Results of the 2017 Annual Update of the National Income and Product Accounts
• Slight revisions to average growth rates of GDP and GDI from 2013Q4 to 2017Q1
  – GDP growth unrevised
  – GDI revised up 0.1 percentage point

Snapshot results of the 2017 update

<table>
<thead>
<tr>
<th>Percent</th>
<th>Real GDP</th>
<th>Real GDI</th>
<th>PCE price index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.1</td>
<td>2.1</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
<td>2.2</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Previously published | Revised

2
Average annual rates of change for real GDP
2013Q4 to 2017Q1

<table>
<thead>
<tr>
<th>Component</th>
<th>Previously published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>PCE</td>
<td>2.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Gross private investment</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Exports</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Imports</td>
<td>3.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Government spending</td>
<td>0.8</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Contributions to the revision to real GDP 2013Q4 to 2017Q1

- GDP: 0.0
- PCE: 0.10
- Gross private investment: 0.01
- Exports: -0.02
- Imports: -0.02
- GOV: -0.01
New and revised source data

- Census Bureau’s annual retail trade survey, services annual survey, construction spending (value-put-in-place), annual survey of manufacturers, annual wholesale trade survey, and government finances data

- BEA’s international transactions accounts

- IRS business tax return data

- OMB budget data
Methodological improvements

• Adjust PCE retail control method to remove gasoline sales at warehouse stores and grocery stores
• Incorporate new data to measure PCE for audio CDs, vinyl, and digital downloads
• Improve merchandise line sales
• Update prepackaged software price
Improved Retail Control

• Adjust retail control group to remove gasoline sales at warehouse clubs and supercenters, and grocery stores
  – Use merchandise lines from the Economic Census and PCE gasoline and other motor fuel to estimate these sales
  – Subtract these sales from the retail control
  – Increased gasoline sales by these retailers exposed non-gasoline sales to the effects of large swings in gasoline prices

• Use annual “physical” music revenue from RIAA to estimate PCE audio discs, vinyl, and digital downloads
Improved Merchandise Line Shares

• Update merchandise line shares for non-store retailers using two data sources:

  – Annual E-Commerce sales data from the U.S. Census Bureau
    • Furniture, small household appliances, computers and software, clothing and shoes

  – Annual retail scanner data from NPD Group, including:
    • Broad coverage, similar to E-Commerce but more timely than E-Commerce
      – Televisions, video and audio equipment detail
Improved Prepackaged Software Price

- Incorporating a more representative producer price index (PPI) for deflating fixed investment in prepackaged software

  - Replace PPI for “Application software publishing” with PPI for “Software publishing, except games”

  - Modest impact for 2017 annual update, however, larger impact for periods prior to 2014, which will be updated as part of the 2018 comprehensive update.
Gross Domestic Product Results
Real GDP Growth 2014-2016

<table>
<thead>
<tr>
<th>Percent change from the preceding year</th>
<th>Previously published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.4</td>
<td>2.6</td>
</tr>
<tr>
<td>2015</td>
<td>2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>2016</td>
<td>1.6</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent change fourth quarter to fourth quarter</th>
<th>Previously published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.5</td>
<td>2.7</td>
</tr>
<tr>
<td>2015</td>
<td>1.9</td>
<td>2.0</td>
</tr>
<tr>
<td>2016</td>
<td>2.0</td>
<td>1.8</td>
</tr>
</tbody>
</table>
2014: Contributions to revision to GDP growth

Real GDP growth was revised from 2.4 to 2.6 percent
Real GDP growth was revised from 2.6 to 2.9 percent.

2015: Contributions to revision to GDP growth

Real GDP growth was revised from 2.6 to 2.9 percent.
Real GDP growth was revised from 1.6 to 1.5 percent.
Real Gross Domestic Product

[Percent change from preceding period, SAAR]
Real GDP growth was revised from 4.0 to 4.6 percent [SAAR]
2015Q1: Contributions to revision to GDP growth

Real GDP growth was revised from 2.0 to 3.2 percent [SAAR]

<table>
<thead>
<tr>
<th>Component</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.2 points</td>
</tr>
<tr>
<td>PCE</td>
<td>0.85 points</td>
</tr>
<tr>
<td>Investment</td>
<td>0.50 points</td>
</tr>
<tr>
<td>Exports</td>
<td>0.19 points</td>
</tr>
<tr>
<td>Imports</td>
<td>-0.18 points</td>
</tr>
<tr>
<td>GOV</td>
<td>-0.18 points</td>
</tr>
</tbody>
</table>

GDP growth was revised from 2.0 to 3.2 percent [SAAR].
Real GDP growth was revised from 1.4 to 2.2 percent [SAAR]
Price Indexes
Gross domestic purchases price index
[Percent change from preceding period, SAAR]
Personal consumption expenditures price index

[Percent change from preceding period, SAAR]
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

- **Average of GDP and GDI**
  - Simple average of the two
  - Helps reflect timing and measurement variations in GDP and GDI
Statistical discrepancy as a percent of GDP

Previously published vs. Revised

Percent

-2
-1
0
13q1 14q1 15q1 16q1 17q1
National income revision in level 2014-2016

- National income
- Proprietors' income
- Corporate profits
- Net interest
- Taxes on production and imports
- Current surplus of govt enterprises

Billions of dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>National income</th>
<th>Proprietors' income</th>
<th>Corporate profits</th>
<th>Net interest</th>
<th>Taxes on production and imports</th>
<th>Current surplus of govt enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>-9.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>74.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>-50.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Real gross domestic income

[Percent change from preceding period, SAAR]
Compensation of employees

[Billions of dollars, SAAR]
Corporate profits
[Billions of dollars, SAAR]
Personal income and outlays

- Average annual growth 2013Q4 to 2017Q1

<table>
<thead>
<tr>
<th>Component</th>
<th>Previously published</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal income</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>Disposable personal income</td>
<td>4.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Personal outlays</td>
<td>4.1</td>
<td>4.2</td>
</tr>
<tr>
<td>Real DPI</td>
<td>3.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Personal saving rate*</td>
<td>5.6</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Average over 2014Q1-2017Q1</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Personal income
[Percent change from preceding period, SAAR]

Previously published
Revised
Real disposable personal income

[Percent change from preceding period, SAAR]
Personal saving rate

[Personal saving as a percentage of disposable personal income]
Presentation Changes And Other Updates
• Accelerate Key Source Data tables

• Add the percent change in the price index for 'Final sales to private domestic purchasers' to the addenda of Table 1.6.7

• Expand the level of detail for subsidies in the Government by Function tables
  – Tables typically available in September or October
• Coming in Fall 2017

• Release quarterly underlying detail at same time as current estimate of GDP

• With CU 2018 release, evaluate concept of “underlying detail”
• Address residual seasonality in historical series
• Publish not-seasonally adjusted estimates
• Incorporate 2012 input-output accounts and other definition and methodology changes
• Update reference year to 2012