

GDP, the National Accounts, and Census Economic Data

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Measuring the Nation's Economy.



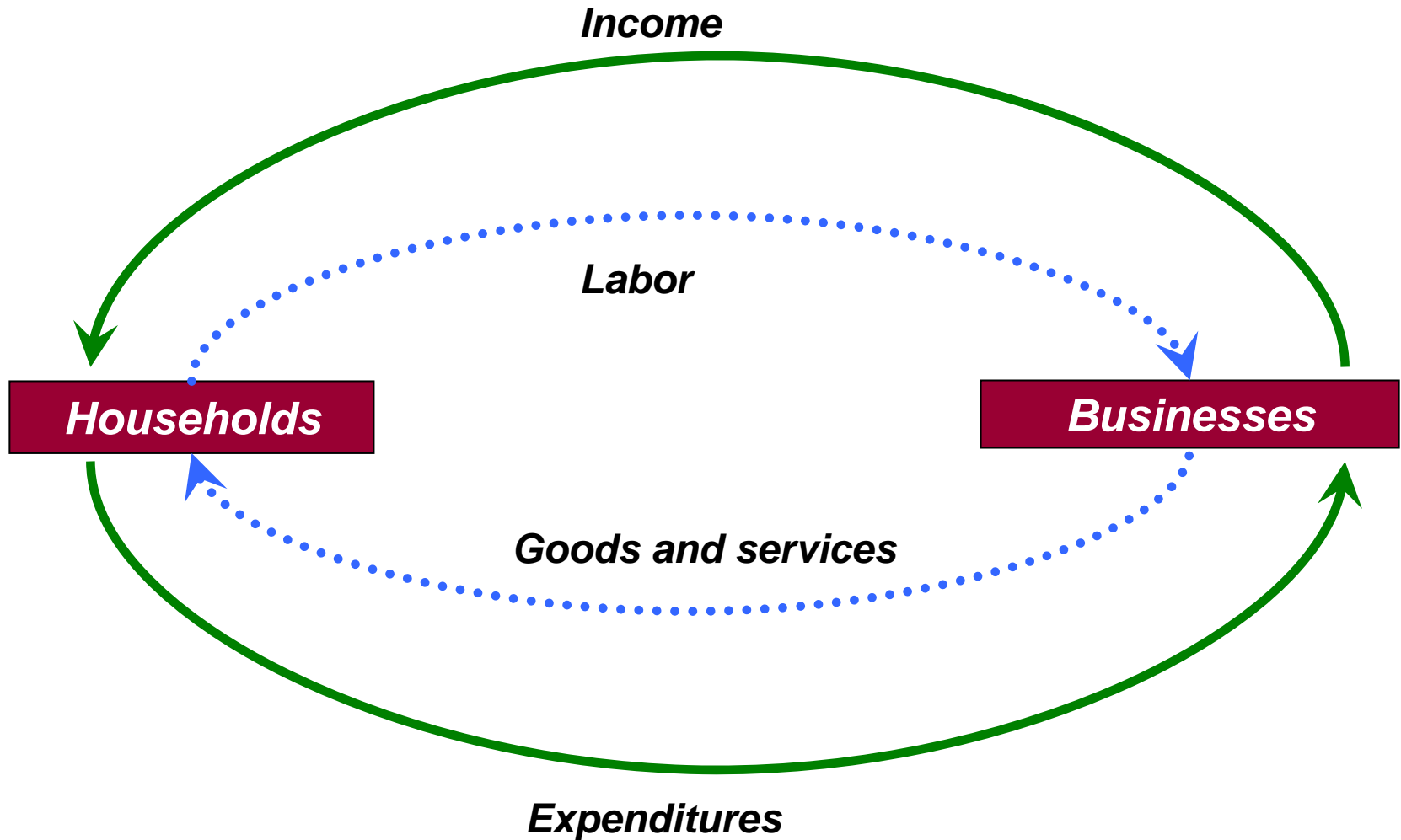
What are the NIPAs?

- The National Income and Product Accounts (NIPAs) are a set of economic accounts that track economic flows within the U.S. economy.

Two key NIPA measures are:

- **Gross domestic product (GDP):** Measures the total value of goods and services produced within the U.S. in a period.
- **Gross domestic income (GDI):** Measures the incomes earned and the costs incurred in producing those goods and services.

The Circular Flow



NIPA seven-account summary

- Domestic Income and Product Account
- Private Enterprise Income Account
- Personal Income and Outlay Account
- Government Receipts and Expenditures Account
- Foreign Transactions Current Account
- Domestic Capital Account
- Foreign Transactions Capital Account

GDP as value added

- Value added is measured as:
Output *less* intermediate consumption
- Example: Wheat to flour to bread.
- GDP is value of bread.
 - Equals sum of value added of farmer, miller, and baker.
- GDP: the sum of industry value added
- Also equals sum of *final* expenditures
- Also equals sum of income earned in production

Account 1. Domestic Income and Product

Compensation of employees,
paid

Taxes on production and
imports

Less: Subsidies

Net operating surplus

Consumption of fixed capital

Gross Domestic Income

Personal consumption expenditures

Gross private domestic investment

Net exports of goods and services

Government consumption
expenditures and gross
investment

Gross Domestic Product

Expenditure components of GDP (2005)

$$GDP = C + I + G + X - M$$

Consumption

70.0%



+

Investment

16.9%



+

Government

18.9%



+

Exports

10.4%



-

Imports

16.2%



= GDP

Income components of GDP (2005)

Compensation

57.1%



TOPI less
subsidies

6.8%

+



+

Net operating
surplus

23.2%



+

Consumption
of fixed
capital

12.6%



+

Statistical
discrepancy

0.3%



= GDP

Account 1. Domestic Income and Product

Compensation of employees,
paid

Taxes on production and
imports

Less: Subsidies

Net operating surplus

Consumption of fixed capital

Gross domestic income

Statistical discrepancy

Gross Domestic Product

Personal consumption expenditures

Gross private domestic investment

Net exports of goods and services

Government consumption expenditures
and gross investment

Gross Domestic Product

Account 2. Private Enterprise Income

- Provides information on the sources and uses of the income of private enterprises.
- Includes current-production corporate profits and proprietors' income.

Account 3. Personal Income and Outlays

- Provides information on the sources and uses of income received by persons.
- Includes personal income and personal saving.
- Can derive disposable personal income and personal saving rate

Account 4. Government Receipts and Expenditures

- Provides information on the transactions of the Federal Government and state and local governments.
- Includes social benefits and government saving.

Account 5. Foreign Transactions

- Provides information on trade in goods in services with the rest of the world.
- Includes imports, exports, and the balance on the current account.

Account 6. Domestic Capital

- Provides information on saving and investment for the U.S. economy.
- Key measures: Gross saving, which is net saving plus the consumption of fixed capital, and net saving, which is a measure of saving that is available for adding to the Nation's net stock of fixed assets.

Account 7. Foreign Transactions Capital

- Provides information on the transactions with the rest of the world that are linked to acquisition or disposition of fixed assets.

Features of national accounts

- Inflation-adjusted (“real” GDP)
- Quarterly frequency
- Seasonally adjusted
- Annualized

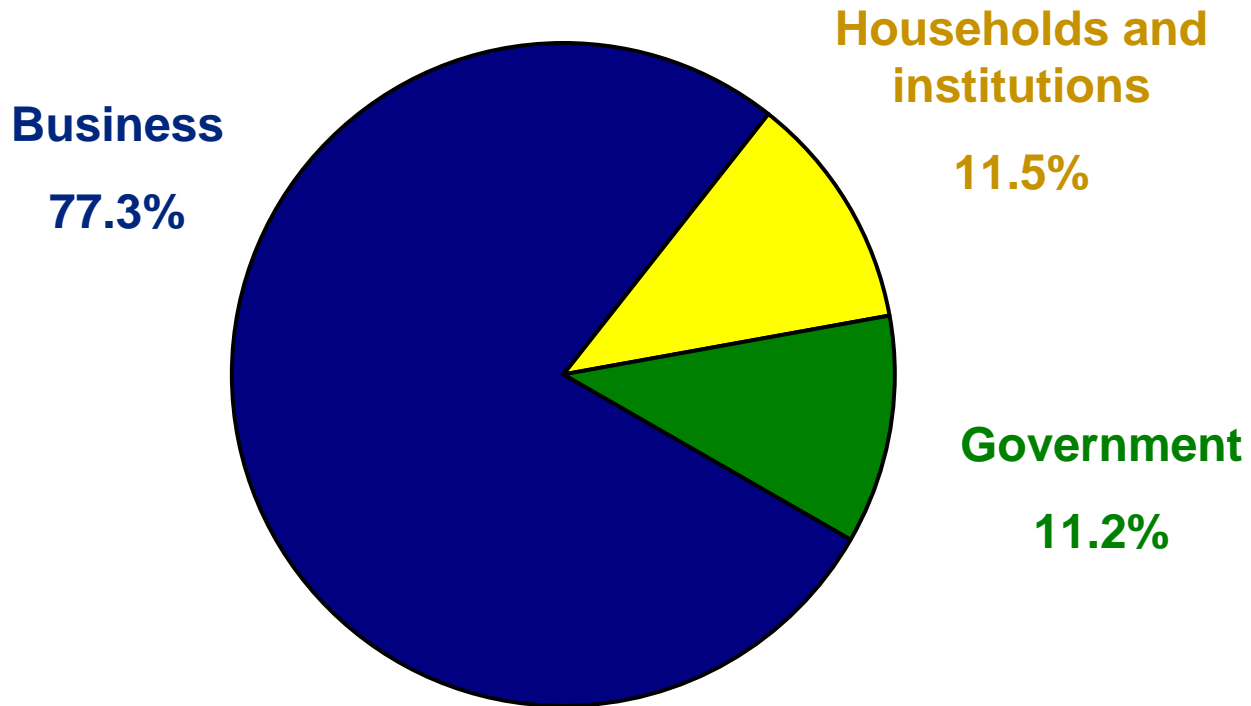
Estimation cycle

- “Advance” estimates are released about $3\frac{1}{2}$ weeks after a calendar quarter concludes.
- “Preliminary” and “final” estimates are released 30 and 60 days after the advance.

Annual revisions and benchmarking

- “Annual revisions” are released in July of non-comprehensive revision years.
- “Comprehensive revisions” occur about every 4-5 years.

GDP by Sector, 2005



Featured measures

- Real GDP growth, as indicated by the percent change in the chain-type quantity index.
- *Contributions* to real GDP growth reflect the role that individual components of GDP play in producing the growth in GDP.
- Gross domestic purchases price index (and personal consumption expenditures price index)—inflation measures that reflect prices of goods and services purchased by U.S. residents.

Other important GDP-related measures

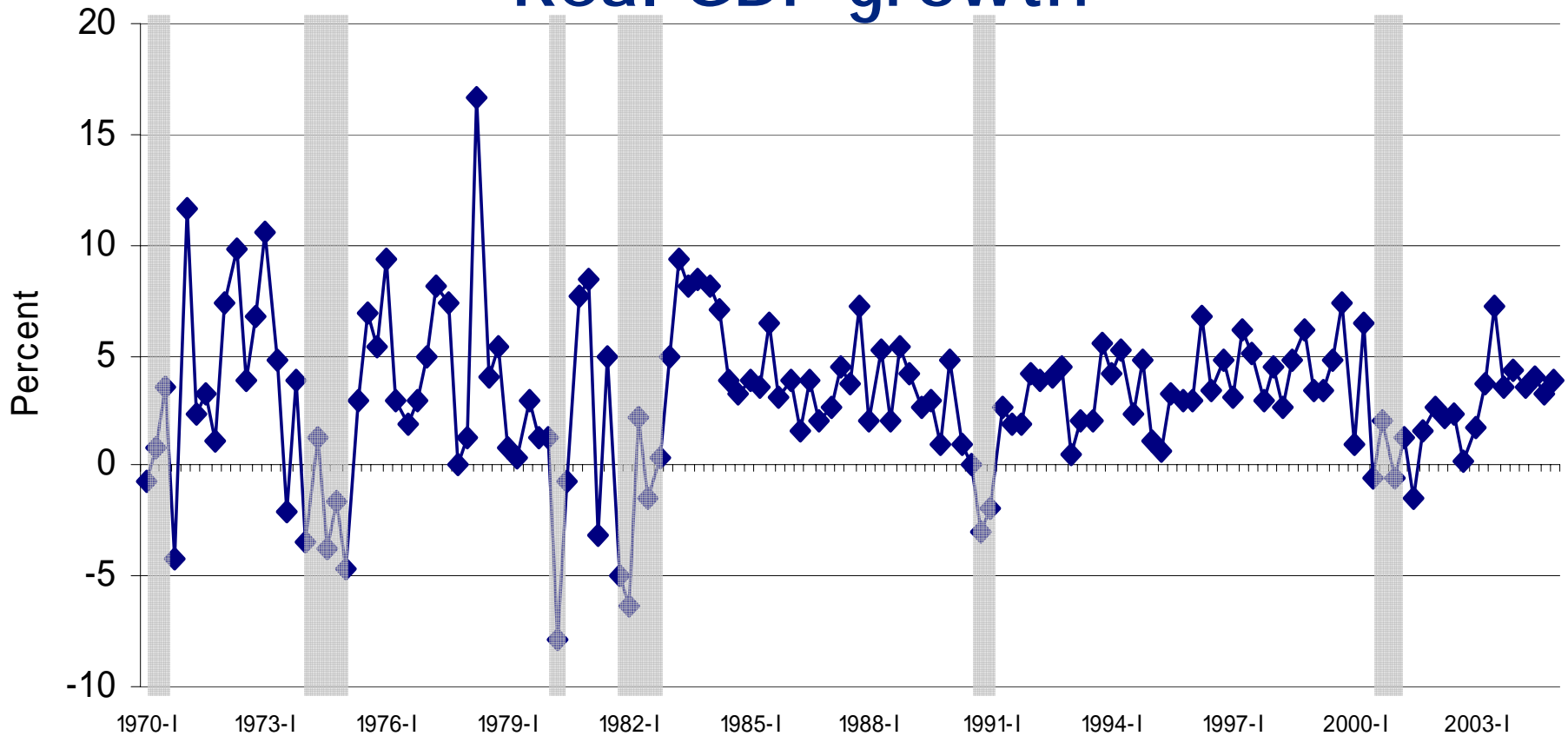
- Current-dollar GDP represents the value of production at a point in time.
- GDP percentage shares provide a measure of the size and importance of a component.

Chained-Dollar GDP

- Chained-dollar GDP is the product of current-dollar GDP in the reference year and the GDP quantity index (divided by 100).
- Chained-dollar components do not add to the total.
- See “Chained-Dollar Indexes” from the November 2003 *Survey of Current Business*.

NBER Recessions

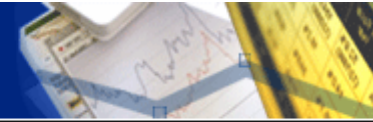
Real GDP growth



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Did You Know?

Advance summary

U.S. Economic Accounts

National

- Gross Domestic Product
- Personal Income and Outlays
- Corporate Profits
- Fixed Assets
- More ...

Regional

- State and Local Personal Income
- Gross State Product
- Regional Input-Output Multipliers
- More ...

International

- Balance of Payments
- Trade in Goods and Services
- International Investment Position
- Direct Investment
- More ...

Industry

- Annual Industry Accounts
 - GDP by Industry
 - Input-Output Accounts
- Benchmark Input-Output Accounts
- Travel and Tourism
- More ...

Spotlight

- Errata to Personal Income and Outlays
- New: Historical Detrended Fixed Assets
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Information RSS

Overview of the U.S. Economy:

View summary of most popular indicators.

Real GDP:

+4.8% in Q1 2006 (advance)
[View Release: 4/28/06]

Personal Income:

+0.5% in March 2006
[View Release: 5/1/06]

Int'l Trade in Goods and Services:

Decrease in the deficit from \$2.8 billion to \$65.7 billion in February 2006(p).
Release: 4/12/06]

U.S. Int'l Trade

Census data: Economic census

- Primary source data for benchmark input-output accounts.
 - Estimates supply of products by industry and use of products by industry and final expenditures.
 - Critical because it provides details necessary to separate *intermediate* consumption from *final* expenditures.

Annual Census source data

- Annual Retail Trade Survey
 - Personal consumption expenditures (PCE) for goods; inventories
- Services Annual Survey - PCE services
- Annual Survey of Manufactures
 - Investment in equipment; inventories
- Value of construction put in place - structures
- Annual Trade Survey - inventories
- Foreign trade data
- Government Finances Survey

Example - Equipment investment

“Commodity flow” method:

- ASM data on shipments of detailed durable goods product categories
- Subtract those going to intermediate uses.
- Add imports: “domestic supply”
- Subtract goods going to exports, government, PCE
- Add margins
- Result is estimate of private investment in equipment.

Example - retail trade

- Sales by retail industry
- Merchandise lines (products) data by industry from last economic census
- Estimate products, controlling the total to total retail sales for categories selling primarily to consumers.
- Deflate using detailed CPIs
- Result is estimate of PCE for goods.

Quarterly source data

Census indicator surveys:

- M3 shipments and inventories for equipment investment, mfg inventories
- Monthly retail trade for PCE goods, retail inventories
- Wholesale trade inventories
- Value put in place for structures
- Foreign trade data

Data issues

- Business births may not be promptly captured or included in samples.
- Non-participation in voluntary surveys may be problem
 - Examples
- Respondents may not follow instructions.
 - Example - may report worldwide shipments or inventories

Diagnosing data problems

- Statistical discrepancy is high level indicator of problems.
- Monitor revisions – persistent large revisions or revisions in the same direction.
- Research on data issues.
 - Examples