

# Impacts of the Dollar's Depreciation on the United States Agricultural Trade

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The United States economy has experienced a healthy growth in the 1980s with an average inflation rate of 3.5 percent and an average unemployment rate of about 6 percent. On the other hand, the healthy growth in our economy is shadowed by sharp increases in national trade and budget deficits. The United States trade deficit has increased from \$25 billion in 1980 to \$170 billion in 1987, and the United States budget deficit also increased from \$40 billion in 1980 to \$208 billion in 1985 and \$150 billion in 1987 (Table 1). The budget deficits over the last seven years have resulted in a total national debt of \$2.3 trillion. The twin deficits and national debt coupled with the stock market crash on October 19, 1987 resulted in a sharp decrease in the value of the United States dollar. The value of the United States dollar against the Japanese yen declined from 238 yen in 1985 to 143 yen in August 1987. It was about 121 yen on December 31, 1987. The value of the United States dollar against the German mark has declined from 2.94 marks in 1985 to 1.81 marks in August 1987 (Table 2). It was about 1.56 marks on December 31, 1987. An important question is, What does the United States dollar depreciation mean in the United States trade and economy? The purpose of this article is to analyze impacts of the recent depreciation of the United States dollar on agricultural trade.

## Comparative Advantage on Prices of Exports and Imports

A decrease in value of the United States dollar is supposed to make United States goods and services cheaper in foreign markets and foreign goods and services more expensive in the United States market. Assume, for example, that the exchange rate of the dollar versus the Japanese yen goes from \$1.00 = 200 yen to \$1.00 = 130 yen. This is an increase in the value of Japan's yen relative to the United States dollar and conversely a decrease in the United States dollar relative to Japan's yen. The result is that wheat priced at \$4.00 per bushel changes in Japan from 800 yen to 520 yen, which is a significant price decrease. On the other hand, a Japanese automobile priced at 2,000,000 yen will increase in price from \$10,000 to \$15,385 in the United States, which is a significant increase. In addition, a United States automobile priced at \$10,000 will be 1,300,000 yen rather than 2,000,000 yen in Japan.

This implies that the United States automobile will be more competitive in both the United States and Japanese markets after the United States dollar depreciation against

Table 1. GNP, Trade Balance, Budget, and Public Debt, United States, 1970-1987.

Year	GNP	Trade Balance	Public Debt	Budget Deficit or Surplus
1970	1,016	2.6	349	- 2.8
1971	1,108	- 2.3	396	- 23.0
1972	1,213	- 6.4	425	- 23.4
1973	1,359	1.0	456	- 14.9
1974	1,473	- 5.5	473	- 6.1
1975	1,598	8.9	532	- 53.2
1976	1,783	- 9.5	619	- 73.7
1977	1,991	- 31.1	698	- 53.6
1978	2,249	- 33.9	767	- 59.2
1979	2,508	- 27.5	819	- 40.2
1980	2,732	- 25.5	906	- 73.8
1981	3,053	- 27.9	996	- 78.9
1982	3,166	- 36.4	1,141	- 127.9
1983	3,402	- 67.2	1,375	- 207.8
1984	3,775	- 114.1	1,559	- 185.3
1985	3,993	- 122.1	1,821	- 212.3
1986	4,193	- 144.3	2,112	- 202.8
1987*	4,538	- 140.0	2,321	- 150.0

\*Projected.

SOURCE: Economic Report to the President, 1986; Federal Reserve Bulletin, December 1987.

Japan's yen. It is very clear from this automobile example that depreciation of the United States dollar against other currencies should stimulate United States exports and at the same time decrease United States imports, resulting in improvements in the United States trade balance.

The United States, however, has not been able to improve its trade balance in spite of the continuous depreciation of the United States dollar since 1985. There are two primary reasons for this. First, the trade balance does not improve with a fall of the United States dollar until the actual volume of exports has a chance to increase in response to lower prices and the volume of imports has a change to decrease in response to higher prices. The quantity adjustments generally take about 18 months. On the other hand, the rise in import price leads to a temporary deterioration in trade balance because the United States imports the same amount of foreign commodities at the higher price just after the dollar depreciation. Since the United States dollar has been continuously falling for the last three years, the

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**Table 2. The Values of Major Foreign Currencies against the United States Dollar, 1980-1987.**

Year	Canada (Canadian \$)	France (franc)	Germany (mark)	Japan (yen)	United Kingdom (pound)
1980	1.17	21.1	1.81	227.3	0.43
1985	1.36	9.98	2.94	238.5	0.77
1986	1.39	6.93	2.17	168.3	0.68
1987 (August)	1.31	6.06	1.81	143.3	0.67

SOURCE: Federal Reserve Bulletin, December, 1987.

long-run improvements in the trade balance which resulted from increases in exports and decreases in imports have been offset by the temporary deterioration of the trade balance continuously occurring. Second, some foreign firms have held prices constant in the United States market by reducing prices in terms of their currencies and accepted losses to hold on to their sales in the United States. The United States has an annual deficit of over \$150 billion due mainly to the second reason. This implies that the value of the United States dollar should depreciate further to eliminate the trade deficit.

The same analogy may not hold for agricultural products. Exchange rates in agricultural product trade may not be important as much as those in the manufactured product trade because aggregate import demand for agricultural products is generally not very sensitive to price changes. In addition, agricultural product trade is generally one-way trade. This means that importers of agricultural products always import from several exporting countries such as the United States, Canada, Argentina, Brazil, and Australia. Under an assumption of an importer's one-way trade with several exporting countries, an exporting country's exchange rate with other exporting countries plays a more important role than the country's exchange rate against the importing country. For example, Japan will import the necessary amount of wheat regardless of the value of the Japanese yen against the other currencies because demand for wheat, as a necessity, is very inelastic in Japan. Japan, however, imports from Canada rather than the United States if the Canadian currency depreciates more against Japan's yen than the United States dollar. This is mainly because it is cheaper to buy wheat from Canada than from the United States under the given exchange rates. On the other hand, Japan will import more from the United States than Canada if the United States dollar depreciates more against Japan's yen than the Canadian currency. This implies that the dollar depreciation against Japan's yen may not stimulate United States agricultural exports to Japan if the other exporting countries' currencies depreciate in the same proportion. Furthermore, United States agricultural exports may decline if the other countries' currencies depreciate against the Japanese yen more than the United States dollar. In the last few years, the United States dollar was weak against major importers' currencies and but was strong than currencies of other exporting countries such as Canada, Brazil, and Argentina. This results in reductions in United States exports of agricultural products.

### Negative Impacts on the United States Economy

The dollar depreciation also may have a negative impact on the United States economy. The dollar depreciation makes foreign goods and imported factors of production

more expensive in the United States market. In addition, increases in United States exports as a result of the dollar depreciation may increase demand for domestic factors of production which results in increases in the prices of these factors. On the other hand, the dollar depreciation makes United States factors cheaper in the foreign market, which results in decreases in production costs in foreign countries when they import these factors to use in their production process. The inflationary trend in the United States economy and lower production costs in foreign countries reduces the initial effects of the dollar depreciation in the United States trade balance. When an economy operates at full capacity, the negative impacts will be inevitable. The United States has not experienced the negative effects of the dollar depreciation on the economy because the economy has been operating at about 85 percent of its capacity. Further depreciation of the United States dollar (i.e., \$1.00 = 100 yen, \$1.00 = 1.4 mark), however, may lead to inflationary pressure in the United States economy. This is also true for agricultural product trade. Inflation, as a result of the dollar depreciation, will make our agricultural production costs higher resulting in United States agricultural products becoming less competitive in the world market. The combined result of the dollar depreciation may not necessarily stimulate United States exports of agricultural products but may make United States agriculture less competitive in the world market.

### Concluding Remarks

Although the United States dollar has been falling for three years since 1985, the United States has experienced annual trade deficits of over \$150 billion. This implies that the United States dollar should depreciate further to eliminate the recent trade deficits. The further depreciation of the United States dollar may stimulate United States exports of manufactured goods and reduce United States imports resulting in improvement in the United States trade balance. This is, however, not always true for agricultural products. The United States dollar depreciation may increase United States exports of agricultural products if the values of currencies in other exporting countries remain unchanged or depreciate less than the United States dollar. If the other countries' currencies depreciate on the same scale as the United States dollar, effects of the United States dollar depreciation on agricultural exports will be minimal. In addition, the further depreciation of the United States dollar may be inflationary and result in an increase in production costs. This will make both agricultural and manufactured goods made in the United States less competitive in the world market and will reduce the initial effects of the dollar depreciation on the United States economy.