

Lecture 2 National Income Accounting and Balance of Payments

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January 29, 2025

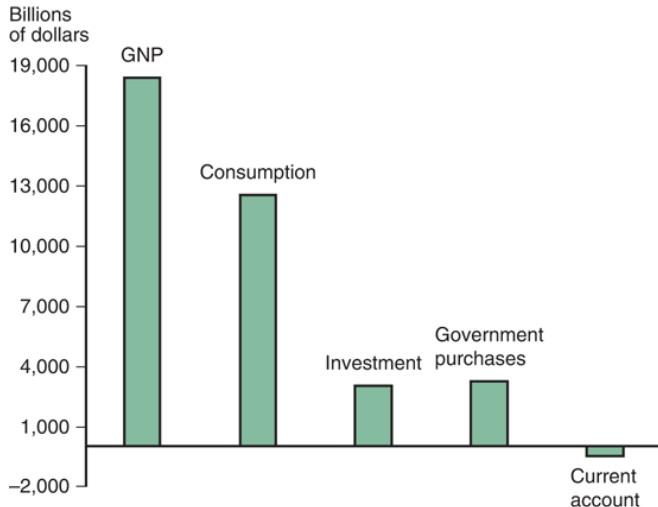
What Is National Income Accounting?

- ▶ A classification of transactions that contribute to national income according to types of expenditure
 - ▶ consumption (C): expenditure by consumers
 - ▶ investment (I): expenditure by firms
 - ▶ government purchases (G): expenditure by gov't, not including transfer payments
 - ▶ current account balance (CA): net expenditure by foreigners, exports (EX) – imports (IM)
- ▶ An important identity
 - ▶ national income = expenditure = production

Measuring National Income

- ▶ Value of all final goods and services in a given period
 - ▶ gross national product (GNP): produced by a nation's factors of production, e.g. labor & capital (our focus)
 - ▶ gross domestic product (GDP): produced within a country's borders
- ▶ GNP & GDP are approximate measures, but not precise
- ▶ A more precise measure
 - ▶ net national product (NNP) = $\text{GNP} - \text{depreciation}$
 - ▶ national income = $\text{NNP} + \text{net unilateral transfers}$

U.S. GNP



► 2016:Q1, Billions of dollars (source: BEA)

► Consumption is largest component of U.S. GNP

The Road Ahead...

① National Income Accounting

② Balance of Payments

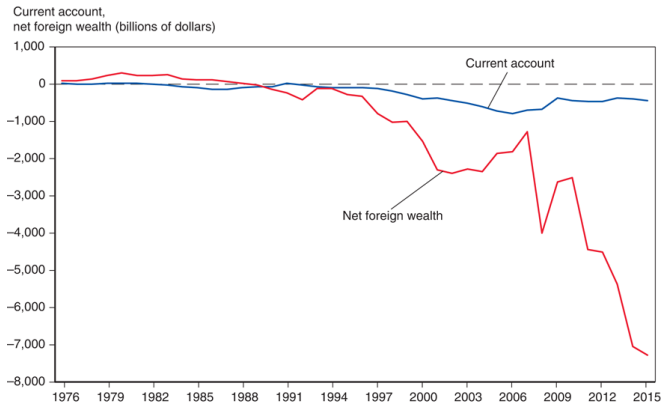
National Income Accounting

National income identity

$$\underbrace{Y}_{\text{GNP}} = \underbrace{C + I + G}_{\text{domestic expenditure}} + \underbrace{EX - IM}_{\text{net foreign expenditure}}$$
$$\Rightarrow \underbrace{EX - IM}_{\text{current account (CA)}} = Y - (C + I + G)$$

- ▶ When production $>$ ($<$) domestic expenditure
 - ▶ surplus (deficit): $CA >$ ($<$) $0 \Leftrightarrow EX >$ ($<$) IM
 - ▶ lending (borrowing) \Rightarrow net foreign wealth \uparrow (\downarrow)
- ▶ International lending/borrowing \Rightarrow *intertemporal* trade

U.S. Current Account, 1976–2015



- ▶ CA & net foreign wealth (or net international investment position), billions of dollars (source: BEA)
- ▶ Sustained CA deficits since early 1980s added up to large foreign debt

Saving and Current Account

National income identity

$$\underbrace{S}_{\text{national saving}} = \underbrace{Y - T - C}_{\text{private saving}} + \underbrace{T - G}_{\text{gov't saving}} = \underbrace{I + CA}_{\text{total investment}}$$

- ▶ Some notations
 - ▶ $Y - T$ = disposable income, T = taxes net of transfers
 - ▶ S^p = private saving, S^g = gov't saving
 - ▶ $G - T$ = primary deficit/newly issued gov't debt
- ▶ Ways to raise national wealth
 - ▶ Closed economy: only accumulate capital ($S = I$)
 - ▶ Open economy: also net foreign investment (CA)
- ▶ Borrow ($CA < 0$) to invest more ($I > S$)

The Road Ahead...

① National Income Accounting

② Balance of Payments

Balance of Payments

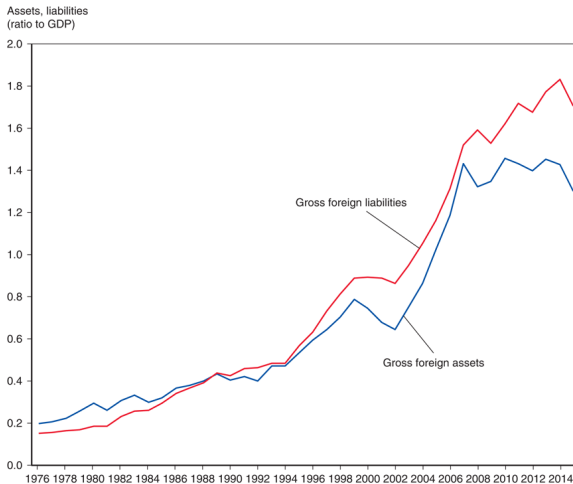
- ▶ A set of accounts recording a country's receipts (credit) from and payments (debit) to foreigners
 - ▶ $\text{current account} = \text{exports} - \text{imports} + \text{net unilateral transfers of goods and services}$
 - ▶ $\text{financial account} = \text{sales (exports) of domestic assets to foreigners} - \text{domestic purchases (imports) of foreign assets}$
 - ▶ capital account: special transfers of assets (small in quantity), e.g. debt forgiveness, migrants' transfers
- ▶ Principle of double-entry bookkeeping
 - ▶ each transaction enters accounts twice, once as credit (+) and once as debit (-)
 - ▶ $\text{current acc't} + \text{capital acc't} = - \text{financial acc't}$

U.S. Balance of Payments, 2015

A. Current Account [(1) – (2) + (3)]	–462.97
(1) Exports	3,044.08
Goods	1,510.30
Services	750.86
Income receipts (primary income)	782.92
(2) Imports	3,362.06
Goods	2,272.87
Services	488.66
Income payments (primary income)	600.53
(3) Net unilateral transfers (secondary income)	–144.99
B. Financial Account [(1) – (2) + (3)]	195.23
(1) Net U.S. incurrence of liabilities, excluding financial derivatives	395.23
Official reserve assets	–98.10
Other assets	493.33
(2) Net U.S. acquisition of financial assets, excluding financial derivatives	225.40
Official reserve assets	–6.29
Other assets	231.69
(3) Financial derivatives, net	25.39
C. Capital Account	–0.04
Statistical Discrepancy [–(A + B + C)]	267.78

Source: U.S. Department of Commerce, BEA, June 16, 2016, release (billions of dollars).

U.S. Gross Foreign Assets & Liabilities



► Ratio to GDP, 1976-2015 (source: BEA)

► U.S. is world's largest debtor nation

Double-entry Bookkeeping: Example 1

	Credit	Debit
Current account, U.S. goods import (Fax machine purchase)		\$1,000
Financial account, U.S. asset sale (Sale of bank deposit)	\$1,000	

- ▶ We purchase a fax machine from Italian company Olivetti
- ▶ Olivetti deposits our check in a U.S. bank

Double-entry Bookkeeping: Example 2

	Credit	Debit
Current account, U.S. service import (Meal purchase)		\$200
Financial account, U.S. asset sale (Sale of credit card claim)	\$200	

- ▶ We buy lunch in France and pay by credit card issued by American bank

Double-entry Bookkeeping: Example 3

	Credit	Debit
Financial account, U.S. asset purchase (Stock purchase)		\$95
Financial account, U.S. asset sale (Sale of bank deposit)	\$95	

- ▶ We purchase a share of British Petroleum (BP) stock
- ▶ BP deposits money in a U.S. bank

Double-entry Bookkeeping: Example 4

	Credit	Debit
Financial account, U.S. asset purchase (Stock purchase)		\$80
Financial account, U.S. asset purchase (Reduction in foreign check claim)	\$80	

- ▶ We purchase a share of German stock and pay by check on Swiss bank account

Double-entry Bookkeeping: Example 5

	Credit	Debit
Financial account, U.S. asset sale (Reduction in sale of dollars)		\$1,000
Current account, U.S. goods export (Goods sale)	\$1,000	

- ▶ Foreign exchange intervention: Korean government uses dollars in American bank account to buy Korean currency from its citizens
- ▶ Korean citizens use dollars to buy American goods

Double-entry Bookkeeping: Example 6

	Credit	Debit
Capital account, U.S. transfer payment (Debt forgiveness)		\$5,000
Financial account, U.S. asset purchase (Reduction in foreign assets holding)	\$5,000	

- ▶ U.S. bank forgives debt owed by Argentina government through debt restructuring

Readings & Exercises

- ▶ Readings
 - ▶ KOM: chapter 13
- ▶ Exercises
 - ▶ KOM: problem 1, 2, 3, 4