pew Research 2009). It seems that Americans, like the citizens of most nations, are often of mixed opinions regarding trade, and poll results are often shaped by "current events" not sound reasoning. When U.S.-based trade specialists and foreign policy experts are asked the same questions, 88 % support free trade and international trade organizations. These differences in views between citizens and experts are very important in the U.S. and account for the "mixed messages" that U.S. politicians and government experts send to the citizens and governments of other nations.

Still, evidence from economic research favors free trade in the long run. According to the Peterson Institute for International Economics, "American real incomes are 9 % higher than they would be over time as a result of trade liberalizing efforts since the Second World War. In terms of the U.S. economy in 2008, that 9 % represented $ 1.3 trillion in additional American income" (Nanto and Donnelly 2009). Trade not only increases GDP and total wages by keeping America's factories, farms, and offices working, but contributes in many less observable ways as well. Producing products for export where the nation has comparative advantage helps focus investment capital, rewards innovation, lowers production costs and raises per worker productivity, while increasing tax revenues, wages, profits and total GDP (Fig. 6.5).

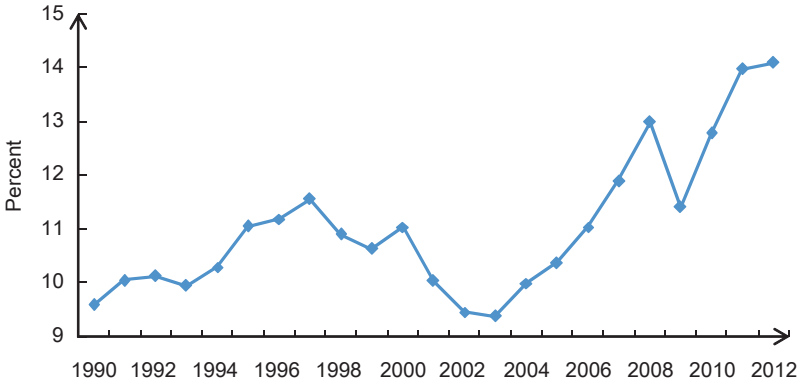

Fig. 6.5 U.S. Exports of goods and services as a percentage of GDP: 1990–2010. (http://www.census.gov/foreign-trade/statistics/historical/, accessed May 1, 2013)

Of course, access by any of the world's consumers to both domestic and imported goods and services adds consumer options while restrain rising prices through increased competition. Meeting the demands of highly competitive markets spurs innovation and provides consumers with the most choices and the best possible products. Indisputably, free trade is essential to the U.S. economy, just as it is for China. The only difference is how citizens in each nation view the issue. Trade and growth in GDP are closely related. Despite steady and significant population growth in the U.S. for the 22 year period from 1990 to 2011, the Pearson's product moment correlations between total export volume, and GDP and per capita GDP are 0.957 ($p=0.0001$) and 0.956 ($p=0.0001$) respectively.

Consider that three quarters of world purchasing power and almost 95 % of world consumers can only be accessed by U.S. manufacturers and farmers through international trade in goods and services. Population in the U.S. will continue to increase, but the domestic demand increase will not be sufficiently to maintain per capita incomes and productivity without international trade. Hufbauer (2008) estimates that elimination of remaining global trade barriers would further increase the gains Americans already enjoy from trade by another 50 %. Also similar to China, a considerable portion of economic growth in the U.S. is associated with international trade. Between 2005 and 2008, exports rose by 43 %, accounting for 47 % of overall GDP expansion. Although this tailed off in 2009, sustained growth in 2010 and 2011 continue the upward trend. In 2008, U.S. exports totaled $ 1.8 trillion or a record high 13 % of U.S. GDP. In fact, during the past decade, the share of U.S. GDP accounted for by exports rose from 9 % in 2001 to 13.0 % in 2010. In spite of a significant drop in value in 2009 due to the global recession, the general upward trend is that exports will account for an increasing share of U.S. GDP over time (Fig. 6.5). Better enforcement of trade regulations, greater trade "transparency", the reduction of tariffs around the world, and the inclusion of effective regulations for the control of trade in IP will allow this share to increase significantly in the future.

Table 6.3 Top ten trading partners of the United States by total trade: 2011. (United States Census Bureau 2012; Wikipedia 2010)

	Total merchandise trade ($ billions)	Exports (year-to-date)	Imports (year-to-date)	Total trade (year-to-date)	Trade balance 2011	Percent of total trade (%)
2011	Total, all countries (regions)	1,480.7	2,207.0	3,687.6	−726.3	100.00
Rank	Total, top 15 countries (regions)	1,015.8	1,596.1	2,611.9	−580.3	70.80
1	Canada	280.9	316.5	597.4	−35.6	16.20
2	Mainland China	103.9	399.3	503.2	−295.4	13.60
3	Mexico	197.5	263.1	460.6	−65.6	12.50
4	Japan	66.2	128.8	195.0	−62.6	5.30
5	Germany	49.1	98.4	147.5	−49.3	4.00
6	United Kingdom	56.0	51.2	107.1	4.8	2.90
7	Korea, South	43.5	56.6	100.1	−13.1	2.70
8	Brazil	42.9	31.4	74.3	11.5	2.00
9	France	27.8	40.0	67.8	−12.2	1.80
10	Taiwan, China	25.9	41.3	67.2	−15.4	1.80

6.1.2.2 Major Trading Partners of the United States

The United States trades with more than 200 nations and territories (U.S. Census Bureau 2012). In reality, however, only a few nations command the "lion's share" of total trade with the country, and of course have a commensurate share of disputes and trade conflicts. In 2011, the top 15 countries accounted for 70.8% of total trade, while the top 10 accounted for 62.89% (Table 6.3). Chinesed Taiwan overtook The Netherlands as the tenth largest trading partner of the U.S by the end of August, 2009 and has remained in this position. On the basis of total trade, the largest U.S. partners at the end of 2011 include Canada, mainland China, Mexico, Japan, Germany, the United Kingdom, South Korea, Brazil, France, and Chinese Taiwan.

From the perspective of trade deficits, a slightly different picture emerges. Actually, the bulk of the U.S. trade deficit is generated by trade with five nations: China, Japan, Mexico, Canada, and Germany. Trade with the oil exporting countries driven by recent increases in energy imports and higher costs adds the nations of Nigeria, Venezuela, and Saudi Arabia to this group. These latter countries had more balanced trade histories with the U.S., and given the surprising boon in gasoline and fuel exports from the United States from 2011–2013, there is evidence that at least in the short term, balanced trade with these oil-rich nations will remain the norm for some time to come as more fossil fuels are mined and processed domestically.

Table 6.4 China export-import volume grouped by trade type in 2010 (billion $, %). (National Bureau of Statistics of China 2011)

Year	General trade		Processing trade		Other trade	
	Export	Import	Export	Import	Export	Import
1985	23.73	37.27	3.32	4.27	0.30	0.70
1990	35.46	26.20	25.42	18.76	1.21	8.39
1995	71.37	43.37	73.70	58.37	3.71	30.34
2000	105.18	100.08	137.65	92.56	6.37	32.46
2005	315.06	279.63	416.47	274.01	30.42	106.31
2006	416.20	333.07	510.36	321.47	42.38	136.92
2007	538.46	428.61	617.56	368.48	61.76	158.86
2008	662.86	572.09	675.11	378.38	92.72	182.09
2009	529.83	533.87	587.03	323.31	90.90	154.00
2010	720.73	767.98	740.52	418.77	153.40	196.00

6.2 The Structure of International Trade

6.2.1 The Structure of China's International Trade: Export-oriented Processed Goods

Since the 1990s, processed exports from China have increased significantly, but declined slightly in proportional terms as overall trade has expanded so dramatically. Processed exports accounted for 55% of total exports in 2000, this gradually declined to 46% by 2008, which is just about where it is in 2010 and 2011. At the same time, processed products included 30.28% of all imports, with a value of $ 418 billion in 2010. Mechanical or electronic products represent an increasingly important trade category, products included in these two categories account for about 55% for both exports and imports.

According to SITC (Standard International Trade Classification), primary goods are mainly import-oriented in China, while manufacturing products are export-oriented. In 2010, the export value of all primary goods was $ 81.68 billion which represented only 5.18% of total exports by value. On the other hand, the value of exported manufactured products was $ 1.49 trillion—the other 94.82% of total exports by value. Turning to imports, machinery and transportation equipment were the leaders in terms of greatest value by commodity group. Imports of raw materials such as fuels, minerals and ores and grains were valued at $ 433.85 billion in 2010, which was 31.07% of the total value of imports (Table 6.4, 6.5, and 6.6). As noted earlier, the majority of imported goods in 2010 (68.9%) were classified as manufactured goods valued at $ 962.39 billon. A full 57% of the share of manufactured goods included machinery and transport equipment.

Imports related to services still play a minor role in China's trade. China's import and export of material goods accounted for 90% of total trade while services were only 10% of value in 2008 which was only half of this percentage for the U.S. In

Table 6.5 Major import categories for China in 2008. (MOFCOM 2009)

Import Categories	Amount in billion U.S. $	Percent of total China import (%)
Machinery and transport equipment	441.92	39.00
Mineral fuel and lubricants	169.11	14.92
Non consumption materials	167.21	14.76
Chemicals	119.20	10.52
The materials of the finished product	107.16	9.46
Miscellaneous goods	97.62	8.62
Foods	14.05	1.24
Plant and animal oil and grease wax	10.49	0.93
Undefined others products	4.42	0.39
Drinks and tobacco	1.92	0.17

Table 6.6 Major export categories for China in 2008. (MOFCOM 2009)

Export categories	Amount in billion U.S. $	Percent of total China export (%)
Machinery and transport equipment	673.33	47.13
Miscellaneous goods	334.61	23.42
The materials of the finished product	261.74	18.32
Chemicals	79.31	5.55
Foods	32.76	2.29
Mineral fuel and lubricants	31.64	2.21
Non consumption materials	11.35	0.79
Undefined others products	1.72	0.12
Drinks and tobacco	1.53	0.11
Plant and animal oil and grease wax	0.57	0.04

2008, the ratio of services to goods was 1:7.1 (exports 1:8.3, imports 1:6.1), far below the global average ratio of 1:4.

6.2.2 The Structure of U.S. International Trade

With higher wages rates, an aging workforce in industrial manufacturing (including higher healthcare costs and costly retirement packages), higher fixed and variable costs, higher tax rates, and [often] stricter environmental controls, the United States is losing, or has lost, comparative advantages in manufacturing in many industries to firms in many developing nations. Many of the products where the U.S. has lost comparative advantages are imported, not only from China but from many other nations as well including Japan, South Korea, Mexico, Brazil, India, Malaysia, and even the EU nations such as Germany and Italy. The latter two are nations with exceptional reputations for the highest quality of industrial machinery and technology.

U.S. imports from year to year are typically no more or less volatile than those of other industrial nations, representing a mix of raw materials and finished goods.

Table 6.7 Major import categories for the United States in 2009. (Workman 2010)

Import categories	Amount in billion U.S. $	Percent of total U.S. import (%)
Crude oil	188.5	12.1
Medicinal product dental and pharmaceutical preparations	81.4	5.3
Passenger cars	53.2	3.4
Other household goods (example: clocks, kitchen products)	47.3	3.0
Computer accessories	43.9	2.8
Automotive parts and accessories	47.3	3.0
Cotton apparel and household goods	43.9	2.8
Computers	40.8	2.6
Telecommunications equipment	37.3	2.4
Video equipment	36.1	2.3

Table 6.8 Major export categories for the United States in 2009. (Workman 2010)

Export categories	Amount in billion U.S. $	Percent of total U.S. export (%)
Civilian aircraft including parts	74.7	7.1
Medicinal, dental and pharmaceutical preparations	46.1	4.4
Semiconductors	37.5	26.0
Other industrial machines	30.9	2.9
Automotive parts and accessories	30.0	2.8
Telecommunications equipment	28.7	2.7
Passenger cars	27.5	2.6
Medicinal equipment	26.9	2.5
Electric apparatus	26.1	2.5
Plastic materials	25.5	2.4

Despite a recent change in fuels, over the *long term,* America's top imports range from crude petroleum and other raw materials to high-tech electronics. Crude oil deliveries in 2009 took up the highest percentage of U.S. imports—a situation that was of great domestic concern. This worry about energy in the 1980s and 1990s spurred growth in alternative energy investments and research—in part funded by the government. Raw materials and semi-processed products for medicines were second, while new and used passenger cars were third in 2009 (Table 6.7). In 2011, however, processed petroleum-based fuels (jet fuel, gasoline) were the NUMBER 1 export of the United States by value. Traded products can change quickly due to changing economic, social and political conditions.

Turning briefly to exports, there is a similar diversity of products and services. For products, civilian aircraft continue to lead U.S. exports. Other high-tech products such as medicines and semiconductors are also important (Table 6.8). There is optimism in the United States that as services are more effectively included in future WTO agreements, markets in this field will expand. Issues related to intellectual property rights and trade in agricultural products have not really been dealt

Table 6.9 Top ten states in U.S. exports for total merchandise trade: 2009. (Trade Stats Express 2010)

	U.S. export values ($ 1,000)	Share in %
U.S. total	1,056,931,976	100.0
Texas	163,046,235	15.4
California	120,142,220	11.4
New York	57,320,623	5.4
Washington	51,739,397	4.9
Florida	46,919,556	4.4
Illinois	41,513,559	3.9
Ohio	34,083,697	3.2
Louisiana	32,714,797	3.1
Michigan	32,553,939	3.1
Pennsylvania	28,253,146	2.7
% Share top 10 states		57.6

with adequately in existing WTO agreements, and underscore the importance of these agreements to the U.S. economy.

6.2.3 Location and International Trade

There is also a "geography" of U.S. exports that should be at least mentioned in this brief chapter—especially as most contributors and readers are geographers. Of course, larger states such as Texas, California and New York have largest volumes of exports, but the coastal location of most top exporting states should also be recognized. The "top ten" exporting states account for 57.6% of total merchandise exports (Table 6.9), and service exports are even more concentrated. The Midwestern states on the list including Ohio, Illinois and Michigan have access to international markets via low-cost waterways such as the Ohio-Mississippi River System that connects the region to the Gulf of Mexico, and the Great Lakes-St. Lawrence Seaway with access to the Atlantic.

Historically, since Sino-U.S. diplomatic relations were formally reestablished in 1978, international trade between China and the U.S. has experienced a transition from initial confrontation to neutral contact, to strategic collaboration, and now, largely, to constructive cooperation. As noted earlier, bilateral trade between China and the United States has played an outstanding role in both national economies. Since 2003, China has become the second largest market for U.S products, and the U.S. has become the largest market for China during the last 10 years. A Gallup poll conducted in January of 2012 found that a majority of Americans felt that China was "the leading economic power in the world today" (53% of those polled and up 1% from 2011 when the same question was asked). 33% of Americans felt the United States was the "leading economic power", and Japan was third with 7% of the vote (Jones 2012) (Gallup is a well-known opinion poll company in the U.S.). This perception underscores the importance of Sino-U.S. trade, not only to these

nations, but to the global economy, but to U.S. domestic perceptions of the greater world (Jones 2012).

The lessons of the recession that began in mid-2008 underscores how inter-related the Chinese and U.S. economies have become, especially in the past two decades (Francois 2010). As American consumers tightened their belts and started saving once the recession was wide-spread, the savings rate for working American's rose from an all-time low of 1.5% in the first quarter of 2008 to 5.4% just over a year later. Given that many of the consumer products that China exports represent highly "elastic" purchases, workers in factories throughout China suffered even as citizens in the U.S. tried to curb their appetites and save for their future. Similarly, as Chinese investors and the Chinese government sought sound and stable investments, U.S. treasury bills and other dollar assets remain attractive, despite the rhetoric to the contrary. China has $ 2.3 trillion in "official" reserves, and Dunaway, of the Council on Foreign relations, a prestigious "think tank", estimates that 70% is held in U.S. dollar assets, mostly U.S. government securities. Further FDI flows into, and from, both nations are at record levels. The economic interests of these two nations are closely related, and further, the dramatic increases in trade we have seen over the past several decades have been, as noted earlier, exceptionally good for both nations.

Indeed, to date, economic and trade contacts between the two countries largely represent a win-win situation. Of course, as the level of trade increases, so will typically minor disputes about particular products and services. This is to be expected. In current dollars, the China's bilateral trade surplus was $ 226 billion in 2009, up from $ 161 billion only 5 years earlier, representing 36.9% of the nation's total trade deficit in 2009, if down somewhat again in 2012. The high-water mark of 2008 is a dramatic increase from 2004, when China's share represented only 22% of the total trade imbalance. However, it is important to notice that the total U.S. deficit with the world is down by $ 121 billion from 2004 to 2009 as well (Francois 2010). While exports to the U.S. are high, China is far less dependent on the U.S. market than Canada or Mexico, and this dependence (like Canada's) is trending downward over time as China develops more trading partners throughout the world.

Further, it should come as no surprise that Chinese products are welcomed by virtually all U.S. consumers—they cost less than domestic equivalents and are of increasing good quality. Trade with China helps reduce household expenditures in many areas for all families in the United States by around five hundred dollars every year.

Sino-U.S. trade has steadily increased in volume, but the trade imbalance has also increased, and as noted earlier, this "gap" has also grown to be a source of concern in the domestic politics of the United States (Table 6.10). Even how to calculate the trade "surplus" or "deficit" is controversial. While beyond the scope of this paper, an example using Chinese data is instructive. Based on Chinese data, China's trade balance with to the U.S. recorded a $ 1.41 billion deficit in 1990 (of no concern to U.S. voters!), but registered a $ 170.86 billion surplus in 2008, 26 times greater than the surplus in 1993 when the trade balance first shifted to China's favor. If based on U.S. data, the situation seems even more uneven. Official American data (and government officials) indicated that China's trade surplus began in 1983, actually 10 years earlier than the official Chinese statistics reaching $ 10.41 billion in

Table 6.10 Trade between China and the U.S. with ratios of dependency (0.1 billion $, %). (National Bureau of Statistics 1990–2009; MOFCOM 2009; BEA 2010; http://www.census.gov; http://www.commerce.gov)

Year	Dependency ratio of China to the U.S.				Dependency ratio of the U.S. to China			
	Exp. − Imp.	Exp. +Imp.	Export	Import	Exp. − Imp.	Exp. +Imp	Export	Import
1990	−14.1	3.02	1.33	1.69	−104.1	0.35	0.08	0.26
1991	−18.2	3.47	1.51	1.96	−126.9	0.42	0.10	0.32
1992	−3.1	3.58	1.76	1.82	−182.6	0.52	0.12	0.41
1993	62.7	4.51	2.77	1.74	−227.7	0.61	0.13	0.47
1994	74.9	6.34	3.84	2.50	−294.9	0.68	0.13	0.55
1995	85.9	5.61	3.39	2.21	−338.1	0.77	0.16	0.62
1996	105.3	5.00	3.12	1.89	−395.2	0.81	0.15	0.66
1997	164.0	5.14	3.43	1.71	−497.0	0.91	0.15	0.75
1998	210.2	5.39	3.73	1.66	−569.0	0.98	0.16	0.81
1999	224.7	5.67	3.87	1.80	−686.7	1.02	0.14	0.88
2000	297.4	6.21	4.35	1.87	−838.1	1.18	0.16	1.02
2001	280.8	6.07	4.10	1.98	−830.5	1.20	0.19	1.01
2002	427.2	6.68	4.81	1.87	−1,031.2	1.41	0.21	1.20
2003	586.1	7.70	5.64	2.06	−1,240.0	1.65	0.26	1.39
2004	802.7	8.78	6.47	2.31	−1,619.8	1.97	0.30	1.68
2005	1,141.7	9.46	7.28	2.18	−2,015.5	2.29	0.34	1.95
2006	1,442.6	9.88	7.65	2.23	−2,325.8	2.56	0.41	2.15
2007	1,633.2	8.93	6.88	2.05	−2,562.0	2.75	0.46	2.28
2008	1,708.6	7.71	5.83	1.88	−2,680.4	2.82	0.48	2.34

1990 and over $ 270 billion in 2008. The latter value is almost $ 100 billion higher than that reflected in official Chinese statistics. The different numbers and statistical findings are due to different accounting methods—issues too complex to review in this limited space, but such "accounting" disagreements are not unusual among major trading partners. Different estimates of commodity value moving as imports and exports cannot help but lead to trade frictions between the two countries. On the other hand, according to Chinese statistics, although the absolute surplus has grown dramatically, for the last few years, the growth rate of China's trade surplus is slowing. That is the annual growth rate of China's trade surplus for the 4 years from 2005 to 2008 was 42.2, 26.4, 13.2 and 4.6 % respectively.

Trade and investment issues between any two nations are always more complicated than they might first appear. According to a recent Ministry of Commerce (PRC) report, by the end of 2009, the United States had set up nearly 60,000 commercial or manufacturing enterprises such as off-shore factories, fast food restaurants, consulting firms, etc. in China since diplomatic relations were reestablished in 1978. Of these, more than 30,000 enterprises remain in operation. The enterprises involve 29 different manufacturing categories and over 100 types of different service provision firms (imports/exports, banking, insurance, product design, marketing, etc.). Based on a preliminary survey by the Ministry of Commerce, these China-based enterprises realized $ 150 billion in sales in 2009. This level of FDI

was actually doubled the value of U.S. exports to China ($ 70 billion) for the same period. From the Chinese perspective, it could be argued that if the revenues of China-based U.S. firms were included in the calculations then, by and large, Sino-U.S. trade is balanced and the Chinese side actually faces a slight deficit. Of course, the U.S. Department of Commerce does not agree with this method of accounting, but it is clear that there is room for far more than one or two opinions on the matter.

For major trading partners of any nation, more conflicts arise over particular issues and particular products as trade grows increasingly important and diversified. As the importance of bilateral trade increases for any two given nations, these conflicts become symbolically more important and more politically charged. Trade relations between China and the United States must be evaluated in this context. Another contentious issue related to Sino-U.S. trade in the past several years has been the issue of China's currency valuation as it related to access to markets and the relative price of goods. Again, this is a complex issue and is beyond the scope of this chapter, but it is important to note that many foreign economists find themselves arguing that while greater revaluation of the Yuan would certainly have some effect on the U.S.-China trade, it would NOT have the effects that many U.S. politicians suggest.

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6.3 Conclusions

6.3.1 From the Chinese Perspective

In the contemporary global trading system, both China and the United States are major players and their interaction adds up to a remarkable 500 billion $ of bilateral trade in 2012. This high level of exchange will continue into the future. Since the period of reform and opening up, China has achieved rapid growth in international trade both with respect to gross value and the number of trading partners. During the past two decades, China has maintained a favorable trade balance, especially with the United States. However, compared to the United States, China still faces major

challenges including those related to raising total economic output, minimizing the trade dependency ratio, upgrading the nation's trade structure and improving the spatial distribution of international trading manufacturers and firms. Strategically, trade is a win-win opportunity associated with expanded mutual cooperation between China and the United States. There are some important issues related to this trade that readers should recognize.

First, in the past 20 years, considering the total value of trade as well as the trade dependency ratio, China has grown rapidly, but China's trade dependency ratio is over twice of that of the U.S. The nation's bilateral trade dependency ratio is far higher than the United States' ratio with China. China's economic growth is still driven to some extent by foreign trade.

Secondly, considering the structure of bilateral trade, Sino-U.S. trade is complementary. China has comparative advantage in all labor-intensive products whether in goods or services. In recent years, thanks to the development of the iron and steel industry, China's capital intensive products are growing increasingly competitive on international markets, but "high-tech" and knowledge- intensive industries, particularly computers and financial services industry are still in the early stages of development and lag behind those of Japan, the United States and many EU nations.

Finally, from a geographical perspective, there are important differences. Although the two countries share several major trading partners from the Asia-Pacific regions and the European Union, the nations—from the Chinese perspective—face different situations. The border trading partners of the United States including Canada and Mexico are members of NAFTA. They are also complementary in trade. The U.S. is usually the first and most important partner in the complementary and profitable exchanges with these nations, and usually has a trade surplus with these nations as well. In contrast, the dominant exporting industries in neighboring Japan, Korea, Chinese Taiwan, and the ASEAN countries are almost all the same as those of China. In a sense then, China faces competition rather than cooperation with these countries that often results in trade deficits for China with these nations. Developing greater trade cooperation with these economies, while building up the entire East-Asian economic community, will prove essential for China in the future.

6.3.2 From the U.S. Perspective

Past history as well as present conditions in both nations would be radically different in the absence of the (relatively) free international trade that exists at the present time—and especially after the World Trade Organization (WTO) was initiated under the Marrakech Agreement in 1995 (Garg 2004). Trade with China still offers excellent opportunities for countless U.S. firms now and in the future. Further, Sino-U.S. trade represents a vital component of the global trading system. As supply chains grow longer and incorporate an ever-growing number of nations, perturbations in Sino-U.S. trade will have far reaching effects on dozens of other nations as well.

Free and unfettered trade, in the long run, typically benefits more persons than it hurts, but as geographers we must recognize that old industrial regions in BOTH nations have faced particular challenges as products from many nations flow into the country. High rates of unemployment are challenging to all nations, but especially to nations such as the United States that typically have limited experience with high unemployment or underemployment. For this reason, and also due to the sheer size of the deficit, trade with China has become enmeshed in the domestic politics of the country. It will remain there for some time.

Still, and most importantly, for many reasons noted in other chapters of this book, it is becoming increasingly clear that China and the United States are destined to have a special relationship in this new century, and—like marriage for better or worse—trade, despite the disputes that invariably accompany trade, will form one of the enduring ties that will bind these two great nations. Trade and intellectual property issues are always complex, and the United States has a long history of difficult negotiations in these areas with many close allies. Good faith negotiations and increasing transparency will prove essential for their resolution, but solving these problems is in the best interests of citizens in both nations, and indeed for consumers throughout the world.

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