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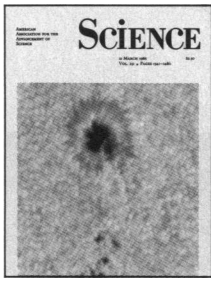

COVER A white-light image of an active region on the sun taken by the Solar Optical Universal Polarimeter instrument during the Spacelab-2 mission on board the space shuttle Challenger. The granular structures are due to convection in the solar atmosphere. The dark sunspot is a region of strong magnetic fields and is approximately 14,000 kilometers in diameter. See page 1264. [Lockheed Palo Alto Research Laboratory, Palo Alto, CA 94304]

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Federal and Trade Deficits

If the budget deficit and especially the foreign trade deficit are substantially curtailed soon, great damage will probably be averted. However, continuation of present trends for an indefinite period could make the recent Wall Street crash only a prelude to other, more serious sequelae.

Some economists have written that the foreign trade and budget deficits are closely related. There is a partial, but not a one-to-one, relation. Lowering the budget deficit will not eliminate costs of oil imports. Other economists have stated that lowering the value of the dollar will cure the trade deficit. Although some improvement in competitiveness will arise from a weak dollar, that is no cure-all.

The "Advance report on U.S. merchandise trade: September 1987," prepared by the U.S. Department of Commerce and issued 12 November provides useful information on the matter. A surficial examination of the report showing that the September deficit was less than that in August gave rise to a 1-day rally on Wall Street. But numbers for 1 month are not necessarily a faithful indication of what is occurring. The total numbers for the third quarter and for the first 9 months of 1987 show a poorer performance than the corresponding 1986 figures, that is $46.234 billion versus $44.828 billion for the third quarter and $128.165 billion versus $123.452 billion for the first 9 months.

The weak dollar has had a beneficial effect on our trade deficit with the European Economic Community. In the first 9 months of 1987, the imbalance was $17.643 billion versus $20.623 billion the year before. There was no improvement in trade with Japan ($44.323 billion versus $43.028 billion).

The large and more intractable problems are trade relations with newly industrializing countries and increasing use of imported oil. This year our imports of oil and its products will cost about $44 billion versus about $38 billion in 1986. The growth of our trade imbalance with East Asian countries—Taiwan, Korea, Hong Kong, and Singapore—is symptomatic of additional problems we will encounter with industrializing countries. During the first 9 months of 1987 our trade deficit with the four countries grew to $28.842 billion from $22.553 billion in 1986. Their currencies are not tied to the yen or Deutsche mark but rather are roughly aligned with the dollar. Thus weakening the dollar further will not cure our deficit with the four countries. A rapidly rising portion of U.S. imports from these countries is high-tech or other products that in the past have been produced only in advanced industrialized countries. Their exports to us are about three times their imports from us, as is the case in our trade with Japan. Other developing countries with which the United States has substantial trade deficits include Brazil, Mexico, and the People's Republic of China. During the first 9 months of this year, our trade deficit with China grew to $2.896 billion from $1.409 billion in the corresponding months of 1986.

In the future our worst problem is likely to be demand for imported oil. Domestic production is down and will continue to decline. Completions of oil wells in the past 12 months have been at half the rate of 2 years ago. At the same time, consumption of products has increased. This is notably true of transportation liquids, uses of which are setting all-time records. Federal actions to increase the speed limit and decrease the mandated mileage for new cars have been moves in the wrong direction.

In the time between February 1985 and the present, a very large drop in the comparative value of the dollar slowed, but did not stop, the increase in the trade deficit. However, it made tangible assets in the United States look cheap, and foreigners are openly and surreptitiously buying up choice real estate, production plants, and other items. In terms of yen or Deutsche marks, members of OPEC are receiving about one-third the currency per barrel of oil that they obtained in 1985. At some point, they might demand payment in a strong currency.

Congress is aware that we must do something about the two deficits. But the thousand-page trade bill, if passed, would probably be vetoed and, if enacted, would make little difference. Washington will provide leadership, but only if the people demand it. The dawdling behavior of Congress and the Administration with respect to budget-deficit reduction suggests that an additional and more unpleasant shock than occurred on 19 October will be required before really significant actions are taken.—PHILIP H. ABELSON