Stumbling into the Great Recession

How and Why GDP Estimates Kept Economists and Policymakers in the Dark

Andrew Reamer George Washington Institute of Public Policy George Washington University

BEA Advisory Committee

May 9, 2014

Stumbling into the Great Recession The Scrapbook Version

The Good

- As of April 2014, quarterly GDP-by-industry is an official BEA data series.
- As of 2011, the Census Bureau conducts annual and quarterly surveys of all services industry sectors.
- These new Census surveys provide the basis for more reliable aggregate GDP estimates at turning points in the business cycle.

The Bad

The Ugly



NEWS RELEASE



EMBARGOED UNTIL RELEASE AT 8:30 A.M. EDT, FRIDAY, APRIL 25, 2014

NEW QUARTERLY STATISTICS DETAIL INDUSTRIES' ECONOMIC PERFORMANCE Statistics Span First Quarter of 2005 through Fourth Quarter of 2013 and Annual Results for 2013

The Bureau of Economic Analysis released today – for the first time – gross domestic product (GDP) by industry for 22 industry sectors on a quarterly basis. These new statistics fill an important gap in U.S. federal economic statistics by providing timely information on how individual industries contributed to U.S. economic growth in a given quarter. These new data also provide businesses with a comprehensive and consistent tool for assessing how their industries are faring compared to other industries. Policymakers, businesses, and academia will be able to use the statistics to quickly identify economic turning points, improving their ability to understand a given sector's performance.

Economic and Statistical Analysis

FY 2013 Budget in Brief

Highlights of Program Changes

		Base	Incre	Increase / Decrease		
	FTE	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>		
Quarterly GDP by Industry	0	\$0	2	+\$500		

Producing GDP by industry on a quarterly basis will provide real-time information on the health and stability of every sector in the U.S. economy. By identifying real-time fluctuations across sectors, government and businesses will have a comprehensive set of statistics on which to base policy decisions and critical business investments.

The Federal economic statistical system – charged with providing key actionable intelligence on the status, trends, and dynamics of the American economy – fell short in providing the advanced warning signs of a building economic crisis. In no small part, this was due to an inability to see, both at the detailed and aggregate levels, warning signs of systematic risk. This shortcoming was not a result of a lack of attention, competence, or focus, but rather the exceptional tempo of change and evolution occurring in the economy and the existing statistical system's inability to keep pace.

The addition of GDP-by-Industry statistics on a quarterly basis will enable policymakers to quickly identify fluctuations across sectors and thus improve the ability to understand and target responses to a given sector's economic position.

These key data will also help inform business investment decisions, providing more effective real-time information that will help small business improve their growth potential. They will also provide an early tool to evaluate the economic performance of U.S. industries.

Economic and Statistical Analysis FY 2013 Budget in Brief

Summary of Appropriations

Funding Levels

	2011	2012	2013	Increase
Appropriation	<u>Actual</u>	Enacted	Estimate	(Decrease)
Salaries and Expenses	\$97,060	\$96,000	\$100,269	\$4,269
TOTAL, BUDGET AUTHORITY	97,060	96,000	100,269	4,269
FTE				
Salaries and Expenses	513	513	517	4
Reimbursable	31	32	30	(2)
TOTAL	544	545	547	2

PUBLIC LAW 113-6-MAR. 26, 2013

Section 1. This Act may be cited as the "Consolidated and Further Continuing Appropriations Act, 2013".

ECONOMIC AND STATISTICAL ANALYSIS

SALARIES AND EXPENSES

For necessary expenses, as authorized by law, of economic and statistical analysis programs of the Department of Commerce, \$100,228,000, to remain available until September 30, 2014.

Bureau of the Census

FY 2009 Budget in Brief

Highlights of Program Changes

	Base			Increase / Decrease		
	FTE	<u>Amount</u>	FTE	Amount		
Current Economic Statistics	1,235	\$155,743	+50	+\$8,118		
Improved Measurement of Services	267	\$31,224	+50	+\$8,118		

The FY 2009 budget request includes an \$8.1 million initiative to provide quarterly and annual coverage of all twelve service sector sections, matching the coverage of the quinquennial Economic Census. This request will provide the Bureau of Economic Analysis, the Council of Economic Advisers, the Federal Reserve Board, other policymakers, business leaders, and the American public with comprehensive and timely data on the service economy, which now accounts for 55 percent of economic activity.

Measuring and Enhancing Services Trade Data and Information Conference

September 14, 2010
U.S. Department of Commerce, Washington, DC

Service Statistics Improvements by the U.S. Census Bureau What We Have Done and Plans for the Future

Mark E. Wallace
Chief, Service Sector Statistics Division
U.S. Census Bureau
Mark.e.wallace@census.gov
September 14, 2010

Overview of Service Statistics Program Frequency and Coverage: Where We Will Be Next Year

		Coverage in I	March 2009	Coverage by	March 2011
Program	Frequency	Sectors	% of GDP	Sectors	% of GDP
Economic Census	5 years	12	55%	12	55%
Service Annual Survey	Annually	7 complete 3 partial	30%	12	55%
Quarterly Services Survey	Quarterly	3 complete 1 partial	17%	12	55%

Quarterly Services Survey Expansion Expedited Timeline

	Original	Timeline	Expedited Timeline			
NAICS	Mail Publish		Mail	Publish		
Ambulatory Health Care Services and Social Assistance (621, 624) (Percent of GDP=4%)	June 30, 2009	December 9, 2009	March 31, 2009	September 9, 2009 (1Q & 2Q 2009)		
Truck Transportation, Courier Services, Warehousing, Rental and Leasing Services, Arts, Entertainment, and Recreation, and Other Services (484, 492, 493, 532, 71, 81) (Percent of GDP=6%)	June 30, 2009	December 9, 2009	June 30, 2009	December 9, 2009 (1Q, 2Q & 3Q 2009)		
Monetary Authorities — Central Banks, Commercial Banking, Savings Institutions, and Nondepository Credit Intermediation, and Securities, Commodity Contracts, and Other Financial Investments and Related Activities, Insurance Carriers (521, 522, 523, 524) (Percent of GDP=8%)	March 31, 2011	Week of September 7, 2011	September 30, 2009	March 11, 2010 (3Q & 4Q 2009)		
Utilities, Air Transportation, Water Transportation, Transit and Ground Transportation, Pipeline Transportation, Scenic and Sightseeing Transportation, Transportation Support, Real Estate, Lessors of Nonfinancial Intangible Assets, and Educational Services (22, 481, 483, 485, 486, 487, 488, 531, 533, 61) (Percent of GDP=20%)	March 31, 2011	Week of September 7, 2011	June 30, 2010	Week of March 9, 2011 (2Q, 3Q & 4Q 2010)		

Service Annual Survey Expansion Timeline

NAICS	Mail	Publish
Utilities, Air Transportation, Water Transportation, Transit	January 2010	First quarter 2011
and Ground Transportation, Pipeline Transportation, Scenic		
and Sightseeing Transportation, Transportation Support,		
Monetary Authorities-Central Banks, Commercial Banking,		
Savings Institutions, and Nondepository Credit		
Intermediation, Security and Commodity Exchanges, Real		
Estate, Insurance Carriers, Lessors of Nonfinancial Intangible		
Assets, and Educational Services (22, 481, 483, 485, 486,		
487, 488, 521, 522, 5232, 524, 531, 533, 61)		

Stumbling into the Great Recession The Scrapbook Version

The Good

The Bad

- The first release of quarterly GDP-by-industry was initially scheduled for 2008.
- The availability of quarterly GDP-by-industry to economists would have been useful in 2008-2009.
- BEA: "Early [GDP] estimates significantly understated the extent of the decline." Major factor—lack of services data.
- The understatement affected the quality of macroeconomic analysis and policymaking during the recession.

The Ugly

BEA Strategic Plan for FY 2004–FY 2008, Detailed Table						
		INDUSTRY	ACCOUNTS			
		Programs and New Initia	atives: FY 2004–FY 2008			
 Programs	2008					
Ougstocky CDD by Industry	Initiate research into methodological options for producing quarterly GDP-by-Industry estimates.	Complete research into methodological options and identify prototype methodologies for producing quarterly GDP-by-Industry estimates.	Develop alternative methodologies for producing quarterly GDP-by-Industry estimates.	Evaluate results of research; if project is approved, begin preparation of first set of quarterly GDP-by-Industry estimates.	Release quarterly GDP-by- Industry estimates.	

Percent Changes in Real Value Added by Selected Industries, U.S., 2007Q1-2009Q4

Seasonally Adjusted at Annual Rates (Source: BEA, April 25, 2014)

Line		2007	2007	2007	2007	2008	2008	2008	2008	2009	2009	2009	2009
Line		I	II	III	IV	I	П	III	IV	Ι	II	III	IV
1	Gross domestic product	0.3	3.1	2.7	1.5	-2.7	2.0	-2.0	-8.3	-5.4	-0.4	1.3	3.9
2	Private industries	0.4	2.6	2.4	0.9	-3.3	1.2	-3.2	-9.3	-5.5	-0.6	1.7	3.5
3	Construction	-0.1	6.2	-4.4	-8.1	-15.7	-4.8	-3.9	-21.0	-25.6	-4.5	5.7	-14.0
4	Manufacturing	-2.5	6.5	8.6	-0.1	-15.8	11.7	-15.2	-18.0	-19.6	3.4	7.8	15.3
5	Durable goods	-0.8	9.5	10.2	8.0	-4.4	0.0	-4.6	-23.0	-31.6	-10.9	2.0	15.0
6	Nondurable goods	-4.8	2.9	6.8	-0.9	-27.9	27.7	-26.5	-11.7	-3.2	21.5	14.4	15.7
7	Wholesale trade	1.1	9.8	1.7	5.9	-1.3	-2.5	-7.8	-17.9	-24.1	-12.8	-1.4	14.3
8	Retail trade	-5.9	-8.5	2.9	2.2	-8.0	-4.4	-5.0	-11.6	0.1	-0.4	-0.2	7.9
9	Transportation and warehousing	-11.1	14.3	-8.8	22.3	-0.9	-5.7	-1.4	-25.1	-21.2	14.7	4.3	8.1
10	Finance and insurance	4.6	-8.4	-11.0	-21.7	8.9	-21.9	-18.1	-32.2	123.9	34.3	7.0	-5.7
11	Professional, scientific, and technical services	1.5	-0.5	12.1	12.6	7.8	7.7	4.6	-4.4	-14.6	-9.7	-3.7	-3.1
12	Management of companies and enterprises	3.5	-10.0	-1.9	8.0	-4.1	7.6	3.9	-5.7	-36.1	6.6	10.3	2.6
13	Administrative and waste management services	2.7	9.3	9.5	4.9	-5.6	2.1	0.3	-10.1	-14.1	-5.5	-1.9	3.1
14	Government	0.3	0.9	1.5	2.6	2.5	1.4	2.5	-1.5	-0.4	2.4	0.3	1.0
15	Addenda:												
16	Private goods-producing industries/1/	-1.8	6.1	1.7	-2.4	-13.2	3.6	-7.9	-3.9	-16.4	-3.0	7.0	3.5
17	Private services-producing industries/2/	1.2	1.6	2.6	2.0	0.0	0.5	-1.6	-10.9	-2.0	0.1	0.3	3.4

Taking the Pulse of the Economy: Measuring GDP

J. Steven Landefeld, Eugene P. Seskin, and Barbara M. Fraumeni

In the United States, the GDP and the national accounts estimates are fundamentally based on detailed economic census data and other information that is available only once every five years. The challenge lies in developing a framework and methods that take these economic census data and combine them using a mosaic of monthly, quarterly, and annual economic indicators to produce quarterly and annual GDP estimates.

Another problem is some data are simply not available for the earlier estimates. For the initial monthly estimates of quarterly GDP, data on about 25 percent of GDP—especially in the service sector—are not available, and so these sectors of the economy are estimated based on past trends and whatever related data are available.

Table 2: Annual Percent Change in Quarterly Estimates of Real GDP 2008Q1-2009Q2

Quarter Annual Rate of Change

	Advance	Final	Latest	Latest minus Final
2008Q1	0.6	1.0	-1.8	-2.8
2008Q2	1.9	2.8	1.3	-1.5
2008Q3	-0.3	-0.5	-3.7	-3.2
2008Q4	-3.8	-6.3	-8.9	-2.6
2009Q1	-6.1	-5.5	-5.3	+0.2
2009Q2	-1.0	-0.7	-0.3	+0.4

Figures in orange were available to Romer and Bernstein on January 10, 2009. Figures in orange and green were available to Congress when it passed the Recovery Act on February 13, 2009.



Enhancing Public Understanding of Revisions to Preliminary Estimates The U.S. Post-Recession Perspective on Revisions

Brent Moulton and Dennis Fixler

IARIW 32nd General Conference

Boston

August 8, 2012

Revisions to the 2007–2009 recession

- Revisions were unusually large
 - Early estimates significantly understated the extent of the decline
 - Revisions exposed gaps in data used for early estimates
- Some revisions came quickly as actual data replaced assumptions and indicators were revised
 - 2008Q4 revised from –3.8% (Jan 30, 2009) to –6.2% (Feb 27, 2009)
- Other revisions came later with annual revisions
 - In July 2011, 2008Q4 was revised to -8.9%
 - Total revision from advance to latest (5.1 percentage points) is the largest downward GDP revision on record

www.bea.gov 9



Interaction between revisions and policy

- Analysis to answer the question: If we knew then what we know now, how would policy have been different?
- The importance of timing; revision release dates and formulation of policy
- Timing of advance 2008Q4 GDP estimate doesn't coincide with ARRA legislation
 - ARRA formulated in December 2008
 - Passed House on January 28 (2 days before GDP)
- Estimates for 2008Q3 may have had an effect

www.bea.gov

The New York Times

Fed Misread Crisis in 2008, Records Show

By BINYAMIN APPELBAUM FEB. 21, 2014

WASHINGTON — On the morning after Lehman Brothers filed for bankruptcy in 2008, most Federal Reserve officials still believed that the American economy would keep growing despite the metastasizing financial crisis.

The Fed's policy-making committee voted unanimously against bolstering the economy by cutting interest rates, and several officials praised what they described as the decision to let Lehman fail, saying it would help to restore a sense of accountability on Wall Street.

The hundreds of pages of transcripts, based on recordings made at the time, reveal the ignorance of Fed officials about economic conditions during the climactic months of the financial crisis. Officials repeatedly fretted about overstimulating the economy, only to realize time and again that they needed to redouble efforts to contain the crisis.

The New York Times

A New Light on Regulators in the Dark

By GRETCHEN MORGENSON FEB. 22, 2014

My initial takeaway from these voluminous transcripts is that they paint a disturbing picture of a central bank that was in the dark about each looming disaster throughout 2008. That meant that the nation's top bank regulators were unprepared to deal with the consequences of each new event.

THE WALL STREET JOURNAL.

New View Into Fed's Response to Crisis

By JON HILSENRATH

Updated Feb. 21, 2014 8:21 p.m. ET

Two days after U.S. officials decided to let Lehman Brothers collapse in September 2008, and just before the Federal Reserve unleashed a torrent of programs to bolster the financial system, central-bank officials were still struggling to grasp the magnitude of the calamity that had hit the economy.

The Fed transcripts, 1,865 pages documenting one of the most turbulent economic times in the nation's history, covered eight formal and six emergency policy meetings the central bank conducted in 2008. They provide the most complete view yet into developments inside the nation's central bank as the financial crisis worsened and threatened to plunge the U.S. into another Great Depression.

Among their revelations: Mr. Bernanke and his Fed colleagues spent much of the year scrambling to catch up with worsening financial turmoil and economic conditions, sometimes moving aggressively only to be surprised when conditions deteriorated again.

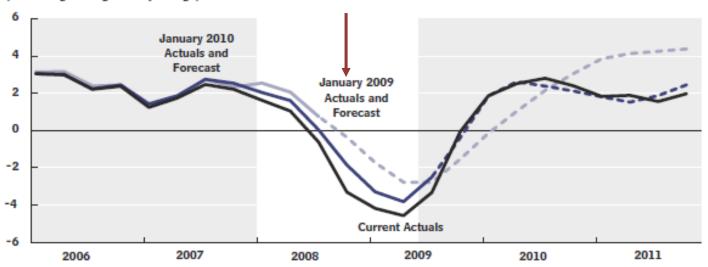
CBO View in January 2009

(Source: CBO's Economic Forecasting Record – 2013 Update)



Forecasts by CBO and Revisions to Values for Real Gross Domestic Product

(Percentage change from year ago)



Sources: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Notes: Solid lines represent historical data that were available at the time each forecast was conducted. Dashed lines represent forecast data.

Real gross domestic product is the output of the economy adjusted to remove the effects of inflation.

Data are quarterly and are plotted through the fourth quarter of 2011.

THE JOB IMPACT OF THE AMERICAN RECOVERY AND REINVESTMENT PLAN

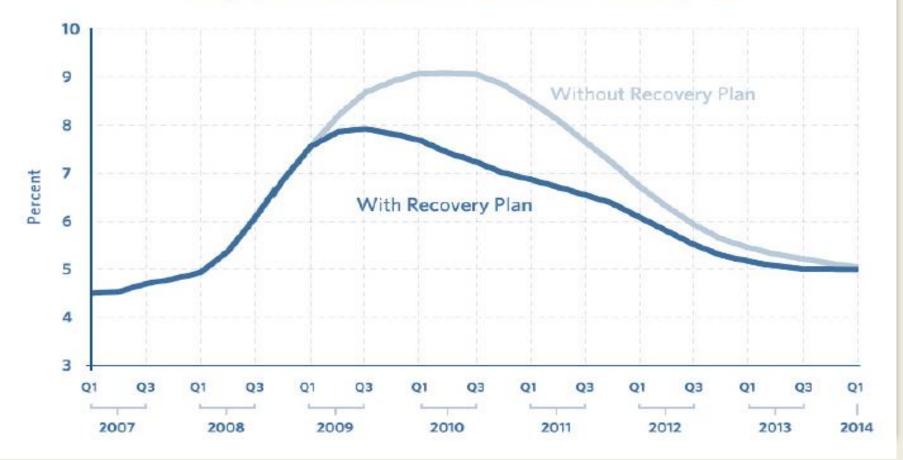
CHRISTINA ROMER

CHAIR - NOMINEE - DESIGNATE, COUNCIL OF ECONOMIC ADVISERS

JANUARY 9, 2009

JARED BERNSTEIN | OFFICE OF THE VICE PRESIDENT-ELECT

Figure 1 Unemployment Rate With and Without the Recovery Plan



Stumbling into the Great Recession The Scrapbook Version

The Good
The Bad

The Ugly

- 1986 Senator Sarbanes and Congressman Obey propose substantial upgrade of federal statistical system, including coverage of services.
- 1989 President Bush approves Economic Statistics Initiative, with services coverage as the "highest priority."
- FY1991-FY1997 Census Bureau goes to Congress 7 times for funding to survey all services industries annually, with modest success.
- FY2003-FY2009 Census Bureau goes to Congress 6 times for funding to survey all services industries annually and quarterly, with modest success.
- FY2009 Congress fully funds Census request of \$8.1M.
- FY2011-FY2013 BEA goes to Congress 3 times seeking funding to prepare quarterly GDP-by-industry.
- FY2013 House turns down, Senate approves BEA request of \$500K, House accedes to Senate in conference.

BETTER INFORMATION AS A TOOL FOR ECONOMIC GROWTH;

A PLAN FOR IMPROVING THE NATION'S STATISTICAL INFRASTRUCTURE

CONGRESSMAN DAVID R. OBEY AND SENATOR PAUL S. SARBANES

June 20, 1986

America's lack of information about itself has increasingly become an impediment to national economic growth. The Federal Government has failed for more than a decade to make the small investments required to update and improve our capacity to collect, organize, and disseminate accurate and relevant statistical information.

A review of our national data collection efforts with regard to the American labor force and American businesses would lead one to believe that we are still a society of blue collar workers primarily engaged in manufacturing. While we continue carefully to count the number of people employed in the textile industry who are engaged in sewing on snaps as opposed to those who stitch sleeves, we have no information on how many Americans now work in computer sales.

THE WHITE HOUSE

WASHINGTON

November 15, 1989

MEMORANDUM FOR THE PRESIDENT

FROM: THE ECONOMIC POLICY COUNCIL

SUBJECT: Improving U.S. Economic Statistics

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Much of public policy decisionmaking depends on sound data.

However, there are serious concerns about the quality of our
economic statistics. As a result, the EPC Working Group on
Economic Statistics has developed recommendations for maintaining
and improving the quality of U.S. economic statistics. The EPC
now presents its recommendations for your review.

1. Services Sector

The measurement of output and prices, and therefore productivity, in the rapidly-growing services sector is seriously flawed. This has been emphasized by many observers, including the 1987 EPC Working Group on the Quality of Economic Statistics. The statistical agencies have made progress, but much remains to be done. In light of the critical importance of this area, improvement of service sector measures should have the highest priority for the statistical agencies. The relevant departments and agencies should consider reallocating resources to accelerate the necessary improvements.

SURVEY OF CURRENT BUSINESS

March 1991

Improving the Quality of Economic Statistics: The 1992 Economic Statistics Initiative

Although the U.S. statistical system is among the finest in the world, it faces serious problems resulting from the rapid pace of change in today's economy. These problems are centered in the increasing importance of the service sector, the growing internationalization of the economy, the deregulation of industries, and the increasing rate of technological innovation as reflected in changes in existing products and introduction of new products. Timely improvements in the statistical system—and, in many cases, new concepts and methodologies—are required.

Federal economic statistics are numbers that move the economy. It is vital to policymakers, the business community, and researchers that these statistics be of the highest possible quality. Many groups—such as the American Economic Association, the Council of Professional Associations on Federal Statistics, the National Academy of Sciences, and the National Association of Business Economists—agree that improvements are needed.

Increasing the Coverage of the Service Sector

The coverage of the annual survey of services and the quinquennial census of service industries would be expanded to provide virtually complete coverage of the service sector and a more detailed picture of the composition of the service industries. (Census)

BUREAU OF THE CENSUS

THE BUDGET FOR FISCAL YEAR 1992

Business statistics.—This program provides current information on sales and related measures of retail and whole-sale trade and selected service industries. The 1992 increase will improve the methods of reducing non-sampling problems in the Advanced Retail Sales Survey, and expand the collection of corporate financial data, as well as collect annual detail for additional service industries. In addition, the increase will improve the measurement of services purchased by industry and small company financial data and will allow the Census Bureau to identify and publish new data for specific growth industries.

THE BUDGET FOR FISCAL YEAR 1997

Current economic statistics.—The business statistics program provides current information on sales and related measures of retail and wholesale trade and selected service industries. Major activities will include efforts to improve the collection and publication of statistics for the service industry; and to remedy shortcomings in principal economic indicators, such as for retail and wholesale trade.

Department of Commerce Budget in Brief

Fiscal Year 2004

In addition to these cyclical changes in activity, the Census Bureau is requesting funding in FY 2004 to launch new program specific initiatives that will significantly improve the breadth and quality of the information it collects and provides to the country. The Census Bureau has carefully identified major segments of our economy and population that are not currently adequately measured. This gap hinders effective policy and decision-making across a broad spectrum of interests. The Bureau believes that a relatively modest investment will yield tremendous gains in understanding complex interactions affecting millions of people and jobs

	<u>B</u>	ase	Increase / Decrease		
	FTE	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	
Current Economic Statistics	1,465	\$148,982	+45	+\$7,300	
Improved Measurement of Services			+39	+\$4,000	

The first phase of this initiative included activities covered in the FY 2003 budget request for Improved Measurement of Services in the New Economy. Phase 2, covered by this FY 2004 initiative, will provide BEA with new key source data on the service sector needed to improve the critical quarterly and annual estimates of our Nation's GDP. This initiative will expand annual coverage of services industries, increase coverage of the new quarterly principal economic indicator of service industry activity, and provide annual merchandise line data for selected retail and wholesale trade industries. This expansion provides a comprehensive framework for gathering information on services and improves the periodicity and detail of service sector statistics.

COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS BILL, 2013

112TH CONGRESS 2d Session

HOUSE OF REPRESENTATIVES

Report 112–463

ECONOMIC AND STATISTICAL ANALYSIS

SALARIES AND EXPENSES

The Committee recommends \$96,000,000 for economics and statistical analysis, which is the same as fiscal year 2012 and \$4,269,000 below the request.

112TH CONGRESS 2d Session

SENATE

REPORT 112–158

ECONOMIC AND STATISTICAL ANALYSIS

SALARIES AND EXPENSES

Appropriations, 2012	\$96,000,000
Budget estimate, 2013	100,269,000
Committee recommendation	100,269,000

The Committee's recommendation provides \$100,269,000 for Economic and Statistical Analysis [ESA]. The recommendation is \$4,269,000 above the fiscal year 2012 enacted level and the same as the budget request. ESA conducts research to provide a better understanding of the U.S. economy which helps Government make more informed policy decisions.

Questions after Stumbling into the Great Recession

- What if #1? What would 2007-2008 quarterly GDP estimates have looked like if Congress had given Census the services survey funds requested for FY2004?
- What if #2? To the extent that 2007-2008 GDP estimates would have been different, how, if at all, might policy and business decisions have been different?
- Why? Why did it take 13 Census Bureau and 3 BEA requests before Congress provided the necessary funds?
- What to do about it? What can be done to ensure that in the future economic decision-makers have the data they need?

Stumbling into the Great Recession

How and Why GDP Estimates Kept Economists and Policymakers in the Dark

The Scrapbook Version

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