Chapter 7

International trade data: improving our knowledge base

> *…..timely knowledge is very important for the types of decisions which business people can make which can keep our economy generally stable.*
>
> ***Alan Greenspan***

Accurate data are the basis for understanding the complex role that international trade plays in the U.S. economy. Reductions in government import barriers and technological advances in communications, computing, and transportation have enabled world trade in goods and services to increase in both volume and significance. However, this increase greatly complicates how the statistics are gathered and makes assuring their accuracy more difficult. The growing importance of trade in our economy and the needs of government and businesses for information to be able to make good decisions make it essential that data on international trade in goods and services be relevant, accurate, and timely.

The federal statistical system, however, does not provide adequate or timely data on international trade and finance. The system is not gathering all the information needed to understand the evolving economy, nor can the system ensure that all of the data are accurate. Testimony before the Commission and other studies point out major weaknesses in the types of statistics gathered and the accuracy of the information. For example, the Commission heard testimony that the undercount in U.S. exports could overstate the U.S. trade deficit by as much as one-third.[1] Similarly, there are a number of factors that lead to the undercounting of imports.

The Bureau of Economic Analysis estimated that measurement inaccuracies, including the undercounting of exports, have led to errors of 0.5 – 0.6 percent of GDP. According to J. Steven Landefeld, director of the Bureau, "for the five-year budget projections, you could make a $200 billion error."[2] The Bureau of the Census estimates the understatement of merchandise exports from the United States is likely to be in a range of 3 to 7 percent, noting that it could be as high as 10 percent. The Census report identified the four primary causes of this understatement as "underestimation of low valued transactions; failure of exporters to file required documentation; missing or incomplete information on documents that are filed; and under-valuation of export shipments in response to foreign quotas or tariffs." While any specific estimate of the export underestimation is difficult to verify, each of these four causes of the understatement of exports is plausible. In addition, other assessments conclude that there are comparable inaccuracies in the reports on imports.

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[1] Testimony before the Commission by Jenny Bates of the Progressive Policy Institute, Washington, D.C., August 19, 1999.
[2] Nicholas Kulish, “Economists Group Warns Budget Cuts May Be Hurting Statistics Reliability,” Wall Street Journal (August 23, 2000), Section A, Page 2.

Efforts to reconcile U.S. trade data with those of our trading partners, which is a way to verify the accuracy of this information, are limited. Since 1990, efforts to reconcile U.S. data have been intermittent and limited to only a few countries (including Australia, Canada, China, Japan, and Korea). U.S. and Chinese trade data were last reconciled for 1993, for instance. However, the substantial growth in commerce with China (an increase in total recorded trade from $40 billion in 1993 to $95 billion in 1999) suggests that more frequent reconciliation is needed. Inaccurate statistics on imports and exports are not a uniquely American dilemma. According to recent reports, the world seems to be counting more of its exports of goods and services than its imports by around $245 billion, or the equivalent of 3 percent of world trade. This discrepancy in the statistics has grown since 1997 at roughly the same rate as the U.S. current account deficit.[3] The increasing size of this global discrepancy indicates the difficulty statistical agencies face in measuring the shifting landscape of the global economy.

Inaccurate reports on international transactions may bias the analysis of current trade relationships and assessments of current trade policy effectiveness. Without accurate data to properly understand the effect of trade policy, oversight of that policy and the formulation of future policy are made more difficult. Further, problems with international trade statistics may provide a distorted view of the health of the U.S. industries facing foreign competition, possibly affecting government policies and private market decisions with respect to those industries. Although some changes to improve the statistical system have been made in recent years through international cooperation and modernization of statistical gathering methods, the need remains for comprehensive improvements in the system.

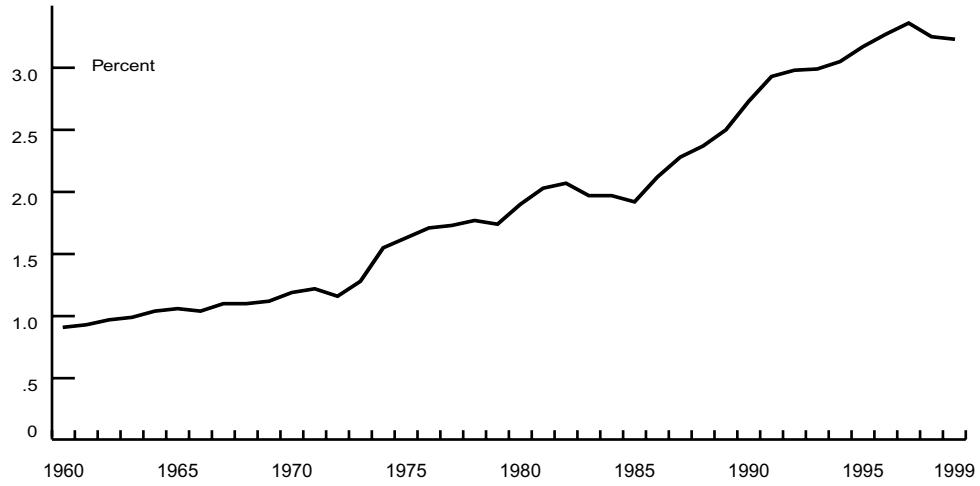
The shifting landscape of the economy

The rapidly changing U.S. economy has made it increasingly difficult for the statistical agencies to gather and provide accurate and relevant data. Further, efforts to facilitate exports may have had the unintended effect of decreasing data quality. The decrease in paperwork linked to exporting goods and services, for instance, has also led to inaccurate counting of export activity. At the same time, lower tariffs and decreased enforcement have led to further deterioration in the accuracy of import statistics.

Services trade, by all accounts, has been growing as a share of U.S. international trade and as a percent of GDP (see Figure 7.1), yet the reporting systems do not provide comprehensive statistics on this sector of the economy. Further, the accuracy of data on financial flows between the United States and other nations is increasingly questionable. Finally, the increased importance of intrafirm trade, the growing volume of small transactions exports, and the problems of counting new products such as software provide telling examples of the strains affecting the statistical system.

[3] "Finance and Economics: War of the Worlds," The Economist (May 27, 2000), p. 76.

Figure 7.1
Services Exports as a Percent of GDP, 1960–99



Source: Economic Report of the President, 2000

Services trade estimates

As the importance of trade in services has grown in the U.S. economy, so too has the demand for more detailed and accurate data. The rapid evolution of services makes it the least accurately measured category of our international trade. The difficulties in gathering international services data stem from the inability to identify and measure the activities of all those involved in international services transactions. Services are diverse, with new products constantly arising. These innovations in the service sector are not reflected in the current statistical system classifications.

The current U.S. trade data system was developed to measure commerce in industrial goods. While there are more than fourteen thousand import and eight thousand export commodity categories that apply to more than two hundred countries and regions, international services transactions are limited to around twenty-five broad categories, with country breakdowns published only for major services. Compilations limited to these broad categories make it more difficult to ascertain major changes within particular components.

One example of the inadequate measure of services is the "other private services" category in the international balance-of-payments accounts. The current reporting of the "other private services" category is only disaggregated quarterly for some services and annually for "other unaffiliated services." Reporting international transactions, which is done on a monthly basis, only uses the broad "other services" category. The reporting of international transactions by destination of service exports or origin of service imports, which is done on a quarterly basis, also does not break down the broad category. The "other private services" category, which represents a

third of all trade in services, includes all services provided to or from foreign affiliates. It also includes many other types of services including education, financial, insurance, telecommunications, and business.

Financial flows data

Statistics on international financial flows measure the movement of capital into and out of the economy. Financial flows, always inherently difficult to measure, are becoming more of an issue in data gathering as payment systems become increasingly sophisticated. The distinction between securities firms and banks has become blurred as regulations have changed and the globalization of securities markets has proceeded at a rapid pace. The measurement of transactions that in earlier periods was performed as the transactions went through financial intermediaries, such as banks and brokerages, is now more difficult. Such transactions are often carried out through other market participants and though offshore financial activities often without regard to national borders. This process makes the traditional U.S. statistical gathering methods less inclusive. In addition, the growth of global financial firms and increased capital mobility make measurements of cross-boundary flows more difficult. These developments have challenged traditional statistical reporting systems in a time of declining staffing and have strained the personnel resources in statistical agencies dealing with financial flow statistics.[4]

Portfolio investment transactions, because of recent increases in volume, have also become a major problem in the accuracy of data. When the last benchmark survey of foreign portfolio investment in the United States was conducted in 1997 (after a three-year interval since the previous benchmark survey), estimates of foreign holdings of U.S. securities were revised upward by $300 billion, or 20 percent. This demonstrates that even a three-year interval leaves room for large discrepancies and the need for material revisions. Benchmark surveys of portfolio investment transactions need to be conducted more frequently than in the past, which had been done only once every five years. The coverage of the surveys also needs to be expanded. In particular, coverage of short-term assets, short-term liabilities, financial derivatives, banking transactions, and repurchase agreements should be improved.

Intrafirm trade and transfer pricing

The Bureau of Economic Analysis estimates that, in 1994, more than one-third of U.S. exports and more than two-fifths of U.S. imports were intrafirm trade. Growing intrafirm transactions make the collection of accurate statistics more difficult for both goods and services trade. Some distortion of the data results from intrafirm transfer pricing and its tax implications.

According to an accounting firm executive who testified before the Commission,

[4] Anne Y. Kester, Following The Money: U.S. Finance in the World Economy (Washington, D.C.: National Research Council, 1995).

> *[In] order to ensure that the measurement of U.S. trade balance figures accurately reflects the value of the transactions that they are intended to quantify, it is important to take into account the possible error that may be introduced into the equation due to intracompany transactions. Furthermore, the increased presence of intangible assets in these transactions has created a need to develop transfer-pricing methods that give multinational corporations the ability to properly report the value of those transactions.*[5]

When trading goods between related parties, estimating the "arm's-length" price (the price that would have prevailed in a transaction between unrelated parties) is often a complex and imprecise process. While there are Internal Revenue Service and accounting guidelines for intrafirm transfer pricing, the tax implications provide incentives for firms to use transfer pricing in a way that will minimize taxes. Therefore, given the large volume of intrafirm trade, such incentives may have a material impact on the accuracy of the trade data. Services rendered to a subsidiary by a parent company in another country also present a problem. Services may show up in the data as profits, royalties, or payment for services rendered. The growing rate of intrafirm trade makes it all the more important that statistical agencies have the resources necessary to assess this issue.

Low-value exports

Export documentation for low-value transactions (those under $2,500) is minimized in order to facilitate their export. Rather than directly counting such exports, Census estimates their total value based on sample surveys. However, the infrequency of such surveys is likely to reduce the accuracy of U.S. trade data. In recent years, there has been a large increase in the number of low-value transactions, because of e-commerce and the rise in export activity of small businesses. Nevertheless, the most recent survey was conducted in 1990, four years prior to the opening of the Internet to commercial activity. Testimony before the Commission indicated that undercounting small-value transactions leads to a persistent and increasing underestimate of trade. While a sample survey may be the appropriate way to measure the large volume of merchandise trade that falls into this category, the fundamental shifts in the structure of the economy warrant more frequent surveys.

Software exports

Software is another example of the complexity of gathering data as the economy becomes more computer based. The sale of software can occur in many forms. If exported on a CD, the software has been valued according to the value of its medium (that is, the value of the disk itself, which is worth only pennies, even though the software on it may sell for hundreds of dollars). Software can also be exported embedded on the hard drive of a computer sold to a foreign customer. It can also be sold by means of a license that authorizes the importer to install the software on a fixed number of computers. And, it can be sold through the Internet, over which soft-

[5] Testimony of Enrique MacGreggor of Deloitte & Touche, LLP., before the U.S. Trade Deficit Review Commission, Dallas, Texas, January 21, 2000.

ware is sent electronically and downloaded by customers directly to their computers. Current reporting systems cannot keep up with these trends. Furthermore, valuation guidelines do not necessarily accurately represent the economic value of software exports.

Problems with economic data have persisted

The difficulties related to the trade and current account statistics are symptomatic of problems in other areas of statistics gathering. While there have been several significant improvements in the statistical system during the 1990s,[6] the shortcomings of international trade data are part of a broader array of problems that have beset economic statistics for years. In 1989, Michael Boskin, then chairman of the President's Council of Economic Advisers, led an economic statistics initiative that proposed recommendations to address well-known problems with those statistics that most affected budget and monetary policy-making, that were most cost-effective, and that could be executed in the short term. In 1995, the General Accounting Office found that progress was being made in completing the recommended actions.[7] Since then, however, there has not been a similar, broadly based effort to continue the process of improving economic data or to address more complex problems.

Despite rising demands to capture adequately the changes in the economy, the international accounts staff of the Department of Commerce's Bureau of Economic Analysis is 30 percent below its peak level of the early 1990s. The outlays of the Bureau of Economic Analysis have declined by 12 percent in real terms during the past five years. During this period, the Bureau has not addressed the immediate deficiencies in the merchandise trade data nor has it conducted quarterly surveys of international services transactions or filled vacancies in its Balance of Payments and International Investment Divisions.

Framework of the statistical system

Currently, fifteen major agencies of the U.S. government have a primary mission to collect and disseminate statistics. In addition, more than eighty-five other government agencies have some statistical programs or produce publicly disseminated statistical products. Given the large number of agencies with responsibilities for statistics, no one agency has all the data to meet the analytical needs of the government and the public. This circumstance makes the issue of sharing data among statistics agencies important.

Difficulties that emerge in attempting to share or merge data sets between agencies, however, suggest a need for moving beyond cooperation toward a fully integrated system. For example, separate lists of businesses in the Bureau of the Census and the Bureau of Labor Statistics have led to duplication and inefficient allocation of resources. A second problem with the current system is that the budgets for the statistical agencies are not determined in a systematic way that would establish priorities for the government's numerous data collection activities.

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[6] Among the most notable improvements are the Bureau of Economic Analysis' revisions of the National Income and Product Accounts and the implementation of the North American Industrial Classification System by the Bureau of Economic Analysis and the Bureau of the Census, along with other agencies.

[7] U.S. General Accounting Office, Economic Statistics: Status Report on the Initiative to Improve Economic Statistics (GGD-95-98, July 7, 1995).

In a 1996 letter to Senator Daniel P. Moynihan urging the establishment of a comprehensive review of the Federal Statistical System, nine noted economists said:

> *[I]nstead of reflecting a balance among the relative priorities of one statistical collection effort against others, statistical priorities are set in a system within which individual Cabinet Secretaries recommend budgetary tradeoffs between their own substantive programs and the statistical operations which their departments, sometimes by historical accident, are responsible for collecting. Moreover, long-range planning of improvements in the federal statistical system to meet the changing nature and needs of the economy is hard to organize in the present framework.*[8]

An integrated statistical system would likely yield sustained improvements in the data reported by federal agencies at lower cost, both in reduced government budgetary costs and in costs imposed on the private sector, than would be possible by merely expanding existing statistical operations. In developing a statistical system, which provides relevant and accurate data, it is important to maintain an integrated network among the parts of that system gathering information on different categories of statistics. For instance, inconsistencies arise in attempting to analyze statistics on employment in services and to compare those with trade in the comparable categories of services. The categories for services that the Bureau of Labor Statistics uses to analyze employment do not match those that the Bureau of the Census uses to measure trade. A solution is to create standardized industrial codes to be used by all federal statistical agencies. Census is currently working on creating Standard Occupational Codes but has yet to implement them. This is one example of integration that could provide better statistics.

Recommendations

The quality of trade and current account reporting, as well as that of other statistical series, has suffered from both a shortage of resources and a fragmentation in the data-gathering process. This situation leads the Commission to recommend that, in the short run, key statistical agencies receive an appropriate increase in budgetary funding. However, raising the budgets of key statistics agencies cannot solve the problems associated with fragmentation. Therefore, the Commission recommends a fundamental change in the statistics-gathering system though the integration of the major statistical agencies.

U.S. Statistics Service

In order to reduce duplication and barriers to information sharing, a majority of the Commission recommends the integration of those agencies most actively involved in economic statistics into a single independent agency. This agency should be funded adequately to enable it to tackle the important issues presented above. Savings from consolidation would help pay for some of the necessary improvements in the reports. A new U.S. Statistics Service should consist of

[8] The signatories were Michael J. Boskin, Martin Feldstein, Alan Greenspan, Paul McCracken, Raymond J. Saulnier, Charles Schultze, Beryl Sprinkel, Herbert Stein, and Murray Weidenbaum.

1. the Bureau of Economic Analysis (currently in the Department of Commerce),
2. the Bureau of Labor Statistics (currently in the Department of Labor),
3. the Bureau of the Census (currently in the Department of Commerce),
4. the Economic Research Service (currently in the Department of Agriculture), and
5. the Statistics of Income Division (currently in the Department of the Treasury).

The mission of the U.S. Statistics Service would be to develop a more comprehensive, accurate, and efficient system of gathering, analyzing, and disseminating data on the U.S. economy. The chief statistician of the U.S. Statistics Service would have the responsibility of developing a uniform system of data collection and dissemination, which would allow analysts to compare the various aspects of international and domestic statistics in a more comprehensive manner. The authority to develop a coordinated statistical research strategy should greatly improve the ability of the federal statistical system to implement effective modernization and improvement strategies.

One area in need of progress is the automation of import and export reporting. While import reporting has been mostly automated, the systems used are outdated and in need of modernization. It is also important to recognize the growing trade in services and adequately respond with an expansion of statistical categories, giving appropriate emphasis to increasing the number of services categories.

In order to improve estimates of services, financial instruments, and direct transactions across U.S. borders, the Bureau of Economic Analysis should expand the quarterly survey of international trade in services to cover computer services, legal services, database services, and financial services. In addition, there needs to be a new set of quarterly and annual estimates of U.S. international assets and liabilities in financial derivatives and other short-term instruments, and selected data on transactions in those instruments.

Confidentiality and privacy laws, which have prohibited the transfer of information between the various agencies, should not inhibit the appropriate use of data for statistical purposes. A single agency with a uniform system to protect privacy with suitable firewalls between the U.S. Statistics Service and external agencies could enhance the maintenance of confidentiality. Consolidation could improve privacy protection for respondents and lessen the burden on the private sector through uniform and centralized filing procedures.

If budget savings brought about by the recommended reorganization do not yield adequate resources to enable the U.S. Statistics Service to meet pressing needs for providing timely and accurate international trade data, then an appropriate increase in funding to ensure accurate, relevant, and timely data should be granted. The Commission believes there should be an increase in the frequency of trade data surveys, although calls for greater data coverage and

quality have to be balanced against the cost of collecting, producing, and disseminating the data.

The agencies involved in statistics gathering need to establish a uniform system for public dissemination of international trade data that is standardized and more easily accessible. Public dissemination of data is vital to the expansion of the base of knowledge on trade and its effects on our economy. Accessibility is a key element of providing such timely data.