CBO

TESTIMONY

Statement of
Douglas Holtz-Eakin
Director

The Chinese Exchange Rate and U.S. Manufacturing Employment

before the
Committee on Ways and Means
U.S. House of Representatives

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Mr. Chairman and Members of the Committee, thank you for inviting me to testify on the relationship among patterns in manufacturing employment; U.S. trade with China; the exchange value of China's currency, the yuan; and legislative proposals linking increases in the yuan's value with potential trade sanctions by the United States.

The Perceived Problem and the Proposed Legislation

Since 1994, China has maintained a fixed rate of exchange of 8.28 between the yuan and the U.S. dollar. Today, the United States' bilateral trade deficit with China is the largest deficit that this nation has with any single trading partner, and U.S. manufacturing employment has registered a decline of 2.8 million jobs since July 2000. Some observers believe that China's exchange rate policy artificially holds down the value of the yuan to the detriment of U.S. manufacturing output and employment in both import-competing and exporting industries. They contend that allowing or forcing the yuan to appreciate relative to the dollar will have a notable and positive effect on manufacturing output and employment in the United States.

Recent legislative proposals reflect that line of reasoning. H.R. 3058 and S. 1586 would require increased tariffs or another form of barrier against Chinese imports if China did not agree either to allow the yuan to float on foreign currency markets or to revalue it relative to the dollar. The specific impact of any such measure would depend on the magnitude of the exchange rate change or tariff. Never-theless, the Congressional Budget Office (CBO) has reached the following general conclusions regarding the prospects for any such legislation's achieving the goals outlined below:

- *Increasing U.S. Manufacturing Employment*. At best, such legislation would increase employment in manufacturing by a small amount and for a limited period. It would not have a significant permanent effect.

- *Reducing the U.S. Bilateral Trade Deficit with China*. Such legislation might somewhat diminish the trade deficit with China but at the expense of increases in the United States' bilateral deficits with other countries.

- *Reducing the Chinese Multilateral Trade Surplus*. Such legislation could shrink China's multilateral trade surplus (its surplus with all trading partners).

- *Reducing the U.S. Multilateral Trade Deficit*. Such legislation could reduce the multilateral trade deficit of the United States by at most a small amount and, depending on the circumstances (in particular, if the legis-lation was paired with corresponding measures by China against U.S. exports), might even increase that deficit by a small amount.

Before I turn to CBO's analysis of the specific impacts of the proposed measures, it is useful to discuss the context of recent economic developments in the United States and China.

U.S. Manufacturing

Employment in the manufacturing sector of the U.S. economy stood at 14.6 million jobs in September 2003, its lowest level since October 1958 and down from 17.4 million in July 2000 (*see Figure 1*). Much of the decline is probably temporary and related to the recent recession and the relatively weak recovery in demand since the recession's end in November 2001. Some of that decline, however, reflects a long-term downward trend in manufacturing employment. The past three years of recession and moderate recovery were particularly hard on employment in manufacturing, as the demand for manufactured goods remained weak in both the United States and the rest of the world and as virtually all of the moderate upturn in demand since the trough of the recession was met by extraordinary gains in productivity rather than by increases in the number of jobs or work-hours. Because changes in employment are dominated by those large cyclical, as well as trend, changes, any effect that trade with China has had on U.S. manufacturing employment is more likely to be apparent by examining more-detailed industry-level data.

Long-Term Influences

The long-term decline in U.S. manufacturing employment largely reflects the strong trend growth of productivity in the manufacturing sector and a pattern in consumption spending away from goods and toward services. Currently, a worker in manufacturing produces more than he or she did ten, or even five, years ago, largely because manufacturers have invested in more and better capital goods. Also, as the U.S. and other economies have become richer, households are allocating a smaller fraction of their consumption to goods, causing a downward trend in the goods share of GDP. Those long-term influences suggest that employment in the manufacturing sector may not return to prerecession levels even after the economy has fully recovered from the 2001 downturn. Indeed, the share of total employment in the manufacturing sector has trended down strongly for the past 50 years, whereas the rate of growth of manufacturing output has been only slightly slower than that of real (inflation-adjusted) gross domestic product, or GDP (*see Figure 2*).

Productivity. The long-term growth of productivity, driven by investment and new technology, has allowed manufacturers over at least the past 50 years to match the pace of overall economic growth without corresponding growth in employment. That trend continues today: labor productivity in manufacturing

Figure 1.

Manufacturing Employment
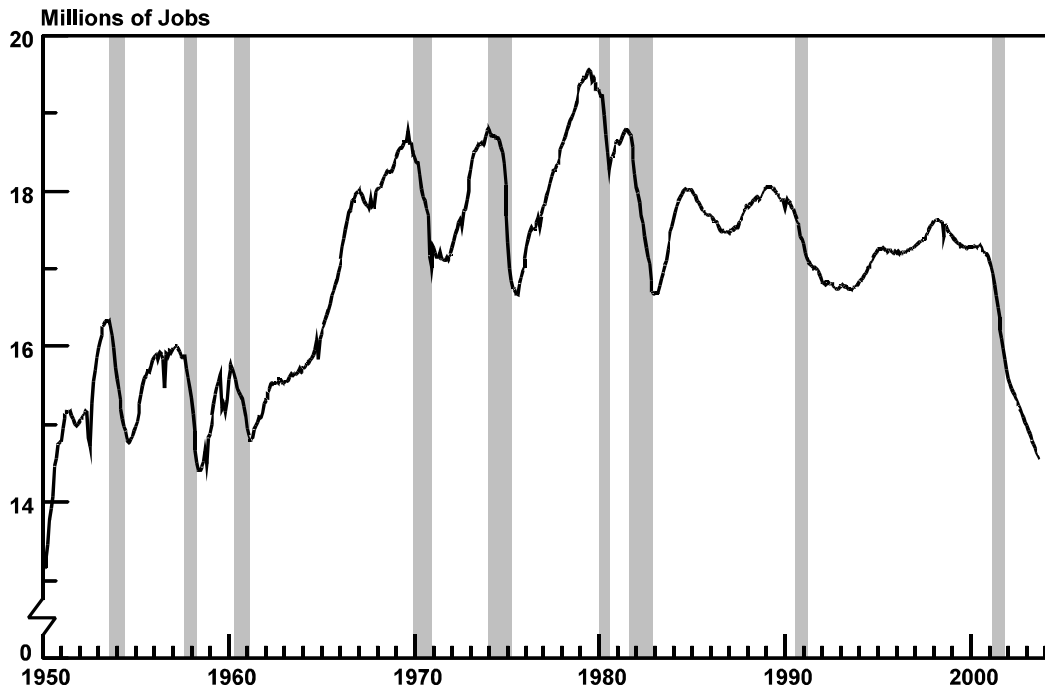
Millions of Jobs

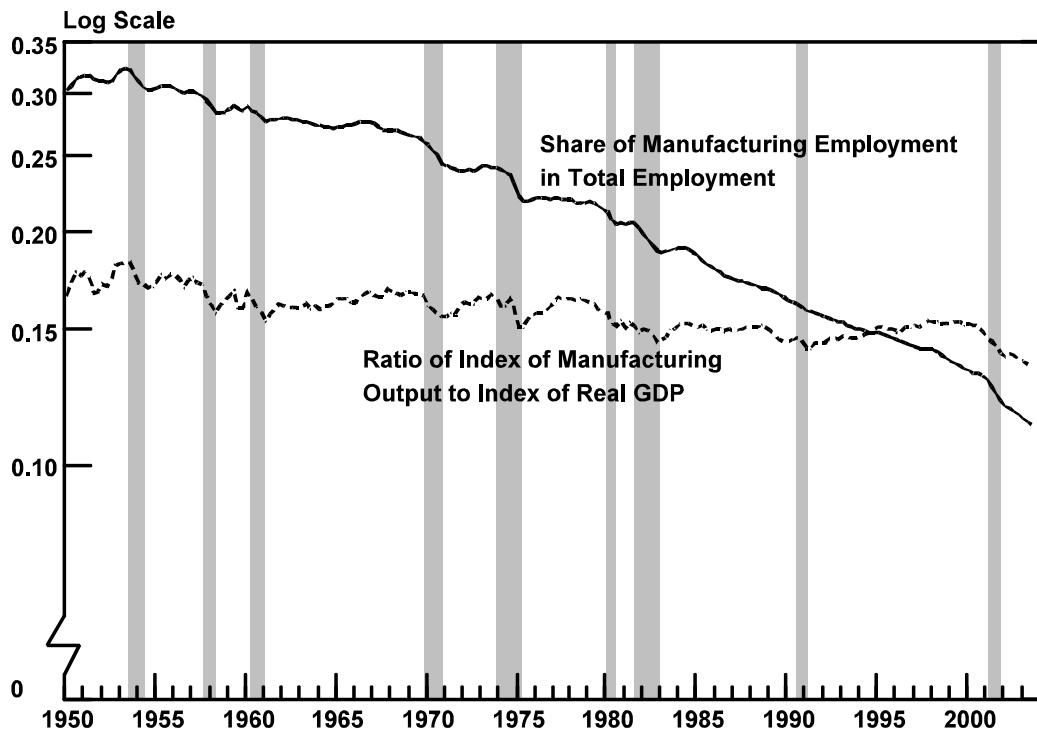Note: Shaded areas denote recessions as defined by the National Bureau of Economic Research.

(manufacturing output per hour worked in manufacturing) has grown at a surprisingly rapid pace during the past several years.

Since the peak of the last business cycle in March 2001, labor productivity in manufacturing has risen at an average annual rate of 4.0 percent, faster than its average annual rate of growth during previous postwar recessions and the early part of the ensuing recoveries (*see Figure 3*). That rapid productivity growth has allowed manufacturers to meet the recent weak demand for their goods with a smaller workforce working fewer hours than would have been required if productivity had grown more slowly.

Shifts in Demand. Further contributing to the long-term decline in manufacturing employment has been the shift in demand by consumers toward services and away

Figure 2.

Manufacturing Output and Employment

Sources: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Department of Commerce, Bureau of Economic Analysis.

Note: Shaded areas denote recessions as defined by the National Bureau of Economic Research.

from manufactured goods. As real income has risen over time, the demand for services has increased by more than the demand for goods. For example, in 2000, 42 percent of consumer spending was devoted to goods, down from 53 percent in 1979 and 67 percent in 1950.

The Recession of 2001 and Its Aftermath

The recession and its aftermath have hit the manufacturing sector hard. Declines in employment are normal during recessions, but the fact that employment has continued to fall as much as it has since the recession's official end is unique to this downturn.

Employment in manufacturing through September 2003 has declined for 38 consecutive months, with the most recent monthly increase posted in July 2000. The magnitude of job losses in the recent recession and recovery is

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Figure 3.

Cyclical Behavior of Labor Productivity in Manufacturing
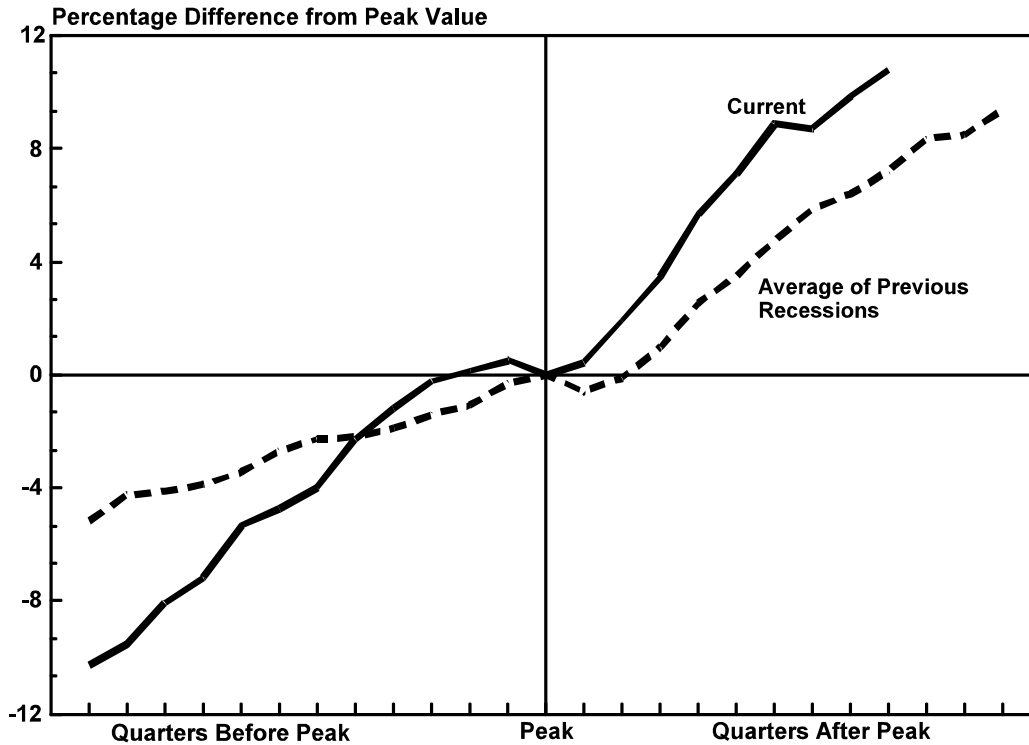
Sources: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

Note: The peak is the end of a business-cycle expansion as defined by the National Bureau of Economic Research.

comparable to that surrounding the back-to-back recessions in 1980 and 1981 to 1982. Indeed, employment has fallen by 16 percent since its peak in the second quarter of 2000, compared with losses averaging 10.2 percent during and surrounding four previous periods of recession.[1] More than half of the losses since the peak in employment have occurred in five industries: computer and electronic products, transportation equipment, machinery, fabricated metals, and apparel. At the same time, however, employment has declined in all 21 industries that make

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1. Those periods of recession are as follows (with "Q" used to mean "quarter"): 1969Q3 to 1971Q3, 1973Q4 to 1975Q2, 1979Q2 to 1983Q1 (which treats the 1980 and 1981-1982 recessions as a single episode), and 1989Q1 to 1992Q4. Note that those dates are defined in terms of manufacturing output and employment and do not strictly correspond to recessions as designated by the National Bureau of Economic Research, which maintains the official chronology of U.S. business cycles.

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up the three-digit level of manufacturing industries in the North American Industrial Classification System (NAICS), and 15 of the 21 have experienced losses exceeding 10 percent. In fact, all 21 industries have shown declines even since November 2001.[2]

The drop in manufacturing employment since the beginning of the recession largely reflects the weak demand for manufactured goods both in the United States and among its major trading partners. The demand for capital goods remained stagnant in the years following the investment surge of the late 1990s. As a consequence, manufacturing output fell sharply during the recession, and it has grown more slowly in the quarters since the recession ended than it did on average after previous downturns (*see Figure 4*). The weak demand for U.S. manufactured goods among the nation's major trading partners reflects the tepid pace of their economies' growth. In the past few years, foreign GDP has grown only about as fast as U.S. GDP (*see Figure 5*). By contrast, during past U.S. recessions and the early part of recoveries, foreign economic growth generally was faster than that of the United States, supporting U.S. exports. As shown in *Figure 6*, U.S. exports have been weaker during the 2001 recession and the recovery thus far than in most previous recessions. The figure also indicates that imports have grown about as fast as they typically have after previous recessions, suggesting that the recent increase in the U.S. trade deficit is due more to weak growth of exports than to strong growth of imports.
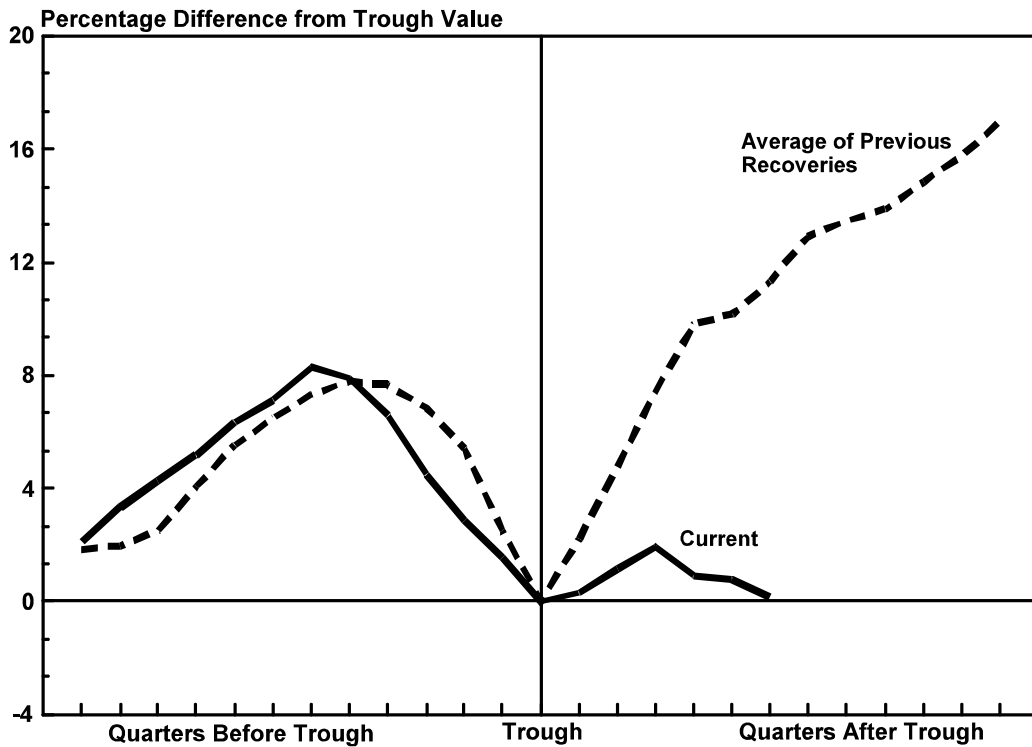
The United States' relatively lackluster export performance has probably also been influenced by the strength of the U.S. dollar. An increase in the value of the dollar raises the price of U.S. exports for foreigners and lowers the dollar price of U.S. imports. In the absence of other influences, those price changes tend to increase the U.S. trade deficit. The dollar appreciated in both nominal and real terms against most currencies between 1990 and early 2001, and although it has weakened recently, it is still strong relative to its value in virtually all of the 1990s (*see Figure 7 on page 10*).

Employment in the manufacturing sector is likely to pick up substantially once the demand for manufactured goods recovers from its recent slump. Nevertheless, the trend of long-term decline suggests that the level of employment is not likely to return to its postwar high of the late 1970s or possibly even to its prerecession level.

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2.   NAICS is a newly introduced system of classifying industries, created jointly by the United States, Canada, and Mexico. All establishments are classified on the basis of the production process they use, in contrast to the previous Standard Industrial Classification, or SIC, system, in which some establishments were classified by using different criteria (such as class of customer).

Figure 4.

Cyclical Behavior of Manufacturing Output

Percentage Difference from Trough Value

Average of Previous Recoveries

Current

Quarters Before Trough   Trough   Quarters After Trough

Sources: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.
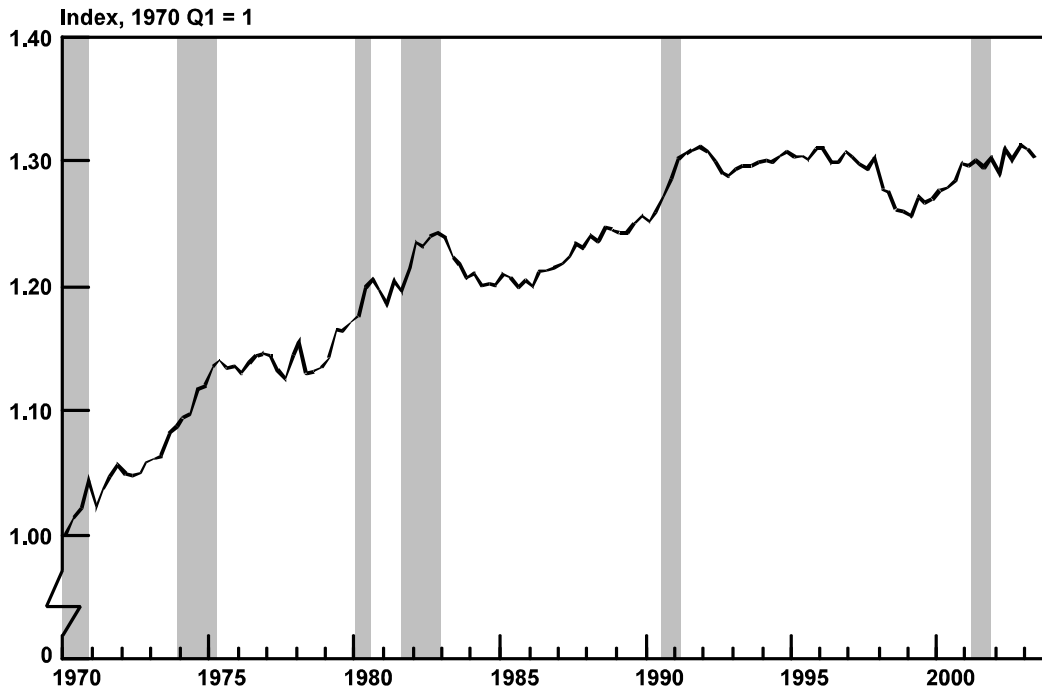
Note: The trough is the end of a recession as defined by the National Bureau of Economic Research.

Measurement Issues

The long-term decline in manufacturing employment is also due in part to a structural shift in the organization of work: manufacturers have increasingly hired temporary workers and outsourced tasks to domestic nonmanufacturing firms that had previously been performed by manufacturing employees. Between 1990 (the first year for which data consistent with the current definition of the industry are available) and 2000, employment at temporary-help services more than doubled (from 1.2 million jobs to 2.6 million), although it fell sharply during the recession. Similarly, historical data that are not strictly comparable with the current data nevertheless suggest that the number of temporary workers had at least doubled during the 1980s as well.

Typically, about 30 percent of temporary workers were working at manufacturing establishments during the 1990s, according to results from periodic special supplements to the Current Population Survey. However, for statistical purposes,

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Figure 5.

Ratio of Foreign to U.S. Real GDP

Index, 1970 Q1 = 1

[A line chart showing the ratio of foreign to U.S. real GDP from 1970 to approximately 2002. The y-axis ranges from 0 to 1.40. The line starts near 1.00 in 1970 and generally rises over time, reaching about 1.14 by 1975, dipping and rising to about 1.24 by 1982, then climbing to about 1.31 around 1991, staying near 1.29-1.31 through the late 1990s, dipping to about 1.26 around 1999, and rising back to about 1.31 by 2002. Vertical shaded bars denote recession periods.]
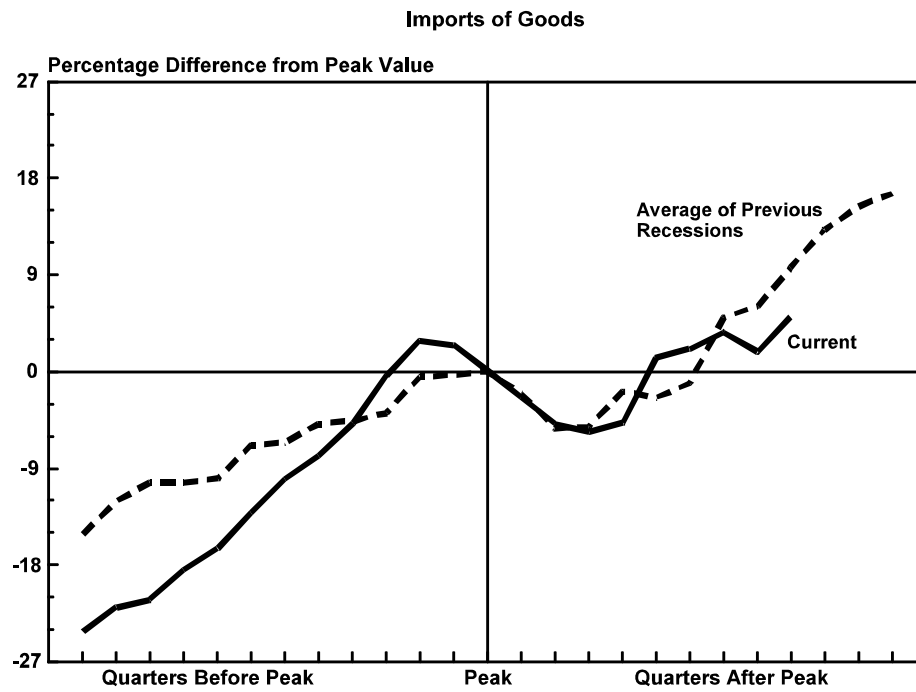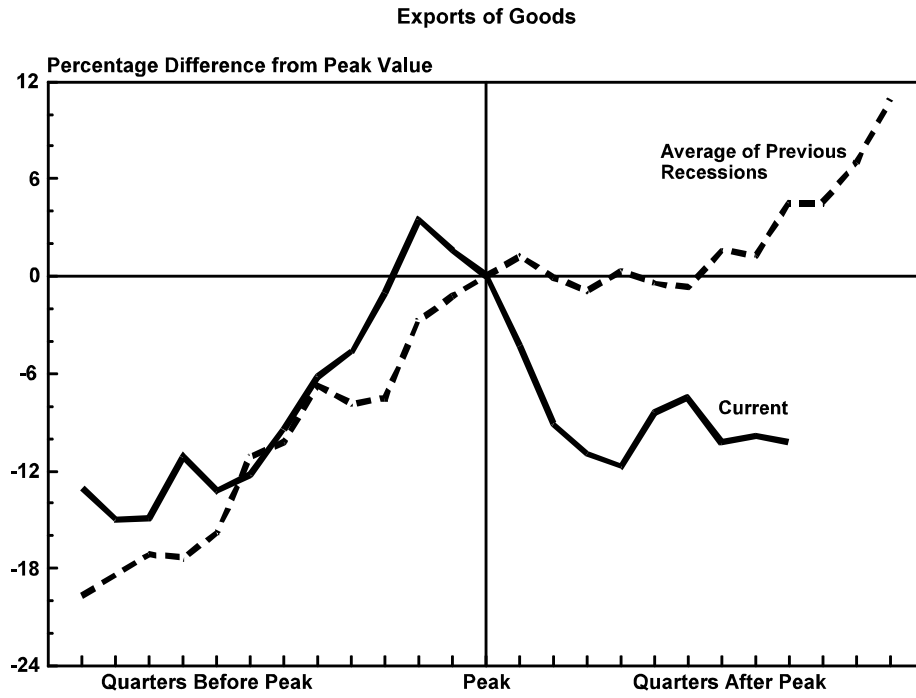
Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Research.

Notes: Foreign gross domestic product (GDP) is the export-weighted GDP of Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, Italy, Japan, Mexico, the Netherlands, Singapore, South Korea, Taiwan, and the United Kingdom.

Shaded areas denote recessions as defined by the National Bureau of Economic Research.

they were treated as being employed by the temporary-help services industry. An implication of that finding is that a large part of the decline in manufacturing employment during the 1990s, as well as a portion of the decline during the 1980s, might be attributable to the increasing use of temporary workers. In addition, manufacturers today are increasingly contracting with outside firms to provide certain support functions (for example, cafeteria and janitorial services and payroll processing) instead of providing them internally; that, too, has tended to depress measured employment attributable to manufacturing. However, data are not available to determine how much (if any) of the decline in manufacturing jobs since 2000 can be ascribed to those phenomena.

Figure 6.
U.S. Exports and Imports

Exports of Goods

Percentage Difference from Peak Value

Average of Previous Recessions

Current

Quarters Before Peak   Peak   Quarters After Peak

Imports of Goods

Percentage Difference from Peak Value

Average of Previous Recessions

Current

Quarters Before Peak   Peak   Quarters After Peak
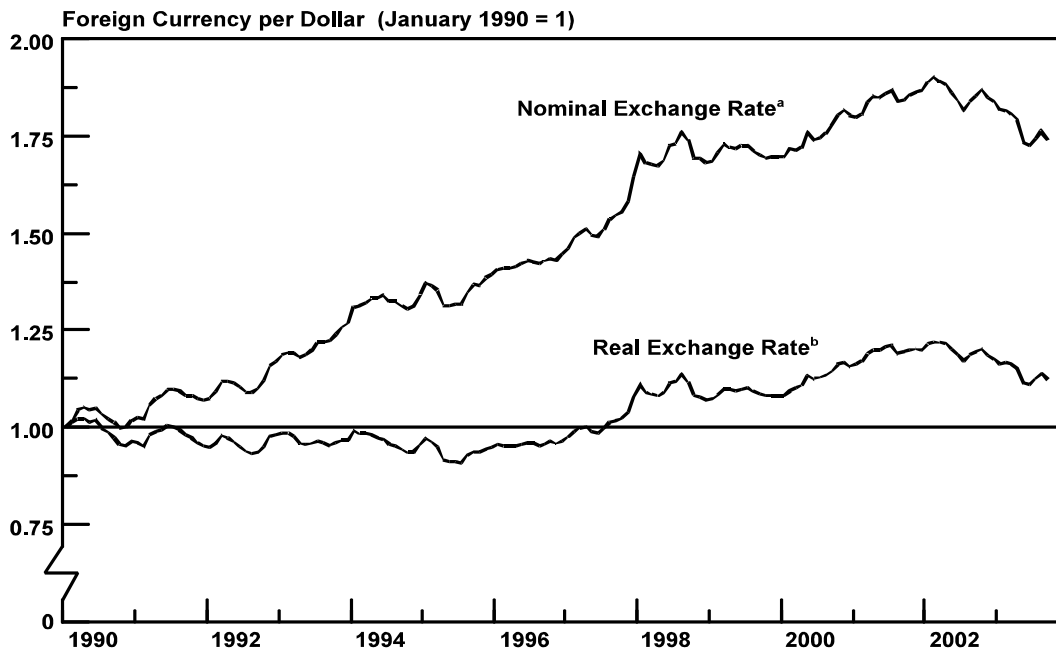
Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Figure 7.

U.S. Dollar Exchange Rate

Foreign Currency per Dollar (January 1990 = 1)

Sources: Congressional Budget Office; Federal Reserve Board.

a. The nominal exchange rate is a trade-weighted exchange value of the U.S. dollar against 35 foreign currencies.

b. The real exchange rate is the nominal exchange rate multiplied by the U.S. price level relative to the trade-weighted foreign price level.

How Imports from China May Be Affecting Particular Industries

In 2002, imported goods from China accounted for 10.8 percent of the value of all U.S. imports of goods, up from 7.8 percent in 1998. Of the increase in the value of all such imports over that period, 22 percent is attributable to goods from China. To assess the possible impact on U.S. manufacturing employment of increased imports from China, CBO examined patterns of employment in detail, looking at manufacturing industries covered under the four-digit NAICS codes. CBO focused on the performance of 25 such industries from 1998 through 2000 in which Chinese imports were 10 percent of the value of total imports and China either accounted for half of the increase in the value of imports or increased its

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imports to the United States in cases in which total industry imports fell.[3] In 2000, those industries together employed 5.5 million workers, or roughly 32 percent of overall manufacturing employment. Between 2000 and 2002 (based on full-year averages), employment in those industries fell by 13.8 percent, or 753,000 jobs. By comparison, employment in all other manufacturing industries fell by 10.2 percent over that period.

The decline in employment for all other manufacturing industries could be interpreted as a rough indicator of conditions common to the entire manufacturing sector, independent of the impact of trade with China. Under that assumption, the additional 3.6 percentage-point decline could plausibly be attributable to expanding trade with China. That decline translates into a loss of about 200,000 manufacturing jobs, or 10 percent of the total job loss in manufacturing between 2000 and 2002. However, the industries that CBO assessed performed somewhat better than the rest of manufacturing between 1998 and 2000. Thus, if changes in employment over the full four-year period from 1998 to 2002 are considered, only about 90,000 additional lost manufacturing jobs can be attributed to imports from China.

Those estimates might be too high or too low, for a number of reasons. On the one hand, the overall impact on manufacturing employment might be as much as twice the direct effect once one accounted for the lost income and concomitant reduction in spending. On the other hand, nearly half of the excess manufacturing employment losses derived from this exercise were in firms producing semiconductors, an industry that has experienced rapid productivity growth and depressed demand. The calculations also assumed that all of the increase in imports from China came exclusively at the expense of domestic producers and were not displacing imports from other countries. Finally, although increased imports (from all trading partners) will in many instances result in identifiable job losses, any effect on overall employment, as noted earlier, will be temporary.

One industry that has experienced especially large employment losses in the past several years is information technology (IT). Since early 2001, employment in firms making computers and electronic products has shrunk by 470,000 jobs, or roughly a quarter. Much of that decline can be traced to the large boom and subsequent decline in the late 1990s in businesses' investment in computers and telecommunications equipment. But it also appears that some U.S. production has

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3.   The four largest industries meeting those criteria were semiconductors and other electronic components; miscellaneous manufactured commodities; printing, publishing, and similar products; and household and institutional furnishings and kitchen cabinets.

been displaced by overseas competitors, including China, in recent years.[4] In 2002, the U.S. trade deficit in IT products (defined as computer, electronic, and communications equipment; consumer audio and visual equipment; and medical and other instruments) increased by $17 billion. Of that amount, $7.2 billion could be attributed to the change in trade flows with China.

That shift reflects several factors. One factor tending to increase the United States' trade deficit with China is China's "expanding role as a center for low-cost manufacturing and assembly of standardized IT products."[5] Another factor is the particular pattern of demand for IT goods over the past several years. China tends to specialize in exports of IT consumer goods, for which demand has remained strong, whereas U.S. production and exports focus much more on IT products for businesses, for which recent demand has been quite weak. A factor tending to lower the trade deficit with China is that IT producers in the United States have substantially increased exports of intermediate products (such as microprocessors) to China. As a result, it is difficult to quantify how much of the IT sector's decline in employment over the past several years is directly related to trade. However, the specific effect is probably small relative to the impact of the slump in businesses' investment spending and of continuing advances in productivity.

Patterns of International Trade

U.S. imports from China and the bilateral U.S. trade deficit with China have grown rapidly over the past decade. However, the vast bulk of that growth in imports has displaced imports from other countries rather than U.S. domestic production. The primary force driving the increase in imports from China is that manufacturers have shifted the final assembly of many of their products from other Asian (and perhaps a few non-Asian) countries to China. Much of the value of Chinese exports continues to consist of parts made elsewhere in Asia. In short, the United States' bilateral trade deficit with China represents the net balance of trade with many Asian countries that is channeled primarily through China.

U.S.-Chinese Bilateral Trade

With the growth of U.S. exports to and U.S. imports from China over the past decade, China has become one of the United States' most important trading partners. Significant U.S. exports to China include airplanes, electronic components and equipment, and agricultural products and chemicals. Significant imports include electronic equipment, toys, footwear, and apparel. The United

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4.   Rob Valletta, "Is Our IT Manufacturing Edge Drifting Overseas?" *Federal Reserve Bank of San Francisco Economic Letter*, No. 2003-30 (October 10, 2003).

5.   Ibid.

States' trade deficit with China has also grown rapidly and is now the largest bilateral deficit that the United States has with any country.

U.S. Exports to China. Between 1992 and 2002, U.S. exports to China increased from $7.5 billion to $22.1 billion, an average annual rate of growth of 11.4 percent. More recently, that rate has accelerated, averaging 16.5 percent between 2000 and 2002. That rapid growth has raised China from the tenth largest U.S. export market in 1997 to the sixth largest in 2002. Thus far in 2003, China is surpassing South Korea to become the United States' fifth largest export market (*see Table 1*).

Although exports to China have grown rapidly on a percentage basis, that growth was from a small base. What matters more from the standpoint of demand for U.S. products and jobs in the U.S. export sector is the overall dollar value of the growth of those exports. By that measure, China ranked fourth among markets

Table 1.

The Largest Markets for U.S. Exports

Country or Region	U.S. Exports in 2002 in Billions of Dollars	U.S. Exports from January to July 2003 in Billions of Dollars	U.S. Exports in 2002 as a Percentage of Total Exports
Canada	160.8	97.8	23.2
European Union	143.7	87.1	20.7
Mexico	97.5	54.5	14.1
Japan	51.4	30.2	7.4
South Korea	22.6	13.9	3.3
China	**22.1**	**14.8**	**3.2**
Taiwan	18.4	9.4	2.7
Singapore	16.2	9.5	2.3
Australia	13.1	7.5	1.9
Hong Kong	12.6	7.4	1.8
Brazil	12.4	6.2	1.8
Malaysia	10.3	6.0	1.5
Switzerland	7.8	5.0	1.1
Philippines	7.3	4.7	1.0
Israel	7.0	4.0	1.0
Memorandum:			
All Countries and Regions	693.3	411.1	100.0

Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Numbers given are free-alongside-ship values of total exports.

that increased their demand for U.S. exports from 1992 through 2002 and third from 1997 through 2002 (well behind Mexico and a bit behind Canada). Thus, even with its rapid growth, China is a substantially smaller market than Mexico is—less than one-fourth its size—and is not likely to become comparable in the near future.

The largest categories of exports by value in 2002 were airplanes, semiconductors and electronic components, electronic equipment (such as computers and navigational and medical instruments), soybeans, and various fertilizers and chemicals (*see Table 2*).

U.S. Imports from China. As rapidly as the value of U.S. exports to China has grown, the value of imports from that country has risen even more quickly. From 1992 to 2002, imports increased from $27.4 billion to $133.5 billion, for an average annual rate of growth of 17.2 percent. The average annual rate from 2000 to 2002 was a slower 11.4 percent—still fast in comparison with imports from other major trading partners but probably slowed by the recession in the United States in 2001, which depressed demand.

With that rapid growth, China has moved from being the fifth largest supplier of U.S. imports in 1997 to the fourth largest in 2002 (*see Table 3*). As with exports, the growth's impact on output and employment in competing industries in the United States is more closely related to the absolute dollar value of the increase in imports than to the percentage growth in their value. Similarly, the benefit of import growth—lower prices for consumers and businesses that import intermediate goods for their production processes—is also more closely related to the absolute dollar value of increased imports. By that measure, China was the third most rapidly growing supplier of U.S. imports from 1992 through 2002 and the second from 1997 through 2002 (behind the European Union). So far in 2003, China's growth has caused it to surpass Mexico to become the United States' third largest source of imports.

The largest categories (in terms of value) of U.S. imports from China are various kinds of electronic equipment (for example, computers and audio and video equipment), toys, footwear, and apparel (*see Table 4*).

The United States' Trade Deficit with China. The United States' trade deficit with China increased from $19.9 billion in 1992 to $111.4 billion in 2002, growing at an average annual rate of 18.8 percent (*see Figure 8 on page 18*). The average annual rate from 2000 to 2002 was a slower 10.4 percent, but it was still rapid in comparison with the growth rates of deficits with other major trading partners. That growth made the trade deficit with China in 2002 the largest of any of the United States' bilateral deficits (it was the second largest in 1997). So far in

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Table 2.

The Largest Categories of U.S. Exports to China in 2002

Product Category[a]	In Billions of Dollars	As a Percentage of All U.S. Exports to China
Aerospace Products and Parts	3.6	16.4
Semiconductors and Other Electronic Components	2.2	9.8
Waste and Scrap	1.2	5.5
Computer Equipment	1.2	5.3
Navigational, Measuring, Electromedical, and Control Instruments	1.0	4.6
Soybeans	0.9	4.0
Resin and Synthetic Rubbers	0.8	3.4
Fertilizers	0.7	3.0
Other General-Purpose Machinery	0.6	2.7
Other Basic Organic Chemicals	0.6	2.7
Meat Products and Meat-Packaging Products	0.6	2.5
Telephone Apparatus	0.5	2.2
Other Industrial Machinery	0.5	2.1
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment	0.4	1.6
Paper Mill Products	0.3	1.5
Metalworking Machinery	0.3	1.4
Special Classification Provisions	0.3	1.4
Mining and Oil and Gas Field Machinery	0.2	1.1
Commercial and Service-Industry Machinery	0.2	1.1
Pulp Mill Products	0.2	0.9
Electrical Equipment	0.2	0.9
Radio and Television Broadcasting and Wireless Communications Equipment	0.2	0.9
Pharmaceuticals and Medicines	0.2	0.9
Pumps and Compressors	0.2	0.8
All Other Chemical Products and Preparations	0.2	0.8

Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Numbers are free-alongside-ship values of total exports.

a. Product categories correspond to five-digit codes of the North American Industrial Classification System.

Table 3.

The Largest Suppliers of U.S. Imports

Country or Region	U.S. Imports in 2002 in Billions of Dollars	U.S. Exports from January to July 2003 in Billions of Dollars	U.S. Imports in 2002 as a Percentage of Total Imports
European Union	232.1	144.4	19.3
Canada	214.0	131.0	17.8
Mexico	136.1	79.7	11.3
China	**133.5**	**85.7**	**11.1**
Japan	124.6	70.1	10.4
South Korea	36.9	21.3	3.1
Taiwan	33.5	18.7	2.8
Malaysia	24.7	14.4	2.1
Brazil	16.7	10.8	1.4
Venezuela	15.8	9.4	1.3
Thailand	15.7	8.9	1.3
Singapore	15.1	9.2	1.3
Saudi Arabia	13.9	12.4	1.2
Israel	12.6	7.7	1.1
India	12.4	7.9	1.0
Memorandum:			
All Countries and Regions	1,202.4	741.2	100.0

Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Numbers are customs-insurance-freight values of general imports.

2003, it remains the largest (*see Table 5 on page 19*). In addition, the United States' deficit with China had the second largest dollar increase of any deficit with a U.S. trading partner from 1992 through 2002—although the increase was just barely smaller than the increase in the deficit with the European Union.

The United States' Multilateral Trade Balance
Individual bilateral trade balances, even the United States' growing deficit with China, generally are unimportant in and of themselves. At most, they have significance only as part of—and only to the extent that they affect—the United States' multilateral trade balance. Even though the deficit with China is larger than the deficit that the United States has with any other country, it accounts for only 21.9 percent of the nation's trade deficit with the world. Similarly, the increase in the trade deficit with China over the past 10 years represents only 22.7 percent of the increase in the United States' multilateral trade deficit; the

Table 4.

The Largest Categories of U.S. Imports from China in 2002

Product Category[a]	In Billions of Dollars	As a Percentage of All U.S. Imports from China
Computer Equipment	12.4	9.3
Dolls, Toys, and Games	11.1	8.3
Footwear	10.6	8.0
Audio and Video Equipment	9.3	6.9
Semiconductors and Other Electronic Components	6.4	4.8
Household and Institutional Furniture	6.4	4.8
Other Manufactured Commodities	5.0	3.8
Women's and Girls' Apparel	4.8	3.6
Small Electrical Appliances	3.7	2.7
Lighting Fixtures	3.4	2.5
Other Leather Products	3.2	2.4
Other Plastics Products	2.8	2.1
Sporting and Athletic Goods	2.6	2.0
Radio and Television Broadcasting and Wireless Communications Equipment	2.3	1.7
Other Fabricated Metal Products	2.1	1.6
Telephone Apparatus	2.1	1.6
Commercial and Service-Industry Machinery	2.0	1.5
Other Apparel	1.7	1.3
Jewelry and Silverware	1.7	1.3
Apparel Accessories	1.7	1.3
Other General-Purpose Machinery	1.6	1.2
Men's and Boys' Apparel	1.5	1.2
Navigational, Measuring, Electromedical, and Control Instruments	1.5	1.1
Curtains and Linens	1.4	1.0
Pottery, Ceramics, and Plumbing Fixtures	1.2	0.9

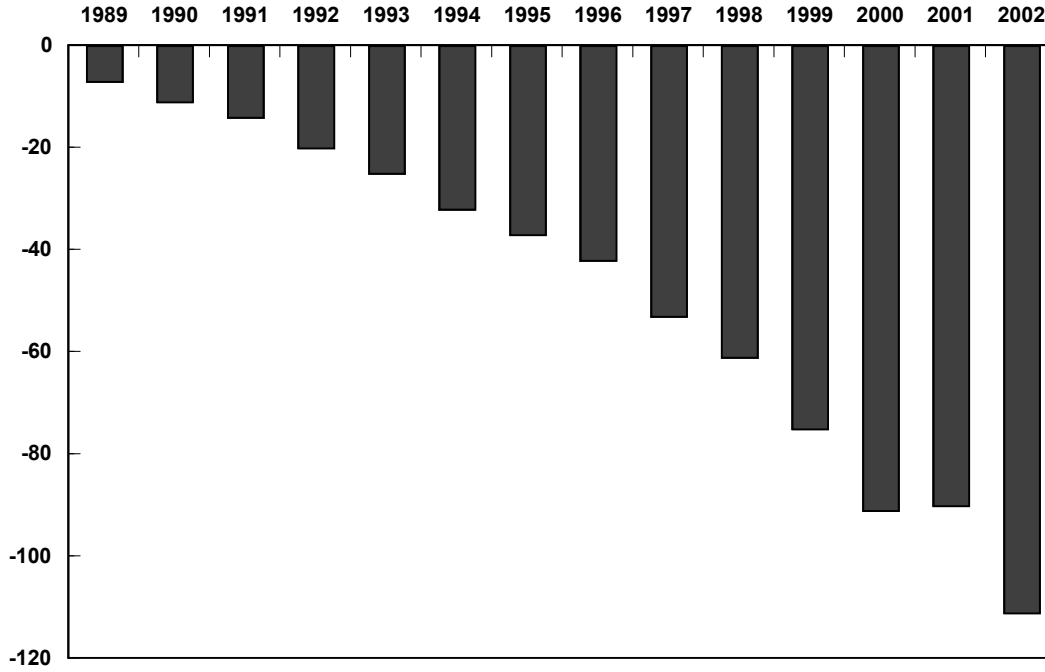Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Numbers are customs-insurance-freight values of general imports.

a. Product categories correspond to five-digit codes of the North American Industrial Classification System.

Figure 8.

The United States' Trade Balance with China, 1989 to 2002

(In billions of dollars)

Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: The trade balance is calculated using free-alongside-ship values of total exports and customs-insurance-freight values of general imports.

corresponding number for the past five years is 19.6 percent (*see Figure 9*). The vast majority of U.S. trade and of the United States' trade deficit is with countries other than China.

Although many people focus exclusively on international conditions to explain the multilateral trade balance, in practice, some of its most important determinants have domestic origins. In particular, the difference between gross investment in the United States and gross domestic saving represents the nation's demand for capital inflows from the rest of the world. Those flows of resources into the U.S. economy provide funds to finance net imports and also influence the rate of exchange between the dollar and other currencies. Thus, changes in the bilateral terms between the United States and China that do not alter overall U.S. investment or saving decisions will not influence the multilateral balance.

Table 5.

The Largest U.S. Trade Deficits

Country	U.S. Trade Deficit in 2002 in Billions of Dollars	U.S. Trade Deficit from January to July 2003 in Billions of Dollars	U.S. Trade Deficit in 2002 as a Percentage of Total Trade Deficits
China	**111.4**	**70.9**	**21.9**
European Union	88.4	57.2	17.4
Japan	73.2	39.9	14.4
Canada	53.2	33.1	10.4
Mexico	38.6	25.2	7.6
Taiwan	15.1	9.2	3.0
Malaysia	14.4	8.4	2.8
South Korea	14.3	7.4	2.8
Venezuela	11.4	8.1	2.2
Thailand	10.8	5.8	2.1
Saudi Arabia	9.1	9.8	1.8
India	8.4	5.2	1.6
Indonesia	7.8	4.5	1.5
Israel	5.6	3.7	1.1
Nigeria	5.2	5.7	1.0
Memorandum:			
All Countries	509.2	330.1	100.0

Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Numbers are based on free-alongside-ship values of total exports and customs-insurance-freight values of general imports.

Saving and investment in the United States are determined by a complex mix of effects deriving from the business cycle, monetary policy, fiscal policy, the regulatory environment for business, the taxation of saving and investment, the desire to save for the future, and productivity growth. Although the yuan's exchange rate against the dollar could, in principle, influence U.S. saving and investment to some extent, one would not expect the effects to be large. Rather, one would expect that much of any increase in U.S. imports from China resulting from a relatively low value of the yuan would be offset by declines in U.S. imports from other countries—and indeed, that is what has happened.

Marcus Nolan, at the Institute for International Economics, estimated in the early to mid-1990s that 70 percent to 80 percent of increased U.S. imports from China displaced imports from other countries rather than U.S. production. CBO's more recent analysis indicates that the comparable figure for 1997 through 2002 was even higher. From 2000 through 2002, U.S. imports from China increased by

Figure 9.

The United States' Trade Balances with China and the World, 1989 to 2002

(In billions of dollars)
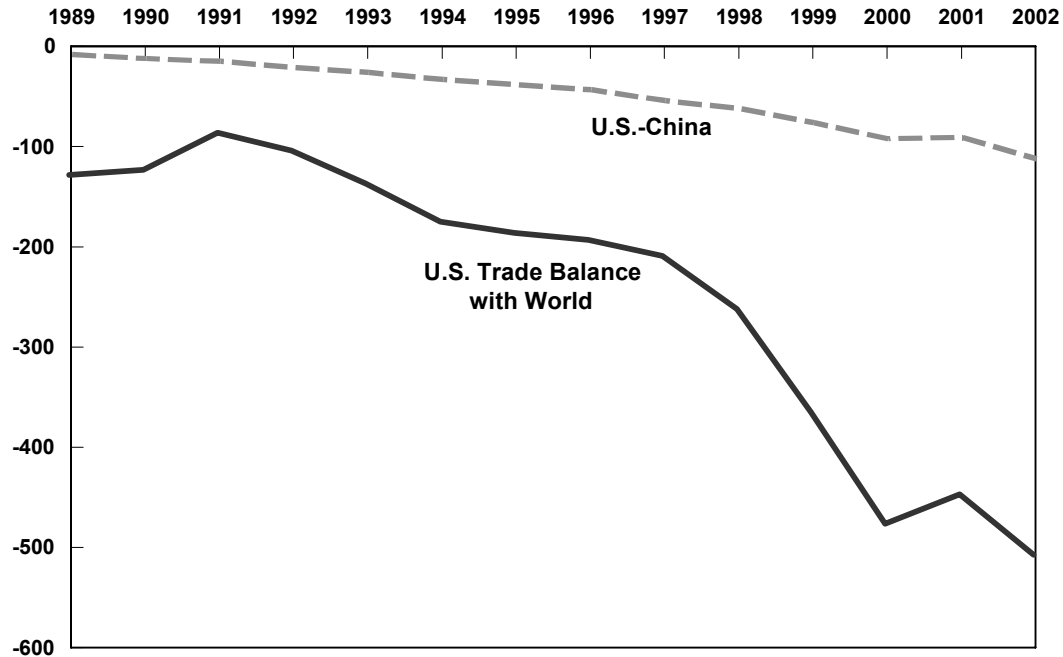
Source: Congressional Budget Office based on data from the Bureau of the Census.

Note: Trade balances are calculated using free-alongside-ship values of total exports and customs-insurance-freight values of general imports.

$25.2 billion at the same time that imports from Japan fell by $24.5 billion and total imports from eight other Asian countries fell by $24.3 billion (*see Figure 10*).

China has developed as a location of assembly, particularly for electronics and machinery; that is, it imports relatively high-value parts from other Asian countries and assembles them into finished goods for export. It also produces toys and apparel. Those unskilled labor-intensive tasks were carried out previously in other Asian (and a few non-Asian) countries but are now being performed in China because wages there are relatively low.
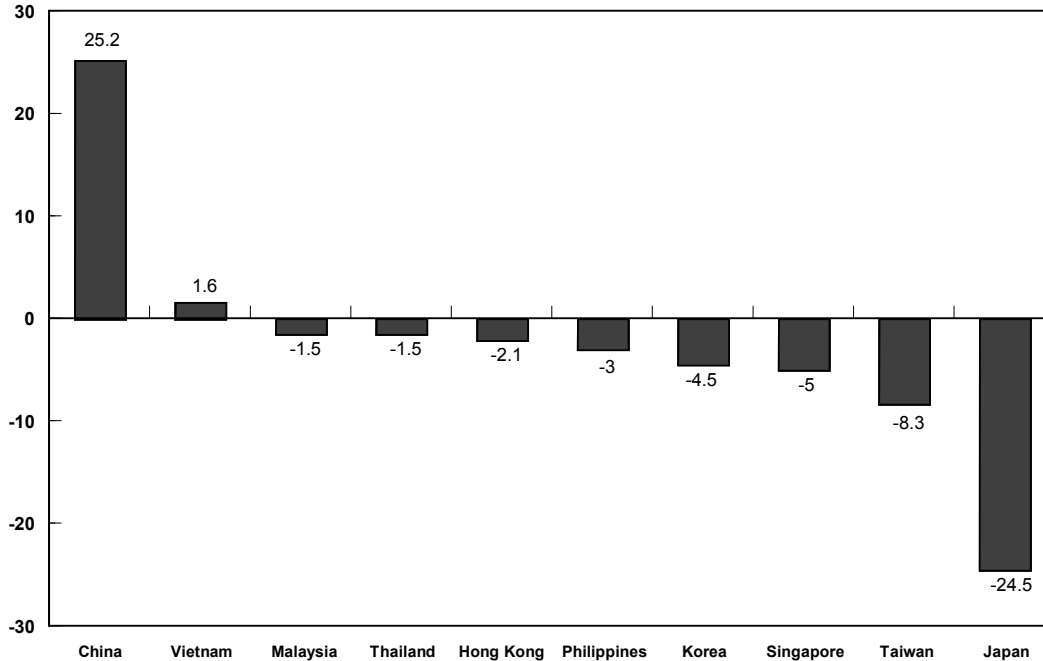
China's Exchange Rate Policy

China maintains a fixed value of 8.28 yuan per dollar. By itself, such a nominal "peg" cannot affect the average real exchange rate (the exchange rate adjusted for

Figure 10.

Change in U.S. Imports from China and Other Asian Trading Partners, 2000 to 2002

(In billions of dollars)

Source: Staff of the International Trade Commission in their analysis of September 24, 2003, for the Subcommittee on Trade of the House Committee on Ways and Means, updating an article by Michael Barry titled "Why Is the U.S. Trade Deficit with China So Big?" (*International Economic Review*, International Trade Commission, September/October 2001).

any changes in prices in the respective trading countries) over the long term because the policy also causes offsetting effects on Chinese domestic prices. Through a policy known as sterilization, however, countries can, within limits, reduce the offsetting effects on prices and thereby influence the real exchange rate—and, consequently, trade flows. China has engaged in some sterilization, leading to the possibility of a lower real exchange rate for the yuan. Because of the difficulty in determining the "correct," or market, value of any currency, considerable disagreement surrounds the question of how much (if at all) the yuan may be undervalued. CBO found estimates by various analysts ranging from no undervaluation to as much as 40 percent, and considerable uncertainty is associated with each estimating approach.

The Peg Between the Yuan and the Dollar
China pegs the value of the yuan to the dollar through the use of exchange controls in conjunction with its buying and selling of dollars for yuan. If exporters'

earnings and direct inflows of foreign investment result in more dollars than are needed to purchase imports, China requires that the dollars be turned in to the central bank in exchange for yuan at the prescribed rate. The central bank then invests the dollars in various assets. At a later time, if a shortage of dollars develops, those assets (referred to as foreign exchange reserves) can be sold for dollars and the dollars provided to importers (or any others with a legally recognized need) in exchange for yuan at the prescribed rate.

Over the past three years, that policy has caused China's central bank to purchase a large and rising number of dollars. The bank's reserves increased by $10.9 billion in 2000, $46.6 billion in 2001, $74.2 billion in 2002, and $103.7 billion in the four quarters ending with the second quarter of 2003. Roughly one-third of the reserves that were accumulated in 2001 and 2002 are invested in U.S. Treasury debt.

Effects on the Real Exchange Rate. Exports and imports are influenced by the real exchange rate. Thus, if a change in Chinese policy halved the value of the yuan relative to the dollar but at the same time led to a doubling of domestic prices (in yuan) in China, Chinese exports would continue to have the same dollar price and therefore would not change (all else being the same). The change in policy would have caused a change in the nominal exchange rate, but it would not have affected the real exchange rate.

By itself, China's policy of pegging the yuan to the dollar would have no effect on the average real exchange rate over time. When the Chinese central bank uses yuan to purchase excess dollars at the prescribed rate, it keeps the value of the yuan from rising relative to the dollar. However, that policy also increases the supply of yuan. If nothing is done to offset that increase, the growth in the money supply will ultimately result in higher domestic prices in China. The higher prices will then offset the effect that the decline in the value of the yuan will have on the dollar prices of Chinese exports. Those prices will therefore remain unchanged—as will the ratio of the price in yuan of Chinese imports to the price of Chinese domestic production. Hence, price-based incentives to purchase exports and imports will be unaffected.

If the central bank "sterilizes" its purchase of dollars by removing an offsetting quantity of yuan from circulation, it can for a time avoid growth in the money supply and inflationary pressures and thus affect the real value of the yuan relative to the dollar. However, the duration and effectiveness of sterilization are not unlimited, and consequently, neither is the ability to keep the real exchange rate from rising in the face of sustained purchases of foreign currency in exchange for domestic currency. China has in recent years engaged in some sterilization by,

among other things, issuing central bank paper.[6] Nevertheless, its money supply has begun to grow more rapidly. M2, a broad measure of the money supply, grew by 12.3 percent in 2000, 15.0 percent in 2001, 19.4 percent in 2002, and 20.6 percent in the four quarters ending with the second quarter of 2003—a pace of money creation that is likely ultimately to put upward pressure on prices.

The Implications of China's Accumulation of Reserves. The substantial reserve accumulation associated with the pegging of the yuan to the dollar has implications for both the United States and China. As noted earlier, a substantial fraction of China's reserves are invested in U.S. Treasury debt, raising the specter of a rise in U.S. Treasury yields and a fall in the dollar relative to other currencies should the Chinese sell a large sum of Treasury securities to buy assets denominated in other currencies. However, the combined holdings of China and Hong Kong represent only about 4 percent of outstanding U.S. Treasury securities.[7] Thus, any sale of dollar assets by China could spur a notable rise in U.S. interest rates only if that sale triggered a broader shift against dollar-denominated assets. A broad fall in the dollar relative to other currencies would help improve the U.S. trade balance, although at the expense of lower prices received for U.S. exports and higher prices paid for U.S. imports. China has strong reasons to avoid such a scenario: it would result in a capital loss on those assets for the Chinese as well as foreign exchange losses when they traded their dollars for other currencies.

Many economists note that the U.S. Treasury debt in which a substantial component of China's reserves is invested currently earns a very low rate of return and that those resources might be more productively invested in the Chinese economy. However, it is likely that not all of the investment inflows will be invested in China. To the extent that the reserves have resulted from inflows of funds speculating on a revaluation of the yuan, they will be needed when speculators undertake to reverse their positions.

Is the Yuan Undervalued?
The premise of the legislative proposals before the Congress, as reflected in their findings, is that the yuan is substantially undervalued. That premise is by no

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6. See the statement of John B. Taylor, Undersecretary of the Treasury for International Affairs, "China's Exchange Rate Regime and Its Effects on the U.S. Economy," before the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology of the House Committee on Financial Services, October 1, 2003.

7. China owned $102 billion, and Hong Kong $48 billion, in U.S. Treasury securities at the end of 2002. (Outstanding Treasury securities at the end of 2002 totaled $3.64 trillion.) China owns other dollar-denominated assets as well, but their inclusion is unlikely to change significantly the results of CBO's calculations. The effects on the yields of the types of securities involved would probably not be large if China were to sell them. The decline of the dollar relative to other countries' currencies would be increased somewhat as China exchanged the dollars for other currencies.

means universally accepted, because determining the right value for any currency is difficult (at best).

China's large trade surplus with the United States is not a good indicator of proper or improper valuation of the yuan because it leaves out not only trade with other countries but also trade in services and income on foreign investments. The current-account balance—a broad measure of the multilateral trade balance—includes trade in goods and services and income on foreign investments between China and all of its trading partners. A relatively substantial current-account balance combined with a capital-account surplus has led Morris Goldstein and Nicholas Lardy of the Institute for International Economics to calculate that the yuan is undervalued by about 15 percent to 25 percent.[8]

In the end, the "correct" value for the yuan is revealed by the markets when the currency is allowed to float—that is, to be bought and sold at market-determined prices with no government intervention. However, floating gives the "right" value only if the market works freely and without institutional distortions, such as controls on capital flows. As I will discuss later, some observers believe that if China both floated its currency *and* removed its capital controls, the yuan would depreciate. (As recently as 1998, some other Asian countries that were forced to allow their currencies to float experienced depreciation.)[9]

Ernest Preeg of the Manufacturers Alliance and the Hudson Institute has performed a calculation that might approximate the exchange rate that would result from a float.[10] He looked at the large accumulation of dollars in Chinese reserves and determined how much higher the yuan would have been if China had not

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8. See the statement of Morris Goldstein, Institute for International Economics, "China's Exchange Rate Regime," before the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology of the House Committee on Financial Services, October 1, 2003; Morris Goldstein and Nicholas Lardy, "Two-Stage Currency Reform for China," *Asian Wall Street Journal*, Op-Ed Section, September 12, 2003; and Morris Goldstein and Nicholas Lardy, "A Modest Proposal for China's Renminbi," *Financial Times*, Op-Ed Section, August 26, 2003.

9. The Asian financial crisis of 1997 and 1998 saw the rapid devaluation of the currencies of Thailand, Malaysia, Indonesia, the Philippines, and South Korea when circumstances forced those nations to allow their currencies' value to float freely in the international currency markets. The differences between their circumstances then and China's now are significant. However, an important commonality is the relatively weak condition of those nations' internal capital markets and banking systems, particularly with regard to bad loans, and the current state of China's capital market and banking system. See International Monetary Fund, *International Capital Markets: Developments, Prospects, and Key Policy Issues* (Washington, D.C.: International Monetary Fund, September 1998), Chapter 2.

10. Ernest H. Preeg, "Exchange Rate Manipulation to Gain an Unfair Competitive Advantage: The Case Against Japan and China," in C. Fred Bergstan and John Williamson, eds., *Dollar Overvaluation and the World Economy* (Washington, D.C.: Institute for International Economics, February 2003), pp. 273-274.

accumulated those dollars. He concluded that the yuan is undervalued by 40 percent. His calculation essentially ignores the role of the capital controls. It is hard to say whether, without those controls, Chinese citizens would hold more or fewer dollars than the Chinese government now holds, which is key to determining what the exchange rate would be. Furthermore, some observers have noted that one reason for the current upward pressure on the yuan is that China is experiencing an inflow of funds by speculators hoping to gain from a revaluation that they consider likely in the near future. That inflow puts upward pressure on the currency that will cease once the yuan is revalued or allowed to float and reaches its market equilibrium value.

Another approach is to look to history. Morgan Stanley's chief economist, Stephen Roach, notes that the trade-weighted average real value of the yuan relative to other currencies is basically in line with the values it has had since 1998.[11] He concludes that the yuan is not undervalued. Roach's analysis could also be taken a step farther: the yuan is not currently out of line with the values it has had over the past 15 years (*see Figure 11*). (Note that a higher value of the index indicates a higher real value of the yuan relative to other currencies.) However, it is not necessarily the case that a country's real exchange rate should remain constant over time. Under certain conditions, if a country experiences more-rapid productivity growth relative to its trading partners in its tradable-goods sector than it does in its non-tradable-goods sector (which could well be the case with China), its real exchange rate could be expected to rise.[12]

Likely Effects of the Bills Under Consideration

How the legislation now being considered might affect the U.S. economy would depend on the precise policy options chosen by the relevant parties. For the sake of illustration, I will discuss the effects of three prototypical choices: China allows the yuan to float in foreign exchange markets and removes capital controls; China revalues the yuan but thereafter continues to maintain a peg at the new, higher value; and the United States imposes a large tariff on imports from China. Although those policies do not constitute a comprehensive catalog of options consistent with the proposed legislation, their effects are representative of what one might anticipate.
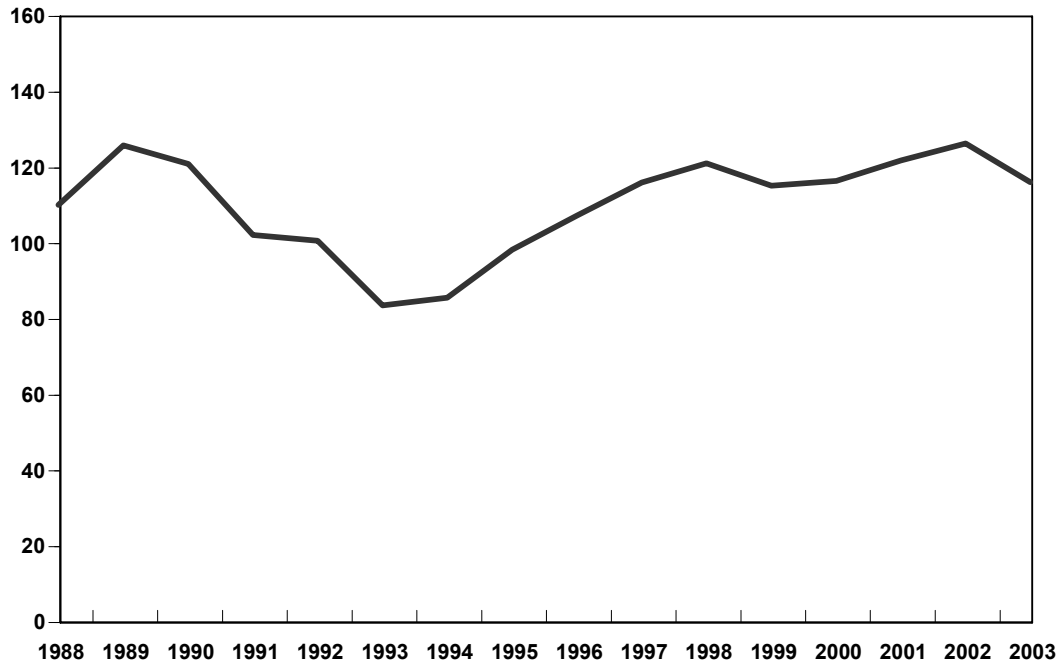
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11.   Stephen S. Roach, *Getting China Right*, Special Economic Study (Washington, D.C.: Morgan Stanley, September 23, 2003), pp. 2-3.

12.   See Maurice Obstfeld and Kenneth Rogoff, *Foundations of International Macroeconomics* (Cambridge, Mass.: MIT Press, 1996), pp. 210-216.

Figure 11.

Real Effective Exchange Rate Index for the Chinese Yuan

(Index, 1995 = 100)

Source: Congressional Budget Office based on International Monetary Fund, *International Financial Statistics* (various years).

Note: The real effective exchange rate index is the ratio of an index of the yuan's period-average exchange rate to a weighted geometric average of exchange rates for the currencies of selected countries and the euro area adjusted for movements in prices. Before 1994, China effectively had a dual exchange rate, with an official rate and a rate that prevailed in a swap market in which exporters, importers, and foreign-invested companies traded currencies. The index reflects a weighted average of the two exchange rates.

Floating the Yuan

Broad consensus exists among analysts that over the long term, a movement toward a more flexible yuan is desirable. Many observers caution, however, that immediately removing capital controls and floating the yuan could be risky for China.[13] A large portion of the loans of Chinese banks are currently nonperforming (that is, they are not being repaid or borrowers are behind on payments).[14] If

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13.   The yuan could be floated without liberalizing the capital controls, but the controls would significantly distort the resulting market exchange rate.

14.   On September 22, 2003, the *Financial Times* reported: "Officially, the non-performing loans in the banking system account for just over 20 per cent of total loans. But independent observers, such as Standard and Poor's, the rating agency, put the figure at 45 per cent of GDP. By either measure,

China's restrictions on capital outflows were eliminated, Chinese citizens and businesses—partly out of a desire for diversification and partly because of bank-specific risk—would probably remove some of their funds from Chinese banks, leading to an outflow of funds to other countries. The outflow, if sufficiently severe, could cause financial stress or, in the extreme, precipitate the collapse of some banks. If the impact was large enough to induce contractionary pressures in the Chinese economy, that could, in turn, reduce the demand for U.S. exports.

In light of those risks, many observers argue that floating the yuan and removing capital controls should be deferred until the Chinese banking system has been strengthened and the Chinese central bank is able manage inflationary and defla-tionary pressures. In short, day-to-day flexibility in the value of the yuan should be accompanied by strengthening of China's domestic institutions and development of its capability to support such a "mature" foreign exchange policy.

Moreover, it is not clear that immediately floating the yuan would even lead to an appreciation of the currency. The large outflow of funds occasioned by the libera-lization of capital controls might actually cause the yuan to depreciate. Also, as previously indicated, a portion of the buildup of reserves may reflect an inflow of funds by speculators in anticipation of gains from an expected revaluation. Spec-ulators must convert their dollars to yuan to achieve their aims, adding to the surplus of dollars that must be absorbed by the Chinese central bank in exchange for yuan. Once the currency was allowed to float and it reached its market value, such speculative activity would cease, thereby ending that source of upward pressure on the yuan.

The effects on U.S. manufacturing of floating the yuan would depend on what happened to the value of the yuan and to the Chinese economy. Predictions of exchange rate movements in floating markets are difficult and prone to error. The effects of exchange rate movements in either direction on U.S.-Chinese trade would have only a small effect on the U.S. multilateral trade balance and con-sequently on U.S. manufacturing employment. If the yuan depreciated (as many economists think likely) and if financial problems in the banking sector led to reduced Chinese growth prospects, the U.S. bilateral trade deficit with China could increase. If the yuan appreciated and major problems in the banking sector were avoided, the opposite could happen, but the ultimate positive effect on U.S. manufacturing employment would be small and mostly temporary.

China has the weakest banking system of any large economy." See James Kynge, "Can China Keep its Economy on Track," *Financial Times*, October 22, 2003.

Revaluation of the Yuan
Another possible policy would be a one-time revaluation of the yuan to a higher value relative to the dollar and a subsequent peg of the yuan to the dollar (or perhaps a peg to a basket of currencies, such as the dollar, the yen, and the euro) after the revaluation. (Some analysts have suggested as well that the yuan be permitted to fluctuate in a modest band around the new value.)

Revaluing the yuan would increase the U.S. price of imports from China. However, one would expect that the increases in prices paid by U.S. purchasers would be substantially less than the targeted percentage revaluation of the yuan. One reason is that firms and their workers in China would be likely to absorb part of any increase. For most countries, revaluations of exchange rates are usually passed through to foreign-currency export prices only incompletely because exporters tend to reduce the home-currency prices of their products and narrow profit margins in response to such revaluations. To the extent that revaluation reduces foreign demand and the consequent reduced production yields lower average costs per unit produced, exporters can reduce their home-currency price and still maintain an adequate rate of profit. Moreover, even if average costs are unaffected, exporters (like any other business) are loath to easily give up hard-earned market share to currency fluctuations and will often accept some reduction in profit margins for as long as possible in an attempt to maintain that share.

A reason more specific to China is that its role as a location of final assembly means that only a comparatively small portion of the value of its exports derives from value added in China. The remainder represents the value of imported inputs that are assembled into finished exports. The final price of an export must cover the cost of the imported inputs plus the cost (in terms of wages, rent, and required return on capital) of the value added in China. However, only the value added in China would be made more expensive in dollar terms by an appreciation. The same appreciation that raised the dollar price of the export for a given yuan price would also reduce the yuan cost to China of the imported inputs. For that reason, the portion of the price of the finished exports accounted for by imported inputs would remain unchanged in dollar terms.

One group of analysts has estimated that only 20 percent to 30 percent of the value of Chinese exports represents value added in China.[15] If so, even with com-

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15.   See the statement of Lawrence J. Lau, "Is China Playing by the Rules? Free Trade, Fair Trade, and WTO Compliance," at a hearing of the Congressional-Executive Commission on China, September 24, 2003; Xikang Chen, Leonard Cheng, K.C. Fung, and Lawrence J. Lau, "The Estimation of Domestic Value-Added and Employment Induced by Exports: An Application to Chinese Exports to the United States" (presentation to the Institute of Systems Science, Academy of Mathematics and Systems Science, Chinese Academyu of Sciences, Beijing, June 18, 2001); and Xikang Chen, Leonard Cheng, K.C. Fung, and Lawrence J. Lau, "The Estimation of Domestic Value-Added and Employment Induced by Exports: An Application to Chinese Exports to the United States," revised

plete pass-through of the extra cost, a 20 percent appreciation of the yuan would increase the final dollar price of the exports by only 4 percent to 6 percent (20 percent appreciation times 20 percent to 30 percent value added). Of course, some Chinese exports undoubtedly have less value than 20 percent added in China, and others may have considerably more than 30 percent added. Hence, the size of a revaluation's effect on price would vary with the good exported. Clearly, however, the effect for a large portion of Chinese exports would be substantially less than the percentage appreciation of the yuan.

The ultimate impact of any resulting price increase on the volume of U.S. imports from China depends on how competitive China is compared with other countries. If the countries that previously assembled the products that China now assembles remain close competitors of China, then a price increase of plausible magnitude might be enough to induce a substantial shift in production from China back to those other countries. In effect, the process by which U.S. imports from China grew over time would to some extent be reversed. Imports from China would decline (or grow more slowly), but imports from the other countries would rise. The U.S. multilateral trade balance would increase only slightly, with just a small and temporary positive effect on U.S. manufacturing employment.

In practice, China appears to have a substantial competitive margin in many products, and the modest price increases that are likely if the yuan is revalued would probably not be enough to shift the pattern of production and trade for those goods. Neither would they be enough, however, to induce U.S. consumers and businesses to reduce dramatically their demand for those products. Again, the U.S. multilateral trade balance would increase only slightly, with just a small and temporary positive effect on U.S. manufacturing employment.

A revaluation of the yuan could also increase U.S. exports to China. However, because the value of those exports is only one-sixth that of U.S. imports from China, the dollar value of a revaluation's effect on exports would be smaller than that of the effect on imports. Also, as with imports, the revaluation would not be completely passed through to reductions of U.S. export prices denominated in yuan. In contrast to China's exports, U.S. exports have a large percentage of domestic value added. Thus, there might be a larger price decline and U.S. exports to China would be likely to increase more than they would in the absence of the revaluation. However, any improvement in the U.S. multilateral trade balance

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December 2001. The last of those sources was referenced by Stephen S. Roach in testimony before the Commission on U.S.-China Economic and Security Review on September 25, 2003, but CBO was unable to obtain the document for verification.

would be modest and the impact on manufacturing employment slight and temporary.

Finally, independent of the extent to which any employment gains were to occur, a revaluation would hurt consumers and some trading sectors in the United States by reducing prices received for exports and increasing prices paid for imports.

Imposition of a Large Tariff on Imports from China
The effects on imports from China of imposing a large tariff would be greater than the effects of a corresponding revaluation of the yuan because the tariff would effectively apply to the entire value of the imports—not just to the value added in China. The tariff would not, however, carry any corresponding incentive for U.S. exports to China. Viewed strictly from the perspective of the trade balance, the net effect of any large tariff would probably be to reduce the United States' bilateral trade deficit with China because the value of U.S. imports from China is six times as large as the value of U.S. exports to that country. Furthermore, as in the case of a revaluation, the decline in imports would be replaced mostly by increases in imports from other countries, so the effect on the U.S. multilateral trade balance would be small.

Moreover, a tariff raises the possibility of a corresponding Chinese policy against U.S. exports—especially if the U.S. tariff was ruled illegal by the World Trade Organization. As noted earlier, China was the sixth largest U.S. export market in 2002 and is currently the fifth largest; it has been the third most rapidly growing market over the past five years. When viewed in the larger context of trade retaliation, a tariff's net effect—positive or negative—on the multilateral trade balance is uncertain.