Results of the 2015 Annual Revision of the National Income and Product Accounts

Bureau of Economic Analysis
Results of the 2015 NIPA AR

- Average growth rates of GDP and GDI from 2011Q4 to 2015Q1 both revised down:
  - -0.2 percentage point revision to GDP; -0.4 percentage point revision to GDI
- Major sources of revisions:
  - New and revised source data
    - Services Annual Survey, Government Finance Survey, American Housing Survey, Economic Census and Annual Survey of Manufactures, Retail and Wholesale trade surveys, IRS business income tax data
  - Methodology improvements
    - Seasonal adjustment
    - PPIs for financial services
Average annual rates of change 2011Q4 to 2015Q1

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Previously published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP</td>
<td>2.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Real GDI</td>
<td>2.7</td>
<td>2.3</td>
</tr>
<tr>
<td>PCE price index</td>
<td>1.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>
### Average Annual Rates of Change for Real GDP

#### 2011Q4 to 2015Q1

<table>
<thead>
<tr>
<th>Component</th>
<th>Previously Published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>2.2%</td>
<td>2.0%</td>
</tr>
<tr>
<td>PCE</td>
<td>2.5%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Gross Private Investment</td>
<td>5.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Exports</td>
<td>2.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Imports</td>
<td>3.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Government Spending</td>
<td>-0.9%</td>
<td>-1.5%</td>
</tr>
</tbody>
</table>

**Note:** Percentages are annualized growth rates.
Contributions to revision of real GDP
2011Q4 to 2015Q1

Percentage points of GDP

-0.2
-0.19
0.07
0.02
-0.01
0.02
-0.11

GDP
PCE
Gross private investment
Exports
Imports
Government spending
Contributions to revision of real PCE
2011Q4 to 2015Q1

Percentage points

-0.3  -0.1  0.0  0.1  0.2

PCE  Goods  Housing and utilities  Health care  Financial services and insurance  All other services
Contributions to revision of real government spending
2011Q4 to 2015Q1

<table>
<thead>
<tr>
<th>Percentage points</th>
<th>Government consumption expenditures and gross investment</th>
<th>Federal national defense</th>
<th>Federal nondefense</th>
<th>State and local</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.6</td>
<td>-0.6</td>
<td>-0.19</td>
<td>0.08</td>
<td>-0.49</td>
</tr>
</tbody>
</table>

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Revisions to GDP quarters

- Revisions to real GDP growth
  - Range from -2.0 (2012Q3) to +1.2 (2014Q1)

- Major sources of revisions:
  - New seasonal adjustment
    - Federal defense, PCE services
  - Updated seasonal factors
    - Prices, shipments, construction, sales, inventories
  - Revised source data
    - Construction spending, services survey, manufacturers’ shipments, retail sales
Contributions to the revision to real GDP growth

2012Q3

GDP was revised from 2.5 to 0.5.

Percentage points

2012Q3

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Percentage Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>-2.0</td>
</tr>
<tr>
<td>PCE</td>
<td>-0.60</td>
</tr>
<tr>
<td>Investment</td>
<td>-0.44</td>
</tr>
<tr>
<td>Exports</td>
<td>0.01</td>
</tr>
<tr>
<td>Imports</td>
<td>-0.20</td>
</tr>
<tr>
<td>GOV</td>
<td>-0.74</td>
</tr>
</tbody>
</table>

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GDP was revised from 2.7 to 1.9.

Contributions to the revision to real GDP growth 2013Q1
Contributions to the revision to real GDP growth 2013Q3

GDP was revised from 4.5 to 3.0.

2013Q3

Percentage points

-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5

GDP PCE Investment Exports Imports GOV

GDP was revised from 4.5 to 3.0.
Contributions to the revision to real GDP growth 2014Q1

GDP was revised from -2.1 to -0.9.
Is there residual seasonality in GDP?

- Indirect seasonal adjustment of GDP
  - Seasonally adjusted source data, when possible
  - BEA adjusts some source data
  - Source data revision schedules

- New seasonal patterns can emerge over time

- Recent pattern in quarterly growth rates show low Q1s and high Q3s

- Annual revision has dampened these swings
Average of real GDP growth rates by quarter
2012Q1 to 2015Q1

Mean of average growth rates was revised from 2.3 to 2.1

Percent

Q1 0.7 1.1
Q2 2.7 2.5
Q3 4.0 2.6
Q4 1.9 2.0

Previously published
Revised
Previously published mean of averages
Revised mean of averages
Gross Domestic Income
Gross Domestic Income

- GDI = GDP in concept
  - Incomes earned in production EQUAL the value of the final expenditures of goods and services produced

- Statistical discrepancy
  - Shows the difference (GDP – GDI) in practice

- New statistic “Average of GDP and GDI”
  - Simple average of the two
  - Helps reflect timing and measurement variations in GDP and GDI
Real GDP and real GDI growth rates
[Percent change from preceding period, SAAR]
Statistical discrepancy as a percent of GDP
Average annual rates of change for nominal GDI 2011Q4 to 2015Q1

- GDI: 4.1% previously published, 3.9% revised
- Compensation: 4.3% previously published, 4.2% revised
- Net taxes on production: 3.0% previously published, 3.2% revised
- Gross Operating Surplus: 4.0% previously published, 3.5% revised

Percentages are shown for each category, with previously published data in yellow and revised data in blue.
Contributions to the revision to GOS
2011Q4 to 2015Q1

Billions of dollars

-120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40

Gross operating surplus
Corporate profits
Proprietors’ income
Rental income of persons
Net interest
Current surplus of government enterprises
CFC
Revisions to GDI quarters

- Revisions to real GDI growth
  - Range from -1.9 (2013Q1) to +1.4 (2014Q1)

- Major sources of revisions:
  - Interpolation of revised annual estimates
  - Seasonal adjustment of corporate profits and interest indicators
  - Revised quarterly source data
Real gross domestic income
[Percent change from preceding period, SAAR]
Nominal gross domestic income

[Percent change from preceding period, SAAR]
Interest and corporate profits
[Percent change from previous period, SAAR]
Revisions to average annual growth 2011Q4 to 2015Q1

<table>
<thead>
<tr>
<th>Component</th>
<th>Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal income</td>
<td>-0.2</td>
</tr>
<tr>
<td>Disposable personal income</td>
<td>-0.3</td>
</tr>
<tr>
<td>Personal outlays</td>
<td>-0.2</td>
</tr>
<tr>
<td>Real DPI</td>
<td>-0.3</td>
</tr>
<tr>
<td>Personal saving rate *</td>
<td>+0.1</td>
</tr>
</tbody>
</table>

*average of quarterly revisions over 2012Q1-2014Q4
Federal refundable tax credits

- Move portion of credit that reduces tax liability
- From personal taxes to social benefits to persons
- Offsetting impacts between personal income and personal taxes
- Back to 1976

<table>
<thead>
<tr>
<th>Major program</th>
<th>Program dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earned Income Tax Credit 2008</td>
<td>1975–present</td>
</tr>
<tr>
<td>Additional Child Tax Credit</td>
<td>1998–present</td>
</tr>
<tr>
<td>2008 Economic Stimulus Payments</td>
<td>2008</td>
</tr>
<tr>
<td>American Opportunity Tax Credit</td>
<td>2009–present</td>
</tr>
<tr>
<td>Making Work Pay Tax Credit</td>
<td>2010–2011</td>
</tr>
<tr>
<td>Health Insurance Premium Assistance Credits</td>
<td>2014–present</td>
</tr>
</tbody>
</table>
Personal income
[Percent change from preceding period, SAAR]
Personal current taxes

Billions of dollars

Previously published
Revised

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Other notable mentions from the 2015 NIPA annual revision

- Final sales to private domestic purchasers
  - New statistic in GDP news release
  - Measure of private U.S. demand

- Expanded data on rest of world transactions
  - Petroleum exports (in NIPA 4.2 table family)
  - Gross transfers to and from ROW
    - Aligns with BEA’s international transactions accounts
    - Incorporated back to 1999