

Business Accounting and Macroeconomic Measures

CARE Conference; Firm Level Information and the Macroeconomy

Dennis Fixler

Chief Economist, BEA

May 18, 2018

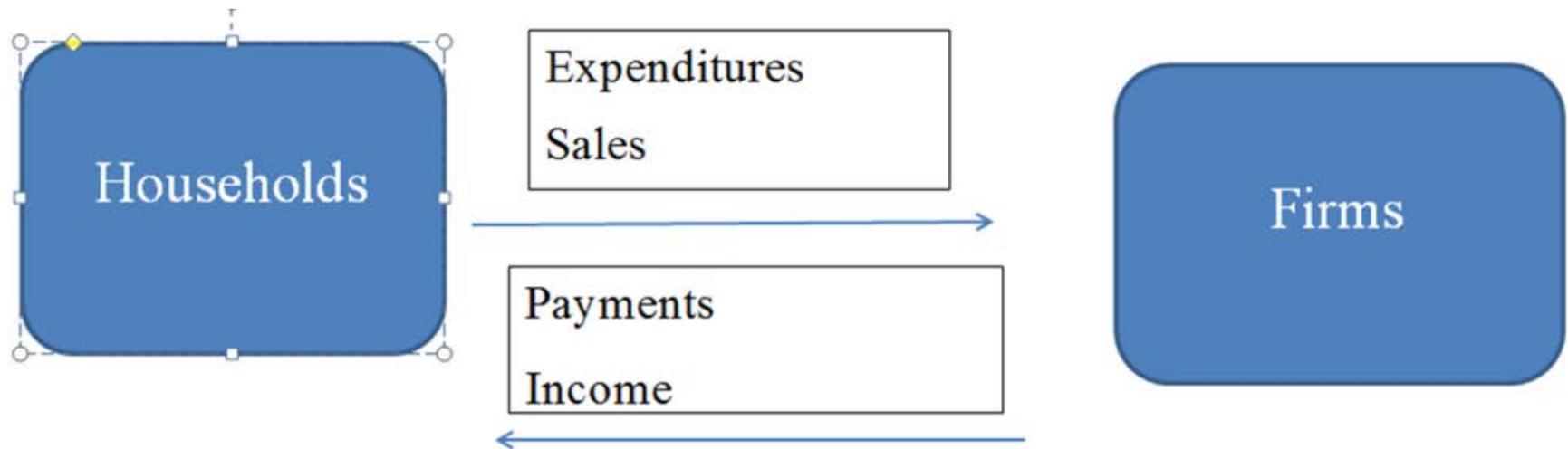


- BEA's Mission: To promote a better understanding of the U.S. economy by providing the most timely, relevant, and accurate economic data in an objective and cost-effective manner
- Production of comprehensive measures of the U.S. economy
 - Except for its International Surveys, BEA's economic accounts are built on data collected by others

- National Accounts—Gross Domestic Product (GDP), Personal Income, Corporate Profits
- International Accounts—Balance of Payments Accounts, Trade in Goods and Services
- Industry Accounts—Input-Output Accounts, GDP by Industry Accounts, Travel and Tourism Accounts
- Regional Accounts—GDP by State Accounts, State Personal Income, Regional Multipliers

- What to measure?
- What are the questions to be answered?
- Example: Business Cycle Analysis
 - Need a comprehensive and accurate picture of aggregate economic activity
 - Want to be able to identify turning points
 - Peak of an expansion
 - Trough of a recession

Circular Flow Model



- **Double Entry bookkeeping:** the cost items for firms is an income item to households
- **Quadruple bookkeeping:** the cost items for firms are accompanied by a reduction in the bank balances of firms and income receipts are accompanied by an increase in bank balances of households
 - Recording in financial accounts
 - Used to record transactions in the System of National Accounts (SNA)
- **Complex Circular Flow**
 - Contain sales to other sectors such as, Government sales to Business
 - Requires incorporating paying taxes and government expenditures
 - Cross border transactions in goods and services

- *National Economic Accounting*

- Objective: Provide measures of national economic activity
- Design: Summary of transactions between sellers and buyers
 - Requires symmetric treatment for both parties
 - Requires data on both parties
- Users: policy makers, investors, business leaders, researchers
- U.S. GAAP (FASB Accounting Standards Codification)
- Objective: Provide financial information on individual firms
- Design: Summary of transactions for a firm in isolation
 - Does not require symmetric treatment
 - Requires data on a single party
- Users: managers, investors, creditors

Production Account



- Production account: Records the activity producing goods and services. Requires the setting of a production boundary.
- Adjustments: To avoid double counting, delete sales to businesses; net inventory changes; net exports
- Focuses on classification of customers: Households, Business, Government

- By Industry
 - Input-Output Model
 - Supply and Use Tables

- By Geography (Domestic & International)
 - Exports
 - Imports
 - Balance of Payments

Relationship between the two Accounting systems



<i>National Economic Accounting</i>	<i>Financial Accounting</i>
1 Output	Net sales
2 –	Less: Cost of sales
3 –	_____
4 –	Gross margin
5 Less: Intermediate consumption	Less: Operating expenses
6 Value-added (GDP)	–
7 Less: Compensation	–
8 Less: Taxes on production less subsidies	–
_____	_____
9 Gross operating surplus	Operating income (EBITDA)
10 Less: Consumption of fixed capital	Less: Depreciation and amortization
_____	_____
11 Net operating surplus	Earnings before interest and taxes
12 Less: Net property income	Less: Net interest paid
_____	_____
13 Net entrepreneurial income before current taxes	Income before income taxes
14 Less: Current taxes on income, wealth, etc.	Less: Provision for income taxes
_____	_____
15 Net entrepreneurial income after current taxes	Net income

Note: EBITDA = earnings before interest, taxes, depreciation, and amortization.

https://www.bea.gov/scb/pdf/2014/03%20March/0314_r&d_in_economic_accounts_and_in_business_accounts.pdf

- Data received at a point of time is viewed as the product of a price and quantity
- Overtime important to decompose the changes into changes in prices and quantities
- Creating measures of price change allow for the implicit measurement of quantities
- As will be mentioned measuring price change is not always straightforward

- **Gross Domestic Product (GDP)** measures the total value of final goods and services produced by an economy within a given period of time
- Measuring GDP
 - Expenditure Approach
 - Income Approach
 - Production Approach
 - Conceptually equivalent
 - Differences due to data and methodology

- GDP measurement focuses on market activity; how to include non-market activity
- Household production is one often mentioned; BEA has provided estimates on the value of this activity
 - <https://www.bea.gov/household-production/>
- How to include the value of activities for which there is no explicit payment
 - Google searches, Facebook
- Intangibles
 - BEA now includes investment in intellectual property products

- Digital Economy includes internet and related activities and Information and Communication Technologies—equipment and software
- BEA activity described in a working paper
 - <https://www.bea.gov/digital-economy/pdf/defining-and-measuring-the-digital-economy.pdf>
- Identifying quality change when measuring price change; if capabilities of computer equipment improve do not want to include the value of the improvements as part of the measured price change for the equipment
 - Affects the measurement of output and productivity
- Measuring new goods and services

- Aspects of globalization
- Transfer pricing
- Contract production/Factoryless Goods Production
- Parking intellectual property at foreign affiliates—this can affect measurement of GDP
 - recent Irish experience in which GDP jumped 26% because of royalty payments for intellectual property parked there
- Decomposing consolidated information into components
- BEA's Direct Investment Division employs 45 accountants that process the survey forms from multinational enterprises; and 14 accountants work in the Balance of Payments Division