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11.481J / 1.284J / ESD.192J Analyzing and Accounting for Regional Economic Growth  
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# **REGIONAL ACCOUNTING**

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**ANALYZING AND ACCOUNTING FOR REGIONAL ECONOMIC GROWTH**

**What are national and regional accounts?**

**How are they structured?**

**What use is made of them?**

# HISTORY OF ACCOUNTS

- Material Product Accounts
- Comprehensive Goods and Services
- Restricted Product Accounts

# CURRENT MAJOR CONCEPTUAL ACCOUNTING FRAMEWORKS

- System of National Accounts (SNA)
- European System of National Accounts (ESA)
- U.S. System of National Accounts
- Material-Product System (MPS)

# TYPES OF ACCOUNTS

- Income and Product
- Input-Output (Interindustry)
- Flow-of-Fund
- Balance-of Payment
- Wealth
- Household
- Environmental

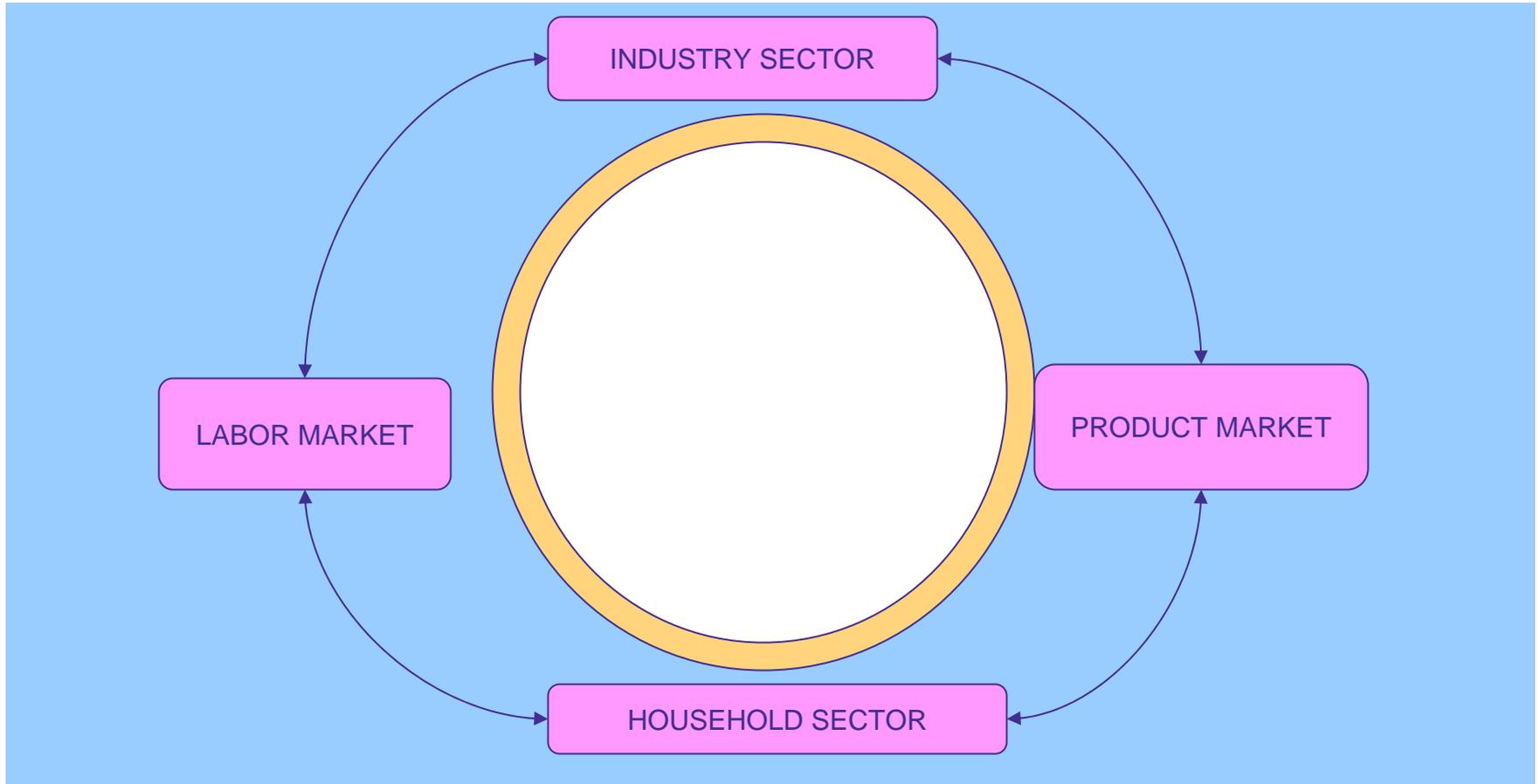
# FINAL DEMAND COMPONENTS

- Personal Consumption Expenditures (PCE)
- Gross Fixed Private Capital Formation (CFPCF)
- Net Inventory Change (Additions-Depletions)
- Net Foreign Exports (Gross Exports-Gross Imports)
- Federal Government Expenditures (FG)
- State and Local Government Expenditures (SLG)

# VALUE ADDED COMPONENTS

- Wages and salaries
- Taxes
- Profits
- Interest
- Dividends

# BASIC CIRCULAR FLOW OF THE ECONOMY



# BRIEF HISTORY OF ACCOUNTS

- **1758-1759**: Francois Quesnay publishes *Tableau Economique*.
- **1776** Adam Smith publishes *Wealth of Nations*. Becomes basis of material production accounts.
- **1874** Leon Walras, a French economist, proposed general equilibrium model with fixed technological coefficients.
- **1931** Wassily Leontief works at National Bureau of Economic Research on an input-output table, continuing work in 1931 at Harvard University.

# BRIEF HISTORY OF ACCOUNTS, cont'd

- **1936** John Maynard Keynes publishes *The General Theory of Employment, Interest and Money*.
- **1936** Wassily Leontief publishes first input-output table (1929) in *The Review of Economics and Statistics*
- **1942-1944** U.S. input-output table for 1939 constructed for 96 sectors at Harvard University
- **1944** Bureau of Labor Statistics (BLS) applies 1939 table to determine employment distribution at end of war (assuming war would end June 30, 1945).
- **1946** Howard Aiken develops the relay computer.

# BRIEF HISTORY OF ACCOUNTS, cont'd

- **1946** BLS given funds by the National Securities Board to construct 1947 input-output table.
- **1951** First International Input-Output Conference held in Dribergen, The Netherlands.
- **1953** Roger Keyes orders input-output work at BLS to be discontinued.
- **1958** Eisenhower starts input-output work again—to be integrated national income and product accounts (NIPA).
- **1970** Multiregional input-output (MRIO) model is implemented at the Harvard Economic Research Project.

# INPUT-OUTPUT TABLE FEATURES

The U.S. tables have the following features:

- **PRODUCER PRICES**

All elements are given in producer prices. Transportation, wholesale trade, retail trade, and insurance margins must be added to each element to transform it to purchaser prices.

- **CURRENT ACCOUNTS**

The table represents the purchases made on current account by intermediate and final consumers in the given year .

## INPUT-OUTPUT TABLE FEATURES (continued)

- **CAPITAL-FLOW TABLE** A capital-account table has the same number of rows and columns as the current-account table and records the plant and equipment purchases (capital flows) for a given year.
- **CAPITAL-STOCK TABLE.** A capital-stock table has the same number of rows and columns as the current account table and records the accumulated plant and equipment (i.e., stock of capital) in the country in a given year.

## INPUT-OUTPUT TABLE FEATURES (continued)

- **CURRENT DOLLARS**—unless otherwise stated, all tables are given in current dollars.
- **CONSTANT DOLLARS (IF DEFLATED)**—for comparisons over time or between countries (regions), the analyst should deflate the numbers in the tables to constant prices (we discuss deflators later).
- U.S. input-output tables are constructed with a Use Table and a Make Table. (Previously, these were called the primary and secondary tables.) The row sum of the use table equals the respective column sum of the make table, and the column sum of the use table equals the respective row sum of the make table.

## INPUT-OUTPUT TABLE FEATURES (continued)

- MARGIN (MARK-UP) TABLES. These tables again have the same number of rows and columns as the producer-price table. The following margin tables exist in the United States :

- Rail
- Truck
- Air
- Ocean
- Domestic water
- Pipeline
- Transport services
- Other Transport
- Wholesale Trade
- Retail Trade
- Insurance

The sum of the columns of each margin matrix becomes a row in the current-account table, with the elements being added to any miscellaneous mark-ups that are not recorded in the margin table.

# INPUT-OUTPUT CALCULATIONS

- TYPES OF MODELS

- Static
- Dynamic
- Open
- Partially closed with respect to households

- TYPES OF COEFFICIENTS

- Direct input  $X_{ij}/X_j = a_{ij}$
- Direct and indirect input (Leontief inverse)
- Direct, indirect, and induced input

# The Basic Circular Flow of the Economy

