



CRS Report for Congress

What's the Difference? — Comparing U.S. and Chinese Trade Data

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Summary

There is a large and growing difference between the official trade statistics released by the United States and the People's Republic of China. According to the United States, the 2006 bilateral trade deficit with China was \$232.5 billion. According to China, its trade surplus with the United States was \$144.3 billion — \$88.2 billion less.

This paper examines the differences in the trade data from the two nations in two ways. First, it compares the trade figures at the two digit level using the Harmonized System to discern any patterns in the discrepancies between the U.S. and Chinese data. This comparison reveals that over two-thirds of the difference in the value of China's exports to the United States is attributable to five types of goods. The second approach to examining the differing trade data involves a review of the existing literature on the technical and non-technical sources of the trade data discrepancies. This report will not be updated.

U.S. trade with the People's Republic of China (China) is becoming increasingly contentious as U.S. bilateral trade deficit rises.¹ Debate over this trade deficit is hampered because of disagreement between the two countries on how large the deficit actually is. According to U.S. figures, the 2006 bilateral trade deficit with China was \$232.5 billion. However, according to the Chinese, its trade surplus with the United States was \$144.3 billion — \$88.2 billion less than the U.S. figure (see **Table 1**). The difference amounts to over one quarter of total trade between the two nations using the U.S. data as the base, or nearly a third of total trade using China's figures as a base.

The size of the bilateral trade deficit also is an issue in proposed legislation addressing trade relations with China. For instance, H.R. 1002, which would impose tariffs on Chinese imports unless China revalues its currency, explicitly lists the U.S.

¹ For a more detailed discussion of key Sino-U.S. trade issues, see CRS Report RL33536, *China-U.S. Trade Issues*, by Wayne Morrison, and CRS Report RL31403, *China's Trade with the United States and the World*, by Thomas Lum and Dick K. Nanto.

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figures for the bilateral trade deficit with China among its findings. Similarly, H.R. 782 and S. 364, which would classify “exchange rate misalignment” or “exchange rate manipulation” as a countervailable export subsidy, both cite bilateral trade deficits as evidence of exchange rate misalignment or manipulation.

Comparison of U.S. and Chinese Trade Data

Table 1 lists the official trade statistics from the United States and China for the years 2001 to 2006, using comparable data.² According to both countries, the U.S. trade deficit with China is large and growing. Where the two sides differ is how big the deficit is and how fast it is growing. From the U.S. perspective, its bilateral trade deficit with China more than trebled in value over the last six years, from just over \$83 billion in 2001 to over \$250 billion in 2006. However, from the Chinese view, its bilateral trade surplus with the United States increased five fold over the last six years, from about \$28 billion in 2001 to over \$144 billion in 2006.

Table 1. U.S. and Chinese Trade Figures, 2001-2006
(billion dollars)

Year	U.S. Trade Figures		Chinese Trade Figures	
	Exports to China	Imports from China	Exports to United States	Imports from United States
2001	19.182	102.278	54.283	26.202
2002	22.128	125.192	69.951	27.230
2003	28.368	152.436	92.474	33.861
2004	34.744	196.682	124.948	44.679
2005	41.925	243.470	162.939	48.735
2006	55.224	305.788	203.516	59.222

Source: Global Trade Atlas, U.S. International Trade Commission.

Table 1 reveals that most of the discrepancy between the trade data from the two nations stems from significantly different figures for China’s exports to the United States. While the difference between the U.S. and Chinese figures for U.S. exports to China has been less than \$10 billion over the last six years, China’s figures for its exports to the United States differed by \$48 billion in 2001 and \$102 billion in 2006.

Delving into the Data: Examining HS Code

The most widely used system for classifying traded goods is the Harmonized Commodity Description and Coding System, commonly referred to as the Harmonized System or simply HS Code. Every product traded is classified into a 10-digit code. The first two digits of the products code corresponds to one of the 98 HS “chapters,” that classify all goods in general categories. The U.S. International Trade Commission maintains the U.S. version of the HS Code, officially called the “Harmonized Tariff

² In this report, export data are valued “free on board,” or F.O.B.; import data are valued including Cost, Insurance, and Freight, or C.I.F.

Schedule of the United States,” or HTS. Since both the United States and China release use the same HS chapters, it is possible to compare the trade data at this level.

Table 2 lists *in rank order* the top ten HS chapters according to the difference between the figures for U.S. imports from China and Chinese exports to the United States for 2006. In all 10 cases, the U.S. import figures exceeded China’s export figures.³ The top five HS chapters — footwear (64), machinery (84), electrical machinery (85), furniture (94), and toys and sporting goods (95) — account for over two-thirds (68.5%) of the difference between the U.S. and Chinese figures. The top 10 chapters collectively account for 83.0% of the difference.

Table 2. Top 10 Discrepancies for U.S. Imports from China, 2006
(billion dollars)

HS Chapter	U.S. Imports from China (U.S. data)	China’s Exports to U.S. (China Data)	Difference
Electrical Machinery (85)	66.930	46.179	20.751
Machinery (84)	64.277	46.374	17.903
Toys and Sporting Goods (95)	22.407	8.640	13.767
Furniture (94)	22.143	11.558	10.585
Footwear (64)	14.667	7.606	7.602
Woven Apparel (62)	12.502	7.881	4.621
Leather Goods (42)	7.374	3.620	3.754
Plastic (39)	8.274	5.658	2.616
Knitted Apparel (61)	8.440	6.300	2.141
Iron & Steel Products (73)	9.307	7.664	1.643

Source: Global Trade Atlas, U.S. International Trade Commission.

These 10 chapters also ranked high according to both countries in terms of their absolute value of trade. The first five chapters listed in **Table 2** were also the top five ranked chapters in terms of the value of imports from China, according to the United States, and accounted for 62.3% of the total value of imports in 2006. The first four sources for the discrepancies were also the top four sources of exports to the United States, according to China. Of the 10 chapters listed in **Table 2**, nine were among the top 10 sources of China’s exports (leather goods ranked 13th among the HS chapters)⁴ and all 10 were among the top 10 in rank order, according to the United States — but not in the same order. The 10 chapters listed above provided 77.3% of the value of what the United States said it imported from China in 2006, and 74.4% of what China said it exported to the United States.

³ The Chinese export figure for chapter 86, “railway and traffic signal equipment,” exceeded the U.S. import figure by \$1.185 billion in 2006.

⁴ Non-railway vehicles (chapter 87) ranked ninth among the chapters.

On the other side of the trade equation, there were three chapters where China's imports exceeded U.S. exports by more than \$1 billion, and one chapter where U.S. exports exceeded Chinese imports by more than \$1 billion. China's imports from the United States of machinery (84), electrical machinery (85), and optical and medical equipment (90) were more than \$1 billion greater than the U.S. exports to China. However, U.S. exports to China of iron and steel (72) were more than \$1 billion greater than China's imports from the United States.

It is also worth noting that on both sides of the trade balance equation, the greatest differences in the official trade statistics of the two nations occurred in the same HS chapters — machinery (84) and electrical machinery (85). The discrepancies between the official trade statistics for these two types of goods have been consistently large for flows in both directions since 2001. This indicates a systemic difference in the evaluation of the bilateral trade of these goods.

Explaining the Differences: Summary of the Literature

The question as to why China's official statistics are routinely much lower in value than the official U.S. trade statistics has been and continues to be the subject of analysis by scholars, government officials and other interested parties. The following is a short review of some of the key explanations provided in this literature, categorized into "technical" and "non-technical" explanations. "Technical" explanations refer to procedural or administrative causes for the discrepancies; "non-technical" explanations include causes arising from non-procedural or administrative sources.

Technical Explanations

Definitions of Exports and Imports. In its official statistics, China evaluates exports using the more commonly used "free on board," (F.O.B.) definition⁵ and the "cost, insurance, and freight, (C.I.F.) definition⁶ to evaluate imports. The United States, however, reports its exports evaluated by using the "freight along side" (F.A.S.) definition⁷ and values imports using a customs definition.⁸ As a result, a direct comparison of the official U.S. and Chinese trade balances reported in the media is misleading. In this report, U.S. trade figures are presented using the F.O.B. and C.I.F. definitions, thereby raising the values of exports, imports and the trade deficit, and increasing the discrepancy in the trade figures of the two nations.

Definition of Territory. The United States includes Puerto Rico and the U.S. Virgin Islands in its trade data; China does not, a comparatively minor source of difference in the trade figures.

⁵ "Free on board" includes the cost of getting the goods to port and loading them onto the ship.

⁶ The C.I.F. definition adds the cost of insurance and shipping (freight) to the value of the imported goods.

⁷ Unlike F.O.B., F.A.S. does not include the costs of clear the goods for export and loading the goods. As a result, the FAS value of a shipment is less than its FOB value.

⁸ The customs definition only includes the actual cost of the goods; it does not include the cost of insurance and freight. As a result the customs value of a shipment is less than its CIF value.

Timing. Because of the distance between China and the United States, it takes time between the export of the goods from China and their import in the United States. Goods in transit at the end of the year are counted as exports by China, but not as imports by the United States. However, the lag between shipments occurs at the beginning and the end of the year, and thus minimize the effect of timing on the overall trade balance difference.

Declaration of Country of Origin. The current practice of U.S. Customs is to rely on the declaration of the importer to determine the country of origin. Some analysts believe that importers are misidentifying a significant amount of imports as Chinese.

Exchange Rates. Because China's currency, the renminbi (people's money), is allowed to fluctuate within a small range against a basket of foreign currencies, the exchange rate between the renminbi and the U.S. dollar changes over time. The value of a shipment may change between the date it leaves China and it arrives in the United States due to changes in the exchange rate. Although the renminbi has appreciated against the U.S. dollar over the last couple of years, exchange rate changes are not a major factor in the discrepancy in the trade figures.

Non-Technical Explanations

Intermediation. Although estimates vary, most analysts agree that a large portion of China's exports arrive in the United States via a third party; Hong Kong being the most commonly identified location.⁹ The intermediation of shipments raises two sources of discrepancies. First, the exporter from China may not know that the goods will eventually be shipped to the United States, and will list the third party (e.g. Hong Kong) as its destination, but U.S. Customs will list the source of shipment as being China. Second, the value of the shipment may change — with or without any actual change in the goods — between its arrival in and departure from the third location. As a result, the Chinese export value will be less than the U.S. import value.

Under-Invoicing. Some analysts believe that Chinese importers may intentionally under value imports from the United States to lower the import tariff due on the shipment. In addition, some analysts believe that Chinese exporters may intentionally under value exports to the United States to maximize their net proceeds overseas for various tax and regulatory reasons. Due to the "hidden nature" of under-invoicing, it is difficult to assess how much this may be contributing to the differences in the trade data.

Implications for Congress

The release of the official U.S. trade figures for 2006 was soon followed by expressions of concern about the bilateral trade deficit with China. Several congressional committees have held or plan on holding hearings on the Sino-U.S. trade deficit and/or trade relations with China. Also, a number of bills have been or may yet be introduced in Congress with the express goal of reducing the U.S. trade deficit with China.

⁹ After adjusting for re-exports via Hong Kong, Fung, Lau and Xiong reduced the difference between the U.S. and Chinese trade deficit for 2005 from \$87.4 billion to \$26.5 billion. Tong estimated that adjustments for re-exports resulted in a \$22 billion reduction in the trade balance difference for 2003.

China, however, does not accept the accuracy of the official U.S. figure for the Sino-U.S. trade balance, and there are reasons for China's opinion. China's Foreign Ministry spokeswoman, Jiang Yu, recently said, "Imbalances in China-U.S. trade are an objective fact, but this is also related to the two sides' different statistical methods."¹⁰

Also, when considering means or actions designed to reduce the U.S. trade deficit with China, it is useful to know which goods are the main sources of discrepancies between Chinese and U.S. trade figures, and how important they are in the overall trade flow between the two nations, so that "trade remedies" may be better targeted at the "problem." According to this report, the main problems appear to be in the trade figures for electrical machinery, machinery, toys and sporting goods, and furniture.

For those causes of the differences resulting from data compilation — such as misidentification of value or country of origin of imports — Congress may choose to appropriate additional funding for the responsible U.S. agency and/or provide for training or assistance to China's customs services. In other cases, the information may be helpful in persuading China to amend or alter its laws, regulations and policies pertaining to the import or export of goods to the United States.

Selected Bibliography on the Differences Between U.S. and Chinese Bilateral Trade Figures

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¹⁰ *Washington Trade Daily*, February 16, 2007.