Michael R. Pakko is a senior economist at the Federal Reserve Bank of St. Louis. Gilberto Espinoza, Daniel Steiner, and Stephen Majesky provided research assistance.

The U.S. Trade Deficit and the "New Economy"

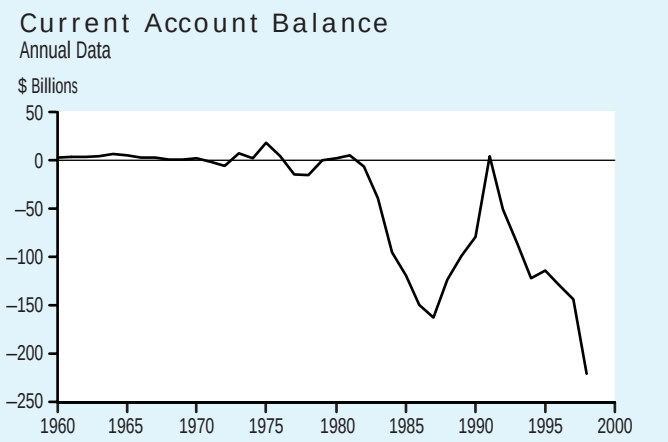
Michael R. Pakko

The performance of the U.S. economy during the 1990s has been universally hailed as stellar. Economic growth has been strong, unemployment has reached its lowest rate in over a generation, and inflation has remained relatively low. Consumer confidence has been high, helping to maintain strong growth in consumption expenditures, and investment spending has experienced a sustained growth rate that is unparalleled during the second half of the twentieth century. Many have gone so far as to declare that current conditions and prospects for the future represent a "new economy" or "new paradigm" in which these favorable trends might continue indefinitely.

One economic indicator that often is viewed with alarm, however, is the nation's growing trade deficit. In 1998, the U.S. trade deficit reached a record level, and when final data for 1999 is available, it is projected to be even higher. Each new release of trade data prompts the financial press to trumpet headlines announcing new record deficits. In both the media and popular opinion, trade deficits often are portrayed negatively, being blamed on the unfair trading practices of our trading partners or on a lack of U.S. competitiveness in world markets. Trade deficits often are attributed with reducing economic growth or resulting in lost jobs, and they almost always are discussed using terms with negative connotation. (For example, a widening deficit is frequently described as a "deterioration.")

Figure 1 illustrates recent movements in the most comprehensive measure of the U.S. international trade position, the current account. Simple logic suggests that the downward trend established during the 1990s cannot be maintained indefinitely —if it were to do so, the United States would ultimately exceed its ability to pay for the rising tide of imports.

Figure 1



Nevertheless, few economists consider such a disastrous scenario likely. Long before the trade deficit could overwhelm the economy, interest rates, exchange rates, and relative national incomes would adjust to re-establish more balanced trade patterns. A key question that remains after acknowledging such market forces, however, is *how* such an adjustment ultimately will take place. If it is a smooth, gradual process, the favorable trends in productivity and incomes in the United States need not be interrupted significantly. If the adjustment were to be sharp and disruptive, however, the claims of proponents about the new economy would begin to ring hollow.

Understanding the underlying causes of the present U.S. trade deficit is an important part of evaluating their future impact on the economy. This article discusses the factors to consider in such an evaluation, focusing on a broad measure of

Figure 2

Components of the Current Account
Annual Data

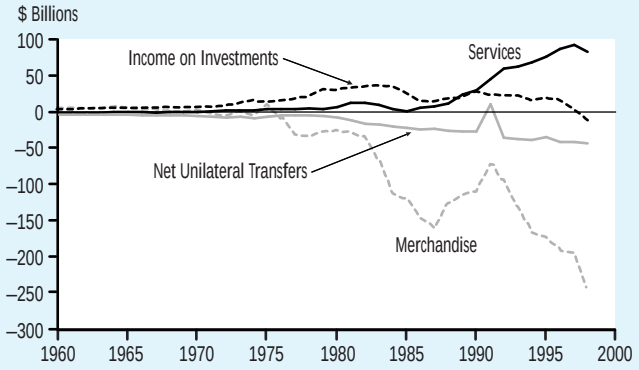


Table 1

Composition of the Current Account in 1998

(Billions of dollars)

Merchandise:		
Exports	670.2	
Imports	–917.2	
Balance		–246.9
Services:		
Exports	263.7	
Imports	–181.0	
Balance		82.7
Income on Investment:		
Inflows	258.3	
Outflows	–270.5	
Balance		–12.2
Net Unilateral Transfers:		–44.1
CURRENT ACCOUNT		–220.6

SOURCE: Department of Commerce, Bureau of Economic Analysis.
NOTE: Components may not sum to total due to rounding.

the U.S. trade position: its current account. The analysis suggests that recent trade deficits are driven by the same market forces that are otherwise manifested in the booming economy of the new paradigm theories.

If the present trade deficit is a temporary (albeit protracted) outcome of the adjustment to a new, higher long-run growth path for the economy, then we should not consider it to be a pressing concern. If it is driven by unsustainable, perhaps speculative imbalances, however, the deficit might forebode the ultimate demise of the longest economic expansion in U.S. history. The conditions under which the present trade deficit ultimately will be reversed might therefore be considered an important indicator of whether the new economy has entered a new, more mature phase, or whether its promises were illusory.

UNDERSTANDING THE CURRENT ACCOUNT

Components of the Current Account

The most comprehensive measure of the U.S. trade position is the *current account*, which is comprised of four categories. A listing of these categories and their magnitudes in 1998 is shown in Table 1, and the current account's recent behavior over time is illustrated in Figure 2.

The largest component, and the one that accounts for nearly the entire deficit, is merchandise. This component also is the most variable, accounting for most of the fluctuations in the current account over time.

In contrast to the deficit in merchandise trade, the United States has a stable surplus in services trade. This surplus has been growing consistently for more than two decades, but trade in services remains quite a bit smaller than merchandise trade. A commonly used measure of the trade deficit—often used loosely as interchangeable with the current account concept—is the combined merchandise and services accounts.[1]

The third category of the current account is income on investments. As foreign residents have accumulated U.S. assets over time, rising debt-service payments reflected in this category have

[1] This measure has the advantage of being available monthly, while other components of the current account are calculated only on a quarterly basis.

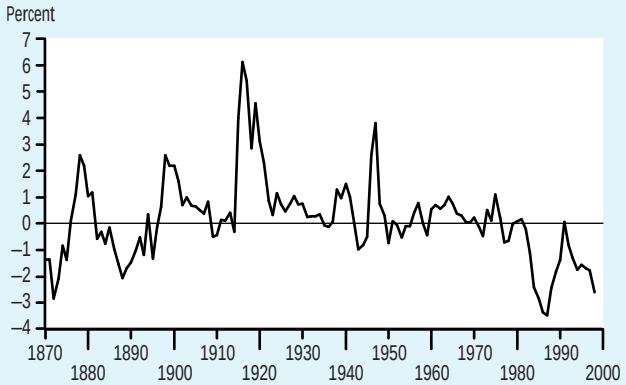
grown. Before 1998, the income-on-investments component represented a net inflow of payments. Since then, this component has reflected a net outflow as interest payments on foreign investment in the United States have risen above payments of interest on U.S. investments overseas. Nevertheless, the magnitude and variability of this component contribute little to the behavior of the overall current account.

The final category is net unilateral transfers. Because the United States is a major donor country in economic aid, this category is consistently in a deficit position.[2] As in the case of the investment-income component, net unilateral transfers are fairly small, and contribute little to the magnitude or variability of the overall current account.

Figure 3

Current Account as a Percent of GNP, 1870-1998

Annual Data



Historical series is from *International Historical Statistics, The Americas 1750-1993*, 4th Edition by B.R. Mitchell.

Putting the Deficit in Perspective

As shown in Figure 1, the current account appears quite volatile over the past decade or so, and recently has approached unprecedented levels. It is more meaningful, however, to gauge the magnitude of the current account deficit against the size of the total economy. In a growing economy, it is perfectly natural for the absolute magnitude of trade flows to be increasing over time. Hence, when we look at the current account deficit relative to the total production or income in the U.S. economy, the recent decline in our net export position —while still large—is not entirely unprecedented. To illustrate this point, Figure 3 shows the U.S. current account as a fraction of gross national product (GNP)—a broad measure of total economic activity. Although the current account deficit was a record $221 billion in 1998, this figure represented only 2.6 percent of GNP. In relative terms, the peak deficit of the 1980s was larger, reaching 3.5 percent of GNP in 1987.

Figure 3 also adds a longer historical perspective to the analysis.[3] It shows that even though the relative magnitude of current account fluctuations in the 1980s and 1990s is greater than during the 1960s and 1970s, swings in the U.S. current account balance in recent years are not quite as exceptional in the context of the past century or more.

The Determinants of Deficits

The recent steep decline in the U.S. trade position is significant, however, and perhaps not something we should simply dismiss. Deficits often are cited as either a cause or a symptom of economic weakness. The underlying implication of such a position is that selling is good, while buying is bad. When stated this starkly, the assumption loses much of its intuitive appeal.

In truth, deficits are neither causes nor symptoms of weakness, but are among the many macroeconomic quantities that are determined jointly by the decisions and interactions of households, firms, and governments in the United States and abroad. In the short-run, the current account can be affected by exchange rate fluctuations—which alter relative prices of imports and exports—and by differences in income growth at home and abroad. In fact, one of the fundamental forces behind the recent widening of our trade deficit has been the strength of the recent U.S. expansion relative to the growth rates of our major trading partners. As U.S. income growth outpaces growth abroad, our demand for both

[2] A notable exception was in 1991, when payments to the United States from allies in the Persian Gulf war resulted in a net inflow in the unilateral transfers account.

[3] Data for years prior to 1960 are from Mitchell (1998). GNP (rather than GDP) is used as the measure of aggregate economic activity to maintain consistency with the historical data.

THE SIMPLE ALGEBRA OF SAVING, INVESTMENT, AND THE CURRENT ACCOUNT

To derive the fundamental relationship among saving, investment, and the current account, one must begin with the national income accounting identity, which states that the total quantity of goods produced domestically (Y_{prod}) and imported (M) are used for consumption (C), investment (I), purchased by the government (G) or exported (X):

(1) $Y_{prod} + M = C + I + G + X,$

or, in a more conventional form,

(1') $Y_{prod} = C + I + G + NX,$

where $NX = X - M$ represents net exports.

Household income (Y_{inc}) is used to purchase consumption goods, save for the future (S), and pay taxes (T):

(2) $Y_{inc} = C + S^P + T,$

where the superscript P designates private saving. The government also saves (or dissaves) to the extent that tax revenues exceed (or fall short of) government spending:

(3) $S^G = T - G.$

Noting that every transaction involves a matched sale and purchase, aggregate equilibrium requires that the total value of goods produced is equal to the total value of income $Y_{prod} = Y_{inc}$. Using this equilibrium condition, and substituting the definitional relationships (2) and (3) into (1) yields the savings/investment/current account nexus:

(4) $NX = (S^P + S^G) - I.$

Consequently, a trade surplus is associated with an excess of saving over investment, while a trade deficit occurs when saving falls short of investment.

domestic goods *and* imports rise, while foreign demand for our exports languishes. This is one sense in which a current account deficit *reflects* underlying strength in the U.S. economy.

Even more fundamentally, the current account or net export balance reflects the outcome of the collective saving and investment decisions in an economy. (See shaded insert.) The relationship can be summarized as

(1) Net Exports = National Saving – Investment,

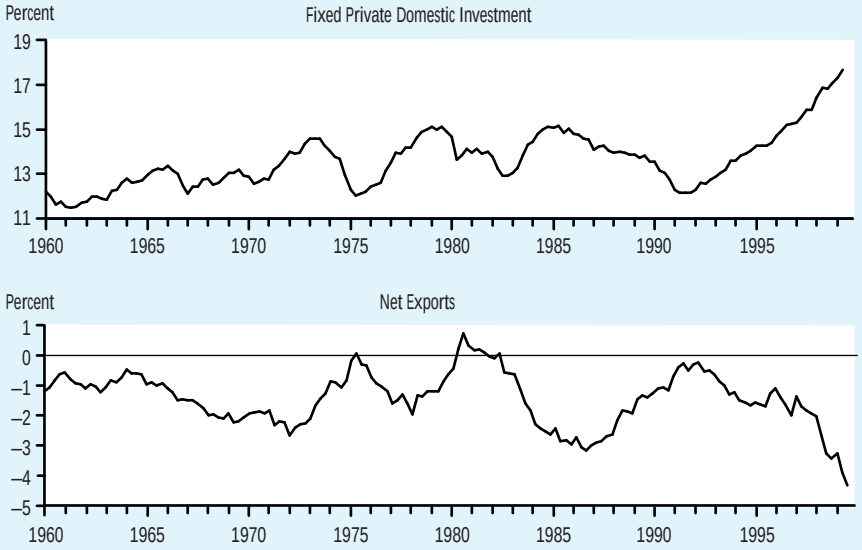
where the relevant measure of national saving includes both private sector saving and government saving (which is positive for government surpluses, negative for deficits), and

(2) National Savings = Private Saving – Government Deficits.

To understand this relationship more intuitively, note that a trade deficit reflects an excess of purchases over sales. Just as is the case for a household or a business firm that has current expenses exceeding current income, the difference must be financed through borrowing. Whether or not this borrowing is wise depends on what is being purchased. For example, a household that is continually running up credit card debt to finance current consumption, or a firm that is accumulating debt to cover operating losses, might well be following an unwise and unsustainable practice. On the other hand, when borrowing is undertaken to finance investments that will yield a flow of profits or services over

Figure 4

Fixed Investment and Net Exports as a Percent of GDP
Quarterly Data



time, it is a perfectly sound policy. The question of whether our national current account deficit is good or bad similarly hinges on the questions of why we are borrowing from the rest of the world, and what we are doing with the resources we are borrowing.

The relationship expressed in equation 1 represents a complex interaction of households, firms, and governments both at home and abroad. As such, it can be misleading to think of a clear, consistent causal relationship among the various components of the equation. Rather, it should be interpreted as summarizing an accounting identity that must hold in the context of all the components of the equation being affected simultaneously by overall economic conditions.

Sometimes it is useful to identify possible paths of causality within the overall relationship, however. For instance, much was made during the 1980s of the "twin deficits" of the United States—a combination of government deficits and current account deficits. Although it is beyond the scope of this article to discuss the issues involved in evaluating the claim that government budget deficits caused or contributed to the trade deficits of the 1980s, equations 1 and 2 demonstrate the plausibility of such a relationship. The basic current account/savings/investment relationship in equation 1 also demonstrates the conditions under which such an hypothesis would hold—namely that private savings and investment do not adjust to offset the effect of the government deficit.

Regardless of whether or not the relatively large current account deficits of the 1980s were related to government budget deficits, that surely cannot be the explanation for the 1990s experience. The U.S. government budget has been in a surplus position since 1997.

The low savings rate of U.S. households often is pointed to as one factor contributing to our negative current account and net export position. Generally speaking, the savings rate does not fluctuate markedly enough to be a key determinant of fluctuations in the current account. The decline of the personal savings rate throughout the 1990s—falling from over 5 percent at the beginning of the decade to nearly zero in 1998—has been a factor contributing to the widening current account deficit. I will suggest below, however, that this

Figure 5

Savings and Investment in a Large Open Economy

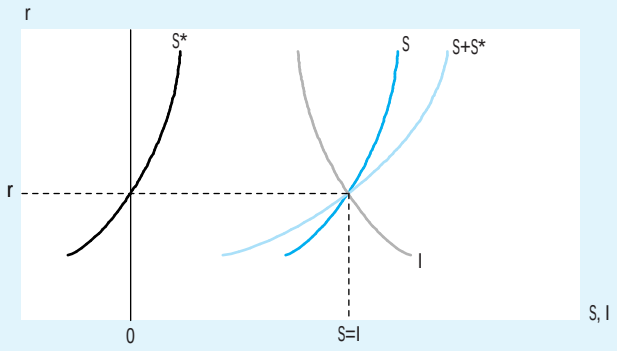
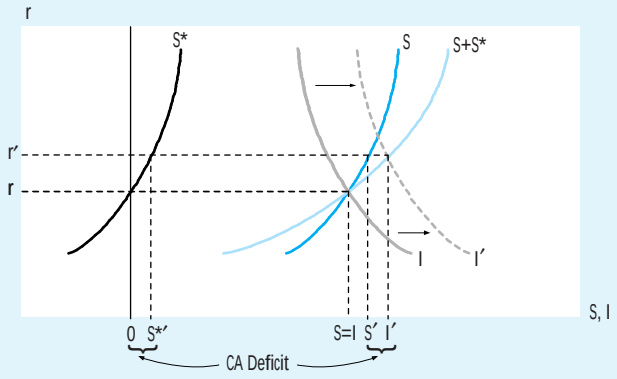


Figure 6

Investment Demand and the Current Account



decline reflects the very same underlying forces driving the deficit, rather than being a root cause.

Investment has been remarkably strong during the current expansion. In 1996, fixed private domestic investment as a percent of (gross domestic product) GDP matched its previous peak of 15.0 percent. In 1997 and 1998, investment spending rose to new record highs of 15.7 percent and 16.8 percent of GDP. Generally speaking, large swings in investment correspond to commensurate movements in the trade deficit, as illustrated in Figure 4.

Although the relationship is not exact, there is a clear tendency for large upswings in investment to be associated with widening trade deficits, and for troughs to be associated with surpluses, or at least smaller deficits. This is particularly true for the 1990s: As investment spending as a percent of GDP has surged through most of 1996-98, the U.S. trade deficit has expanded in tandem.

The Analytics of Investment, Savings, and Deficits

Figures 5 and 6 illustrate a diagrammatic representation of the savings/investment/current account relationship. Figure 5 shows an economy in the situation of balanced trade. Domestic savings, *S*, and the supply of potentially available foreign savings, *S**, both are represented as increasing in response to a higher domestic interest rate, *r* (relative to interest rates abroad). Investment demand, *I*, declines when domestic interest rates rise because the interest rate is the key cost of financing investment spending. When the supply of domestic savings matches investment demand, as is the case in Figure 5, no net inflow or outflow of foreign savings is necessary ($S^* = 0$) and the current account is balanced.

In Figure 6, the demand for investment in new capital goods has increased. Assuming for simplicity that the position of the supply curves for domestic and foreign savings are unaffected, the quantities of both domestic and foreign savings rise (to S' and $S^{*\prime}$) in response to the upward pressure on the interest rate. Investment spending rises and the country experiences a current account deficit equal to the shortfall of domestic savings relative to investment, $I' - S'$.

Note that if the opportunity to draw on the pool of foreign savings was not available in this instance, the increase in investment demand could only be financed by domestic savings (the intersection between the *S* and *I* curves in Figure 6). If this were the case, the interest rate would have to rise further in order to establish the balance between savings and investment, limiting the amount of investment spending that would actually take place.

DEFICITS AND THE NEW ECONOMY

With this analysis in mind, what can we say about the relationship between the widening trade deficit of the 1990s and the new economy?

What is the New Economy?

Two, or sometimes three, factors generally are cited as the underlying positive performance of the economy during the 1990s.[4] First is the adoption of new technologies in information processing and telecommunications. A second factor is the world-wide commodity glut that has caused sharp declines in the prices of some key U.S. imports—particularly oil. An additional factor often cited is the competitive effects of globalization.

The globalization argument suggests that competition from abroad has forced U.S. firms to keep costs down and prompted workers to scale back expected wage increases. While it is undoubtedly true that foreign competition is an important consideration for many firms, there is little empirical evidence that foreign competition significantly affects wages or aggregate income in the United States.[5] Even though trade has taken on increased prominence in the composition of economic activity in the United States, it still comprises only a small share of total GDP. In 1998, exports and imports represented only 13 percent and 16 percent of GDP, respectively. For all practical purposes, trends in the United States depend on domestic factors, with influences from abroad taking on a distinctively secondary role.[6]

It is the main argument of this article that the U.S. trade position, in relation to the rest of the world *reflects* the underlying determinants of recent economic performance, rather than being a fundamental cause in and of itself.

The other two factors underlying the new economy—low oil prices and technological advances—fall in the general category of supply shocks.[7] Both would be expected to raise economic output and to increase the demand for domestic labor and capital. To the extent that investment spending rises to meet higher demand for physical capital, this type of supply shock also tends to give rise to a current account deficit—as described in the previous section.

The two types of supply shocks differ in key respects, however. A decline in the price of an imported factor of production, like oil, often is reversed—witness the increases in oil prices in early 1999. Investment demand will increase only to the extent that productive capacity can be brought online and maintained to exploit the favorable cost environment. In and of itself, a temporary oil price decline is more likely to increase capital utilization, rather than capital investment. Moreover, a temporary increase in economic activity would be expected to raise aggregate savings, as households set aside some of the windfall income gains for the future. Hence, domestic savings and investment demand both rise, and there is little, if any, pressure for widening trade and current account deficits.

The adaptation of new technologies to the production process, on the other hand, is more likely to be associated with a sustained increase in investment as new equipment replaces "vintage" capital.[8] To the extent that capital productivity is expected to rise permanently (or at least for an extended period of time), the rise in investment demand will be larger than it would be for a temporary supply shock. At the same time, domestic savings might rise very little—and might even fall, which has happened during the 1990s. This is because there is less incentive to set aside a portion of the increase in income for the future, with the future looking so bright. Consequently, longer-lasting supply shocks would be expected to induce larger current account movements than more short-term shocks.

Assessing Recent Deficits

The decline in U.S. net exports as a fraction of national income eventually will be reversed, either as the investment boom runs its course or as foreigners become increasingly unwilling to finance mounting

[4] In his public speeches, Federal Reserve Board Chairman, Alan Greenspan (1997, 1999) has described the factors underlying current strong economic conditions.

[5] Burtless (1995) provides a survey of economic research on the effect of trade on U.S. wages and incomes.

[6] Krugman (1996a,b) forcefully and persuasively argues this contention about the quantitative irrelevance of globalization, which he calls "globaloney."

[7] These types of supply shocks figure prominently in so-called real business cycle theories.

[8] The notion that technological progress is embedded in new capital replacing vintage capital is explored by Jorgenson (1966) and more recently by Greenwood, et al (1997). Greenwood et al find that as much as 60 percent of post-war productivity growth can be attributed to this type of investment-specific technological change.

Figure 7

Capital Goods Imports as a Percent of Total Merchandise Imports

Quarterly Data

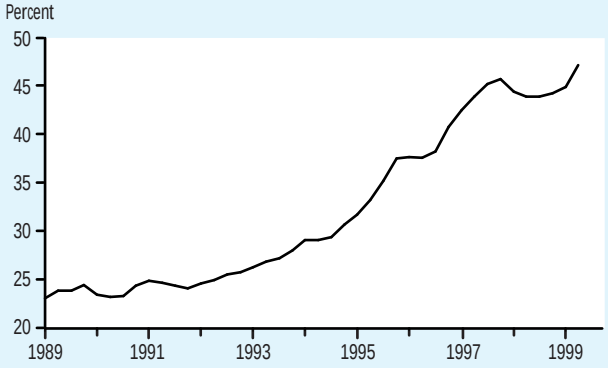
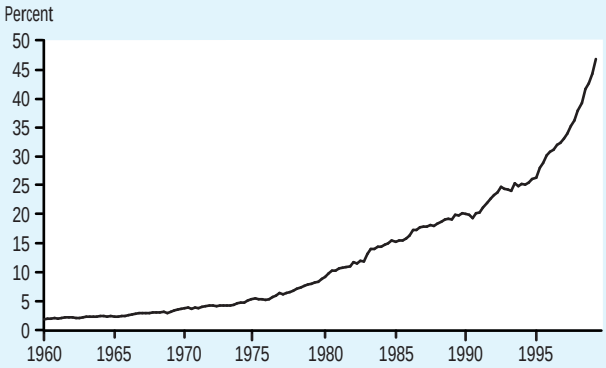


Figure 8

Information Processing Equipment as a Percent of Total Fixed Investment

Quarterly Data



deficits and the debt. The question of whether the reversal is likely to take place as an orderly adjustment, or as a "crash-and-burn" scenario, is crucial for evaluating the prospects for continued economic strength suggested by advocates of the new economy view. Which of these scenarios is more likely depends, in turn, on the factors underlying the burgeoning trade deficit. The key question to ask is: "What are we doing with the resources that we're borrowing from the rest of the world?"

Recalling the analogy to individual households or businesses, we maintain that borrowing to finance frivolous consumption is a recipe for disaster, while borrowing to invest in assets that will pay off in future flows of goods and services is more likely to be a prudent course.

Figure 7 considers one dimension of the question: "What are we doing with the borrowing?" Looking literally at the composition of imports, we see that the rise in the capital goods imports as a share of total imports during the 1990s has been remarkable, rising from around 25 percent at the beginning of the decade to more than 44 percent in 1997 and 1998. Figure 8 illustrates an important feature of the composition of total investment during the 1990s. The share of investment in information processing equipment and technologies as a fraction of total investment has been rising steadily since the mid-1970s, but has increased dramatically during the latter half of the 1990s.

Moreover, the United States is taking the world lead in investing in cutting-edge technologies. In 1997, for example, spending on information technology accounted for a full 4.5 percent of U.S. GDP, compared to only 2.6 percent in Japan and 2.3 percent in Western Europe (Koretz, 1999).

These measures suggest that unprecedented rates of investment in the latter half of the 1990s are associated with the widespread and rapid adoption of new technologies. To the extent that these investments do, in fact, pay off in future higher productivity and output growth, undoubtedly we will look back on this period as setting the stage for what truly will be a new economy.

Until very recently, there has been little indication that the adoption of new technologies has resulted in any significant gains in productivity. In fact, the early stages of the 1990s' economic expansion were characterized by very slow productivity and employment growth by historical standards. This is consistent with economic models of technological advancement, however.[9] During the early stages of technological breakthroughs, like those we are witnessing in information processing and telecommunications, a period of slow growth is predicted as new technologies are integrated and adapted to production

[9] Theoretical analyses of the effects of breakthroughs in such general purpose technologies are explored in depth in Aghion and Howitt (1998).

processes. Only after this transition phase does productivity rise. The relatively high and rising rates of productivity for the United States during the latter part of 1998 and early 1999 might forebode the beginning of long-awaited productivity gains.

Allen (1997) assesses various theories explaining the lack of obvious productivity gains over the course of the 1990s. He cites as an historical precedent the work of David (1990), who compared the modern information technology revolution to the invention of the electric dynamo in the nineteenth century. David suggested that fully exploiting the new technology represented by the dynamo took decades. In the meantime, its effect on productivity lagged its ultimate potential.

If the analogy holds true, it is not surprising that productivity growth has not yet accelerated as much as one might think with the adoption of new technology. The ultimate benefits of adopting new technologies only will become apparent over the course of years to come. Once the initial surge in investment demand subsides, we would expect the deterioration in the U.S. current account to show signs of reversal, suggesting that the economic expansion associated with this transition has reached a more mature stage.

CONCLUSION

This article has described the basic determinants of the current account, challenging the common, but simple notion that trade deficits are inherently bad. In fact, deficits are neither good nor bad: Rather, they are reflections of the more fundamental underlying forces affecting the economy.

In the context of the U.S. economy during the 1990s, rising trade and current account deficits are consistent with the notion that strong investment spending is associated with the adoption of new technologies, with the anticipation of rapid economic growth in the future suppressing domestic saving. The resulting weakness of the U.S. current account balance is, therefore, a reflection of an economy that is strong, but in transition. A turnaround of the deficit is likely to be an important indicator of when that transition is complete. Only after we reach this more mature phase of the current economic expansion will we be able to fully evaluate the claims of those who suggest that we are on the threshold of a new economy in which rising rates of productivity and economic growth will last far into the future.

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