



Aircraft Turbulence

The United States deficit in goods and services trade increased sharply last August, rising by \$1.8 billion to \$16.7 billion. To observers on the lookout for signs of the Asian financial crisis' impact on the U.S. economy, this news appeared to be a "smoking gun." However, the interpretation of economic data on a month-to-month basis is notoriously difficult, as illustrated by the fact that the \$1.8 billion August increase was followed by a \$2.3 billion *decline* in September. U.S. exports have certainly been affected by weakened demand in Asia, but some interpretations of the trade deficit surge in August implied an inordinately large impact.

Interpreting movements of monthly data is difficult for a number of reasons. Measurement error is substantial in monthly data, but tends to net out over longer periods. Similarly, although seasonal adjustment techniques smooth out regularly occurring patterns, unusual seasonal events are a source of month-to-month variability. In addition, exceptionally volatile components of aggregate series can have undue influence over the month-to-month changes in the total. This factor is particularly important when interpreting recent trade statistics.

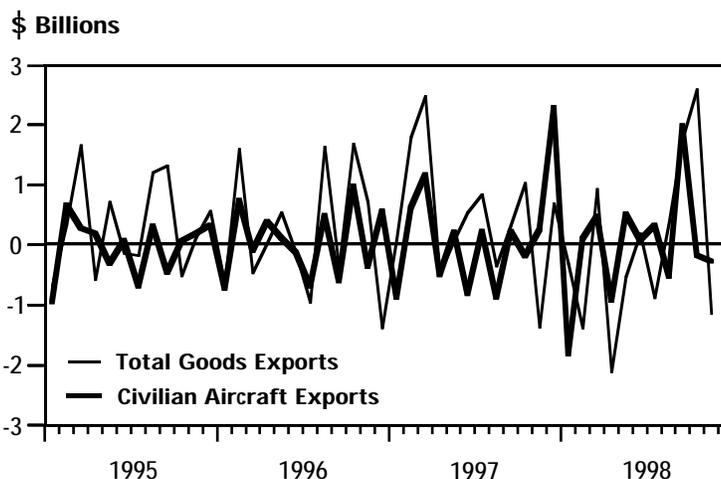
One of the most volatile components of U.S. trade data is the export of civilian aircraft. The behavior of this category of goods is "lumpy" in the sense that aircraft shipments occur infrequently but in large dollar volumes. One large shipment can cause exports to rise sharply in one month, only to fall back in the following month. In August, civilian aircraft exports fell \$500 million, while exports of other goods increased for the month. The narrowing of the deficit in September was similarly influenced by the volatile aircraft component: September exports of goods and services combined rose \$2.5 billion, but nearly \$2 billion of that was attributable to civilian aircraft shipments.

The chart illustrates the influence that this fairly small component has on monthly changes in total exports. Averaging \$1.7 billion per month over the period from 1995 through November 1998, the civilian aircraft component of exports accounts for only about 3 percent of total goods exports. But it creates quite a bit of turbulence. The average absolute month-to-month change in aircraft exports exceeds \$500 million. By one common measure of variability—the standard deviation—the aircraft component is 70 percent as variable as total goods exports. This feature is readily apparent in the chart.

Although monthly data provide important updates of information on economic conditions, month-to-month changes should be interpreted cautiously. It is unwise to jump to conclusions based on a single monthly statistic.

—Michael R. Pakko

Monthly Changes in Total Goods and Civilian Aircraft Exports



Note: Data are from the monthly FT-9000 report on U.S. International Trade in Goods and Services, published by the Bureau of Economic Analysis. Total goods exports and civilian aircraft exports are both reported on a Census basis, seasonally adjusted.