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The U.S. Trade Deficit: Trends, Theory, Policy, and Sustainability

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ABSTRACT

This report briefly surveys recent trends in the U.S. trade deficit and the economic theory and policies surrounding it. The Federal Trade Deficit Review Commission was organized in June 1999 to develop trade policy recommendations. This report points out some problems with and recent advances in traditional economic approaches to trade theory and policy, particularly with respect to inter-industry trade, strategic trade, macroeconomic trade theory, the twin deficits, the exchange rate, and intertemporal savings and investment. It also examines the sustainability of the trade deficit and its relationship to employment. This report will be updated as conditions warrant.

The U.S. Trade Deficit: Trends, Theory, Policy, and Sustainability

Summary

This report briefly surveys recent trends in the U.S. trade deficit and the economic theory and policies surrounding it. After dropping to $74 billion in 1991, the U.S. merchandise trade deficit increased by $49 billion in 1998 to a record high of $248 billion. Even though the reasons for the rising deficit seem apparent, it raises questions about the theoretical analysis that underlies U.S. policies to deal with it and its sustainability and effect on the U.S. economy.

The Federal Trade Deficit Review Commission was organized on June 10, 1999, and is responsible for developing trade policy recommendations by examining the economic, trade, tax, and investment policies and laws, and other incentives and restrictions that are relevant to addressing the causes and consequences of the U.S. merchandise and current account deficits.

Economic theory is evolving with respect to the international trade side of the U.S. economy and the relevant policy implications. The standard macroeconomic approach to explaining the trade deficit is encountering some obstacles. First, the savings and investment equality is an *ex post* identity, a framework for analysis, and not a behavioral equation. Second, the linkage between macroeconomic conditions and a nation's exchange rate has not been established; exchange rate changes do not translate completely into price changes for imports and exports, and exchange rates tend to overshoot the equilibrium rates. This brings other inefficiencies into an economy. Government policy may also affect exchange rates. Recent weakness in the Japanese yen, for example, has been exacerbated by Japanese government policy. The United States does not seem to have a transparent method of determining if and when it should intervene in currency markets.

A third issue is that a focus on the savings-investment relationship in the economy can lead to dubious policy prescriptions — such as the assertion in the 1980s that eliminating the federal budget deficit would do the same for the trade deficit. A fourth problem is that a static macroeconomic approach does not account for why the United States may be borrowing from abroad and how those funds are being used. There may be an optimal level for a nation's current account deficit, and borrowing may be justified if it is used to increase productivity. Recent U.S. trade data indicate that a rising share of U.S. imports has been for capital goods that should raise U.S. productivity and economic growth.

The policy implications with respect to trade still center on the belief that free trade is optimal, but extensions of the theory now allow for a strategic trade policy aimed at assisting certain industries. The conventional economic conclusion that all intervention into trade flows has no effect on the trade deficit, however, is yet to be demonstrated empirically. In terms of sustainability, if the recent large capital inflows reaching nearly $200 billion per year continue into the next century, a U.S. foreign debt would develop equivalent to a quarter of GDP and foreigners may end up owning more than half the U.S. federal debt. If the capital inflows do not continue, the U.S. trade and current account deficits of today will be unsustainable.

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After dropping to $74 billion in 1991, the U.S. merchandise trade deficit increased from $199 billion in 1997 to $248 billion (balance-of-payments basis) in 1998. This surge in the U.S. trade deficit can be explained primarily by the strong U.S. economy (which is buying more of almost everything — including imports), the Asian financial crisis (which has reduced U.S. exports to Asian countries and lowered prices of Asian exports to the U.S.), and inflows of capital (which drive up the value of the dollar and make imports into the United States cheaper and American exports more expensive). Even though the reasons for the rising deficit are apparent, it raises questions about the long-term implications of this imbalance, the economic analysis that underlies U.S. policies to deal with it, and its sustainability.

In concert with the rising U.S. trade deficit, the exchange value of the dollar has been rising, particularly with respect to the currencies of Asian countries (except for China and Hong Kong). The strength of the dollar in the late 1990s bears a strong resemblance to the strong dollar in the first half of the 1980s. This was the period when the U.S. trade deficit grew by six times. In 1998, the dollar gained so much strength with respect to the yen that on June 17, 1998, both the United States and Japan intervened in currency markets to support the yen.

This report first provides an overview of trends in the U.S. trade deficit. It then examines the economic theory for analyzing the trade deficit and formulating policy implications. This section is somewhat technical and touches only on the major points in the theoretical debate. It is intended to point out some of the pitfalls of the standard interpretations of the trade deficit. It includes both a discussion of the traditional comparative advantage and macroeconomic approaches to the deficit and a brief review of exchange rates, the sustainability of the trade deficit, and the effect of trade on jobs. This report will be updated as major events warrant. More recent trade data can be found in CRS Issue Brief 96038, *U.S. International Trade: Data and Forecasts*, by (name redacted) and (name redacted).

As for legislative activity, in the 105th Congress, H.R. 3579 (Livingston, Supplemental Appropriations) included a provision to establish an Emergency Trade Deficit Review Commission to study the causes and consequences of the U.S. merchandise trade and current account deficits and develop trade policy recommendations for the 21st century. Although this measure passed the Senate, the provision was removed in Conference.[1] It then was inserted into the Legislative

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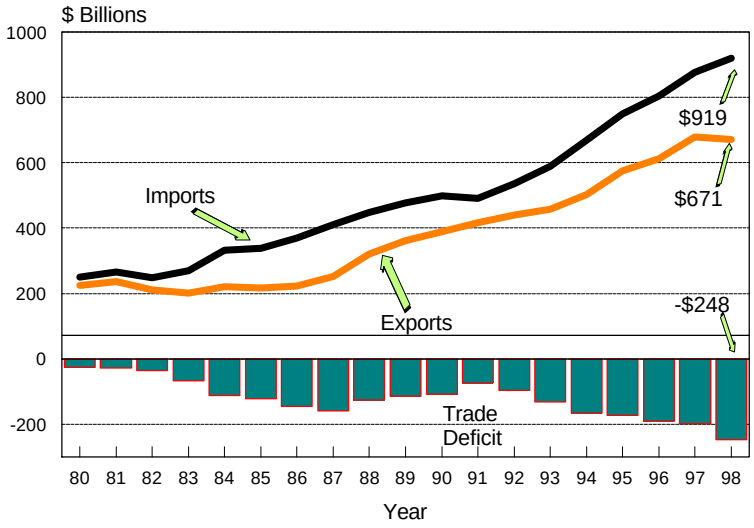
[1] U.S. Congress. House of Representatives Report to accompany H.R. 3579, 105th Congress, 2nd Session. (Emergency Supplemental Appropriations bill for the fiscal year

(continued...)

Branch FY99 Appropriations bill (S. 2137) and became the Trade Deficit Review Commission Act of 1998 (19 USC 2213). The Federal Trade Deficit Review commission is responsible for developing trade policy recommendations by examining the economic, trade, tax, and investment policies and laws, and other incentives and restrictions that are relevant to addressing the causes and consequences of the U.S. merchandise and current account deficits. The Commission is composed of twelve members appointed by the Senate and House and is to submit a final report to the President and Congress not later than twelve months after the date of its initial meeting on June 10, 1999. In the 106th Congress, Section 312 of the Legislative Branch Appropriations Act, 2000 (S.1206, Bennett, reported by the Senate Appropriations Committee on June 10, 1999) would make some changes to the Trade Deficit Review Commission. It would extend funding for the Commission and its termination day to 90 days after the Commission submits its final report. It also would exempt Commission members from certain pay authorities and provisions of the Federal Advisory Committee Act. Other legislation related to the U.S. trade deficit includes trade provisions aimed at specific countries, such as Japan and China,[2] and legislation dealing with fast-track trade negotiating authority.[3]

Recent Trends in the U.S. Trade Deficit

Figure 1. U.S. Merchandise Imports, Exports, and Balance of Trade (balance-of-payments basis), 1980-98



Source: Trade data from U.S. Department of Commerce.

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[1](...continued)
Ending September 30, 1998, and for other purposes."

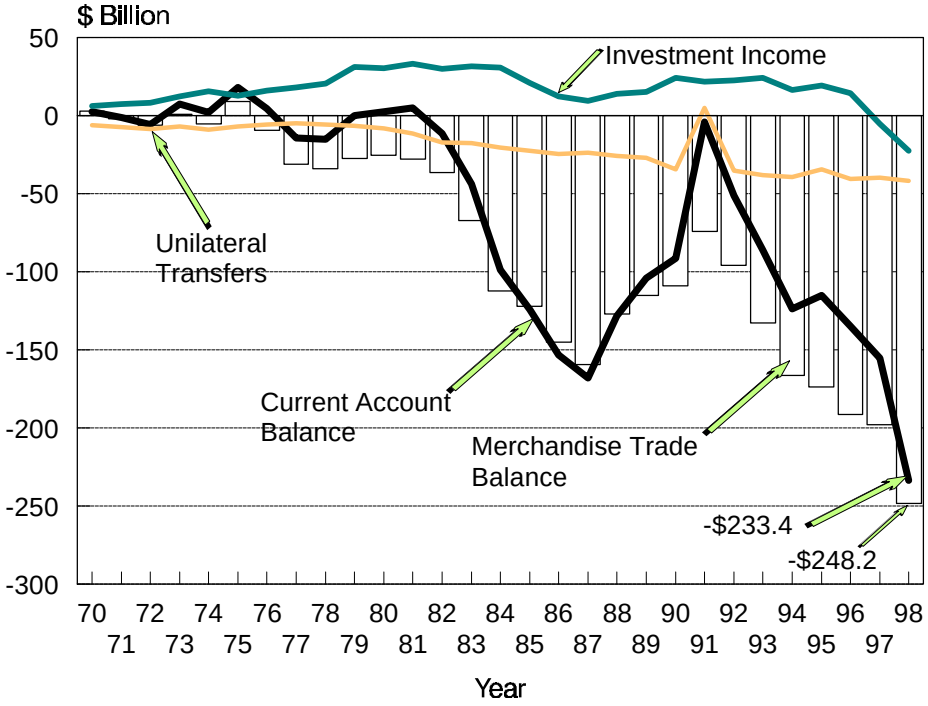
[2] See: CRS Issue Brief 97015, *U.S.-Japan Economic Ties: Status and Outlook*, by (name redacted), and CRS Issue Brief 91121, *China-U.S. Trade Issues*, by (name redacted).

[3] See: CRS Issue Brief 97016, *Trade Agreements: Renewing the Negotiating and Fast-track Implementing Authority*, by (name redacted).

As shown in **Figure 1**, the U.S. trade deficit grew from $25 billion in 1980 to a peak of $160 billion in 1987 as the burgeoning Federal budget deficit along with rising U.S. interest rates drew in international capital, appreciated the dollar, and hampered U.S. net exports. The deficit then declined to $74 billion during the U.S. recession of 1991 but rose to $199 billion in 1997 and further to $248 billion in 1998 despite significant shrinkage in the Federal budget deficit. U.S. export growth had been strong until 1998 when exports declined. Imports have continued to increase.

Standard and Poor's Data Resources, Inc., a major economic forecasting firm, projects that for 1999, the U.S. merchandise trade deficit (balance-of- payments basis) may reach $327 billion.[4] Much of the deterioration is occurring because the Asian financial crisis has cut U.S. exports to countries in difficulty, such as South Korea, Japan, Indonesia, and Thailand, and has driven capital from Asian markets to higher quality investments in the United States. Prices of imports from Asia also are lower because of their weakened currencies.

Figure 2. U.S. Balance on Current Account, Merchandise Trade, Unilateral Transfers, and Investment Income, 1992-1998



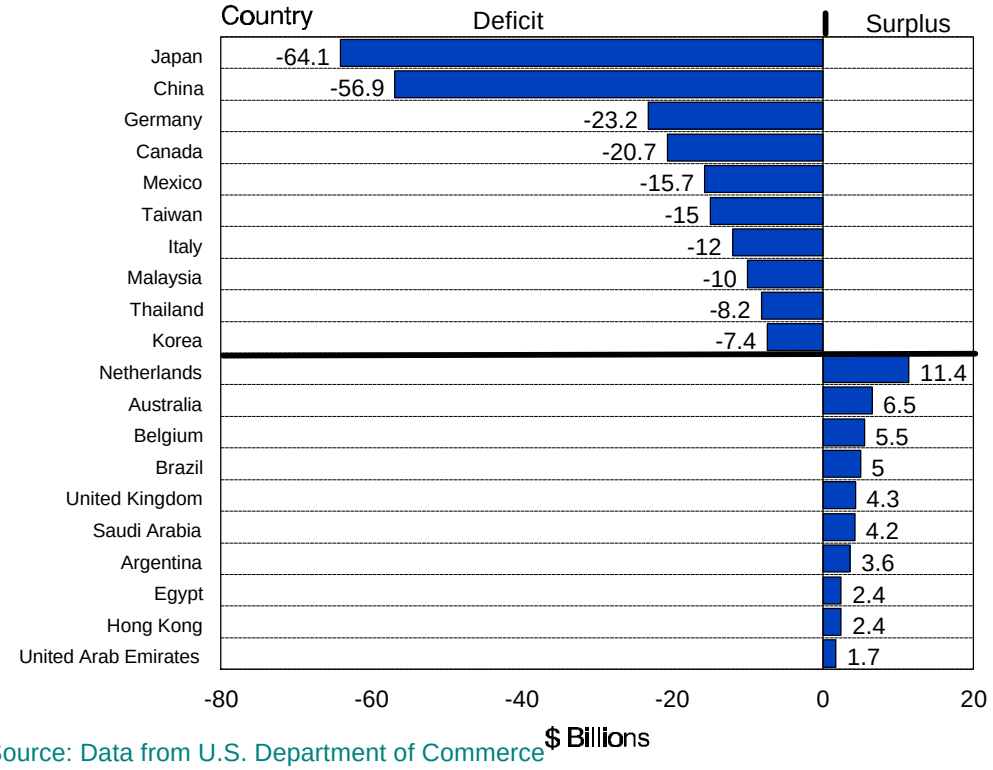
Source: Data from U.S. Department of Commerce

In terms of the U.S. current account (which includes trade in merchandise and services, investment income, and unilateral transfers), the picture is similar — primarily because the deficit in merchandise trade dominates the other balances. (See **Figure 2**) In services trade, however, the United States ran a surplus of $78.9 billion in 1998 — down somewhat from 1997. Net unilateral transfers (transfers of money

[4] Standard & Poor's. *Review of the U.S. Economy*, May 1999.

not in return for goods or services performed, e.g. remittances, private gifts, pension payments, and government grants) have been fairly stable at about -$40 billion. In 1998 it was $-41.9 billion. A significant change in the U.S. current account has been in the balance on investment income. This is the balance of income received on U.S. investments abroad less income paid on foreign assets in the United States. This balance dropped from a surplus of around $30 billion in the early 1980s, to $20 billion in the early 1990s, to a deficit of -$5.3 billion in 1997, and -$22.5 billion in 1998. The switch from surplus to deficit in this balance largely reflects the net inflow of investment into the United States. This inward investment is the functional equivalent of foreign borrowing and has pushed the net investment position of the United States to a negative $1.545 trillion in 1998. The United States has become the world's largest debtor nation, and the servicing of that debt has increased the U.S. deficit on current account.

Figure 3. U.S. Bilateral Merchandise Trade Balances with Selected Trading Partners, 1998



Source: Data from U.S. Department of Commerce

The rising overall U.S. merchandise trade deficit is reflected in bilateral trade with specific countries. (See **Figure 3**) In 1997, U.S. trade deficits with Japan and China accounted for nearly two-thirds of the total U.S. deficit. Trade with Canada and Mexico, the two NAFTA (North American Free Trade Agreement) trading partners, also remained in deficit. With Japan, after declining from a peak of $66 billion in 1994, the U.S. deficit fell to $48 billion in 1996 before rising to $64 billion in 1998. The U.S. deficit with China has surged from $30 billion in 1994, to $39

billion in 1996, and to $57 billion in 1998. With NAFTA, the U.S. deficit has shrunk somewhat as it eased from $39 billion in 1996 to $36 billion in 1998.[5]

Although there is no economic reason that bilateral trade with any particular trading partner should be in balance, the chronic U.S. deficit with Japan and the rising imbalance with China have attracted criticism, raised political tensions, and have induced calls for changes in U.S. trade policy. Trade barriers and market- opening measures, moreover, clearly affect trade with individual nations. The continual trade deficit with Japan combined with that nation's weak-yen policy and capital outflows from Japanese financial deregulation along with trade barriers in China have arguably contributed to the rising U.S. trade deficit.[6]

Trade Theory and Policy

International trade theory takes two basic tracks in analyzing aggregate trade flows. The first harkens back to the theory of comparative advantage along with neoclassical economics and the second focuses on the macroeconomic foundations of trade flows. Although the theory of comparative advantage and neoclassical economic theory do not focus on the trade deficit, *per se*, we discuss this briefly in order to provide a picture of how various aspects of trade theory and policy are evolving.

The theory of comparative advantage and traditional trade policy analysis conclude that under certain idealized conditions, a country maximizes its well-being by specializing in producing those goods and services in which it has a comparative advantage and importing those in which other nations have advantage. The policy implication of the comparative advantage argument is that barriers to trade reduce national welfare and free trade brings optimal benefits for the economy as a whole. Import competition may hurt some domestic competitors and impose some adjustment costs on certain actors in the economy, but, in the long run, free trade tends to lower prices and provide benefits to consumers that should offset the negative effects on industries that are hurt. For the economy as a whole, therefore, national well-being is increased. It is up to the political system to determine whether income is then transferred to the industries that are hurt. According to this analysis, protectionism is self defeating. It benefits certain trade interests but at a cost to the rest of society.

Criticism of this model for trade policy based on comparative advantage and traditional trade theory comes both from some policymakers and theoretical economists. Some decision-makers assert that the policy implication that free trade

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[5] See: CRS Report 97-183, *The U.S. Trade Deficit in Manufa*ctures: The Rise of China and NAFTA, by (name redacted).

[6] In July 1998, a senior official of the U.S. Department of Commerce stated before the House Committee on International Relations, Subcommittee on International Economic Policy and Trade, that the U.S. trade deficit is largely due to distortions in the trading relationship with Japan and China. See: Trade Imbalance with China and Japan Priority in Reducing Trade Deficit. *Inside U.S. Trade*, July 31, 1998. Internet edition available at <www.insidetrade.com>.

is always optimal is too broad-brushed and unidimensional and does not account for the complexities of the real world. Adjustment costs from free trade may be too high, or, in some cases, other countries may pursue industrial and trade policies that are "unfair." Governments may subsidize certain industries, maintain trade barriers, or allow companies to engage in dumping or other unfair trade practices. Most economists contend, however, that retaliation for trade barriers and protectionism abroad usually ends up hurting U.S. consumers rather than solving the problem.

Economists acknowledge, however, that traditional trade models do not describe or predict accurately trade flows in the real world, particularly in terms of manufactured products. The models either ignore or provide unsatisfactory treatment of five major deviations between the real world and the theoretical models. These include: (1) increasing returns to scale (larger firms can produce goods at a lower per unit cost than smaller firms), (2) learning-by-doing (comparative advantage can be created as economies learn how to produce certain products and entry costs are high for latecomers), (3) external effects (benefits exist from research and development and technological change that cannot be captured solely by those directly involved, plus a concentration of industrial processes — such as in Silicon Valley or Detroit — produces benefits for other firms and society at large), (4) inter-firm strategic rivalries (in contrast to the pure competition economic model in which all firms are small and produce identical products, in the real world, the actions of one firm in an industry can affect the operations of others), and (5) the existence of abnormal profits or losses by firms for systematic reasons (i.e. for reasons beyond simple randomness or "luck") which government policies can influence greatly.[7] The comparative advantage approach also does not account for trade barriers, exchange rate manipulation, or business subsidies by individual countries that may alter the competitiveness of certain firms.

A large body of economic literature has been developed to study these deviations from the pure theory of international trade. This literature is summarized in *the Handbook of International Economics*, edited by G. Grossman and K. Rogoff. An important conclusion of this literature is that international trade theory is evolving and some cherished axioms are being abandoned. The pure theory is not repudiated, rather it is being extended. The critical question is whether or not the above problems with the pure theory are significant enough to invalidate the analysis. So far, most economists retain their support of the position that as a rule of thumb, free trade is most beneficial, but acknowledge that in certain industries the deviations between the model and the real world are significant enough to alter the standard policy prescriptions.

A complete review of the literature on how trade theory and policy are evolving is beyond the purview of this paper. Here we examine two areas in which deviations from the standard model bring new insights into real policymaking. They are intra-industry trade and strategic trade.

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[7] Brander, James A. Strategic Trade Policy. In *Handbook of International Economics*, Vol. III, Edited by G. Grossman and K. Rogoff. New York, Elsevier Science, 1995. P. 1397-98, 1447.

Intra-industry Trade

The theory of comparative advantage goes a long way in explaining why one country specializes in producing one product which it then trades for another. Saudi Arabia, for example, trades petroleum for aircraft. What the theory of comparative advantage does not explain, however, is why Europe buys aircraft, automobiles, and machine tools from the United States, while the United States buys the same products from Europe. This is **intra**-industry trade or trade in products within the same industry (e.g., American Jeeps for German BMWs) and contrasts with **inter**-industry trade which is trade between countries for products of different industries (e.g., American power generators for Chinese-made shoes).

Intra-industry trade arises partly because of economies of scale in production. The average cost of manufactured products tends to fall as the units produced increase. If one country tries to produce the full variety of products that consumers demand, it will be able to do so only at relatively high costs. Companies often need extensive production runs to be competitive with respect to price. They produce large quantities of certain product lines for sale in both domestic and export markets, but they are not able to produce each type of the product (intellectual property rights also come into play). The conclusion of traditional comparative advantage analysis that, for example, Europe could produce all high-fashion goods, the United States all automobiles, and Japan all consumer electronics makes way for a more complex system of intra-industry trade in which all three economies produce and trade with each other for all three products. This is the two-way trade of products within the same industry, and it counters the idea that countries should abandon entire industries that may appear uncompetitive at some time.

This intra-industry analysis may provide, for example, a framework to analyze whether a government-backed loan to a company (i.e. the Chrysler corporation in the 1970s) is economically efficient. This extension of trade theory, however, does not address the size of the U.S. trade deficit.

Strategic Trade Theory

Another response to the criticisms of the traditional approach to trade has been to develop a theory of "strategic trade" in which governments play a role in fostering the development of strategic industries and pursue trade policies that condition or alter strategic relationships among firms. The primary strategic relationship in which government intervention might be justified is interdependence: the profits of one firm are directly affected by the individual strategy choices of other firms. In economic models, one way to account for this interdependence is to introduce oligopolies (industries dominated by a few firms producing differentiated products) or imperfect competition into trade policy analysis. The appeal of this approach is that it allows trade theory to address some of the practical concerns that dominate the political debate over actual trade policy.

The policy implications of the strategic trade approach tend to justify government intervention in favor of "strategic industries." Intervention might include subsidies for research and development, military contracts to develop dual-use

technology, or export support for commercial aircraft. The strategic approach also helps to understand how apparently modest government intervention can have large effects. If a comparatively small subsidy determines whether a foreign or domestic firm enters an industry in which there are significant learning requirements and economies of large-scale production, a sizable long-run impact can arise if the domestic industry eventually becomes viable. The approach also helps explain how trade and industrial policies have had a major role in influencing the current international pattern of specialization and trade. It further provides a theoretical rationale for deviating from the policy of free trade.[8]

Strategic trade policy prescriptions, however, pose problems of their own. Many economists still are not convinced that the risks involved in implementing them justify the deviation from free trade. Selecting a strategic industry is difficult in a political system in which traditional industries (such as steel, automobiles, petroleum, and textiles) have major influence on national economic policy. A true strategic industry may be small and not represented well in political power centers. Strategic trade also can be used as a rationale for protection of industries that may be strategic primarily in terms of size or political clout but not with respect to the economic definition of the term.

Studies of strategic trade also indicate that even nationally successful strategic trade policies have a "beggar-thy-neighbor" aspect; that is, one country's strategic industries may advance at the expense of those of another. This may induce other countries to retaliate and attempt to neutralize the gain. Also, countries that compete with each other with strategic trade policies tend to make agreements to ameliorate or prevent such rivalries. The United States and other industrialized nations, for example, have multilateral trade agreements curbing excessive use of subsidies and other government assistance to industries.

Strategic trade policies, moreover, are not aimed directly at the U.S. trade deficit. Whether a deficit exists or not does not change the rationale for a strategic trade policy.

Macroeconomic Theory

Macroeconomics deals primarily with aggregate flows in an economy. It is largely separate from considerations of comparative advantage or the actions of particular microeconomic actors, such as business production or consumer choice. It is in macroeconomics that the problem of the level of the trade deficit is addressed.

The macroeconomic interpretation of trade and current account deficits is that they are caused by an imbalance in domestic saving and investment. Businesses, consumers, or governments do not save enough to finance domestic investment, so they use foreign capital to bridge that gap. They borrow from abroad to finance

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[8] *Ibid*., p. 1446-1447.

investments or deficit spending.[9] This implies that the relative level of trade flows is determined outside of specific trade policies that are aimed at imports or exports — including strategic trade policy. Trade policies may change particular product flows but are unlikely to change their aggregate level.

According to macroeconomic theory, for example, a policy to restrict imports of steel may cause foreign steel inflows to decline, but the overall balance of trade would not change. An import barrier causing a fall in U.S. imports of steel would have two major effects: exchange rate appreciation and a multiplier effect on the domestic economy. A decline in steel imports would first push up the value of the dollar as fewer Japanese yen, Korean won, and other foreign currencies were required to buy foreign steel. This dollar appreciation would make imports into the United States relatively cheaper and U.S. exports more expensive for foreign buyers. The second effect would be a domestic demand stimulus as steel consumers bought less steel from abroad and more from local producers. This would be multiplied through the domestic economy raising incomes and economic activity. Higher economic activity would induce more imports. The combination of these two effects would eventually bring international trade flows back to the previous level determined by the balance of savings and investment.

The same logic applies to export promotion or even an increase in exports that may occur for any of a variety of reasons. Paul Krugman, one of the foremost international trade economists, for example, states the following:

> ...[C]onsider a national economy that finds one of its major exports growing rapidly. ...[T]here will be strong negative feedbacks from the growth of that export to employment and exports in other industries. Indeed, those negative feedbacks will ordinarily be so strong that they will more or less completely eliminate any improvements in overall employment or the trade balance.[10]

The policy implications of a macroeconomic approach to the trade deficit, therefore, is that trade policy measures have no effect on the overall balance of trade, although they can influence specific flows of imports or exports or change the distribution of the trade deficit among trading partners or among specific traded goods. According to this approach, trade policy may do many things, but it is unlikely to alter the aggregate size of a nation's trade deficit.

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[9] The accounting identity that produces this result is derived as follows: Income(Y) =Consumption (C) + Business Investment (I) + Government Expenditures (G) + Net Exports (Exports [X] - Imports [M]) or: **Y = C + I + G + (X-M)**. By an alternative definition, Income (Y) = Consumption (C) + Taxes (T) + Household savings (S) or: **Y = C + T + S**. Solving the above two equations yields: T + S = I + G + (X-M). Rearranging the equation yields: **(X - M) = (S - I) + (T -G)**, or the **trade deficit** equals the **savings-investment shortfall** plus the **budget deficit**.

[10] Krugman, Paul. A Country is Not a Company. *Harvard Business Review*, v. 74, January/February 1996. P. 40-51. Krugman assumes the economy is at full employment.

This macroeconomic approach to the trade deficit is reflected in policy conclusions, such as the following from the Cato Institute:

> Contrary to popular conception, the trade deficit is not caused by unfair trade practices abroad or declining industrial competitiveness at home. Trade deficits reflect the flow of capital across international borders, flows that are determined by national rates of savings and investment. This renders trade policy an ineffective tool for reducing a nation's trade deficit.[11]

In recent years, this basic approach to the trade deficit and trade policy has been extended. Economists have developed new models that attempt to deal with some shortcomings of traditional analysis such as: (1) the inability of macroeconomic models to explain movements in actual data, such as the exchange rate, (2) the inability of macroeconomic models to indicate when exchange rates are over- or undervalued, and (3) the static nature of macroeconomic models which do not consider dynamic and intertemporal effects on variables such as productivity and consumption at different time periods. Recently, the Asian financial crisis has raised the issue of the sustainability of the trade deficit. The macroeconomic approach also pays little attention to the time necessary for adjustment, the adjustment path, or whether the adjustment is partial or complete.[12]

Problems with the Basic Macroeconomic Approach

The accounting identity underlying the macroeconomic approach to the trade deficit relies heavily on the equality of savings and investment. The problem with this is that while the savings-investment identity always holds *ex post* (with an adjustment for errors and omissions of several billion dollars), it is less useful in determining policy and in forecasting future changes.

The economic profession agrees that "savings = investment" is an accounting identity and not a behavioral equation. The identity captures a final result but does not show how to get there. It is a framework for analysis, a macroeconomic relationship that overlays a microeconomic world. It provides a way to sort out the many forces in an economy that affect trade and to highlight relationships that might be difficult to grasp otherwise. It also is useful in categorizing the sources of a savings-investment gap in a country. The identity, however, does not show the direction of causality. Do levels of savings affect trade, or do levels of trade affect savings? It also does not provide a mechanism to show exactly how a domestic savings-investment gap determines international capital flows and the trade deficit.

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[11] Griswold, Daniel T. America's Maligned and Misunderstood Trade Deficit. Cato Trade Policy Analysis No. 2, April 20, 1998. On Internet at <http://www.freetrade.org/pubs/pas/tpa-0002.html>.

[12] For a simulation of some macroeconomic effects, see: CRS Report 96-301, *Effects of Trade Policies on the U.S. Trade Deficit and Other Macroeconomic Variables*. By (name r edacted).

A survey of the state of macroeconomic theory with respect to trade policy is beyond the purview of this report.[13] To catch a flavor of the debate and the policy implications of it, however, we will examine three issues that seem pertinent today. These are foreign exchange rates, the so-called twin deficits, and the trade deficit over time.

Exchange Rate Effects and Determination. Exchange rates and the role they play in equilibrating imbalances in trade flows among nations are a key to macroeconomic trade analysis. Exchange rates are like international prices among countries. They are a central part of the mechanism by which macroeconomic flows of goods, services, and capital are brought into balance. In theory, by allowing exchange rates to adjust, countries can bring their international accounts into balance.

Exchange rates also play a key role in linking capital flows to trade flows. Consider, for instance, an inflow of capital which is usually considered to cause an offsetting increase in a country's trade deficit. How does the process work? The standard interpretation is that the capital influx increases demand for a country's currency which causes the nation's exchange value to appreciate. The higher value for the currency makes imports cheaper and exports more expensive to foreign buyers. The net effect is that imports rise, exports decline, and the trade deficit increases. (The inflow of capital, if not offset by actions by monetary authorities, also may lower interest rates which then stimulates demand for products — including imports.)

In the real world, however, exchange rates do not always determine the prices of traded goods and services. The problem is that international markets tend to be segmented: a product may have different domestic prices in different countries. The "law of one price" does not hold in most cases.[14] Prices for commodities, such as petroleum and coal, tend to be the most similar across countries, while prices for sophisticated manufactures or for services tend to be the least similar. If different prices for the same product can be charged in various countries, then an exchange rate change will not necessarily induce the expected response in import (and export) flows. On brand-name products, in particular, the pass-through of exchange rate changes is usually incomplete.

For example, between January 5, 1994 and April 19, 1995, the Japanese yen appreciated by 34% against the dollar as it rose from 113 to 80 yen per dollar. Prices for exported products from Japan to the United States should have risen significantly, but, for example, the U.S. sticker price of a Toyota Celica ST Coup rose by only 2% (it went from $16,968 to $17,285), while the suggested retail price of a large-screen Sony Trinitron television receiver actually fell by 15%. Between 1982 and 1985, the

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[13] For more detail, see: Grossman, G. and K. Rogoff, eds. *Handbook of International Economics*, Vol. III, New York, Elsevier Science, 1995.

[14] The law of one price states that under perfect competition (and ignoring transportation costs) the price of an identical product must be the same across markets.

dollar appreciated by 21%, but U.S. import prices fell by only 4%. Between 1985 and 1988, the dollar depreciated by 44%, while U.S. import prices rose by only 10%.[15]

For shipments to the United States, economic studies have found that, on average, an exchange rate change induces a price response equal to one-half the amount, although it varies by industry. Measures of trade barriers, moreover, tend to play no role in explaining the differences in prices across markets.[16] An implication of this lack of response of domestic prices to exchange rate changes is that a currency depreciation will not necessarily eliminate a nation's trade deficit,[17] although empirical studies indicate that for most countries over the long run, a real depreciation (adjusting for domestic inflation) is likely to improve a nation's current account balance while a real appreciation is likely to worsen it. In the short-run, however, the opposite is likely to occur.[18]

For practical purposes, the lack of response in flows of imports and exports to an exchange rate change means that the exchange rate will often overshoot the amount of change necessary to bring trade and capital flows back into balance. This introduces more distortions and inefficiencies into the economy. An extreme case would be the situation in Indonesia in which its trade gap was not closed despite a drop in the value of its currency from 2,500 rupiah per dollar in July 1997 to about 14,000 per dollar in July 1998.

A further problem with exchange rates and the macroeconomy is that the link between the two still has not been sufficiently quantified. If the savings-investment relationship determines the trade deficit, and one of the mechanisms by which the trade deficit changes in response to macroeconomic variables is through the exchange rate, then economists should be able to establish linkages between exchange rate movements and underlying macroeconomic conditions such as relative interest rates and the money supply.

The economic literature on this point, however, is less than persuasive. Several economic models have been estimated that seek to explain or forecast monthly or quarterly exchange rates with traditional observable macroeconomic fundamentals but have generated few encouraging results. In the words of a reviewer of this literature for the *Handbook of International Economics*,

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[15] Krugman, Paul R. and Maurice Obstfeld. *International Economics, Theory and Policy*, 2nd edition. New York, HarperCollins Publishers, 1991. P. 454.

[16] Goldberg, Pinelopi Koujianou and Michael M. Knetter. Goods Prices and Exchange Rates: What Have We Learned? *Journal of Economic Literature*, Vol. 35, September 1997. P. 1244, 1270. Note: Two national markets are segmented if buyers in those markets face systematically different common currency prices for the same product. (P. 1245)

[17] *Ibid*. P. 1248.

[18] In order for a real depreciation to improve the current account, exports and imports must be sufficiently elastic respect to the real exchange rate. This condition holds for most industrialized countries for trade in manufactured goods in the long run but not in the short run. Krugman and Obstfeld, *International Economics*, p. 450, 468.

> "The dispiriting conclusion is that relatively little explanatory power is found, and the models contain little forecasting ability compared to very simple alternatives. Existing structural models have little in their favor beyond theoretical coherence. Positive results, when they are found, are often either fragile or unconvincing in that they rely on implausible theoretical or empirical models. For these reasons, we, like much of the profession, are doubtful of the value of further time-series modeling of exchange rates at high or medium frequencies using macroeconomic models.[19]

In commenting on another study, the same reviewers concluded that "macroeconomic variables cannot be very important determinants of exchange rate volatility.... There appears to be a growing general consensus for this conclusion; it is the rule rather than the exception that large movements in exchange rates occur in the absence of plausible or detectable macroeconomic events.[20] The theory, however, appears to do better with annual changes and in predicting long-term trends.

In view of volatility in exchange rates in the 1997-99 Asian financial crisis, more work on exchange rate determination is being conducted. The current trend is to view exchange rates in terms of microeconomic analysis — not unlike that used to analyze stock prices — but this approach is still primarily a research agenda.[21] What everyone does seem to agree upon is that exchange values (for floating rates) are determined by supply and demand, and that capital flows rather than trade flows comprise most of the foreign exchange transactions. Analysis of the exchange rate, moreover, is complicated by the fact that the U.S. dollar is a key international currency. Other nations use it as a unit of account, a store of value, and medium of exchange. They often acquire dollars for purposes other than to purchase U.S. exports or invest in the U.S. market.

There is little evidence that macroeconomic variables have consistent strong effects on exchange rates (except during extraordinary circumstances such as hyperinflations). Without this link between a nation's macroeconomy and its exchange rate, part of the adjustment mechanism by which a nation's saving and investment affects the trade deficit disappears. We are left with the demand effects — an increase in exports stimulates the domestic economy which then draws in more

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[19] Frankel, Jeffrey A. and Andrew K. Rose. Empirical Research on Nominal Exchange Rates. In *Handbook of International Economics*, Vol. III, Edited by G. Grossman and K. Rogoff. New York, Elsevier Science, 1995. P. 1705.

[20] *Ibid.* P. 1707. This observation was based on: Flood, Robert P. and Andrew K. Rose. Fixing Exchange Rates: A Virtual Quest for Fundamentals. National Bureau of Economic Research Working Paper No. 4503, October 1993.

[21] Frankel, Jeffrey A. and Andrew K. Rose. Empirical Research on Nominal Exchange Rates. In *Handbook of International Economics*, Vol. III, Edited by G. Grossman and K. Rogoff. New York, Elsevier Science, 1995. P. 1709-1710.

imports and offsets some of the original increase in exports. Demand effects alone, however, cannot account for all movements in trade balances.[22]

The inability of macroeconomic theory to explain even simple exchange rate movements also raises questions about the standard interpretation of international trade policies. If exchange rates do not reflect either underlying trade flows or macroeconomic variables (such as interest rates), then the standard macroeconomic conclusion that all export promotion or import protection is negated completely by market forces is subject to challenge. A country might be able to erect trade barriers or promote exports without eliciting a major response from exchange markets. The current state of macroeconomics allows one to state that reducing U.S. imports will tend to raise the value of the dollar on exchange markets, but whether a combination of the effects on the exchange rate and domestic demand are sufficient to offset the reduced imports to keep the balance of trade the same does not seem to have been established empirically.

In terms of actual trade policymaking, however, U.S. commitments under the World Trade Organization and other trade agreements preclude unilateral protectionist measures or excessive export promotion activity. Economic studies also have shown that import protection does cause higher prices and a narrower choice of products. This benefits domestic companies manufacturing those products but harms consumers who might buy them.

The lack of an empirically established link between the exchange rate and macroeconomic variables also implies that little can be said about whether an exchange rate is at the "right" level or not. Although observers agree that as exchange rates rise and fall they tend to overshoot, there is no agreed-upon formula to determine what the appropriate level should be and when an exchange rate has dropped too low or risen too high.

Some countries maintain a fixed exchange rate that they determine primarily in response to forces of demand and supply. Hong Kong, China, and Chile, for example, intervene aggressively in foreign exchange markets to maintain their fixed rates. They have doggedly fended off speculators who have bet on a depreciation. They also may be willing to sacrifice some amount of domestic economic growth to maintain what they consider their "right" exchange rates. The United States, however, has adhered to the policy that it intervenes in currency markets only in exceptional cases and will not sacrifice the domestic economy to protect the exchange rate.[23]

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[22] In order for all increases in U.S. exports to be offset by greater imports caused by increased demand, the U.S. import share would have to exceed the inverse of the demand multiplier. For example, if a $1 billion increase in exports raises a nation's gross domestic product (GDP) by $2.5 billion (multiplier of 2.5), then for imports to rise by $1 billion, imports as a share of GDP must equal at least 40% or 1/2.5 and must respond proportionately. In the United States, imports of goods and services account for about 13% of GDP.

[23] A major defense of a weakening exchange rate usually requires raising interest rates to attract capital inflows or stop capital outflows. Higher interest rates, however, cause

(continued...)

In June 1998, however, as the yen dropped to 146 yen per dollar, the United States and Japan did intervene in currency markets to bolster the yen's value and weaken the dollar. The weakening yen not only was causing Japan's trade surplus to rise but it was imposing greater difficulty on exporters from the Asian economies in financial crisis, particularly South Korea, whose exports compete with those from Japan. The weak yen also was putting pressure on China to devalue its currency[24] and was hurting U.S. exports to Japan.

In terms of U.S. policy, one may ask just what are the limits to exchange rate changes that will trigger intervention? Are they established in some rational manner or are they primarily determined by the "squeal factor" — allowing the dollar to appreciate or depreciate until businesses that are hurt complain loudly enough to compel intervention by the U.S. Federal Reserve or Treasury? Should the United States have an exchange rate policy much like it has a monetary policy?

If other countries regularly intervene in exchange markets, moreover, then the resulting exchange rates can be partly the result of government policy, although with floating exchange rates most intervention appears to have only temporary and psychological effects. One way that governments intervene in foreign exchange markets is to accumulate foreign exchange reserves. Japan's foreign exchange reserves, for example, soared from $98.5 billion in 1993 to $183.3 billion in 1995, and to $223.7 billion in May 1999.[25] This still is small relative to world capital flows, but the increase from 1993 is more than double the size of Japan's trade surplus with the United States.

Countries also may regulate capital flows. Some countries restrict outflows of capital or may cause a surge of foreign borrowing by local institutions (e.g. Thailand in the mid-1990s) by liberalizing their nation's capital flows or may induce a surge in capital outflows by increasing the share of pension funds or other assets that can be invested in foreign securities (e.g. Japan in 1998).

Figure 4, shows monthly percentage changes in Japan's official foreign exchange reserves (including holdings of gold) along with changes in Japan's yen-dollar exchange rate from January 1996 to June 1998. The accumulation or disposal of foreign exchange reserves is functionally equivalent to intervention in foreign exchange markets. When Japan's central bank accumulates foreign exchange, it refrains from converting dollars, marks, pounds, and other foreign currencies into yen. This weakens the value of the yen and strengthens the value of foreign currencies, particularly the dollar. (As the volume of Japan's foreign trade increases, its need for

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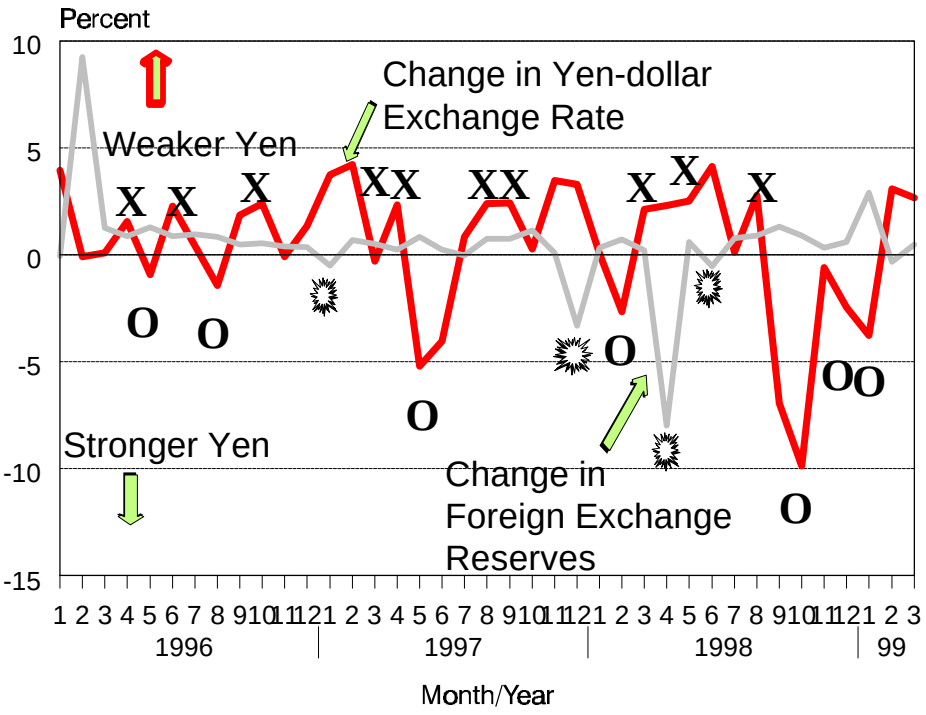
[23](...continued)
economic growth to slow.

[24] U.S. Department of the Treasury. Statement by Treasury Secretary Robert E. Rubin on Japan. Press Release RR-2522, June 17, 1998. On Internet at <http://www.treas.gov/press/releases/pr2522.htm>. Sanger, David. U.S. Intervenes in Currency Markets to Support the Yen. *The New York Times on the Web*, June 18, 1998. On Internet at <http://www.nytimes.com/library/financial/061898dollar-yen.html>.

[25] International Monetary Fund. *International Financial Statistics*. Japan. Ministry of Finance. On Internet at <http://www.mof.go.jp>.

foreign currency reserves also may rise, but the level of Japan's currency reserves seems out of line with those of other major trading nations. Germany's reserves [including gold] are about $80 billion, the United Kingdom's about $40 billion, and the U.S. government's about $70 billion.)

Figure 4. Monthly Changes in Japan's Yen-Dollar Exchange Rate and Foreign Exchange Reserves (Percent)
(X = Intervention to weaken a weakening yen,
O = Intervention to weaken a strengthening yen,
= Intervention to strengthen a weakening yen.)



Source: Data from International Monetary Fund, Japan Ministry of Finance

If Japan's policy is to stabilize its exchange rate, changes in its holdings of foreign exchange and in the level of its exchange rate should move in opposite directions. When the yen is weakening, Japan should be selling foreign exchange (buying yen), and vice versa. If, however, Japan is accumulating foreign exchange at the same time that its currency is weakening, it is pursuing a "cheap yen" policy. It is intervening in the market to further weaken the yen. In **Figure 4**, such policy episodes predominated during 1996 and into mid-1998. They are indicated by an **X** along the line showing changes in exchange rates. When Japan is accumulating foreign exchange at a time the yen is strengthening, it also is pursuing a policy of weakening the yen. These episodes are indicated with an **O** and add to the episodes in which Japan pursued a "cheap yen" policy. The times are indicated by a when Japan was selling dollars to strengthen its yen — which is the policy the United States was encouraging Japan to take during much of this period,. These episodes occurred primarily after the onset of the Asian financial crisis (from mid-1997) and primarily after the value of the yen had dropped to levels that threatened to further destabilize world markets. Even during the Asian crisis, however, Japan has, at times, reported net increases in foreign exchange reserves. After intervening in foreign exchange

markets to strengthen the yen by selling $17.8 billion in foreign exchange in April 1998, the Bank of Japan added foreign exchange reserves in ten of the next twelve months to bring its total holding of foreign exchange back to the level of $223 billion in April 1999 — the amount Japan held before the April 1998 sales.[26]

From the standpoint of economic efficiency, excessive volatility in the exchange rate adds risk, makes investment analysis more difficult, and may reduce economic growth. For U.S. exporters to Japan, for example, the depreciation of the yen from 80 yen per dollar in 1995 to 146 yen per dollar in June 1998, was equivalent to Japan's imposing an 82% tariff on imports from the United States.

Twin Deficits. A focus on the savings and investment identity also may produce policy prescriptions that can be incomplete. For example, in the 1970s and 1980s, the United States experienced so-called twin deficits. A sizable volume of economic and popular literature pointed out that the dissavings of the federal government in the form of its budget deficit was generating a twin in the form of a rising U.S. trade deficit. In order to reduce the trade deficit, the policy prescription was that the United States should look beyond trade policy and put its resources instead into increasing its savings rate. (This led to a 1989 policy proposal by Japan in trade negotiations with the United States, for example, that in order to reduce the U.S. trade deficit, Americans should curtail their reliance on credit cards.[27])

How valid is the twin deficit connection?[28] An econometric analysis indicates that for industrial countries, budget deficits indeed were positively correlated with current-account deficits over the 1976-1985 period. Over the 1986-1990 period, however, that correlation evaporated.[29] In the mid-1990s, for the United States and Japan, the two deficits are negatively correlated and moving in opposite directions. The U.S. budget deficit has shrunk and is turning into a surplus, while the U.S. trade deficit has been rising. Japan's budget deficit is rising, while the country runs a ballooning trade surplus.

Although U.S. government budget deficits do reduce national savings and may induce U.S. borrowing from abroad, a lower budget deficit does not imply a lower trade deficit. In addition to federal government dissavings (deficits), private, business, and local government savings also come into play. The conclusion now seems to be that the twin deficits certainly are not Siamese, identical, or even fraternal and are useful for policy purposes only as a generality.

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[26] Data on Japan's Foreign Exchange Reserves are available from Japan's Ministry of Finance on the Internet at <http://www.mof.go.jp/english/gaijun>.

[27] Frankel, Jeffrey A. The SII Outcome: In Whose Best Interest? *The International Economy*, October/November 1990. P. 70.

[28] For a discussion of this issue, see: CRS Report 97-985, *Why the Budget Deficit and the Trade Deficit Haven't Been Moving Together*, by (name redacted).

[29] Obstfeld, Maurice and Kenneth Rogoff. The Intertemporal Approach to the Current Account. In *Handbook of International Economics*, Vol. III, Edited by G. Grossman and K. Rogoff. New York, Elsevier Science, 1995. P. 1763.

Intertemporal Savings and Investment. Another area in which the traditional macroeconomic approach to the trade deficit is being extended is to consider the effects of international borrowing on variables such as productivity and consumption at different time periods. If American citizens, for example, are borrowing from abroad to finance current purchases, they must be doing so according to some valuation of future versus current consumption.

According to a review of economic literature on the intertemporal approach to the current account, economic models that fail to integrate investment, saving, and growth make it virtually impossible to understand persistent current account imbalances. Why, for example, are the current accounts of Canada and Australia perennially in deficit while that of Japan is in surplus despite wide swings in their real exchange rates? The standard macroeconomic approach to trade deficits, moreover, offers no valid benchmark for evaluating the size of external imbalances. The International Monetary Fund in its dealings with currency crises considers a current account deficit that exceeds 5% of gross domestic product to be a warning signal that the deficit may be unsustainable.[30] But that observation is based more on experience than on theory. In practice, policymakers usually just strive to avoid a negative current account. In considering trade across time periods, however, efficiency often calls for an unbalanced current account (as explained below).[31]

One recent approach to this problem is to treat the international borrowing to fund a current account deficit in terms of standard investment analysis. A current account deficit represents the borrowing against future output in order to purchase more goods and services today (which generates a trade deficit). This potentially could burden future generations with lower consumption in order to repay the debts being incurred today. In standard cost-benefit analysis, this borrowing would be justified if it results in enough consumption being made available in the future to offset borrowing costs (interest rates).

For a nation, rigorous cost-benefit analysis of all international borrowing is not feasible. Capital flows occur because of both pull and push factors. Although inflows of capital may be conceptually equivalent to international borrowing, foreign investors may have their capital "pushed" into the U.S. market for a variety of reasons, including considerations of political risk, which may be unrelated to differences in interest rates or other borrowing criteria.

A stylized approach to assessing whether trade deficits are "good" or "bad," however, is to examine how a deficit in trade and corresponding imports of capital (borrowing) are used. If the capital imports are employed to increase productivity (e.g. used to buy capital equipment) that will bolster economic growth, the capital

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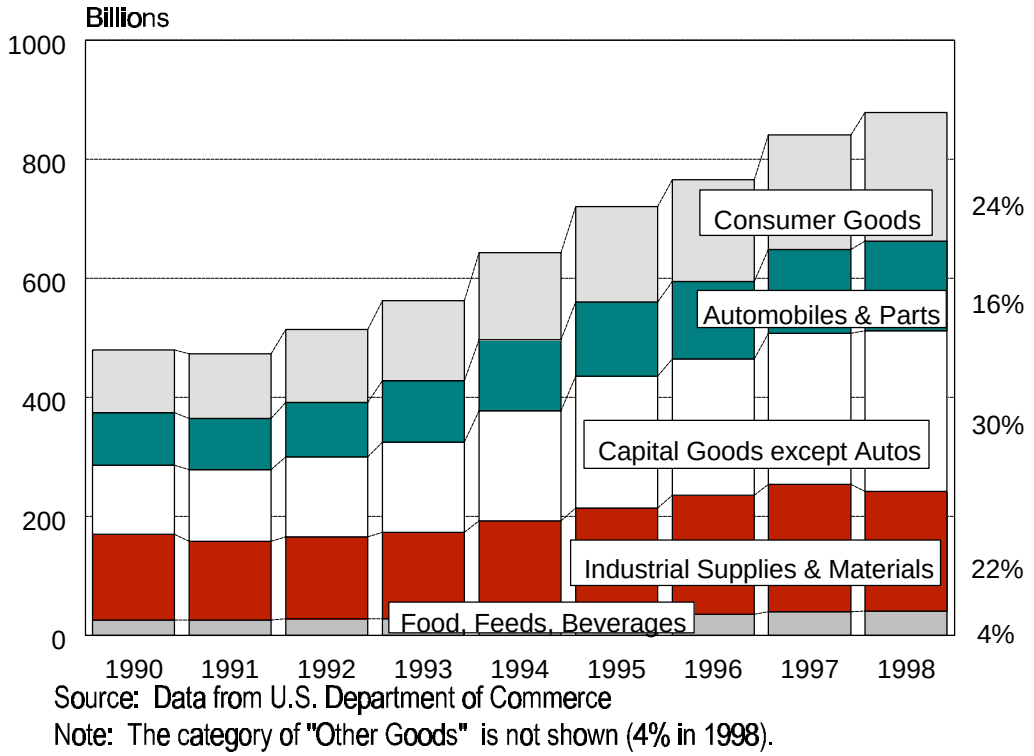
[30] Sugisaki, Shigemitsu. The Global Financial System: Status Report. Address at the 11th Conference of the International Federation of Business Economists, Vancouver, Canada. November 18, 1997.

[31] Obstfeld, Maurice and Kenneth Rogoff. The Intertemporal Approach to the Current Account. In *Handbook of International Economics*, Vol. III, Edited by G. Grossman and K. Rogoff. New York, Elsevier Science, 1995. P. 1793-94.

imports and corresponding trade deficit may be considered to be "good."[32] If the international borrowing is used to finance current consumption, it is considered to be "bad" (in the sense that future consumption will be lower than it otherwise would be). The logic of this analysis is similar to that for an individual. If the individual is borrowing to finance investments in productive assets (e.g. an education, automobile for commuting to work, or preventive medical care) that tend to increase productivity and earned income, it may be considered to be "good." However, if the individual is borrowing merely to increase current consumption (e.g. vacation travel, clothes, or entertainment), it may be considered to be "bad."[33]

Figure 5. U.S. Imports of Merchandise by Major End-use Category, 1990-97



Source: Data from U.S. Department of Commerce

Note: The category of "Other Goods" is not shown (4% in 1998).

As shown in **Figure 5**, U.S. imports of capital goods (excluding automobiles) have been rising. In 1998, they accounted for 30% of total merchandise imports, up from 23% in 1990. Imports of automobiles, some of which are capital goods, but most of which are consumer durables, eased somewhat from 18% to 16%, while consumer goods grew from 19% to 24%. In dollar amounts, imports of capital goods (excluding automobiles) rose by $154 billion (from $116 billion in 1990 to $270 billion in 1998), while the U.S. current account deficit rose by $141 billion (from $92 billion in 1990 to $233 billion in 1998). In the 1990s, therefore, imports of capital

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[32] In a strict sense, the rate of return on the investment should exceed the interest paid on capital borrowed from abroad.

[33] Lippens, Robert E. Are Trade Deficits That Bad? *Business Economics*, April 1977, vol. 32. P. 14-19. See also: CRS Report 98-508 E, *U.S. Trade Balance: An Analysis of Recent Trends and Policy Options*, by (name redacted).

goods have increased by more than the current account deficit, and capital goods imports have been growing both absolutely and as a percent of total merchandise imports. In this sense, the capital borrowing from abroad seems to have been used to finance productivity-enhancing investments. Consumption imports, however, still are quite large.

The intertemporal approach to the current account deficit does provide one policy implication that most developing nations have implemented. That is, if tariffs are imposed they should fall on consumption and not capital goods.

This approach may indicate to policymakers whether a country is "squandering" the capital being imported to purchase current consumption goods, but it does not provide policy tools to determine the optimal size of a nation's current account deficit. The United States may be borrowing to enhance future economic growth, but are we becoming too reliant on foreign capital? The intertemporal approach has not yet developed to the point that it can indicate to policymakers whether or not a chronic current account deficit can be sustained.

Sustainability of the Trade Deficit

Is the U.S. current account deficit sustainable? Is the United States likely to encounter a situation in which investors lose confidence in dollar-denominated assets and dump them thereby causing a rapid depreciation in the value of the dollar and a currency crisis similar to that experienced by Mexico in 1995 and countries of Asia in 1997 and 1998? This depends on whether the U.S. economy will be able to generate the resources necessary to repay the funds borrowed from abroad.

First, it should be noted that even though the U.S. trade deficit has reached the $200-billion level, the current account deficit is less at $155 billion primarily because of the U.S. surplus in services trade. As a percent of total U.S. consumption, moreover, the trade deficit at about 3% is down from the 5% in the mid-1980s. The current account as a percent of gross domestic product also is comparably lower. The U.S. current account deficit is not currently at the 5%-of-GDP level considered to be a danger sign in international financial markets.

Second, it should also be noted that the foreign investments in the United States have grown to the point that in 1997 foreign investors in the U.S. market earned $5.3 billion more than Americans earned on their investments abroad.

Concern over the sustainability of the U.S. current account deficit was recently stated by Alan Greenspan, the Chairman of the Federal Reserve:

> A more distant concern, but one that cannot be readily dismissed, is the very condition that has enabled the surge in American household and business demands to help sustain global stability: our rising trade and current account deficits. There is a limit to how long and how far deficits can be sustained, since current account deficits add to net foreign claims on the United States.

> It is very difficult to judge at what point debt service costs become unduly burdensome and can no longer be sustained. There is no evidence at this point that markets are disinclined to readily finance our foreign net imbalance. But the arithmetic of foreign debt accumulation and compounding interest costs does indicate somewhere in the future that, unless reversed, our growing international imbalances are apt to create significant problems for our economy.[34]

In essence, whether the United States can sustain its current account deficit over the foreseeable future depends on whether foreigners are willing to increase their investments in U.S. assets. In short, the current account deficit puts the economic fortunes of the country partially in the hands of foreign investors. Foreign investment in the United States takes two primary forms: direct investment necessary to do business in the U.S. market and portfolio investment to take advantage of higher rates of return in the United States. The latter includes short-term speculative funds that are seeking higher quality markets because of instability abroad and bank deposits.

As shown in **Figure 6**, net inflows of capital into the United States have more than offset the recent U.S. current account deficit. Net capital flows and the current account tend to mirror each other. (In 1997, net capital inflows were $255 billion while the current account was only -$155 billion because of a -$100 billion statistical discrepancy. This discrepancy has trended toward larger negative numbers. It went from $25 billion in 1989 to $1 billion in 1994, to -$60 billion in 1996, and -$100 billion in 1997.)

Capital inflows include official reserve assets, other government assets, and private assets. Private assets dominate the capital flows. In 1997, of the total $733.4 billion in capital inflows, $717.6 billion was in private assets (of which $93.4 billion was in direct investments, $171.5 billion in Treasury securities and currency, $196.8 billion in U.S. private sector securities, $107.8 billion in nonbanking assets, and $148.1 billion in banking assets). For capital outflows the story is similar. Of the total $478.5 billion in capital outflows, private assets accounted for $477.7 billion (of which $121.8 billion was in direct investments, $88.0 billion in foreign securities, $120.4 billion in other nonbanking assets, and $147.4 billion in banking assets).[35]

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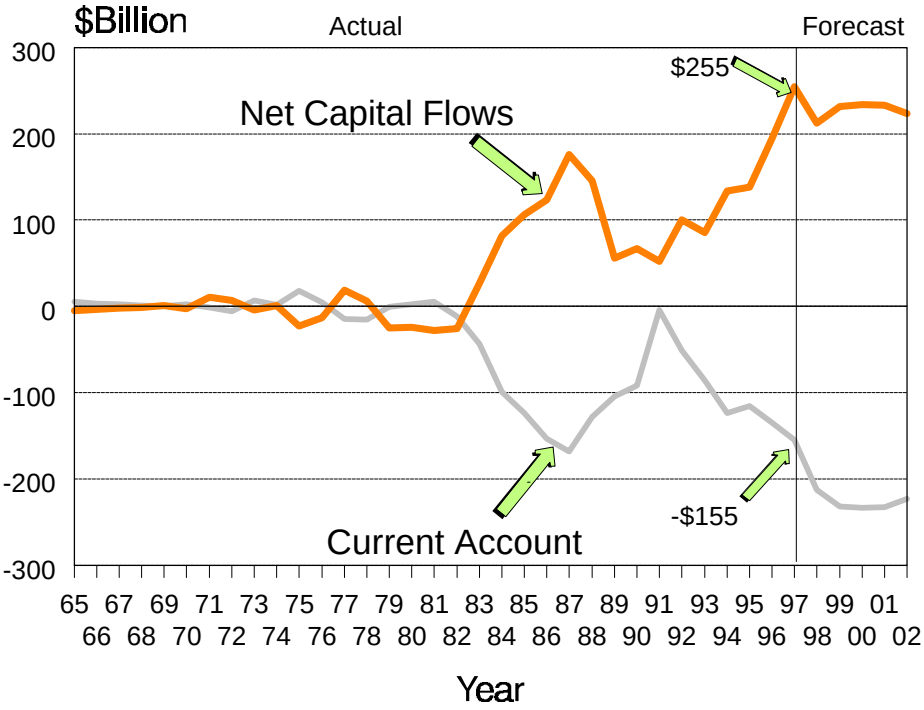
[34] Greenspan, Alan. *The American economy in a World Context*. Remarks at the 35th Annual Conference on Bank Structure and Competition of the Federal Reserve Bank of Chicago, Chicago, Illinois. May 6, 1999. On the Internet at <http://www.bog.frb.fed.us/boarddocs/speeches/1999/19990506.htm>.

[35] U.S. Bureau of Economic Analysis. *Survey of Current Business*, July 1998. P. 68-69.

Figure 6. Net Capital Flows (Government and Private) and Current Account Balances for the United States, 1965-97



Source: U.S. Bureau of Economic Analysis. Forecast by Standard & Poor's DRI

In terms of private assets, foreign direct investment inflows and outflows tend to offset each other. In 1997, the inflow of foreign direct investment of $93.4 billion was more than offset by U.S. direct investment abroad of $121.8 billion. In terms of financing the U.S. trade deficit, direct investment is attractive because it is more stable than portfolio investment. Foreign companies and actual plant and equipment in the United States are here somewhat permanently Foreign owners cannot easily move them out of the U.S. market.

Portfolio investment in securities and equities is much more volatile and depends on relative rates of return, behavior of stock markets, relative interest rates, economic stability, and other variables. In the mid-1990s, the booming U.S. stock market combined with relatively high interest rates and currency instability in Asia to attract considerable capital to the United States. (In mid-June 1998, the U.S. three-month money market rate was 5.6% as compared with 0.4% in Japan, 1.9% in Switzerland, 3.6% in Germany, 3.8% in France, and 5.1% in Italy.) For now, U.S. capital markets are appealing, but as Asian countries discovered during their financial crises, capital can be fickle. It can flow out as fast as it flows in.

How much longer the United States can attract $150 to $250 billion per year in net capital inflows in order to finance its trade deficit is an important question. Net foreign purchases of U.S. Treasury securities have been running at an annual rate of about $150 billion in 1996 and 1997. This almost equals the U.S. current account deficit. According to one analyst, the continuation of the current account deficit and strong dollar — and, hence, of the sequence of happy non-inflationary years with

domestic demand growing faster than the trend rate of GDP growth — depends on foreigners' willingness to purchase U.S. Treasuries at a rate equal to about 2 percent of the American gross domestic product. The author concludes that recent trends in the American balance of payments, and — more specifically — in the financing of the current account deficit, are "clearly unsustainable." He reasons that foreign and international investors already own such as high percentage of the U.S. national debt that they will not continue purchasing it at current levels. He warns that in a decade foreign investors could end up owning all the U.S. national debt[36]

One factor working in the favor of the United States in terms of capital flows is that the dollar has become a key world currency. It is used abroad for the same reasons that it is used at home: as a unit of account, a medium of exchange, and a store of value. Foreigners are willing to purchase U.S. paper currency (which pays no interest) for use in international transactions. As of 1996, the U.S. Treasury estimated that $209.6 billion in U.S. currency (primarily $100 notes) was circulating abroad. This amount was increasing by about $15 billion per year and exceeded the currency circulating in the United States. In other words, the United States has been exporting paper currency in exchange for claims on real goods and services abroad.

The use of dollars as a key currency, moreover, means that American foreign borrowing can be denominated in dollars rather than in a foreign currency. Even if the value of the dollar falls on exchange markets, the dollar amount of U.S. borrowing does not change. This is quite a different situation from that of Indonesia, South Korea, or Mexico. As the value of their currencies fell, the amount of their foreign debt, which was denominated in dollars and other foreign currencies, rose.

Foreign and international investors also invest their capital in U.S. equity and property markets. Over 1996-97, U.S. equity markets attracted between $100 billion and $200 billion per year from abroad. In the future, whether these markets can keep pulling in such amounts, plus absorb more of the funds that have been flowing into Treasury securities, is an open question. Much of the recent influx of foreign capital into Treasury securities, U.S. equity markets, or even U.S. bank accounts has been induced by the Asian financial crisis and threat of contagion in Eastern Europe and Latin America. Finance capital has been leaving other countries because of instability there. There has been a "flight to quality" despite countermeasures by countries, such as South Korea, that have raised domestic interest rates to levels as high as 20 to 40%. Once the Asian financial crisis eases, however, some of this capital likely will flow back to these Asian and other nations.

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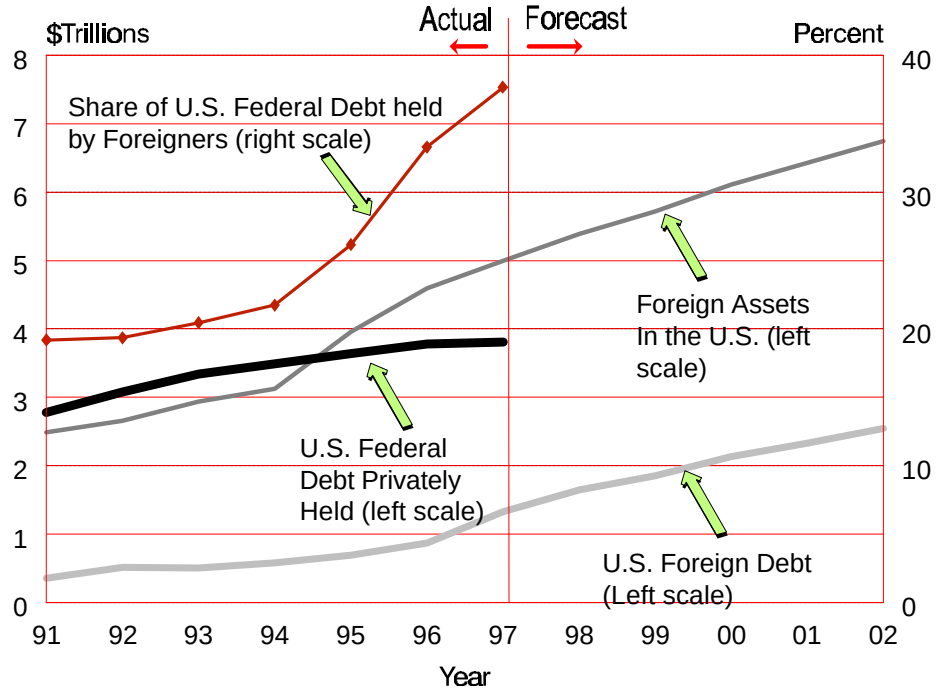
[36] Congdon, Tim. Treasury Warning. *The International Economy*, July/August 1998. P. 34-35. (Actually, foreign purchases of U.S. Treasury securities plus currency amounted to about 2% of U.S. gross domestic product in 1996 and 1997.)

Figure 7. U.S. Foreign and Federal Debt and Foreign Assets in the United States, 1991-2002 (forecast)



Sources: U.S. Federal Reserve. U.S. Department of Commerce. Forecast from Standard & Poor's DRI

The Standard and Poor's DRI projection of the U.S. current account deficit and net inflows of capital are both at about $230 billion from 1999 to the year 2002. As shown in **Figure 7**, this implies an increase in the foreign indebtedness of the United States of about a trillion dollars every four or five years. The foreign debt (net international investment position of the United States with the sign reversed) has already risen from $355 in 1991 to $1,328 billion in 1997. Following the Standard and Poor's DRI forecast, this position would deteriorate to $2,131 billion in the year 2000 and to $2,543 billion in the year 2002. This implies that U.S. foreign debt as a percent of U.S. gross domestic product would have risen from 16.4% in 1997 to about 25% in 2002. Foreign assets in the United States likewise have already surged from $2,487 billion in 1991 to $4,993 billion in 1997. If current trends continue, they are forecast to reach $6,745 billion by 2002 (or about 67% of the $10,076 billion forecast for U.S. GDP).

One question is where this inflow of foreign investment would be directed. The total U.S. privately held federal debt rose to $3,393 billion in 1997, but its level has stabilized as the federal budget is beginning to generate a surplus. Purchases of federal securities by foreigners, however, have continued. As a percent of total federal debt privately held, the share held by foreigners rose from 19% in 1991 to 38% in 1997. If foreign holdings of U.S. federal debt continue to rise at $100 to $200 billion per year, by the year 2002, between 47% and 67% could be held by foreigners. The question is whether this level would be acceptable to the American people or to foreign investors and lenders. For Americans, this is primarily a political question. For foreign investors, this is primarily an economic question.

Looking forward into the next century, it is unlikely that net capital inflows into the United States will continue at their unusually high rates of 1996-98. The Standard and Poor's DRI forecast merely extrapolates current trends. If the high rates of capital inflows do not continue, the U.S. current account deficit also will have to decline. Put another way, if the United States is able to reduce its trade deficit, its borrowing needs also would decline.

Trade and Jobs

Considerable controversy exists as to the effect of imports and exports on American jobs and wages. Most mainstream economists assert that international trade results primarily in reallocation of jobs from less efficient to more efficient industries rather than particular job gains or losses for the economy as a whole. This argument was recently stated by Alan Greenspan as follows:

> It is difficult to find credible evidence that trade has impacted the level of total employment in this country over the long run. Indeed, we are currently experiencing the widest trade deficit in history with a level of unemployment close to record lows.
>
> Certainly, the distribution of jobs by industry is affected by international trade, but it is also affected by domestic trade. It is the relative balance of supply and demand in a competitive market economy that determines the mix of employment. When exports fall or imports rise, domestic demand and relative prices have invariably adjusted in the long run to leave total employment relatively unaffected. As economists like to say, all imports are eventually paid for with exports.[37]

Other studies, however, indicate that the trade deficit may have an impact on U.S. potential employment. One study, for example, concluded that because of the Asian financial crisis, many of the Asia countries affected are attempting to export their way out of their problems. The resulting $100 billion increase in the U.S. trade deficit could destroy 1.1 million U.S. jobs. The losses would occur in every state, mostly in the manufacturing sector, where, even if interest rates are lowered enough to stave off a jump in unemployment, 600,000 jobs would be shifted from the high-wage manufacturing to the lower-paying service sector.[38]

As for the North America Free-Trade Agreement, a 1998 study of its effect on employment over the four-and-one-half years after it had been implemented concluded that NAFTA had primarily served to accelerate trade, plant relocation, and sectoral job gains and losses that were already ongoing. Approximately 191,000 primary jobs had been certified by the U.S. Department of Labor in 1,638 plants as potentially

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[37] Greenspan, Alan. *Trade and Technology*. Remarks before the Alliance for the Commonwealth, Conference on International Business, Boston, Massachusetts. June 2, 1999. On Internet at <http://www.bog.frb.fed.us/boarddocs/speeches/1999/19990602.htm>.

[38] Scott, Robert E. and Jesse Rothstein. *American Jobs and the Asian Crisis: The Employment Impact of the Coming Rise in the U.S. Trade Deficit*. Washington, Economic Policy Institute, 1998. 13 p.

threatened by increased imports or plant relocations to Mexico or Canada. Apparel and electronics accounted for 40% of the NAFTA certifications. These potential job losses, however, were balanced by an estimated 680,000 net job gains in the U.S. economy from increased exports to Mexico and Canada since NAFTA took effect. This study did not, however, attempt to estimate net job gains foregone arising from increased imports from Canada and Mexico because there can be no net job losses as long as U.S. output and employment continue to rise.[39] Another study, however, estimated that over the first three years of NAFTA, the reduction in net exports to Canada and Mexico had eliminated 167,172 American job opportunities, and in total, NAFTA had resulted in a net loss of 394,835 jobs.[40] This area of job losses and gains from trade agreements seems to be one in which data and methods of analysis are still being developed.

Conclusion

This brief survey of the U.S. trade deficit and the theory and policies surrounding it indicates that this field of economics is evolving. Recently, some basic economic theory has been called into question as empirical studies fail to validate long accepted theoretical linkages. The policy implications with respect to trade have developed from the prescription that free trade is optimal to one that allows, for example, for strategic trade policy aimed at assisting certain industries — particularly those in high-technology. A strategic trade policy, however, comes with a new set of pitfalls.

The macroeconomic approach to explaining the trade deficit is encountering some obstacles. Many seemingly straightforward theoretical linkages, for example, have not been empirically established. In particular, studies have not been able to link macroeconomic conditions to short- and medium-term changes in a nation's exchange rate. Also, studies have found that changes in exchange rates do not translate completely into price changes for imports and exports. This implies that in order for exchange depreciation to eliminate a trade deficit, it must overshoot the equilibrium rate by quite a margin. This brings other inefficiencies into an economy.

Many nations regularly intervene in foreign exchange markets and influence the values of their currencies. Recent weakness in the Japanese yen, for example, has been exacerbated by the Japanese government's intervention into exchange markets. The United States, however, has no announced exchange rate policy nor does it have a transparent method of determining when it should intervene in currency markets.

The inability of macroeconomic theory to explain even simple exchange rate movements raises questions about the standard interpretation of international trade policies. If exchange rates do not reflect either underlying trade flows or macroeconomic variables (such as interest rates), then the standard macroeconomic conclusion that export promotion or import protection is negated completely by

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[39] CRS Report 98-783 E. *NAFTA: Estimates of Job Effects and Industry Trade Trends After 4 ½ Years*, by (name redacted).

[40] Rothstein, Jesse and Robert Scott. NAFTA's Casualties, Employment Effects on Men, Women, and Minorities. Economic Policy Institute Issue Brief No. 120. September 19, 1997.

market forces is subject to challenge. A country might be able to erect trade barriers or promote exports without eliciting a major response from exchange markets. U.S. commitments under the World Trade Organization and other trade agreements, however, preclude unilateral protectionist measures or excessive export promotion activity.

The demand effects of import protection or export promotion, however, are well established in empirical studies of the economy. Trade policies that reduce imports or increase exports provide a stimulus to the domestic economy that usually causes domestic production to rise. This, in turn, brings in more imports which offset, to some extent, the reduction in imports or increase in exports resulting from the trade policies. Also well established in economic studies are the benefits to competing U.S. producers and harm done to the American consumer from higher prices and narrower choice resulting from import protection policies.

The macroeconomic approach also is being extended to account for why the United States may be borrowing from abroad and how those funds are being used. Trade data indicate that a rising share of U.S. imports has been of capital goods that should increase U.S. productivity and growth in the future. Treating foreign borrowing with the same methods used to evaluate domestic borrowing might determine an optimal level for the U.S. current account deficit. This has not yet been done, however.

In terms of sustainability, it is difficult to see that the historically large capital inflows of 1996-1998 will continue into the next century. As the Asian financial crisis ebbs and world economies recover, some of the capital that has sought safety in U.S. markets likely will return abroad. If so, the U.S. trade and current account deficits of today will have to diminish. Put in opposite terms, if the U.S. trade deficit is reduced, the need for foreign borrowing also will decline.

The ability of the United States to continue to incur trade and current account deficits at the $200 billion level depends on the willingness of foreigners to lend and invest funds in the American market. The deficit, currently at roughly 3% of gross domestic product, is not at the danger-signal level of 5% of GDP used by the International Monetary Fund. But whether foreigners will continue to move capital to the American market, even if the foreign share of the U.S. federal debt rises to exceed 50% or if the level of foreign assets in the U.S. market increases to the equivalent of two-thirds of U.S. GDP, is both a political question for U.S. policymakers and an economic question for foreign investors. A further issue is whether net U.S. payments to foreign investors will continue to rise enough above their $22.5 billion in 1998 and whether they will offset capital inflows or become a burden to the U.S. economy.

Considerable controversy exists as to the effect of imports and exports on American jobs and wages. Mainstream economists assert that international trade results primarily in reallocation of jobs from less efficient to more efficient industries rather than particular job gains or losses for the economy as a whole. Other studies, however, document potential job losses in specific industries and point out that a rising trade deficit induces a shift of jobs from relatively high-wage manufacturing industries to the relatively lower-paying service sector