
THE GEORGE WASHINGTON UNIVERSITY

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Recommendations to the Manufacturing Council

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Competitiveness Analysis and Strategy

- Encourage the Commerce Department to build and maintain the internal capacity to assess the competitive strengths and weaknesses of U.S. manufacturing industries and prepare and implement a regularly updated competitiveness strategy.
- Encourage the Commerce Department in its strategy development to use, as appropriate, the full array of policy tools, including information, facilitation, trade agreements, regulation, tax incentives, grants, intramural investments, and procurement. Also, encourage it not to confuse strategy development with the operation of specific programs (e.g., National Network for Manufacturing Innovation).
- Recommend that Secretary of Commerce revise the Department Organization Order for the Office of the Chief Economist ([last issued in 1994](#)) to include the function of providing analysis and advice on U.S. industrial competitiveness.

Economic Statistics

- Review U.S. Code Title 15, Sections [172-183](#), [1516](#), and [1517](#) to determine how existing duties and authorities of the Department and Secretary of Commerce regarding the production of economic statistics might be more actively employed in support of manufacturing competitiveness.
- Recommend that the Secretary update Department Organization Orders for the Census Bureau ([last issued in 1987](#)) and the Bureau of Economic Analysis ([last issued in 1982](#)) to include the function of providing statistics to facilitate public and business decisions that concern competitiveness.
- Advocate for specific improvements in federal economic statistics:
 - General
 - 1) Quarterly GDP by Industry
 - 2) Reconciliation of Census Bureau and BLS Industry Statistics

- Innovation, Research, and Development
 - 3) Business R&D and Innovation
 - 4) Input Price Indices
- Workforce
 - 5) National Employment Statistics System
 - 6) O*NET
 - 7) Occupational Employment Statistics
 - 8) Real-time Labor Market Information
 - 9) Job-to-Job Flow Analysis
 - 10) Statewide Longitudinal Data Systems
 - 11) Postsecondary Non-degree Credentials
- Export Growth
 - 12) Trade in Value-added
 - 13) International Trade Data System
 - 14) Foreign Direct Investment
- Energy Policy
 - 15) Energy's Economic Impact

Opportunities to Improve Federal Economic Statistics

General

1) Quarterly GDP by Industry

Objective: Enable economic and business decision-makers to see current trends in economic activity by industry.

History and Status: In annual budget justifications sent to Congress for FY2011-2013, the Bureau of Economic Analysis (BEA) indicated that it “fell short in providing the advanced warning signs of a building economic crisis” due to “the exceptional tempo of change and evolution occurring in the economy and the existing statistical system’s inability to keep pace.” ([FY2013 BEA budget request](#), p. 36.) BEA’s initial quarterly GDP estimates for 2008, particularly for Q3 and Q4, significantly underestimated the speed and severity of the economic decline and lacked industry detail that would have helped policymakers better understand the sectors of concern, particularly finance, insurance, and real estate.

On the basis of its observation, BEA asked Congress three years in a row for \$500,000 to construct a new measure, quarterly GDP by industry, which would allow it to correct this problem. Congress turned down BEA’s request each time.

BEA had waited years to be in a position to make the request. Before it could do so, the Census Bureau first required an \$8.1 million appropriation to survey all U.S. industries quarterly. The Census Bureau made that request six times between 2003 and 2009 before receiving congressional approval.

Over the last few years, BEA has used previously allocated funds to develop [prototype versions](#) of quarterly GDP by industry. After the last congressional refusal, the agency programmed existing resources to bring the data series into regular production, which will begin in April 2014 (see [December 2012 note](#)).

Issue: Because of general fiscal constraints and congressional lack of understanding of the importance of economic statistics, BEA’s ability to create and maintain important data series such as quarterly GDP by industry is constantly in question.

Annual Cost: \$500,000

Request: The Manufacturing Council discuss with the BEA the feasibility and desirability of producing quarterly GDP by industry with significant industry detail (see [annual table](#)) and of producing gross output statistics. The Council encourage the Secretary to ensure that BEA has sufficient resources to maintain production of the new data series.

2) Reconciliation of Census Bureau and BLS Industry Statistics

Objective: Create one reliable picture of U.S. industrial structure as measured by jobs, earnings, and the number and size of establishments.

Issue: Thirty percent of business establishments are classified by the Census Bureau in one industry and by the Bureau of Labor Statistics (BLS) in another. The reason is that the Census Bureau and BLS cannot compare and reconcile their business registers because by law the

Census Bureau cannot allow BLS to see any records containing data derived from Internal Revenue Service (IRS) records. (See [National Academy of Sciences, "Improving Business Statistics through Interagency Data Sharing: Summary of a Workshop," 2006.](#)) The consequence is that analysts are unsure about the true nature of U.S. industrial structure.

Status: Since the Bush Administration, the Departments of Treasury, Commerce, and Labor and the White House have repeatedly asked Congress to allow the Census Bureau to share IRS-derived records with BLS on a confidential basis, without success. Currently, the Administration is "waiting for the proper legislative vehicle."

Annual Cost: \$0

Request: The Manufacturing Council voice its support for congressional passage of a law allowing the reconciliation of Census and BLS business registers.

Innovation, Research and Development

3) Business R&D and Innovation

Objective: Have access to detailed data on recent U.S. business R&D and innovation activities.

Issue: The latest available detailed tables on business R&D activity from the National Science Foundation (published June 2011) are for [2007](#). The latest available summary statistics (published June 2013) are for [2010](#). As a consequence, public and private decision-makers do not have a current, accurate, complete picture of industrial R&D activity.

The [Business R&D and Innovation Survey \(BRDIS\)](#) is sponsored by NSF and conducted by the Census Bureau. Reasons for the delay include the newness of BRDIS (first year 2008), its size (far larger than the previous iteration) and insufficient NSF resources (on the order of a few million dollars).

Request: The Manufacturing Council request that the Census Bureau and NSF indicate the reasons for the delay in the release of BRDIS data, ask the Secretary to use her legal authorities to help resolve this issue, and make other recommendations, as appropriate, for ensuring the timely release of annual BRDIS data.

4) Input Price Index

Objective: Ensure the accuracy of measures of U.S. manufacturing productivity.

Issue: BLS overestimates annual growth in manufacturing productivity by 10-20 percent because its method incorrectly attributes to greater productivity the drop in intermediate input prices that occur when a manufacturer shifts from a domestic to a cheaper foreign supply source. (See Susan Houseman, Christopher Kurz, Paul Lengermann, and Benjamin Mandel. 2011. "[Offshoring Bias in U.S. Manufacturing.](#)" *Journal of Economic Perspectives*, 25(2): 111-32.)

Status: A feasibility study to create a new input price index that enables accurate productivity measurement has been prepared by the BLS Office of Prices and Living Conditions. (See William Alterman, "[Producing an Input Price Index,](#)" paper prepared for Conference on Measurement Issues Arising from the Growth of Globalization, November 2009.)

Annual Cost: Years 1-3--\$1.6 million annually for a pilot input price index. Years 4 and beyond--\$11 million annually.

Request: The Manufacturing Council ask the Secretary to encourage the Secretary of Labor to request, the Office of Management and Budget to allocate, and Congress to appropriate the funds required by BLS to create input price indices.

Workforce

5) National Employment Statistics System

Objective: Have the Secretary of Labor create and maintain, as required by a 1998 law, a National Employment Statistics System for use by labor market actors—students, workers, educators, and employers—to make informed decisions regarding, for example, career paths, degree and certificate programs, and location of business operations.

The Secretary . . . shall oversee the development, maintenance, and continuous improvement of a nationwide employment statistics system . . . that includes . . . statistical data . . . that . . . enumerate, estimate, and project employment opportunities and conditions at national, State, and local levels in a timely manner, including statistics on . . . industrial distribution of occupations, as well as current and projected employment opportunities, wages, benefits . . . , and skill trends by occupation and industry, with particular attention paid to State and local conditions . . . ; information on State and local employment opportunities, and other appropriate statistical data related to labor market dynamics" (U.S. Code, Title 29, Section [491-2](#) and [2864\(d\)\(2\)\(E\)](#))

Issue: The law has not been fulfilled by the Secretary of Labor since the Clinton Administration. As a consequence, labor markets actors are making decisions with less adequate information and employers have greater difficulty finding workers with desired competencies.

Request: The Manufacturing Council recommend to the Secretary of Commerce that she encourage the Secretary of Labor to implement the National Employment Statistics System as required by law, updated for 21st century labor markets and in cooperation with the Commerce Department, the Department of Education, the National Science Foundation, and state employment and education agencies.

6) O*NET

Objective: Have the Department of Labor's [Occupational Information Network](#) (O*NET) be a complete, accurate, and current guide for students, workers, educators, and employers making occupation-related decisions.

Status and Issue: The online O*NET database provides detailed characteristics of nearly 900 occupations, including industries, tasks, tools, knowledge, skills, abilities, work values, work styles, basic and cross-functional skills, education, and organizational context. Information is collected through [surveys](#) of employed workers and occupational experts. The website averages 1.1 million visitors monthly.

O*NET provides the foundation for several online career tools, including [MySkills MyFuture](#), [My Next Move](#), and the [O*NET Interest Profiler](#).

To paraphrase a [2010 National Academy of Sciences report](#), O*NET:

- does not have any close substitutes or close competitors as a source of information on the content of jobs performed by the U.S. workforce;
- provides a tool for comparing job attributes and skill requirements across occupations at a point in time . . . and for evaluating changes in these job attributes over time; and
- provides an exceptionally rich set of scales for assessing job content along numerous dimensions.

Annual funding for O*NET is \$4.6 million. At this budget level, O*NET can update profiles of only 100 occupations a year. While O*NET can revise high demand occupations on a more frequent basis, many occupational profiles are not current.

Request: The Manufacturing Council determine from the Department of Labor the level of resources required to have O*NET be current, complete, and accurate and ask the Secretary of Commerce to support a Department of Labor request for that additional funding.

7) Occupational Employment Time Series

Objective: Understand current trends in occupational employment and pay, by industry, for the nation, states, and metropolitan areas.

Issue: Due to small sample size, BLS provides [Occupational Employment Statistics](#) data as a rolling three-year average. Consequently, OES data do not reflect current labor market conditions and cannot be used in a time series.

Status: In its FY2011 budget request, BLS asked for \$6 million to expand the OES sample to address this issue. Congress did not approve the request. BLS is now seeking to develop alternative methods for producing single-year OES data by geography.

Request: The Manufacturing Council ask the Secretary to request an update from BLS on plans to improve OES data and make recommendations as appropriate.

8) Real-time Information on Occupational Demand

Objective: Understand the current extent and nature of demand for individual occupations, by industry.

Status: Real-time labor market information is an emerging subscription-based web resource for tracking the extent and nature of employers' demand for labor by occupation, industry, and geography. [Real-time LMI vendors](#), both for-profit and nonprofit, regularly collect and aggregate job ads and analyze them to extract industry, occupational, skills, certification, wage, and geographic information. Real-time LMI is used, for instance, by [community colleges](#) to better align education and training programs with current labor market demand. Many [state LMI agencies](#) rely on real-time data.

Issue: Department of Labor staff [indicate](#) that they would find access to real-time LMI of value. BLS could use these data to improve occupational descriptions in the biennial [Occupational Outlook Handbook](#) (7 million page views a month) and the upcoming 2018 revision of the [Standard Occupational Classification](#) system. It would find the information particularly useful for emerging occupations. BLS also would like to explore the potential for using real-time LMI to improve its monthly estimates of the numbers of jobs and job openings, particularly for states and areas.

Employment and Training Administration (ETA) staff say that real-time LMI would be useful for updating O*NET, informing the content of the agency's [Competency Model Clearinghouse](#) (identification of a hierarchy of needed worker competencies, by industry), and tracking occupational demand by region.

However, BLS and ETA staff have observed that in the current budget environment, their agencies would find it difficult to fund the purchase of seat licenses to use real-time LMI.

Annual Cost: A seat license typically costs \$5,000 to \$10,000 per year.

Request: The Manufacturing Council learn from BLS and ETA how these agencies' access to real-time LMI could lead to improvements in manufacturers' access to skilled workers and make recommendations accordingly.

9) Job-to-Job Flow Analysis

Objective: To understand career path trajectories of workers in individual industries.

Status and Opportunity: Using establishment and employer wage records provided by state labor market information agencies, the Census Bureau's [Local Employment Dynamics](#) (LED) Partnership produces statistics on the dynamics of the nation's workforce. Fully implemented efforts measure [hires/separations](#) by industry and map where workers [live and work](#), with full confidentiality protection. A forthcoming effort will measure "job-to-job flows," the path workers take as they shift from one employment situation to the next, including periods of nonemployment. Census staff recently published a [series of papers](#) testing the methodology.

Annual Cost: \$14 million for the LED Program.

Request: The Manufacturing Council learn about LED Partnership plans for a job-to-job flows research tool, determine the implications for manufacturing workforce development, and make recommendations accordingly.

10) Statewide Longitudinal Data Systems

Objective: Create a network of state-operated data systems, as authorized by the No Child Left Behind Act, which track patterns of student progression through high school and postsecondary education and into the workforce.

Status and Opportunity: Since FY2006, 47 states and DC have received at least one grant from the Department of Education's [Statewide Longitudinal Data System \(SLDS\) Grant Program](#), totaling \$612 million over five rounds of funding. In the latest round (FY2012), the SLDS program gave out \$97 million in grants.

ETA has a small complementary program, the [Workforce Data Quality Initiative \(WDQI\)](#), which provides \$1 million grants to state LMI agencies to help state education agencies gain access to workforce data, particularly unemployment insurance (UI) employee wage records, for inclusion in the SLDS. ETA has held two rounds of grant competition, for a little over \$12 million each. The agency received another \$6.5 million from Congress for FY2012 and opened competition for those funds in March 2013.

A number of SLDS are building on-line tools that show workforce outcomes by individual postsecondary institution and credential program. To date, five states have [posted](#) data.

One limitation of these databases is that they only include workers who remained in-state after leaving a postsecondary program. To overcome this problem, efforts are underway to have all 50 states and DC join a wage record-sharing compact, the [Wage Record Interchange System \(WRIS\) 2](#).

Annual Cost: In the FY2014 budget, the president asked for \$85 million for SLDS and \$6 million for WDQI. The Senate Appropriations Committee approved most of the SLDS request (\$75 million) and the full WDQI request. The House Appropriations Committee has not yet acted.

Request: The Manufacturing Council learn from the Departments of Education and Labor about the current status of and plans for their respective SLDS-related programs and make recommendations to the Secretary of Commerce as appropriate.

11) Postsecondary Non-degree Credentials

Objective: Determine the extent to which U.S. adults hold non-degree postsecondary credentials—including industry-recognized certifications, community college certificates, and professional licenses—by industry and the extent to which these credentials correlate with improve pay levels and job stability.

Issue: There is widespread recognition that a postsecondary credential is [increasingly essential](#) to obtain a stable, decently-paying job. In a recent Department of Education [study](#), 38 percent of adults report holding an industry-recognized certification, professional license, or subbaccalaureate educational certificate. However, federal statistical agencies collect information only on degree attainment, not that of non-degree credentials.

Status: The Department of Education has organized an [Interagency Working Group on Expanded Measures of Enrollment and Attainment](#) (including the Census Bureau) to develop new survey questions and seek to place those questions on federal household surveys. The aim is to determine the extent to which the adult population holds non-degree postsecondary credentials, the nature of these credentials, and characteristics of credential holders, including occupation, industry, and wages.

Request: The Manufacturing Council request an update from the interagency working group regarding the status of the effort and provide recommendations as appropriate.

Export Growth

12) Trade in Value-Added

Objective: Accurately measure the trade in value-added (TiVA) between the U.S. and other nations.

Issue: In recent years, global supply chain networks have become more complex and geographically diffused:

From automobiles, electronics, and plastics, to software development or clothing, many goods and services today are provided via global supply chains. . . . The Apple iPod is a prominent example of a good produced via a global supply chain. Apple is headquartered in the United States and most of its R&D, marketing, top management, and corporate functions are located in the United States. The iPod's hard drive, however, was designed in Japan by Toshiba and built in factories in China and the Philippines. The controller chip was designed by the U.S. firm Portal Player, but is produced by firms in either Taiwan or the United States. Other parts are manufactured in Japan, Thailand, Taiwan, Korea, and Singapore. Finally, the iPod is assembled by Taiwanese manufacturing firms in China. . . .

[S]upply chains have rearranged the pattern of U.S. trade, increasingly concentrating the production and export of skill-intensive goods and services in the United States while relocating other, less skill-intensive activities to other countries. Global supply chains have induced many leading U.S. companies to change their business models, refocusing on coordinating the assets and expertise of their business partners, and placing less emphasis on owning all key technological and managerial assets. . . . The effect of global supply chains on U.S. wages and employment varies for workers in different industries and occupations, and may also depend on the extent to which U.S. multinationals concentrate their activities in high-income or low-income countries. (U.S. International Trade Commission, [The Economic Effects of Significant U.S. Import Restraints](#), Seventh Update 2011, Publication 4253, August 2011, p. 3-1, 3-23.)

As complex multinational supply chains develop, traditional trade statistics based on gross flows are unable to provide a true view of the value added provided by each nation. That Apple iPod is counted as a Chinese or Filipino import. Countries that add intermediate value are invisible.

U.S. exports to Canada are about 40% smaller measured in value added terms than gross terms, whereas U.S. exports to France are essentially identical in gross and value added terms. . . . [T]he U.S.–China deficit is approximately 30–40% smaller when measured on a value added basis, while the U.S.–Japan deficit is approximately 33% larger. These adjustments point to the importance of triangular production chains within Asia.” (Robert C. Johnson and Guillermo Noguera, [“Accounting for Intermediates: Production Sharing and Trade in Value Added,”](#) *Journal of International Economics*, v. 28, March 2012, pp. 224-236.)

In a sophisticated use of international input-output data, economists at the USITC estimate that in 2004 less than a third of domestic value added (DVA) in U.S. exports was in final goods consumed by importing nations:

- 32.5 percent U.S. DVA in final goods consumed by importing nations
- 27.6 percent DVA in intermediate exports used by importing nations to make final goods for domestic consumption
- 14.6 percent DVA in intermediate exports used by importing nations to produce items for export
- 12.4 percent DVA in intermediate exports to which importing nations added value and shipped back to the U.S.
- 12.9 percent foreign value added in gross exports (particularly from Canada and Mexico) (Robert Koopman, William Powers, Zhi Wang, and Shang-Jin Wei, ["Give Credit Where Credit Is Due: Tracing Value Added in Global Production Chains,"](#) Working Paper 16426, National Bureau of Economic Research, September 2010 (revised September 2011)).

Status: The [World Trade Organization](#), the [Organisation for Economic Co-operation and Development](#), and the [European Commission](#) recently released on-line web tools that measure TiVA among nations. The [U.S. International Trade Commission](#) has prepared a series of reports and studies on the topic.

As of May 2013, BEA is examining the feasibility of producing a [TiVA data series](#). The agency is responsible for [U.S. international trade statistics](#). (BEA can trace back the origins of its responsibility to 1820.)

Request: The Manufacturing Council indicate the desirability of the development of a TiVA data series, ask BEA to assess the feasibility, costs, and timeframe of producing such a series, and make recommendations accordingly.

13) International Trade Data System

Objective: As required by the SAFE Port Act of 2006, create a unified [International Trade Data System](#) (ITDS) to electronically collect and distribute import and export data required by government agencies that license or clear the import or export of goods.

Status and Issue: According to the Customs and Border Protection (CBP) December 2012 [report to Congress on ITDS](#):

- "Currently, traders must make redundant reports to multiple agencies (often on paper). When completed, ITDS will allow traders to make a single electronic report, and the relevant data will be distributed to the appropriate agencies. Costs will be reduced for business and government. Agencies will obtain data more quickly through electronic filings, and with automated processing, be able to process cargo more expeditiously, and be better able to identify unsafe, dangerous, or prohibited shipments."
- "Customs and Border Protection (CBP) is responsible for both building and operating ITDS. Currently, 47 agencies, including CBP, are working together to implement ITDS."

The interagency ITDS Board of Directors, chaired by the Treasury Department, coordinates interagency participation in ITDS.” Five Commerce units are involved, including the Census Bureau and the Import Administration.

- “Competing priorities have resulted in delays in implementing ITDS priorities and ITDS funds being redirected for other uses. Funding limitations have resulted in the elimination of contractor support for the ITDS program, and a consequent loss of knowledge and expertise, exacerbated by the retirement and rotation of staff from the ITDS agencies. It is critical that implementation of ITDS functions begin in the near future, so that the experience and knowledge developed in the preparation and planning for ITDS are not lost. But competing priorities and funding limitations make plans for ITDS uncertain.”
- “[T]he ITDS account began FY 2013 with a balance of \$31 million from prior years. Because of budget limitations, no new appropriation was requested for FY 2013. Current plans for spending on ITDS are uncertain and will depend on CBP prioritization of competing ACE [Automated Commercial Environment] projects. In addition, report language for the 2012 DHS budget indicates that prior year ITDS balances are available for other ACE development priorities. It is possible that all remaining ITDS funds will be expended in FY 2013, for ITDS and for other ACE development priorities.”

The U.S. Chamber of Commerce is actively monitoring the situation, as it views ITDS implementation as a priority for manufacturing competitiveness. The Chamber indicates that since the CBP report to Congress, the agency has reassessed the project in cooperation with the Department of Homeland Security, the White House, and the private sector. As a consequence, the Chamber says, CBP has completely revamped the ITDS production process and is consistently hitting its milestones. At the same time, the Chamber remains concerned about progress being jeopardized due to inadequate funding.

Request: The Manufacturing Council request an ITDS project status update from CBP and other stakeholders, identify the steps required to complete and implement the effort, assess the value of ITDS in promoting export growth, and make recommendations accordingly.

14) Foreign Direct Investment

Objective: More fully measure the nature of foreign direct investment (FDI) in U.S. businesses. Improved measures will increase understanding of the nature of the U.S. manufacturing base and successful attraction of foreign manufacturers to the U.S.

Status and Issue: While [BEA data indicate](#) that foreign firms support 2.1 million manufacturing jobs in the U.S., the nature of that investment is not fully understood. BEA’s current FDI survey does not

- distinguish between acquisitions and new establishments;
- provide adequate state detail on fixed assets, commercial property, and manufacturing employment; and

- capture small to mid-sized investment activity, which accounts for a substantial share of FDI in many states.

BEA halted production of FDI detail by state in 2008 due to budget cuts. It has proposed restoration of these cuts several times, but has been turned down by Congress. [State business attraction organizations](#) indicate their efforts are hampered by the lack of data. The Commerce Department's [SelectUSA](#) effort could make good use of the data as well.

As part of BEA's [FY2014 budget request](#), it once again has asked Congress for funds to enhance its FDI data program (p. 32-34). The House Appropriations Committee has turned down this request; the Senate Appropriations Committee has approved it.

Annual Cost: \$3.9 million

Request: The Manufacturing Council issue a statement supporting inclusion of BEA's FDI budget initiative in the House-Senate conference report.

Manufacturing Energy Policy

15) Energy's Economic Impact

Objective: Improve the accuracy and detail of measures of energy production and business and consumer spending on energy goods and services.

Issue: At present, BEA's input-output accounts lack the detail desired by public and business decision-makers.

Status: In BEA's [FY2011](#) (pp. 71-72) and [FY2012](#) (pp. 62-65) congressional budget requests, it included an initiative to improve statistics on energy consumption and production. From the FY2012 request:

. . . BEA would expand the level of detail for energy-related categories—from the eight current categories to upwards of 40—in the U.S. input-output (I-O) accounts and would develop detailed price and quantity measures consistent with the expanded categories. . . . This initiative will lead directly to an enhancement in the accuracy of energy statistics for the U.S. economy. Funds provided by this initiative will allow BEA to address critical new developments in production, supply, and consumption of energy goods and services, including new renewable energy and high-technology capital investments made by businesses to promote energy efficiency and a reduced carbon footprint. This initiative will also provide more timely and accurate statistics to BEA's entire range of customers—statistics that the Department and Administration use to promote exports and trade, and that small businesses use to make business investment decisions and to create jobs. . . .

Congress did not approve these requests.

Annual Cost: \$1.2 million

Request: The Manufacturing Council discuss with the Secretary and BEA options for improving energy statistics as proposed in its recent budget requests, particularly regarding energy consumption by business, and prepare recommendations accordingly.