

MEASURING MACROECONOMIC PERFORMANCE

Output & Prices

1. RISING LIVING STANDARDS - ECONOMIC GROWTH

Economic Growth: Tendency for the level of output (i.e. quantity & quality of goods and services) to increase over time.

☑ **Output per Capita** = Output / Population

☑ **Economic Growth** = Trend rise in per-capita output (Eg. GDP per capita/ person)

2. STABLE BUSINESS CYCLE

Low volatility in fluctuations of actual output around its *trend* or *potential output*.

Australia's Real Quarterly GDP Growth Rates – Decade Averages

	1960s	1970s	1980s	1990s	2000s	2010s
Mean	1.25	0.83	0.84	0.84	0.77	0.63
Standard Deviation	1.50	1.42	1.09	0.79	0.52	0.38
Ratio	0.83	0.58	0.77	1.06	1.48	1.66

Mid-1980s *Great Moderation* – large fall in volatility of real output – why?

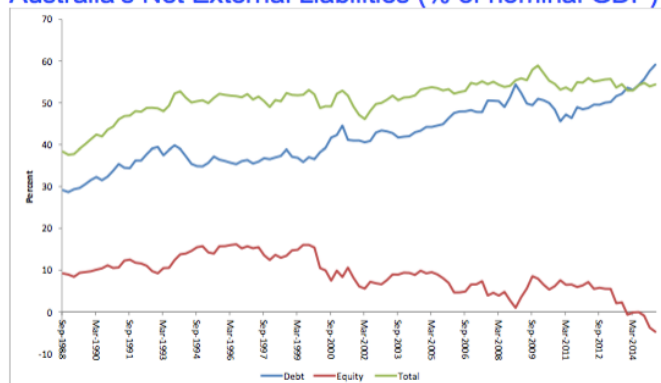
3. RELATIVELY STABLE PRICE LEVEL

- We want a **low (positive)** rate of inflation
- Inflation has been a concern for most developed countries over the last half century. Japan is an exception & has experienced deflation over the last decade.

4. SUSTAINABLE LEVELS OF PUBLIC AND NATIONAL DEBTS

- Public Debt: Borrowing by a public sector from private sector. (Influenced by government budget deficits/ surpluses)
- Foreign Debt: Borrowing by domestic residents from foreign countries (Influenced by a economy's current account deficits/ surpluses)

Australia's Net External Liabilities (% of nominal GDP)



Towards the end, the red is negative and the blue rises. ∴ We can infer that foreign companies are buying over Australian assets/ companies. Australia is losing equity and in greater debt!

5. BALANCE BETWEEN CURRENT AND FUTURE CONSUMPTION

- Choice for an individual (How much should I consume today vs tomorrow?)
- Aggregate economy (How much should an economy save/ invest?)
- At equilibrium: Savings = Investment

6. FULL EMPLOYMENT

- Does the economy produce employment for all individuals seeking work?

STANDARD DESIRED OUTCOMES

For Macro variables

- Relatively high & stable growth rate of real per-capita output
- Stable & low (positive) rate of inflation
- Low unemployment rate
- Sustainable level of public/ external debt (*It's fine to borrow if you can pay them back*)
- Balance between current & future consumptions

GDP: GROSS DOMESTIC PRODUCT

▶ **GDP:** (Formal) The market value of final goods and services produced in a country **during a given period**.

- GDP is a *flow variable*: Measured over a period of time. (Eg. Quarterly - March, June, September, December)
- Financial Year VS. Calendar Year

Annual/Year – just add-up GDP over 4 quarters

- Calendar – Mar-09 + Jun-09 + Sep-09 + Dec-09
- Financial – Sep-09 + Dec-09 + Mar-10 + Jun-10

Australian GDP for 2014/15 = \$1,610.8 billion

Approximately ≈ \$1.6 trillion

- (Informal) Measure of a country's *aggregate (total)* output/ production.
(eg. Cars, oranges, computers, lectures, Big Macs)

Example:	Quantity	Market Price
	10 cars	\$20,000 per car
	100 apples	\$1 per apple

$$\text{GDP} = \$200,000 + \$100 = \$200,100$$

- Includes G&S with no market price, like Household *Consumption*, National Defence, Roads (for public)

Excludes:

- **Imports** (Goods and services produced in other countries, but consumed in Australia)
- **Second-hand goods** (Goods & services produced in an earlier period, but resold in the current period) * Only counted once! *
- Housework (Household *production*)/ Labour Costs
- **Intermediate** goods & services (Goods that are used up in the production process)
Eg. In the production of a loaf of bread, the *flour* is an intermediate input and is not (double) counted in GDP

MEASURING GDP

1. Value of Production Method
2. Value of Expenditure Method
3. Value of Income method

CONCEPT OF VALUE ADDED

▶ The market value of a firm's production **less** the cost of intermediate inputs purchased from other firms.

☑ **Concept of Value Added** = Production/ Sales - Cost of Intermediate Inputs

☑ **GDP (Production Method)** = Sum of Value Added **OR** Market Value of Final Goods

Firm	Sales	Input Costs	Value Added
Intel Incorp	20,000	0	20,000
Macro Soft	5,000	0	5,000
Bell	80,000	25,000	55,000
PC Charlie's	100,000	80,000	20,000
PC Charlie's <i>final sales</i> = \$100,000			
Sum of Value Added = \$100,000			

(Labour cost is not intermediate input. Only parts/ ingredients that go into the product/ dish)

EXPENDITURE METHOD

☑ **GDP (Expenditure)** = Expenditure on G&S by final users

- Consumption (C) – purchases by Households
 - Investment (I) – purchases by Firms
 - Government (G) – Government purchase
 - Net Exports (NX) – net purchases by foreign sector
- NX = Exports (X) – Imports (M)

If GDP = Y..

$$Y = C + I + G + NX$$

$$Y = C + I + G + (X - M)$$

$$Y + M = C + I + G + X$$

= Value of their production (Supply = Demand)

*** 'I' is **GROSS Investment!!**

* Assumption: All goods are sold/ if not, are counted as business inventory investment

INCOME METHOD

☑ **GDP (Income)**= GDP at Factor Cost + Indirect Taxes - Subsidies

- Assumption: All revenue earned from sales are distributed to workers (wages, salaries) & owners of capital (profits, rent, interest, capital)
- Labour (L)
- Capital (K)

☑ **GDP at Factor Cost** = Labour Income + Capital Income

➤ **Capital Income**: "Payments to owners of capital".

Which of the following is the correct definition of annual GDP?

(a) Value of all goods and services bought and sold during a year (This would include second-hand goods)

(b) Value of all new goods and services produced during a year (This would include intermediate goods)

(c) Value of all final goods and services purchased during a year (Option says purchased (not produced) so includes imported goods and services)

(d) None of the above (Correct choice)

NOMINAL GDP VS. REAL GDP

The current measure of GDP could increase if the prices of some G&S increase. It is useful to have a measure of changes in physical production/ volumes of goods & services produced.

➤ **Nominal**: Raw value of GDP

> Values qualities of G&S produced at their **current year prices** (or year of production)

➤ **Real**: GDP adjusted for inflation

> (Constant price/ Chain Volume measure) Values qualities of G&S produced at **base year prices** (measure of actual physical volume of production)