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## Missing Pieces: A New Report to Congress Details Biases and Gaps in Economic Statistics Resulting from Globalization

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*Stephen A. Wandner*

From Workforce Research to Workforce Policy

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## Missing Pieces

### A New Report to Congress Details Biases and Gaps in Economic Statistics Resulting from Globalization

*This article is adapted from Houseman and Ryder (2010b). That document, along with the research papers underlying the report that was sent to Congress (Houseman and Ryder 2010a), can be found at [www.upjohn.org](http://www.upjohn.org). See the references on p. 4 for URLs.*

**G**lobalization of the U.S. economy is perhaps the most important economic phenomena of our time. The value of trade has increased dramatically over the last two decades relative to the size of the U.S. economy, reaching the equivalent of 30 percent of U.S. GDP in 2008, just

**The report was motivated by concerns that offshoring has resulted in systematic biases in key economic statistics and in an understatement of the true effects of trade on the U.S. economy.**

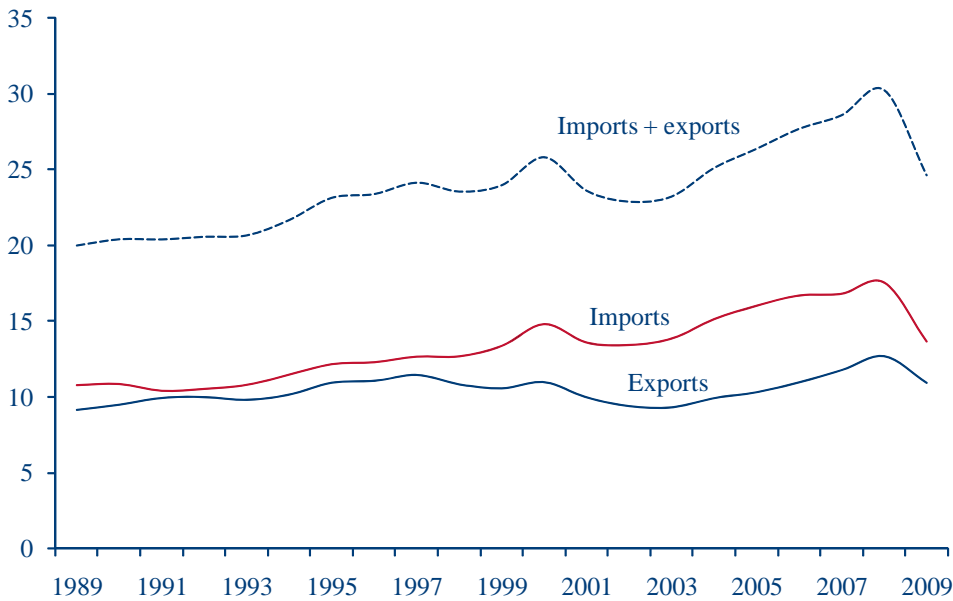
prior to the onset of the recession. The growth of imports greatly outpaced the growth of exports, resulting in a widening trade deficit in the 2000s (Figure 1). Moreover, import growth was largely accounted for by imports from emerging economies, reflecting a fundamental shift in the composition of our trading partners (see Figure 2). In recent years, China became the largest exporter to the United States, surpassing Canada.

While the growth of international trade and the emergence of China and other developing economies as major trading partners offer great opportunities for Americans, these developments also present many challenges, particularly during recessionary times. Formulating effective labor market policies in a global economy requires understanding how recent developments in international trade impact U.S. businesses and workers. Critical questions include

- What are the effects of imports, particularly from low-wage countries such as China, on U.S. wages, employment, and inequality?
- Will specific federal and state stimulus programs be effective in mitigating unemployment, or will there be considerable leakage of the monies spent on imports?
- What is the import content of exports, and how effective will export promotion policies be in raising domestic employment?
- How will the expected rise in trade in business services affect the occupational distribution of employment in this country and the educational requirements of U.S. workers?

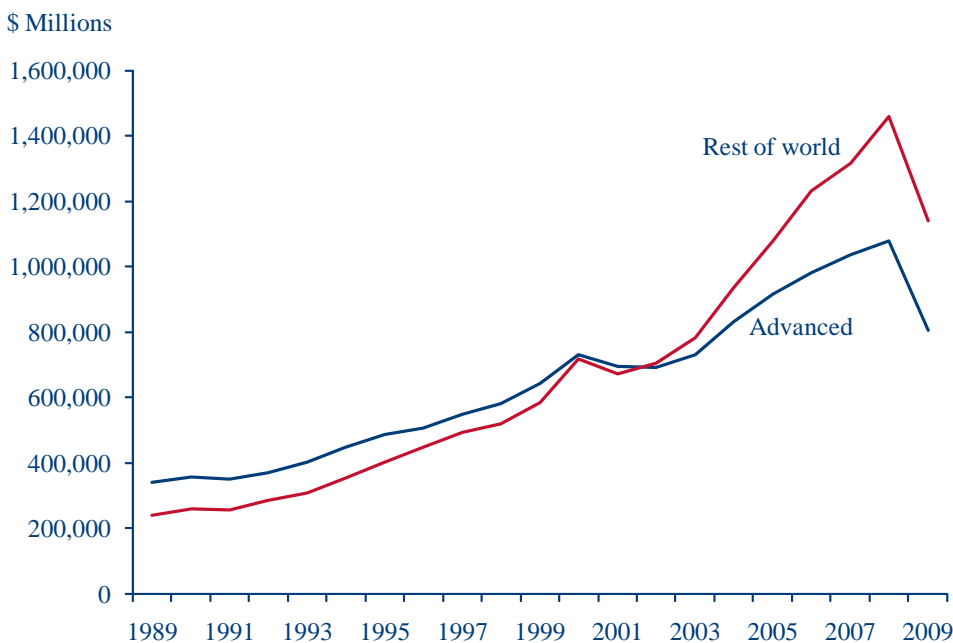
Answering these questions requires good economic data. But while the

**Figure 1 Imports and Exports as a Percent of GDP**



SOURCE: National Income and Product Accounts, U.S. Bureau of Economic Analysis.

**Figure 2 Imports by Country Type**



NOTES: Advanced countries include Western European countries, Canada, Japan, Australia and New Zealand.

SOURCE: U.S. International Transactions, U.S. Bureau of Economic Analysis.

growth of globalization underscores the need for sound data to understand its effects and formulate policies, globalization greatly complicates the collection of economic data and the construction of reliable statistics.

A new report to Congress by the Upjohn Institute, in collaboration with the National Academy of Public Administration, was motivated by concerns that “offshoring” or the growth of imports from low-wage economies has resulted in systematic biases in key economic statistics and in an understatement of the true effects of trade on the U.S. economy. (This concern was publicized in Mandel [2007].) The report, *Measurement Issues Arising from the Growth of Globalization* (Houseman and Ryder 2010b), summarizes findings and recommendations of new research supported by funding from the Bureau of Economic Analysis and the Alfred P. Sloan Foundation and conducted by leading researchers in academia and the federal statistical agencies. Much of the research focuses on biases in import price indexes that, in turn, may result in significant biases in key economic statistics.

**Import Prices and Biases Arising from Shifts in Sourcing**

Underlying the trends displayed in Figures 1 and 2 has been a rapid shift in the sourcing of consumer products and intermediate inputs to low-wage countries, most notably China. As currently constructed, price indexes generally do not capture price declines, often large, associated with such shifts in sourcing. This and related problems in the construction of import prices have prompted concerns that the real (constant dollar) growth in imports has been understated and domestic productivity and real output growth have been overstated. (See sidebox for an explanation of the critical role import prices play in the construction of domestic output and productivity statistics.)

New research commissioned for the report examined three aspects of the issue: 1) What is the precise nature of the price measurement problem? 2) Is there concrete evidence of biases to price

indexes and to output and productivity measures? 3) What are the solutions?

### Nature of the Problem and Evidence of Biases

The fact that price indexes generally fail to capture price declines associated with a shift in sourcing to low-cost suppliers—whether domestic or foreign—is widely recognized. Although a large body of research has examined biases to the Consumer Price Index resulting from the growth in discount retail chains, biases to price indexes resulting from the growth of imports from low-wage countries has not been previously considered. The increased import penetration in consumer goods and intermediate inputs and the large price differentials between domestic and foreign suppliers—as documented in the research papers in the report—have increased the possibility that some economic statistics are significantly biased.

Research uncovered anomalies in recent price index trends, providing concrete evidence of a problem. In instances where import penetration in consumer goods has grown significantly, import price indexes generally have risen faster than consumer price indexes, suggesting that the import price indexes have not accurately captured the lower prices that have prompted many retailers and consumers to shift from domestic to imported goods. Similarly, although manufacturers increasingly have been sourcing intermediate inputs from low-cost foreign suppliers, the import materials price deflator has been rising faster than the domestic materials price deflator, indicating that these price indexes often fail to capture the cost savings driving manufacturers' offshoring.

If the growth of import prices is overstated, then the growth in imports in real terms will be understated. Moreover, an understatement of the real growth in imports implies that domestic productivity and real output growth will be overstated. Such biases in the data have potentially important implications for studies of the impacts of imports in the U.S. economy; at least to some degree the growth of low-cost

## Why Import (and Export) Prices are Important in Computing Domestic Output and Productivity Measures

In a global economy, accurately measuring the prices of imports and exports is critical to computing key *domestic* output and productivity measures. Consider GDP, the value of goods and services produced in a country. In the United States, GDP is computed indirectly using the “expenditure” approach. The value of final goods and services expenditures by consumers, governmental entities, and businesses (private investment) is summed. To deduce the value of goods and services produced domestically, exports (goods and services produced in this country for foreign consumption) are added to domestic expenditures and imports (goods and services produced overseas for domestic consumption) are subtracted, thus yielding the familiar formula:  

$$\text{GDP} = \text{C} + \text{I} + \text{G} + \text{X} - \text{M}.$$

A leading indicator of the economy's health is the growth of real (constant dollar) GDP. To compute real GDP growth, all domestic expenditures and export and import values must be properly deflated to control for price changes. Errors in measuring import and export price indexes would make little difference if the volume of international trade flows was small. But as shown in Figure 1, the value of trade flows in recent years has reached 25–30 percent of GDP.

Similarly, import price indexes are critical in computing the growth of real value added in industry statistics. Intermediate inputs, including imported intermediates, must be netted out from shipments in calculating value added. The BEA estimates that about 40 percent of imported commodities are used as intermediate inputs by businesses, and that the import share of intermediates has grown dramatically in the last decade.

Measures of the growth in real imports and real value added are used, in turn, to construct various measures of productivity growth. For example, an industry's labor productivity growth might be computed as the growth in its real value added less the growth in labor input (employment or hours worked). As a result, an error in import price growth will translate into errors in the measurement of both domestic real output and productivity growth.

While accurately computing price indexes for imports and exports has become more important in the construction of key domestic economic indicators, accurately computing import and export price indexes has been greatly complicated by the rapid shift in sourcing of global production and expansion of trade in business services. Several research papers concerned biases in import price indexes resulting from the growth of low-cost imports and gaps in measurement of prices for imported and exported business services, the most rapidly growing area of trade.

Data on import and export prices are collected by the International Price Program (IPP) in the Bureau of Labor Statistics. Despite the dramatic growth in trade and the importance of import and export price indexes in constructing key domestic economic indicators, the IPP's budget is small—\$19 million—and has not risen since 2003.

imports will be incorrectly manifested as productivity and output growth, and the economic effects of import growth will be underestimated. Although the size of any bias to productivity and output measures for the aggregate economy is unknown, evidence in the research papers points to the possibility of sizable biases in some sectors, including manufacturing and construction.

### Solutions

In the report, the Bureau of Labor Statistics proposes a new input price index to help address this fundamental problem in industry statistics (Alterman 2010). Currently, input price deflators are constructed from surveys of domestic producers and importers of inputs and may miss a price decline when businesses shift to a low-cost supplier for their inputs. The proposed index would directly survey the purchasers of inputs, who could report the price change of a given item irrespective of its source. The report recommends that Congress provide modest funding for a pilot of the proposed index to determine its feasibility.

In addition, the report recommends funding for the collection of price data for imported and exported business services. Currently, data on import and export prices in business services—which include IT services, engineering services, and call centers and represent the most rapidly growing category of services trade—is nonexistent. This serious data gap could result in significant inaccuracies in economic statistics as trade in business services expands.

### Other Measurement Issues Arising from the Growth of Globalization

Biases in price indexes from offshoring constitute just one of many serious challenges facing statistical agencies as a result of globalization. Because the destination of imports to final consumers, industry, and government is not tracked, in constructing statistics agencies must make assumptions about how imports are used in the economy. Research for the project indicates that this data gap, coupled with long lags in updating information

on the structure of U.S. industry (from benchmark input-output tables), may have resulted in significant inaccuracies to economic statistics in recent years, a period characterized by rapid globalization and changing supply chains.

The absence of data on how imports are used in the economy compromises our ability to understand which industries are engaging in offshoring. Moreover, it potentially compromises the accuracy of the numerous other economic analyses based on the input-output data published by the Bureau of Economic Analysis. For instance, the growth of imports renders it more difficult to predict the impact of state and local economic development policies because the degree to which policies will stimulate demand for imports rather than domestic goods and services cannot be accurately assessed.

In addition, trade in services is rapidly expanding, reflecting the role

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of the Internet and other technological developments in communications. The lack of industry detail in domestic services and services trade data, of data on export and import prices, and of longitudinal occupational data for the U.S. economy seriously hamper accurate measurement of these trade flows and analysis of their impacts on the U.S. economy and workers. Recommendations in the report include collecting longitudinal data on employment by occupation so that structural changes in the labor market and the educational requirements of the workforce may be better understood.

### The Need for Increased Funding and Data Sharing

The pace of globalization is unlikely to abate in the near future; our need to assess the impact of this continued expansion will similarly increase.

Filling these data gaps is critical for such assessments and will require at least modest increases in funding for international statistics.

In some cases, information gaps could be filled by linking data already collected by various federal statistical agencies. The efficient use of existing data, however, is greatly limited by legal restrictions on sharing microlevel data among agencies. Congress will need to modify existing legislation (specifically the Confidential Information Protection and Statistical Efficiency Act) to allow the sharing of nonsensitive business tax data.

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