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**Adjusted Estimates of United States-China Bilateral Trade Balances—
An Update**
by

K. C. Fung[*],
Lawrence J. Lau[**]
Yanyan Xiong[***]

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Stanford University
579 Serra Mall @ Galvez, Landau Economics Building, Room 153
Stanford, CA 94305-6015

[*] University of California, Santa Cruz
[**] Stanford University and The Chinese University of Hong Kong
[***] The Chinese University of Hong Kong

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March 31, 2006

K. C. Fung
Department of Economics, University of California, Santa Cruz

Lawrence J. Lau
Department of Economics, Stanford University
And
Department of Economics, The Chinese University of Hong Kong

Yanyan Xiong
Department of Economics, The Chinese University of Hong Kong

Abstract

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Large differences exist between the official data on trade balances between the United States and China. In 2005, the U. S. merchandise trade deficit with China was US$ 201.6 billion according to United States Government data, but US$ 114.2 billion according to Chinese Government data, a discrepancy of US$ 87.4 billion. The objective of this paper is to provide updated adjusted estimates of the U.S.-China trade balances that are comparable so as to facilitate more objective policy discussions. Four adjustments are made to the export and import data of the two governments: (1) freight along side (f.a.s.)-free on board (f.o.b.) and cost, insurance and freight (c.i.f.)-f.o.b. conversions, (2) re-exports through Hong Kong (and elsewhere), (3) re-export markups and (4) bilateral trade in services.

After all of these adjustments, our best estimate for the 2005 bilateral trade balance in goods and services combined is US$ 170.7 billion, in China's favor, which is much larger than the official Chinese balance but also much smaller than the official U.S. balance.

Keywords: China, United States, bilateral trade balance, adjusted estimates

JEL Classification: F14

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[*] The authors are, respectively, Professor of Economics, Department of Economics, University of California, Santa Cruz, Kwoh-Ting Li Professor of Economic Development, Department of Economics, Stanford University and Vice-Chancellor, The Chinese University of Hong Kong, and Ph. D. Candidate, Department of Economics, The Chinese University of Hong Kong.

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1. Introduction

In 2005, according to United States Government data, the U. S. ran a merchandise trade deficit of US$ 201.6 billion with China. However, according to Chinese Government data, the Chinese surplus vis-à-vis the United States in 2005 was US$ 114.2 billion. Thus, there continues to be a large difference, US$ 87.4 billion in 2005, between the official data on trade balances of the two governments. Unfortunately, for many reasons, neither the U.S. nor the Chinese official trade data reflect completely and accurately the true picture of the bilateral trade balances. The objective of this paper is to provide updated adjusted estimates of the U.S.-China trade balances that are comparable so as to facilitate more objective policy discussions.

2. Adjustments to the Official Trade Data

As discussed in detail in Fung and Lau (1996, 1998, 2001, 2003), both the Chinese and the U.S. trade data have to undergo a series of adjustments in order to arrive at comparable measurements of the bilateral trade balances. To lay the foundation for our various adjustments, we first present the official U.S. and Chinese data on exports and imports of goods in Table 2.1.

[*] The authors are, respectively, Professor of Economics, Department of Economics, University of California, Santa Cruz, Kwoh-Ting Li Professor of Economic Development, Department of Economics, Stanford University and Vice-Chancellor, The Chinese University of Hong Kong, and Ph. D. Candidate, Department of Economics, The Chinese University of Hong Kong.

Table 2.1: Official U.S. and Chinese Trade Data (billion US$)

Year	Official U.S. Exports to China FAS (U.S. Data)	Official Chinese Imports from the United States CIF (Chinese Data)	Official U.S. Imports from China Customs Basis (U.S. Data)	Official Chinese Exports to the United States FOB (Chinese Data)	Official U.S.-China Trade Balance (U.S. Data)	Official U.S.-China Trade Balance (Chinese Data)
1989	5.8	7.9	12	4.4	-6.2	3.5
1990	4.8	6.6	15.2	5.2	-10.4	1.4
1991	6.3	8	19	6.2	-12.7	1.8
1992	7.4	8.9	25.7	8.6	-18.3	0.3
1993	8.8	10.7	31.5	17	-22.8	-6.3
1994	9.3	14	38.8	21.5	-29.5	-7.5
1995	11.7	16.1	45.6	24.7	-33.8	-8.6
1996	12	16.2	51.5	26.7	-39.5	-10.5
1997	12.8	16.3	62.5	32.7	-49.7	-16.4
1998	14.3	17	71.2	38	-56.9	-21
1999	13.1	19.5	81.8	41.9	-68.7	-22.4
2000	16.2	22.4	100.0	52.1	-83.8	-29.7
2001	19.2	26.2	102.3	54.3	-83.1	-28.1
2002	22.1	27.2	125.2	70.0	-103.1	-42.7
2003	28.4	33.9	152.4	92.5	-124.1	-58.6
2004	34.7	44.7	196.7	124.9	-162.0	-80.3
2005	41.8	48.7	243.5	162.9	-201.6	-114.2

Source: <u>U.S. Foreign Trade Highlights</u>, U.S. Department of Commerce, various years;
<u>China's Customs Statistics</u>, General Administration of Customs of the People's Republic of China, various years.

Note: A positive sign indicates a U.S. trade surplus; a negative sign indicates a U.S. trade deficit.

As described in our earlier work, four adjustments are necessary to render the export and import data of the two governments comparable and complete: (1) freight along side (f.a.s.)-free on board (f.o.b.) and cost, insurance and freight (c.i.f.)-f.o.b. conversions, (2) re-exports through Hong Kong (and elsewhere), (3) re-export markups and (4) bilateral trade in services.

First, exports and imports should be measured on the same basis for the trade data to be comparable. We choose to measure all exports and imports on an f.o.b. basis. F.o.b. values include the costs of origin-country factory production as well as the costs of transporting the goods and loading them onto the cargo vessels within the same country. One small complication is that unlike

the export data of most countries, U.S. export data are recorded on an f.a.s. basis. F.a.s. values are smaller than the f.o.b. values by the costs of loading the goods onto the cargo vessels at the origination ports. To convert f.a.s. values into the f.o.b. values, 1% is added to the f.a.s. export values.[1] China records its export data on an f.o.b. basis, so no adjustment is necessary. The U. S. records its imports on customs basis, which is essentially the same as f.o.b. basis, so no adjustment is necessary. China records imports on a c.i.f. basis. A 10% discount is deducted from the c.i.f. values to obtain the f.o.b. values.[2]

In Table 2.2, we present the official U.S. and Chinese trade data, converted to an f.o.b. basis. We note that even after the conversion, there are still large discrepancies between U.S. data on U.S. exports to China and Chinese data on Chinese imports from the U.S. The latter are consistently higher than the former. We attribute this difference to "indirect U.S. exports," that is, re-exports through intermediate third destinations, and apply the c.i.f.-f.o.b. adjustment to the indirect exports, obtaining the adjusted Chinese estimates of Chinese imports from the U.S., f.o.b. Similarly, we apply the c.i.f.-f.o.b. adjustment to the difference between U.S. data on U.S. imports from China and Chinese data on Chinese exports to the U.S., that is, "indirect Chinese exports," obtaining adjusted U. S. estimates of U.S. imports from China, f.o.b.

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[1] Such a conversion has been proposed by researchers at various international organizations, including the World Bank.
[2] A 10% discount is the conventional method of conversion, employed, for example, by the International Monetary Fund (IMF). For discussions of these adjustments and measurements of transport costs, see Fung and Lau (2001, 2003), Amjadi and Yeats (1995) and Yeats (1981).

Table 2.2: Official U.S. and Chinese Trade Data
Converted to an FOB basis (billion US$)

Year	U.S. Exports to China FOB (U.S. Data)	Chinese Imports from U.S. FOB (Chinese Data)	Chinese Imports from U.S. FOB (Adjusted Chinese Data)	U.S. Imports from China FOB (U.S. Data)	Chinese Exports to U.S. FOB (Chinese Data)	U.S. Imports from China FOB (Adjusted U.S. Data)	U.S.-China Trade Balance FOB (Adjusted U.S. Data)	U.S.-China Trade Balance FOB (Adjusted Chinese Data)
1989	5.9	7.2	7.1	12.0	4.4	11.3	-5.5	2.7
1990	4.8	6.0	5.9	15.2	5.2	14.3	-9.4	0.7
1991	6.4	7.3	7.2	19.0	6.2	17.8	-11.5	1.0
1992	7.5	8.1	8.0	25.7	8.6	24.1	-16.7	-0.6
1993	8.9	9.7	9.7	31.5	17.0	30.2	-21.3	-7.3
1994	9.4	12.7	12.4	38.8	21.5	37.2	-27.8	-9.1
1995	11.8	14.6	14.4	45.6	24.7	43.7	-31.9	-10.3
1996	12.1	14.7	14.5	51.5	26.7	49.2	-37.1	-12.2
1997	12.9	14.8	14.6	62.5	32.7	59.8	-46.9	-18.1
1998	14.4	15.5	15.4	71.2	38.0	68.2	-53.7	-22.6
1999	13.2	17.7	17.3	81.8	41.9	78.2	-64.9	-24.6
2000	16.3	20.3	20.0	100.0	52.1	95.7	-79.3	-32.1
2001	19.4	23.8	23.4	102.3	54.3	97.9	-78.5	-30.9
2002	22.3	24.8	24.5	125.2	70.0	120.2	-97.8	-45.4
2003	28.7	30.8	30.6	152.4	92.5	147.0	-118.3	-61.9
2004	35.1	40.6	40.1	196.7	124.9	190.2	-155.1	-84.8
2005	42.3	44.3	44.1	243.5	162.9	236.1	-193.9	-118.8

Source: Table 2.1. Conversion of f.a.s. to f.o.b. through multiplication by the factor 1.01; conversion of c.i.f. to f.o.b. through division by the factor 1.1. It is assumed that the differences between the U.S. and Chinese data on U.S. exports f.o.b. to China and between the U.S. and Chinese data on U.S. imports f.o.b. from China are entirely due to "indirect exports," that is, re-exports through third countries or regions.

Note: A positive sign indicates a U.S. trade surplus; a negative sign indicates U.S. trade deficit.

Second, we adjust the trade data by the exports that are initially shipped to Hong Kong before being re-exported to either the United States or China. Re-exports occur when imports to Hong Kong are consigned to a buyer in Hong Kong who takes legal possession of them, sells them to another party in a third country, and ships them there.[3] The issue of re-exports complicates both the Chinese as well as the U.S. trade data. For the Chinese data, it is not clear whether and how much of the re-exports to and from Hong Kong are included (in principle, re-exports are not included). We treat

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[3] The Hong Kong buyer may undertake minor processing of the imports before re-exporting them. However, the nature of the goods is not fundamentally altered so that no Hong Kong origin is conferred.

official Chinese data on both exports and imports as reflecting only direct trade. Re-exports from China via Hong Kong to the United States reflect indirect trade that have to be added to the official Chinese trade data.[4] For the U.S. data, U.S. exports to China reflect only direct exports, so that re-exports through Hong Kong have to be added. On the import side, we do know that the U.S. Customs traces the ultimate countries of origin of all imports, including re-exports, so that Chinese re-exports to the U.S. through Hong Kong (or elsewhere) do not need to be added.

Re-exports constitute a significant proportion of U.S.-China trade. In 2005, US$ 5.5 billion (f.o.b. basis) worth of U.S. goods were shipped to Hong Kong and then re-exported to China, amounting to 13 percent of official U.S. exports to China. In the same year, goods made in China valued at US$ 34.7 billion were re-exported to the United States through Hong Kong, amounting to 21 percent of the official Chinese exports to the U. S. Thus, if the bilateral trade data are not adjusted by re-exports through Hong Kong, they will be grossly inaccurate.[5] Estimates of U.S. exports to China and U.S. imports from China adjusted for re-exports through Hong Kong are presented in Table 2.3 and Table 2.4 respectively.

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[4] The Chinese Maritime Customs has begun an effort to identify the ultimate origins of imports from Hong Kong and destinations of exports to Hong Kong several years ago but has had only limited success.
[5] In fact, because of re-exports through intermediate destinations such as Hong Kong, the bilateral trade data of most countries with China are inaccurate, including, in addition to those of the United States, Canada, the European Union and Japan. Statistics Canada (2002) actually did a study in reconciling Chinese and Canadian trade data using a similar methodology as ours.

Table 2.3: Estimates of U.S. Exports to China
FOB Adjusted for Re-Exports (billion US$)

Year	U.S. Exports to China FOB (U.S. Data)	Chinese Imports from U.S. FOB (Adjusted Chinese Data)	Hong Kong Re-Exports of U.S. Imports to China FOB Hong Kong (Hong Kong Data)	Hong Kong Re-Exports of U.S. Imports to China FOB U.S. (Hong Kong Data)	Hong Kong Re-Exports of U.S. Imports to China FOB U.S. as a Percent of U.S. Direct Exports to China	Our Estimates of U.S. Exports to China FOB Adjusted for Hong Kong Re-Exports (U.S. Data)	Our Estimates of U.S. Exports to China FOB Adjusted for Re-Exports (Adjusted Chinese Data)
1989	5.9	7.1	1.3	1.2	20%	7.0	8.2
1990	4.8	5.9	1.3	1.2	24%	6.0	7.1
1991	6.4	7.2	1.7	1.5	24%	7.9	8.7
1992	7.5	8.0	2.4	2.2	29%	9.7	10.2
1993	8.9	9.7	3.2	2.9	33%	11.8	12.6
1994	9.4	12.4	3.7	3.4	36%	12.8	15.8
1995	11.8	14.4	5	4.5	38%	16.4	18.9
1996	12.1	14.5	5.9	5.4	44%	17.5	19.9
1997	12.9	14.6	6	5.5	42%	18.4	20.1
1998	14.4	15.4	5.3	4.8	33%	19.3	20.2
1999	13.2	17.3	5.4	4.9	37%	18.1	22.2
2000	16.3	20.0	6.1	5.5	34%	21.9	25.5
2001	19.4	23.4	6.5	5.9	30%	25.3	29.3
2002	22.3	24.5	6.2	5.6	25%	28.0	30.2
2003	28.7	30.6	6.2	5.7	20%	34.3	36.3
2004	35.1	40.1	5.8	5.3	15%	40.3	45.4
2005	42.3	44.1	6.0	5.5	13%	47.7	49.6

Source: Table 2.2; <u>Hong Kong External Trade</u>, Hong Kong Census and Statistics Department, various years. Hong Kong re-exports of U.S. imports to China, f.o.b. Hong Kong, are converted to f.o.b. U.S. basis through division by the factor 1.1.

Note: Totals may not add or subtract because of rounding.

Table 2.4: Estimates of Chinese Exports to the United States
FOB Adjusted for Re-Exports (billion US$)

Year	Chinese Exports to U.S. FOB (Chinese Data)	U.S. Imports from China FOB China (Adjusted U.S. Data)	Hong Kong Re-Exports of Chinese Imports to U.S. FOB Hong Kong (Hong Kong Data)	Hong Kong Re-Exports of Chinese Imports to U.S. FOB China (Hong Kong Data)	Hong Kong Re-Exports of Chinese Exports to U.S. FOB China as a Percent of Chinese Exports to U.S.	Our Estimates of Chinese Exports to U.S. FOB Adjusted for Hong Kong Re-Exports (Chinese Data)
1989	4.4	11.3	8.5	7.7	176%	12.1
1990	5.2	14.3	10.5	9.5	184%	14.7
1991	6.2	17.8	13.4	12.2	196%	18.4
1992	8.6	24.1	18.1	16.5	191%	25.1
1993	17.0	30.2	21.8	19.8	117%	36.8
1994	21.5	37.2	25.3	23.0	107%	44.5
1995	24.7	43.7	27.6	25.1	102%	49.8
1996	26.7	49.2	29.2	26.5	99%	53.2
1997	32.7	59.8	31.3	28.5	87%	61.2
1998	38.0	68.2	31.1	28.3	74%	66.3
1999	41.9	78.2	32.1	29.2	70%	71.1
2000	52.1	95.7	36.4	33.1	63%	85.2
2001	54.3	97.9	33.2	30.2	56%	84.5
2002	70.0	120.2	34.3	31.2	45%	101.1
2003	92.5	147.0	33.3	30.3	33%	122.8
2004	124.9	190.2	35.5	32.2	26%	157.2
2005	162.9	236.1	38.2	34.7	21%	197.7

Source: Table 2.2; Hong Kong External Trade, Hong Kong Census and Statistics Department, various years. Hong Kong re-exports of Chinese imports to U.S., f.o.b. Hong Kong, are converted to f.o.b. China basis through division by the factor 1.1.

Note: Totals may not add or subtract because of rounding.

We should emphasize that our adjustments due to re-exports through Hong Kong (and for that matter, elsewhere) do not change the total exports and total imports of either China or the United States vis-à-vis the whole World in any way—they merely rearrange the origins and destinations. For example, U.S. exports to Hong Kong that is subsequently re-exported to China is re-classified as exports to China, so that the reported amount of U.S. exports to Hong Kong is reduced by the same amount that U.S. exports to China is increased. Total U.S. exports to the World remain unchanged.

We use the estimates of U.S.-China trade adjusted for re-exports in Tables 2.3 and 2.4 to derive the U.S.-China trade balances. The results are presented in Table 2.5. The discrepancies between the estimates of the U.S.-China trade balances based on U.S. and Chinese data are substantially reduced, but not eliminated. For example, for 2005, the discrepancy is reduced from US$ 87.4 billion to US$ 40.3 billion. However, we note from Table 2.4 that even after the adjustment for re-exports, the discrepancies between U.S. and Chinese data on Chinese exports to the U.S. remain large, amounting to US$ 38.4 billion in 2005. We attribute these remaining discrepancies to re-exports through other intermediate third destinations.

Table 2.5: Estimates of U.S.-China Trade Balance
FOB Adjusted for Hong Kong Re-Exports (billion US$)

Year	Our Estimates of U.S. Exports to China FOB Adjusted for Hong Kong Re-Exports (U.S. Data)	Our Estimates of U.S. Exports to China FOB Adjusted for Hong Kong Re-Exports (Adjusted Chinese Data)	U.S. Imports from China FOB China (Adjusted U.S. Data)	Our Estimates of Chinese Exports to U.S. FOB Adjusted for Hong Kong Re-Exports (Chinese Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports (Adjusted U.S. Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports (Adjusted Chinese Data)
1989	7.0	8.2	11.3	12.1	-4.3	-3.9
1990	6.0	7.1	14.3	14.7	-8.3	-7.7
1991	7.9	8.7	17.8	18.4	-9.9	-9.6
1992	9.7	10.2	24.1	25.1	-14.5	-14.8
1993	11.8	12.6	30.2	36.8	-18.4	-24.3
1994	12.8	15.8	37.2	44.5	-24.5	-28.7
1995	16.4	18.9	43.7	49.8	-27.3	-30.9
1996	17.5	19.9	49.2	53.2	-31.8	-33.4
1997	18.4	20.1	59.8	61.2	-41.4	-41.1
1998	19.3	20.2	68.2	66.3	-48.9	-46.1
1999	18.1	22.2	78.2	71.1	-60.0	-48.9
2000	21.9	25.5	95.7	85.2	-73.8	-59.7
2001	25.3	29.3	97.9	84.5	-72.7	-55.2
2002	28.0	30.2	120.2	101.1	-92.2	-71.0
2003	34.3	36.3	147.0	122.8	-112.7	-86.5
2004	40.3	45.4	190.2	157.2	-149.9	-111.8
2005	47.7	49.6	236.1	197.7	-188.4	-148.1

Source: Table 2.2, Table 2.3 and Table 2.4.
Note: Totals may not add or subtract because of rounding.

The third adjustment that needs to be made is with respect to re-export markups. When goods are first exported to Hong Kong (or elsewhere), the middlemen add their markups to goods that are subsequently re-exported. These markups represent value-added in Hong Kong (and elsewhere) and should be taken out of both the U.S. and the Chinese trade data. We use both published and unpublished survey data on markups added by Hong Kong middlemen. These estimated markups are presented in Table 2.6.[6]

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[6] The estimated markups of Feenstra et al. (1999), based on a different methodology, are quite close to the estimates here. For example, for 1995, they estimated that the average markup for Hong Kong re-exports of Chinese goods to the United States to be around 25.3%. Our estimate here is 26.7%. For the case of Canada,

Table 2.6: Estimates of Hong Kong Re-export Markups

Year	Estimates of Hong Kong Re-export Markups for U.S. Imports to China	Estimates of Hong Kong Re-export Markups for Chinese Imports to U.S.
1989	10.30%	11.50%
1990	11.30%	17.40%
1991	9.30%	20.50%
1992	9.30%	22.90%
1993	7.80%	26.10%
1994	5.70%	24.90%
1995	8.40%	26.70%
1996	7.63%	26.03%
1997	6.87%	25.37%
1998	6.10%	24.70%
1999	8.80%	27.70%
2000	12.10%	28.60%
2001	14.40%	28.40%
2002	12.80%	26.80%
2003	11.20%	26.40%
2004	10.10%	29.40%
2005	10.10%	29.40%

Source: Hong Kong Monthly Digest of Statistics, Census and Statistics Department, Hong Kong Government, February 1996; Fung and Lau (1996); unpublished data, Census and Statistics Department, Hong Kong Special Administrative Region; figures for 1996 and 1997 are interpolated; figures for 2005 are assumed to be the same as 2004.

In Tables 2.7 and 2.8, we present our estimates of U.S. exports to China and Chinese exports to the U.S. adjusted for re-exports and mark-ups. We first make adjustments for re-exports and re-exports markups for Hong Kong only. We then apply the same markups to all indirect trade between the U.S. and China, based on the assumption that the markups are similar across intermediate third destinations for all indirect Chinese exports to the U.S. and indirect U.S. exports to China respectively. We use these estimates to derive the adjusted U.S.-China trade balances, which are presented in Table 2.9. With adjustments of only Hong Kong re-exports and re-export markups, the estimates of the U.S.-China trade balance for 2005 are US$ 181.0 billion and US$ 140.7 billion based

the markup seemed to be even higher. For example, Statistics Canada (2002) estimated the markup for Hong Kong re-exports of imports from China to Canada to be 47% in 2001, much higher than the figure we used for the U.S. for the same year. But Statistics Canada (2002) also found negative markups for Hong Kong re-exports

on U.S. and Chinese data respectively. With the additional adjustments of re-exports markups for all indirect trade, the estimates of the U.S.-China trade balance for 2005 become US$ 172.3 billion and US$ 140.9 billion respectively. The discrepancies are therefore further narrowed from US$ 87.4 billion to US$ 31.4 billion.

For several reasons discussed in our earlier work (Fung and Lau 2001, 2003), the U.S. data should be considered more reliable than the Chinese data. Hence, our best estimate for the U.S.-China bilateral merchandise trade balance for 2005 is US$ 172.3 billion. Essentially we believe that the discrepancies between the Chinese export data and the U.S. import data, converted to an f.o.b. basis, are caused primarily by re-exports and their markups, not only through Hong Kong but also through other intermediate destinations, although there are probably also other factors at work, such as over- and under-invoicing for purposes of transfer pricing, tariff evasion, and circumvention of capital control laws and regulations.

Finally, in Table 2.10, we present all of the alternative estimates of the U.S.-China bilateral trade balances based on various adjustments. With each successive additional adjustment, the discrepancies between the bilateral trade balances estimated with U.S. and Chinese data are reduced. However, ultimately there still remain large discrepancies on the order of US$ 30 billion in 2005 that must be attributed to re-exports through unknown intermediate third destinations.

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of Canadian imports to China. We suspect that this may be due to deliberate under-invoicing by Hong Kong re-exporters in order to evade Chinese tariffs.

Table 2.7: Estimates of U.S. Exports to China FOB Adjusted for Re-Exports and Markups (billion US$)

Year	U.S. Exports to China FOB (U.S. Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Re-Exports (Adjusted Chinese Data)	Hong Kong Re-Exports of U.S. Imports to China FOB U.S. (Hong Kong Data)	Estimates of Hong Kong Re-export Markups for U.S. Imports to China	Hong Kong Re-Exports of U.S. Imports to China FOB U.S. Adjusted for Markups (Hong Kong Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Hong Kong Re-Exports and Markups (U.S. Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Hong Kong Re-Exports and Markups (Adjusted Chinese Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Re-Exports and Markups (Adjusted Chinese Data)
1989	5.9	8.2	1.2	10.30%	1.1	6.9	8.1	8.0
1990	4.8	7.1	1.2	11.30%	1.1	5.9	7.0	6.9
1991	6.4	8.7	1.5	9.30%	1.4	7.8	8.6	8.5
1992	7.5	10.2	2.2	9.30%	2.0	9.5	10.0	10.0
1993	8.9	12.6	2.9	7.80%	2.7	11.6	12.3	12.3
1994	9.4	15.8	3.4	5.70%	3.2	12.6	15.6	15.4
1995	11.8	18.9	4.5	8.40%	4.2	16.0	18.6	18.4
1996	12.1	19.9	5.4	7.63%	5.0	17.1	19.5	19.3
1997	12.9	20.1	5.5	6.87%	5.1	18.0	19.8	19.6
1998	14.4	20.2	4.8	6.10%	4.5	19.0	19.9	19.9
1999	13.2	22.2	4.9	8.80%	4.5	17.7	21.8	21.5
2000	16.3	25.5	5.5	12.10%	4.9	21.3	24.9	24.5
2001	19.4	29.3	5.9	14.40%	5.1	24.5	28.6	28.0
2002	22.3	30.2	5.6	12.80%	5.0	27.3	29.5	29.3
2003	28.7	36.3	5.7	11.20%	5.1	33.7	35.7	35.5
2004	35.1	45.4	5.3	10.10%	4.8	39.8	44.9	44.4
2005	42.3	49.6	5.5	10.10%	5.0	47.2	49.1	48.9

Source: Table 2.2, Table 2.3 and Table 2.6.

Note: Totals may not add or subtract because of rounding.

Table 2.8: Estimates of Chinese Exports to the United States FOB Adjusted for Re-Exports and Markups (billion US$)

Year	Chinese Exports to U.S. FOB (Chinese Data)	U.S. Imports from China FOB China (Adjusted U.S. Data)	Hong Kong Re-Exports of Chinese Imports to U.S. FOB Hong Kong (Hong Kong Data)	Hong Kong Re-Exports of Chinese Imports to U.S. FOB China (Hong Kong Data)	Estimates of Hong Kong Re-Export Markups for Chinese Imports to U.S.	Hong Kong Re-Exports of Chinese Imports to U.S. FOB China Adjusted for Markups (Hong Kong Data)	Estimates of Hong Kong Re-Exports Markups of Chinese Imports to U.S. FOB China (Hong Kong Data)	Our Estimates of U.S. Imports from China FOB China Adjusted for Hong Kong Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of Chinese Exports to U.S. FOB China Adjusted for Hong Kong Re-Exports and Markups (Chinese Data)	Our Estimates of U.S. Imports from China FOB China Adjusted for Re-Exports and Markups (Adjusted U.S. Data)
1989	4.4	11.3	8.5	7.7	11.5%	6.9	0.8	10.5	11.3	10.6
1990	5.2	14.3	10.5	9.5	17.4%	8.1	1.4	12.9	13.3	12.9
1991	6.2	17.8	13.4	12.2	20.5%	10.1	2.1	15.8	16.3	15.9
1992	8.6	24.1	18.1	16.5	22.9%	13.4	3.1	21.1	22.0	21.2
1993	17.0	30.2	21.8	19.8	26.1%	15.7	4.1	26.1	32.7	27.5
1994	21.5	37.2	25.3	23.0	24.9%	18.4	4.6	32.6	39.9	34.1
1995	24.7	43.7	27.6	25.1	26.7%	19.8	5.3	38.4	44.5	39.7
1996	26.7	49.2	29.2	26.5	26.0%	21.1	5.5	43.8	47.8	44.6
1997	32.7	59.8	31.3	28.5	25.4%	22.7	5.8	54.0	55.4	54.3
1998	38	68.2	31.1	28.3	24.7%	22.7	5.6	62.6	60.7	62.2
1999	41.9	78.2	32.1	29.2	27.7%	22.9	6.3	71.8	64.8	70.3
2000	52.1	95.7	36.4	33.1	28.6%	25.7	7.4	88.3	77.8	86.0
2001	54.3	97.9	33.2	30.2	28.4%	23.5	6.7	91.2	77.8	88.3
2002	70.0	120.2	34.3	31.2	26.8%	24.6	6.6	113.6	94.5	109.6
2003	92.5	147.0	33.3	30.3	26.4%	24.0	6.3	140.7	116.5	135.6
2004	124.9	190.2	35.5	32.2	29.4%	24.9	7.3	182.9	149.9	175.4
2005	162.9	236.1	38.2	34.7	29.4%	26.8	7.9	228.3	189.8	219.5

Source: Table 2.1, Table 2.2, Table 2.4 and Table 2.6.

Note: Totals may not add or subtract because of rounding.

Table 2.9: Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports and Markups (billion US$)

Year	Our Estimates of U.S. Imports from China FOB China Adjusted for Hong Kong Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of U.S. Imports from China FOB China Adjusted for Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of Chinese Exports to U.S. FOB China Adjusted for Hong Kong Re-Exports and Markups (Chinese Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Hong Kong Re-Exports and Markups (U.S. Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Hong Kong Re-Exports and Markups (Adjusted Chinese Data)	Our Estimates of U.S. Exports to China FOB U.S. Adjusted for Re-Exports and Markups (Adjusted Chinese Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Hong Kong Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for H.K. Re-Exports and Markups (Adjusted Chinese Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports and Markups (Adjusted Chinese Data)
1989	10.5	10.6	11.3	6.9	8.1	8.0	-3.6	-3.2	-3.7	-3.3
1990	12.9	12.9	13.3	5.9	7.0	6.9	-7.0	-6.4	-7.0	-6.5
1991	15.8	15.9	16.3	7.8	8.6	8.5	-8.0	-7.7	-8.1	-7.8
1992	21.1	21.2	22.0	9.5	10.0	10.0	-11.6	-12.0	-11.8	-12.0
1993	26.1	27.5	32.7	11.6	12.3	12.3	-14.5	-20.4	-15.9	-20.4
1994	32.6	34.1	39.9	12.6	15.6	15.4	-20.1	-24.3	-21.5	-24.5
1995	38.4	39.7	44.5	16.0	18.6	18.4	-22.4	-25.9	-23.7	-26.1
1996	43.8	44.6	47.8	17.1	19.5	19.3	-26.7	-28.3	-27.5	-28.5
1997	54.0	54.3	55.4	18.0	19.8	19.6	-36.0	-35.6	-36.3	-35.8
1998	62.6	62.2	60.7	19.0	19.9	19.9	-43.6	-40.8	-43.2	-40.8
1999	71.8	70.3	64.8	17.7	21.8	21.5	-54.1	-42.9	-52.6	-43.3
2000	88.3	86.0	77.8	21.3	24.9	24.5	-67.0	-52.9	-64.7	-53.3
2001	91.2	88.3	77.8	24.5	28.6	28.0	-66.7	-49.3	-63.8	-49.8
2002	113.6	109.6	94.5	27.3	29.5	29.3	-86.2	-65.0	-82.2	-65.3
2003	140.7	135.6	116.5	33.7	35.7	35.5	-106.9	-80.8	-101.9	-81.0
2004	182.9	175.4	149.9	39.8	44.9	44.4	-143.0	-105.0	-135.5	-105.4
2005	228.3	219.5	189.8	47.2	49.1	48.9	-181.0	-140.7	-172.3	-140.9

Source: Table 2.7 and Table 2.8.
Note: Totals may not add or subtract because of rounding.

Table 2.10: Comparison of Alternative Estimates of China-U.S. Trade Balance (billion US$)

Year	Official U.S.-China Trade Balance (U.S. Data)	Official U.S.-China Trade Balance (Chinese Data)	U.S.-China Trade Balance FOB Basis (U.S. Data)	U.S.-China Trade Balance FOB Basis (Chinese Data)	U.S.-China Trade Balance FOB Basis Adjusted for Hong Kong Re-Exports (Adjusted U.S. Data)	U.S.-China Trade Balance FOB Basis Adjusted for Hong Kong Re-Exports (Adjusted Chinese Data)	U.S.-China Trade Balance FOB Basis Adjusted for Hong Kong Re-Exports and Markups (Adjusted U.S. Data)	U.S.-China Trade Balance FOB Basis Adjusted for H.K. Re-Exports and Markups (Adjusted Chinese Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports and Markups (Adjusted U.S. Data)	Our Estimates of U.S.-China Trade Balance FOB Adjusted for Re-Exports and Markups (Adjusted Chinese Data)
1989	-6.2	3.5	-5.5	2.7	-4.3	-3.9	-3.6	-3.2	-3.7	-3.3
1990	-10.4	1.4	-9.4	0.7	-8.3	-7.7	-7.0	-6.4	-7.0	-6.5
1991	-12.7	1.8	-11.5	1.0	-9.9	-9.6	-8.0	-7.7	-8.1	-7.8
1992	-18.3	0.3	-16.7	-0.6	-14.5	-14.8	-11.6	-12.0	-11.8	-12.0
1993	-22.8	-6.3	-21.3	-7.3	-18.4	-24.3	-14.5	-20.4	-15.9	-20.4
1994	-29.5	-7.5	-27.8	-9.1	-24.5	-28.7	-20.1	-24.3	-21.5	-24.5
1995	-33.8	-8.6	-31.9	-10.3	-27.3	-30.9	-22.4	-25.9	-23.7	-26.1
1996	-39.5	-10.5	-37.1	-12.2	-31.8	-33.4	-26.7	-28.3	-27.5	-28.5
1997	-49.7	-16.4	-46.9	-18.1	-41.4	-41.1	-36.0	-35.6	-36.3	-35.8
1998	-56.9	-21	-53.7	-22.6	-48.9	-46.1	-43.6	-40.8	-43.2	-40.8
1999	-68.7	-22.4	-64.9	-24.6	-60.0	-48.9	-54.1	-42.9	-52.6	-43.3
2000	-83.8	-29.7	-79.3	-32.1	-73.8	-59.7	-67.0	-52.9	-64.7	-53.3
2001	-83.1	-28.1	-78.5	-30.9	-72.7	-55.2	-66.7	-49.3	-63.8	-49.8
2002	-103.1	-42.7	-97.8	-45.4	-92.2	-71.0	-86.2	-65.0	-82.2	-65.3
2003	-124.1	-58.6	-118.3	-61.9	-112.7	-86.5	-106.9	-80.8	-101.9	-81.0
2004	-162.0	-80.3	-155.1	-84.8	-149.9	-111.8	-143.0	-105.0	-135.5	-105.4
2005	-201.6	-114.2	-193.9	-118.8	-188.4	-148.1	-181.0	-140.7	-172.3	-140.9

Source: Table 2.1, Table 2.2, Table 2.5 and Table 2.9.

We have so far focused on the merchandise trade balance between the United States and China. However, the United States is traditionally a net exporter of services. Service trade has grown in importance in recent years. Thus the fourth adjustment to be made is to take into account trade in services.

China's entry into the WTO means that China's service sectors such as banking, insurance, and distribution will be opened up. In Table 2.11, estimates of the bilateral trade balances, adjusted for f.a.s.-f.o.b. and c.i.f.-f.o.b. factors, re-exports, re-export markups and private service trade are presented. Private services include activities such as advertising, computer and data processing services, education, financial services (including banking and finances), professional services (including accounting and legal services), managing consulting, royalties and license fees, telecommunication, transportation, tourism and travel. Table 2.11 indicates that the United States has always had a modest surplus with China in trade in services. In 2004, the latest year for which official data are available, the U. S. had a surplus of US$1.6 billion in its service trade with China. Assuming that the service trade surplus remained at US$ 1.6 billion in 2005, the bilateral trade balance between the U. S. and China in goods and services combined may be estimated to be US$ 170.7 billion.

Table 2.11: Estimates of U.S.-China Trade Balance
FOB Adjusted for Re-Exports, Markups, and Services (billion US$)

Year	Our Estimate of U.S. Imports from China FOB Adjusted for Re-Exports and Markups (Adjusted U.S. Data)	Our Estimate of U.S. Exports to China FOB Adjusted for Re-Exports and Markups (Adjusted U.S. Data)	Official Estimate of U.S. Exports of Services to China (U.S. Data)	Official Estimate of U.S. Imports of Services from China (U.S. Data)	Our Estimate of U.S.-China Trade Balance FOB Adjusted for Re-Exports, Markups, and Services (Adjusted U.S. Data)
1992	21.2	9.5	1.6	1.0	-11.2
1993	27.5	11.6	1.9	1.3	-15.3
1994	34.1	12.6	2.0	1.5	-21.0
1995	39.7	16.0	2.5	1.7	-22.9
1996	44.6	17.1	3.2	1.9	-26.2
1997	54.3	18.0	3.6	2.2	-34.9
1998	62.2	19.0	3.9	2.3	-41.6
1999	70.3	17.7	4.0	2.7	-51.2
2000	86.0	21.3	5.2	3.3	-62.7
2001	88.3	24.5	5.6	3.6	-61.8
2002	109.6	27.3	6.0	4.1	-80.3
2003	135.6	33.7	5.9	3.9	-99.8
2004	175.4	39.8	7.2	5.6	-133.9
2005	219.5	47.2	7.2	5.6	-170.7

Source: Table 2.7, Table 2.8, and Survey of Current Business, U.S. Department of Commerce, October 1999, pp. 48-95.

Note: Totals may not add or subtract because of rounding.

3. Conclusion

Our best estimate for the 2005 bilateral trade balance in goods and services combined is US$ 170.7 billion, in China's favor. This is much larger than the official Chinese balance of US$ 114.2 billion, but also much smaller than the official U.S. balance (on merchandise trade) of US$ 201.6 billion. The discrepancies between the adjusted Chinese data and the adjusted U.S. data on U.S. imports from China remain large—US$ 189.8 billion versus US$ 219.5 billion on an f.o.b. China

basis. We attribute these discrepancies to re-exports through other intermediate destinations such as Japan, South Korea, Singapore and Taiwan.[7]

We also note that while China has been running large overall trade surpluses with the United States, its overall trade surpluses vis-à-vis the World as a whole have been quite modest. In the five years prior to 2005, the average Chinese overall trade surplus, goods and services combined, was on the order of US$ 30 billion per year. 2005 was an exceptional year for China—it was the first year after the lifting of restrictions on Chinese textile exports on the expiration of the worldwide Multi-Fibre Agreement. Even then, the overall surplus in 2005 was only approximately US$ 90 billion out of a total Chinese international trade in goods and services in excess of US$1.5 trillion, reflecting the fact that it has been running large trade deficits in goods and services with many other economies.

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[7] However, we have not had a chance to examine these possibilities in detail.

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