Results of the 2012 Annual Revision of the National Income and Product Accounts

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Associate Director for National Economic Accounts
Bureau of Economic Analysis
July 27, 2012
Why does BEA revise its estimates?

- Improve accuracy of the estimates by incorporating the most complete and reliable source data
  - Benchmarking indicators to annual surveys
  - Replacing trends or indirect indicators with comprehensive source data
- Provide a more detailed picture of the economy
- Make improvements to methods used for preparing the estimates
Example: Benchmarking manufacturing

- **Indicator:** Monthly M3 ("manufacturers’ shipments, inventories, and orders")
  - Voluntary reporting
  - 4,300 reporting units with more than $500 million in shipments (represents 60% of manufacturing)
  - 89 industry categories
  - No product detail

- **Benchmark:** Annual survey of manufactures
  - Mandatory reporting
  - 50,000 establishments (representing all 328,500 manufacturing establishments)
  - 471 industries
  - 1,384 product classes
Shipments - Nondefense capital goods excluding aircraft

Source: Census Bureau, July 3, 2012
Retail sales excluding motor vehicles

Levels (millions of dollars, seasonally adjusted)

2007m1 2008m1 2009m1 2010m1 2011m1

Source: Census Bureau, March 30, 2012
Business inventories

Source: Census Bureau, July 20, 2012
New source data vs. indirect indicators

- For some components of GDP and GDI, direct indicators aren’t available
  - State & local government spending
    - Current data on employment and construction
    - Data on other types of spending available from Census Bureau with a 2-year lag
  - Corporate profits
    - Current data on public corporations
    - Comprehensive IRS data available (including private and S corporations) with a 2-year lag
  - IRS data on proprietors’ and partnership income with a 2-year lag
Period covered by revisions

- Revised annual estimates for 2009-11 and quarterly estimates for 2009Q1–2012Q1

- Revised estimates for the first quarter of 2012 will be released on July 27

- Reference year continues to be 2005

- Full historical period (1929 forward) will be open to revision in next year’s comprehensive revision
New and revised source data

- **Census Bureau surveys:**
  - Annual survey of manufactures
  - Annual retail trade survey
  - Annual wholesale trade survey
  - Service annual survey
  - Construction spending (value put in place)
  - Government finances
- **Bureau of Labor Statistics:** Wage and salary data
- **Internal Revenue Service:** Tabulations of tax returns for corporations and for sole proprietorships and partnerships
- **Office of Management and Budget:** Federal government budget data
- **BEA:** International transactions accounts
Improvements in data & presentation

- New data from expansion of the Census Bureau’s service annual survey and quarterly services survey will be incorporated in PCE:
  - Household utilities
  - Transportation services
  - Education services
- QSS now available for 42% of PCE services
- A new set of tables will present GDP, GDI, and other major aggregates in a single location on BEA’s Web site
Average annual rates of change of real GDP and its major components, 2008 to 2011

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>PCE</th>
<th>Nonres Fixed</th>
<th>Res Fixed</th>
<th>Exports</th>
<th>Imports</th>
<th>GOV</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>0.8</td>
<td>-2.3</td>
<td>-3.6</td>
<td>2.5</td>
<td>0.7</td>
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<tr>
<td>0.3</td>
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<td>0.6</td>
<td>0.4</td>
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</table>

Previously published | Revised
Percent change (annual rate) of real GDP and its major components, 2008:Q4 to 2012:Q1

<table>
<thead>
<tr>
<th>Component</th>
<th>2008:Q4</th>
<th>2012:Q1</th>
<th>Revised</th>
<th>Previously Published</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.4</td>
<td>1.5</td>
<td><strong>1.5</strong></td>
<td>-0.8</td>
</tr>
<tr>
<td>PCE</td>
<td>1.5</td>
<td>1.6</td>
<td><strong>1.6</strong></td>
<td><strong>-0.5</strong></td>
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<tr>
<td>Nonres Fixed</td>
<td>1.1</td>
<td>0.6</td>
<td><strong>0.6</strong></td>
<td></td>
</tr>
<tr>
<td>Res Fixed</td>
<td>-3.7</td>
<td>-3.5</td>
<td><strong>4.4</strong></td>
<td></td>
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<tr>
<td>Exports</td>
<td>4.4</td>
<td>4.4</td>
<td><strong>4.4</strong></td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>2.4</td>
<td>2.6</td>
<td><strong>2.6</strong></td>
<td></td>
</tr>
<tr>
<td>GOV</td>
<td>-0.8</td>
<td>-0.5</td>
<td><strong>-0.5</strong></td>
<td></td>
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</tbody>
</table>

Previously published and Revised values are indicated in the chart.
Real gross domestic product
[Billions of chained (2005) dollars, SAAR]
Percent change in real GDP and contributions to percent change - 2009

Previously published

Revised

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Previously Published</th>
<th>Revised</th>
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</thead>
<tbody>
<tr>
<td>GDP</td>
<td>-3.5</td>
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<tr>
<td>PCE</td>
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<td>GPDI</td>
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<td>-1.14</td>
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<td>3.59</td>
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<tr>
<td>GOV</td>
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Revisions to percent change in real GDP and to contributions to percent change - 2009

Percentage points

2009

GDP
PCE
GPDI
Exports
Imports
GOV
Percent change in real GDP and contributions to percent change - 2010

Previously published

 Revised

<table>
<thead>
<tr>
<th>Component</th>
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<th>Revised 2010</th>
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<tr>
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<td>PCE</td>
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<td>GPDI</td>
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<td>1.31</td>
<td>1.29</td>
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<td>GOV</td>
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Revisions to percent change in real GDP and to contributions to percent change - 2010
Percent change in real GDP and contributions to percent change - 2011

Previously published

Revised

2011

<table>
<thead>
<tr>
<th>Component</th>
<th>Previously published</th>
<th>Revised</th>
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<tbody>
<tr>
<td>GDP</td>
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<td>PCE</td>
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<td>GOV</td>
<td>-0.44</td>
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Percentage points

www.bea.gov
Revisions to percent change in real GDP and to contributions to percent change - 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP</th>
<th>PCE</th>
<th>GPDI</th>
<th>Exports</th>
<th>Imports</th>
<th>GOV</th>
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<tbody>
<tr>
<td>2011</td>
<td>0.1</td>
<td>0.26</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
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</table>
Real gross domestic product
[Percent change from preceding period, SAAR, 2008-2011]
Revisions to percent change in real GDP and to contributions to percent change – 2009Q1

2009Q1

Percentage points

-0.20 -0.20
-0.02 0.00
-0.04 0.04
0.00 0.20
0.04 0.40
0.00 0.60
0.00 0.80
0.00 1.00
0.00 1.20
0.00 1.40
0.00 1.60

1.4
0.74
0.70
-0.04
0.04
-0.02

GDP PCE GPDI Exports Imports GOV
Revisions to percent change in real GDP and to contributions to percent change – 2010Q1

<table>
<thead>
<tr>
<th>2010Q1</th>
<th>Percentage points</th>
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<tbody>
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<td>GDP</td>
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<td>GOV</td>
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Revisions to percent change in real GDP and to contributions to percent change – 2010Q2

<table>
<thead>
<tr>
<th>2010Q2</th>
<th>GDP</th>
<th>PCE</th>
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<th>Exports</th>
<th>Imports</th>
<th>GOV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-1.6</td>
<td>-0.24</td>
<td>-1.27</td>
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Percentage points
Revisions to percent change in real GDP and to contributions to percent change – 2011Q2

Percentage points

2011Q2

<table>
<thead>
<tr>
<th>Component</th>
<th>Contribution</th>
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<td>GDP</td>
<td>1.2</td>
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<td>GPDI</td>
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<td>GOV</td>
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Revisions to percent change in real GDP and to contributions to percent change – 2011Q4

Percentage points

2011Q4

GDP PCE GPDI Exports Imports GOV
Real personal consumption expenditures

[Percent change from preceding period, SAAR]
Real personal consumption expenditures

[Billions of chained (2005) dollars, SAAR]
Real PCE for services
[Percent change from preceding period, SAAR]

Revision in percent change, 2009-2011

Previously published  Revised

0.0 0.1 0.5

2009 2010 2011
Real nonresidential fixed investment

[Percent change from preceding period, SAAR]
## Real nonresidential fixed investment

[Billions of chained (2005) dollars, SAAR]

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Level</th>
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<td>06q1</td>
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<td>07q3</td>
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<tr>
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<td>1,100</td>
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<td>12q1</td>
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</tbody>
</table>

*Previously published* vs *Revised*
Real nonresidential structures
[Percent change from preceding period, SAAR]

Revision in percent change, 2009-2011

Previously published  Revised

0.1 0.2 -1.9
0.0 -0.6 -1.2 -1.8 -2.4

2009 2010 2011

Percent

08q1 08q3 09q1 09q3 10q1 10q3 11q1 11q3 12q1

0.0 10.0 20.0 30.0 40.0

www.bea.gov
Real residential fixed investment

[Percent change from preceding period, SAAR]
Real residential fixed investment

[Billions of chained (2005) dollars, SAAR]
Real change in private inventories

[Billions of chained (2005) dollars, SAAR]

Levels

Previously published
Revised

Revision in level (billions of chained dollars), 2009-2011

2009
2010
2011

5.9
-7.9
-3.6

0
2
4
6
8

-10
-8
-6
-4
-2
0
2
4
6
8

08q1 08q3 09q1 09q3 10q1 10q3 11q1 11q3 12q1
Real exports of goods and services
[Billions of chained (2005) dollars, SAAR]
Real imports of goods and services

[Percent change from preceding period, SAAR]

Revision in percent change, 2009-2011

Previously published
Revised
Real imports of goods and services
[Billions of chained (2005) dollars, SAAR]
Real federal government spending

[Billions of chained (2005) dollars, SAAR]
Real state and local government spending

[Percent change from preceding period, SAAR]
Average annual rates of change in the gross domestic purchases price index and its components, 2008 to 2011

<table>
<thead>
<tr>
<th>Component</th>
<th>2008-2011 Rate</th>
<th>2009-2011 Rate</th>
<th>2010-2011 Rate</th>
<th>2011-2012 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Domestic Purchases</td>
<td>1.3</td>
<td>1.5</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>PCE</td>
<td>1.3</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonres Fixed Investment</td>
<td>-0.3</td>
<td>-0.1</td>
<td>-0.9</td>
<td></td>
</tr>
<tr>
<td>Res Fixed Investment</td>
<td>-0.9</td>
<td>-0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOV</td>
<td>-2</td>
<td>-1</td>
<td></td>
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</tr>
</tbody>
</table>

Previously published vs Revised
Price index for gross domestic purchases

[Percent change from preceding period, SAAR]
Corporate profits from current production

[Percent change from preceding period, quarterly rate]
Real gross domestic income

Percent change from preceding period, SAAR

Revision in percent change, 2009-2011

Previously published
Revised
Real GDI and Real GDP

[Billions of chained (2005) dollars, SAAR]
Statistical discrepancy as % of GDP
Personal income and its components

[Revision in level]

Billions of dollars

2009 2010 2011

-150 -100 -50 0 50 100

Personal income
Wages and salaries
Supplements
Proprietors' income
Rental income
Personal income receipts on assets
Personal current transfer receipts
Personal income
[Percent change from preceding period, SAAR]
Real disposable personal income (DPI)

[Percent change from preceding period, SAAR]
Real disposable personal income (DPI)

[Billions of chained (2005) dollars, SAAR]
Personal saving as a percentage of DPI

Revision in percentage points, 2009-2011

Previously published  Revised
Personal saving as a percentage of DPI

Percent

0 1 2 3 4 5 6 7
02q1 03q1 04q1 05q1 06q1 07q1 08q1 09q1 10q1 11q1 12q1

Previously published
Revised
Gross (national) saving as a percentage of gross national income

Revision in percentage points, 2009-2011

Previously published Revised

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td>Percent</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-0.7</td>
</tr>
</tbody>
</table>

www.bea.gov
Selected components of national saving

[Revision in level]

- Personal saving
- Undistributed profits
- Government saving

Billions of dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>Personal saving</th>
<th>Undistributed profits</th>
<th>Government saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td></td>
<td>40</td>
<td>-40</td>
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<tr>
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<tr>
<td>2011</td>
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<td>-40</td>
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