
Summary

In the 1980s, the United States lived beyond its means to an extent unimaginable a few years before. Consumption rose — both in absolute terms and as a percentage of GNP—with consumption of foreign-made goods leading the way. Imports grew at an average rate of 8 percent per year between 1980 and 1987, far outpacing exports. Investment recovered soon after the 1982 recession. Federal government spending surged ahead of reduced tax revenues, causing the biggest peacetime budget deficits in U.S. history. And in the process, the United States, a creditor nation since World War I, quickly became the world's leading debtor. Its net indebtedness exceeded \$400 billion in 1987, and could reach \$1 trillion by the early 1990s.

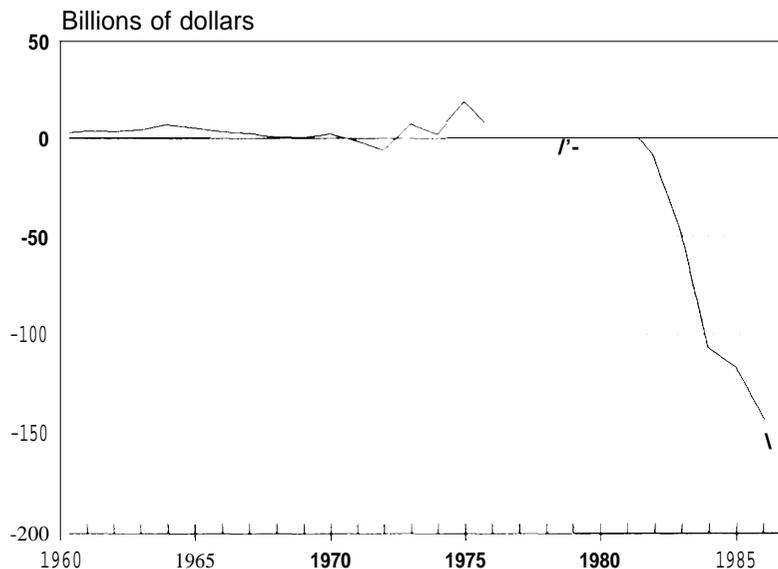
The U.S. current account balance—the most comprehensive measure of trade in goods and services —was stable throughout the 1950s and 60s and experienced some tremors in the 1970s. Then, beginning in

1981, it nosedived (figure1). The only way the United States was able to sustain this deficit was with loans and investments from abroad. A massive infusion of foreign capital allowed Americans to live beyond their means. It cannot continue, though, and therein lies the problem.

No nation, not even one as rich as the United States, can go on forever paying its current account deficit with foreign capital. A time of reckoning will come. As the United States sinks deeper into debt, foreign investors and creditors — central banks, individuals and firms —will be less inclined to commit ever-increasing amounts of capital to a \$4 trillion economy on a spending spree.

The trade deficit will go away. As the flood of foreign capital ebbs, the United States will be forced to rein in government spending, business investment, or consumption — or all

Figure 1.
U.S. Current Account Balance
1960-87



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Business Statistics: 1986, (Washington, DC: U.S. Government Printing Office, 1987) Appendix II, U.S. International Transactions, p. 250; U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, March, 1988, p. 31, table D.

three. Whether this comes about through slower growth, or through a recession that cuts investment and consumption in absolute terms, will depend on how competitive American manufacturers are and how fast other major economies are growing. One way or another, exports will have to exceed imports. A recession could force this to happen, by cutting consumption and thus restraining imports. So could a further drastic fall in the value of the dollar, raising the price of imported goods beyond the means of many consumers, making video cassette recorders, imported cars, and so on luxury items for the few.

A less painful course is not only to make needed macroeconomic adjustments, but also to get better at manufacturing — to make a wide range of high quality goods at competitive costs. That is the most constructive way to recapture some of our own markets and raise exports. Such gains will not be easy to win, however; they will require concentrated efforts on the part of U.S. producers to improve manufacturing productivity and quality. And they will require redoubled efforts on the part of the U.S. government to promote American manufacturing; for example, through export promotion and through policies that will ease the pressures on manufacturers to pursue short-term profits at the expense of longer term investments in technology and market share.

The Trade Deficit: In What and To Whom?

The U.S. trade deficit is mostly a deficit in the trade of manufactured goods. Of the \$161 billion current account deficit in 1987, 85 percent was in manufacturing trade

(figure 2). The growing U.S. service sector cannot generate sufficient trade to offset continuing deficits in manufactured goods trade. The services trade is simply not big enough; goods can be stored and shipped while services by and large cannot. Moreover, the surpluses the United States has enjoyed in services trade are shrinking. Other nations have become more competitive in an array of services that are traded internationally — from engineering to banking and software design.

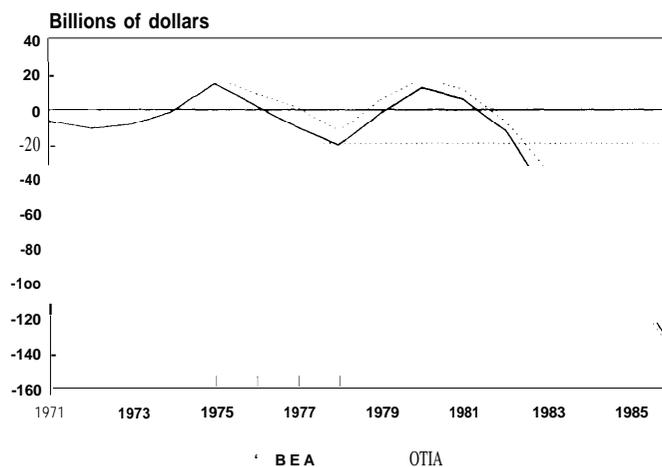
Nearly three-quarters of the U.S. manufacturing trade deficit is in three product areas:

- motor vehicles and parts (a \$53 billion deficit);
- textiles, apparel and shoes (a \$28 billion deficit);
- electronics, especially semiconductors, telecommunications equipment and consumer electronic items (a \$22 billion deficit).

The countries with which the United States runs the largest trade deficits are, in order: Japan, Taiwan, West Germany, Canada, South Korea, Hong Kong, Italy, Mexico, Brazil, and Great Britain (see figure 3).

Japan accounted for 36 percent of the U.S. merchandise trade deficit in 1987— about \$57 billion. From Japan came 21 percent (\$85 billion) of U.S. merchandise imports, but to Japan went only 11 percent (\$28 billion) of U.S. merchandise exports. The leading Japanese import by far was motor vehicles and parts — about 30 percent of all imports from that country. Other major imports from Japan include consumer electronic products, telecommunications equipment, computers and their attachments, other office machinery (e.g., copying machines), and semiconductors.

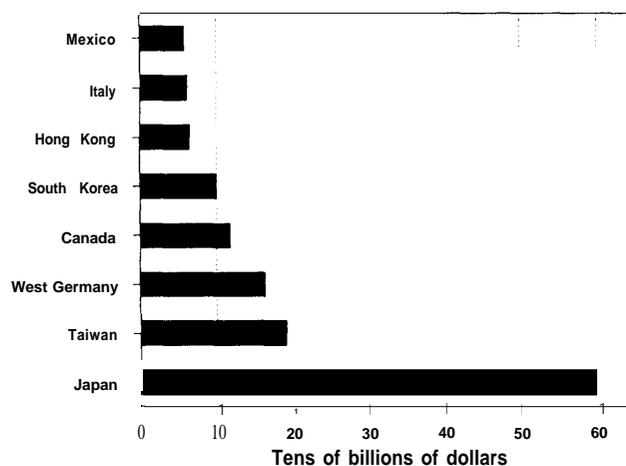
Figure 2.
U.S. Manufacturing Trade Balance
1971-86



NOTE: Bureau of Economic Analysis figures are merchandise trade less petroleum imports and agriculture exports,

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, Table 3, June 1982 and 1987; U.S. Department of Commerce, Office of Trade and Investment Analysis, Presentation by Allen Lenz, "U.S. Trade Deficits and International Competitor."

Figure 3.
Largest U.S. Trade Deficits by Country, 1987



SOURCE: U.S. Department of Commerce, Office of Trade and Investment Analysis, 1988 unpublished data.

The deficit with Japan has accounted for one-third to one-half of the U.S. merchandise trade deficit for the last decade, growing tenfold in that time from \$5.5 billion to almost \$57 billion. The U.S. merchandise trade deficit with Asian countries other than Japan has also grown significantly over the past decade. By 1987 it had reached \$47 billion, of which nearly three-quarters was with Taiwan, South Korea, Hong Kong, and Singapore.

In 1980, the United States had a merchandise trade surplus of \$20 billion with Western Europe. By 1987, this surplus had turned into a deficit of \$27 billion, with West Germany accounting for more than half (\$15 billion). Automotive products are the number one item in the U.S. merchandise trade deficit with Western Europe.

As the U.S. deficit declines, the countries exporting most to the United States will have to adjust to exporting less—or at the least, slowing the growth of exports. Although the adjustment will not be easy for anyone, countries that can expand consumption in their own economies, and that have low unemployment rates, strongly competitive manufacturing industries, and healthy trade surpluses, are best equipped to weather the changes.

Causes of the Trade Deficit

There is no one cause and no single cure.

Macroeconomic policies certainly contributed to the deficit. In the 1980s, the United States has pursued expansionary fiscal policies, while most other industrialized nations acted to restrain their deficits. As a result, the United States needed to borrow money, and real interest rates had to rise to attract it. In response countries such as Japan

and West Germany invested their savings in the United States. This, in turn, increased the demand for dollars and pushed up the dollar's value. The strong dollar made goods produced in the United States more expensive for foreigners and foreign goods cheaper for Americans.

But the strong dollar is only part of the story behind the U.S. trade deficit. The dollar peaked in the first quarter of 1985 and since then its value has fallen by one-third relative to other major currencies. It is now at postwar lows against the yen and the German mark. Despite this 3-year decline, and despite the recent upsurge in exports, the U.S. merchandise trade deficit was running at an annual rate of well over \$100 billion in 1988. The deficit with Japan hit a new record in 1987, and only began to decline in the first months of 1988. It seems that the devalued dollar spurred U.S. exports, but it did not reduce merchandise imports until April 1988.

There is further evidence that something in addition to currency exchange rates is at work here. U.S. manufacturers of products as diverse as automobiles, integrated circuits and color televisions began to lose their world market share well before the dollar's rise. Moreover, since about 1970, U.S. manufacturers have been able to hold on to their shares of world markets only when the dollar's value is falling, making U.S.-made goods progressively cheaper compared to goods made in other countries. This suggests loss of competitiveness.

Of course, the United States cannot expect to dominate world markets to the extent it did in the first couple of decades after World War II. War-damaged industrial countries recovered, and the diffusion of capital and technical knowledge made it possible for some of the poorer countries to achieve

vigorous economic growth. The world economy became richer — a desirable result, and one which has long been the aim of U.S. policy.

The fact remains that the U.S. market — the largest and richest in the world, and one of the most open to foreign goods — is the best prospect for both developed and developing countries to cultivate. Some of these countries have concentrated on exports and kept their own markets relatively closed, as a development strategy. Few nations have faced the kind of competitive pressure the United States is under. While some developed nations have labor costs comparable to those of the United States, most nations have much lower wages. U.S. capital costs have also been higher than those of most other developed nations. The combination of these disadvantages and the attractiveness of the American market to most foreign producers (in developed and developing countries alike) means that the United States must do a great many things very well, just to stay even with the competition.

Quite a few signs indicate that U.S. manufacturing is not staying even.

Signs of Weakness in U.S. Manufacturing

U.S. pre-eminence in many manufacturing industries has evaporated. For example, only one U.S.-owned company is still making color TV sets, and most of its production takes place in Mexico. No U.S. company makes video cassette recorders or compact disc players. Mass production of automobiles was invented in the United States, but others (especially the Japanese)

are now leaders in the technology and management of auto manufacture. Of the 10.3 million passenger cars bought by Americans in 1987, 3.1 million came from Japan, despite the quota on these imports. Another 620,000 cars were built in North America in Japanese-owned plants; still another 1 million cars were imported from other countries.

What is behind these losses? There are signs that the United States is losing its once substantial edge in technology, a crucial factor in competitiveness for an advanced, high-wage nation. For example, the United States is spending a smaller share of gross national product on the kind of research and development likely to pay off commercially than its major competitors; U.S. civilian R&D spending was less than 1.9 percent of GNP in 1985, compared to Japan's 2.8 percent and West Germany's 2.5 percent. Japanese private businesses are even farther ahead in spending on R&D, devoting 2.1 percent of GNP to the purpose in 1986, compared to 1.4 percent for U.S. businesses.

In the human skills needed for technologically advanced manufacturing, the United States is also losing ground. We are graduating and using just over half as many engineers per capita as Japan; and our public schools are turning out young people who do not measure up internationally, especially in math and the sciences.

The heart of the matter, however, is whether American manufacturers have fallen behind in the practical application of technology. The available evidence suggests that they have. One study of flexible manufacturing systems — computer controlled systems that are designed to make different kinds of parts in small batches—concluded that American firms

have no edge at all in this advanced form of automated manufacturing. On the contrary, they used the technology far less effectively than the Japanese. The American flexible manufactured systems produced many fewer kinds of parts, took longer to develop, and performed less reliably.

Another example comes from auto design and manufacture. U.S. auto companies spend, on average, over 5 years taking a model from the initial concept to full production. Japanese companies take only a little over 3 1/2 years to do the same—and they do it with about half as many engineering hours. The Japanese advantage appears to come from such things as putting a single boss in charge of the project, getting the company's research/development/design people and its production people to communicate with each other, ironing out conflicts early, and treating product and process design as simultaneous rather than sequential.

There are other Japanese strengths. Among those most often cited are close attention to product quality and reliability, consensus building, and emphasis on long-term market share rather than short term profit. Not all Japanese firms share these characteristics, and some American firms do. But firsthand observation, case studies, and the remarkable record of Japanese industrialization and adaptation in the postwar period support the basic point: Japanese manufacturers have moved into a commanding position in many industries and have surpassed U.S. rivals in many important markets, by developing and applying technology.

U.S. manufacturers have responded to the Japanese challenge (and the challenges from Taiwan, Korea, Germany, and so on) in a variety of ways, some effective, and some less so. Overall, American manufacturing has not yet recouped the losses of recent years. As one departing chief executive officer of a major U.S. manufacturer told the *New York Times*: “Yes, American industry has improved over the past four or five years, but so have our competitors.”¹

A Manufacturing and Service Economy

The United States cannot do without a strong manufacturing sector. Manufactured goods are indispensable for trade with other nations. It is also clear that America has not entered a post-industrial stage in which demand for goods gives way to demands for services. Demand for manufactured goods is as great as ever – greater, for everything but the basics, food and fuel. American consumers, businesses and government now devote over 30 percent of all their spending to manufactured goods other than food and fuel, compared to 23 percent 30 years ago.

More fundamentally, to speak of services as taking the place of manufacturing is to overlook the strong interdependence of the two kinds of activities and the blurring of distinctions between them. Many service industries depend heavily on manufacturers for business. And some manufacturing industries could hardly exist without allied services –for example, the manufacture of computers and design of software, often by an independent firm.

¹Robert Anderson, former chief executive officer, Rockwell International Corporation, quoted in Claudia H. Deutsch, “U.S. Industry's Unfinished Struggle,” *The New York Times*, Feb. 21, 1988, sec. 3.

Manufacturing remains extremely important for employment in the U.S. economy. Nearly 28 million Americans—about one-quarter of the work force—make their living in manufacturing, either directly or in providing services or materials to manufacturing. Far from replacing manufacturing as source of employment, in the manner that manufacturing took the place of agriculture, service industries include a good many jobs that depend on manufacturing—and by and large, these are well-paying jobs. Not only are manufacturing wages, on average, higher than wages in the service sector; most of the jobs in services that are closely tied in with manufacturing also pay better than average. To keep those good jobs, America has to compete effectively in the production of goods, as well as the provision of services.

High technology industries cannot take the place of traditional manufacturing, any more than services can simply replace the manufacturing sector as a whole. Certainly, high tech industries are vital to the generation of jobs, wealth, exports, and the advance of technology in other industries. But they do not stand alone. The best customers of high tech industries such as semiconductors are other industries, both high tech (e.g., computers) and traditional (e.g., autos). Nor can the high technology industries, by themselves, compensate for trade deficits in declining traditional industries. The trade balance in high technology products shrank from a surplus of \$27 billion in 1980 to a surplus of only \$600 million in 1987—with an intervening deficit of \$2.6 billion in 1986. U.S. high technology industries are still quite competitive, but they are unlikely to regain the dominance they enjoyed 10 years ago or to generate the large trade surpluses of that time.

Conclusion

Counting on the lower dollar alone to sell American manufactured goods is a shaky and potentially painful strategy. If the United States is to maintain its standard of living and live within its means, it will have to reduce the Federal budget deficit, increase its access to foreign markets, and make its manufacturing sector more competitive. As yet, some progress has been made on some of these fronts, but more ground remains to be gained. Improving manufacturing competitiveness—the ability to make high-quality goods at reasonable costs, without sacrificing our standards of living to get costs down—will be crucial if the United States is to remain a first-class economic power.

A Note About the Special Report

This special report is an interim product of the full assessment *Technology, Innovation and U.S. Trade*. This report describes the causes and anatomy of the U.S. trade deficit, and discusses the role and health of manufacturing within the U.S. economy.

The full assessment will analyze the record of American manufacturing companies in developing and applying new product and process technologies, with particular emphasis on how we have lost or could bolster technological advantages. The full assessment will also examine the extent to which high capital costs, and relationships of manufacturers with providers of capital, have limited the ability of U.S. manufacturers to make needed investments in technology development.

In addition, the full assessment will discuss how Federal government policies promote or hinder technology development and its application to manufacturing. It will assess how foreign government trade, industrial, and technology policies affect U.S. manufacturers' access to foreign markets and their ability to compete in the U.S. market. That part of the assessment will concentrate on Japan and Asia's newly industrializing countries, where the most

significant technological progress has been and will likely be. The full assessment will also evaluate how U.S. trade policies have affected American manufacturing, both in promoting increased exports and in coping with rapidly rising imports. Policy options will focus on fostering technology development and application in manufacturing, building technological advantage, promoting exports and opening foreign markets, and alternatives for dealing with imports.