National Income and Product Accounts

Notation and Definitions

\[ C \equiv \text{Personal Consumption Expenditures} \]
\[ \equiv \text{Durables + Nondurables + Services.} \]
\[ I_g \equiv \text{Gross Private Domestic Investment} \]
\[ \equiv \text{New Residential Construction + Expenditure on} \]
\[ \text{New Plant and Equipment + Change in Inventories.} \]
\[ G \equiv \text{Government Purchases of Goods and Services.} \]
\[ X \equiv \text{Exports (all foreign spending on U.S. goods).} \]
\[ Im \equiv \text{Imports (all U.S. spending on foreign goods).} \]
\[ NX \equiv X - Im \equiv \text{Net Exports or Net Foreign Investment.} \]
\[ \text{GDP} \equiv \text{Gross Domestic Product.} \]
\[ \text{GNP} \equiv \text{Gross National Product.} \]
\[ \text{NNP} \equiv \text{Net National Product.} \]
\[ \text{NI} \equiv \text{National Income.} \]
\[ \text{PI} \equiv \text{Personal Income.} \]
\[ \text{YD} \equiv \text{Disposable Income.} \]
\[ S \equiv \text{personal Savings.} \]
\[ \text{Profit} \equiv \text{Corporate Profit + Profit from unincorporated enterprises.} \]
\[ \text{Corporate Profit} \equiv \text{Dividends + Retained Earnings + Corporate Income Tax.} \]
Expenditure Approach

\begin{align*}
(1) \quad \text{GDP} & \equiv C + I_g + G + NX \\
\text{GNP} & \equiv \text{GDP} + \text{Receipts of factor income from the rest of the world} \\
& \quad - \text{Payments of factor income to the rest of the world} \\
& \equiv \text{GDP} + \text{Net factor income from the rest of the world} \\
(2) \quad \text{NNP} & \equiv \text{GNP} - \text{depreciation (capital consumption allowance)} \\
(3) \quad I_N & \equiv \text{Net Private Domestic Investment} \\
& \equiv I_g - \text{depreciation} \\
(4) \quad \text{NI} & \equiv \text{NNP} - \text{Indirect Business Taxes} - \text{Business Transfer Payments} \\
& \quad - \text{Statistical discrepancy} \\
& \quad + \text{Subsidies less current surplus of government enterprises} \\
(5) \quad \text{PI} & \equiv \text{NI} - \text{[income earned, but not received] + [income received, but not earned]} \\
& \equiv \text{NI} - \text{[Corporate Income Tax + Retained Earnings} \\
& \quad + \text{Social Security Contributions + Net Interest]} \\
& \quad + \text{[Government Transfer Payments + Business Transfer Payments} \\
& \quad + \text{Personal Interest Income]} \\
(6) \quad \text{YD} & \equiv \text{PI} - \text{Personal Taxes} \\
(7) \quad \text{YD} & \equiv \text{Personal Outlays + S} \\
& \equiv [C + \text{Interest Paid by Consumers} \\
& \quad + \text{Personal Transfer Payments to Foreigners}] + S. \\
\end{align*}

Income Approach

\begin{align*}
(9) \quad \text{NI} & \equiv \text{Compensation of employees (wages and salaries)} + \text{Net Rental Income} \\
& \quad + \text{Net Interest} + \text{Corporate Profit} + \text{Proprietors’ Income (Unincorporated Profit)}. \\
\end{align*}

Procedure: Try to use the expenditure approach first. (It’s easier.) If that doesn’t work, start with NI. Build up to GNP and GDP or break down to YD using the equations from the expenditure approach.