

NATIONAL INCOME ACCOUNTING

National Income Accounting

- In order to know where you are, you need to know where you were.
- To know if your economy is growing, you need to measure it over time.

National Income Accounting

- The collective measurements of national income are called the National Income and Product Accounts (NIPA).
- The methodology is somewhat standardized for the planet.

National Income Accounting

- As with any statistic, one statistic does not tell the whole story.
- It is important to know what is included and what is excluded in the calculation of that statistic.

National Income Accounting

Problems with statistics.

- Statistics are estimates, there is a range of error associated with each number (statistical sampling error).
- Quality of data collection poses additional problems that result in errors.
- The past is not always a good indicator of the future.

National Income Accounting

- National income measures are generally used as a measure of welfare.
- The primary measure of national income is called Gross Domestic Product (GDP).
- GDP is sum of market values of all final goods and services produced over a period of time, usually, one year.

National Income Accounting

- GDP measures production not sales.
- The linkage between production and sales is inventory: $\text{Sales} - \text{production} = \text{change in inventory}$.
- Inventory becomes a useful indicator of economic activity.
- If inventories are declining (increased) relative to sales, then production will need to be increased (decreased).

National Income Accounting

- GDP measures final goods not intermediate.
- A final good or service is one consumed by consumers.
- Intermediate goods are used in the production of final goods and services.
- Example: a car is a final good, the windshield that came from another factory is an intermediate good.

National Income Accounting

Examples

- Selling your car does not add to GDP, it was produced in a prior year.
- However, the sales commissions earned by a used car salesman are included as that is a service rendered in the current year.

National Income Accounting

Examples

- Selling your common stock at a profit does not add to GDP, it is exchange of assets, it is not production.
- However, the sales commissions earned by a stock broker are included as that is a service rendered in the current year.

National Income Accounting

What is not included in GDP

- The value of illegal activities.
- The value of self-employed resources, that is, building your own house other than the purchase of materials and contract labor.
- Voluntary activities, volunteering your time to help a charity is not included in the calculation of GDP.

National Income Accounting

Example

- Would the value of a nanny whose residency papers were questionable be included?

National Income Accounting

Example

- Would the value of a nanny whose residency papers were questionable be included?
- Yes, raising children is not an illegal activity.

National Income Accounting

GDP Calculation: National Income Accounting Equation

- $Y = C + I + G + X$
- Where Y = income,
- C = consumption,
- I = investment
- G = government
- X = net exports or imports

National Income Accounting

Year	2005	2006
GDP (\$Trillions)	\$12,445.8	\$13,246.6
Consumption	8,742.4	9,268.9
Investment	2,057.4	2,212.5
Government	2,372.8	2,527.7
Foreign	(716.7)	(762.5)

National Income Accounting

- This follows an expenditure approach where income is measured as the sum of aggregate expenditures.

National Income Accounting

- There are other measures of national income.
- One is called National Income and measures the contribution to the economy from sources of income.
- National Income
 - Compensation
 - Proprietorship Income
 - Corporate Profits
 - Rental Income
 - Net Interest

National Income Accounting

	2004	2005
National Income (\$Trillions)	\$10811.8	11702.1
Compensation	7030.3	7489.5
Proprietorship Income	970.7	1015.1
Corporate Profits	1330.7	1615.7
Rental Income	72.8	77.4
Net Interest	483.4	509.3
Other & Taxes (imports)	923.9	995.1

National Income Accounting

Disposable Personal Income (DPI)

- $DPI = \text{Personal Income} - \text{Taxes}$
- $DPI = \text{Personal Consumption Expenditure} + \text{Personal Savings}$
- This is what is available to consumers to buy goods and services.

National Income Accounting

- National Income measures are aggregate measures, they measure total income and expenditures.
- Of obvious interest is what is available to individuals, per capita income and expenditures.

National Income Accounting

	2003	2004	2005	2006
GDP (\$Bns)	\$110	125	150	400
Population	280	290	302	315
Per Capita GDP (\$K)	\$100	105	113	115

National Income Accounting

- A major problem in comparing measures over time is the effect of inflation.
- Numbers expressed in terms of dollars are called nominal measures.
- When these measures are adjusted for inflation to reflect the purchasing power, they are called real.
- $\text{Real} = \text{Nominal} / \text{Price Deflator}$

National Income Accounting

	2003	2004	2005	2006
GDP (nominal)	10,960.8	11,712.5	12,455.8	13,246.6
Nom. Growth %		6.9	6.4	6.3
Deflator	106.404	109.426	112.737	116.043
GDP (real)	10,301.0	10,703.5	11,048.6	11,415.3
Real Growth %	2.5	3.9	3.2	3.3

National Income Accounting

- Let's put all of this together and consider an example of two fictitious countries: France and Kuwait.
- With each slide we will introduce an additional economic statistic. At each slide, decide for yourself which country you would rather live in based on these statistics (not your personal prejudices).
- Note that the data is fictitious.

National Income Accounting

	France	Kuwait
GDP (\$B)	2,230.6	52.7

National Income Accounting

	France	Kuwait
GDP (\$B)	2,230.6	52.7
Per Capita	30,000	32,000

National Income Accounting

	France	Kuwait
GDP (\$B)	2,230.6	52.7
Per Capita	30,000	32,000
Work week	30	25

National Income Accounting

	France	Kuwait
GDP (\$B)	2,230.6	52.7
Per Capita	30,000	32,000
Work week	30	25
Income Distribution (Gini Coefficient*)	33	60

*Note: Gini = 0 perfect equality, =1 total inequality

The End