

# Introductory Macroeconomics

## What is economics all about?

- **The role of incentives:** Why do people, firms and governments behave the way they do? (policies)
- **The constraint of scarce resources:** how does this behaviour impact on the economy, individuals, and the environment? (limits and affects choices, opportunity costs)
- **Microeconomics and macroeconomics**

## Microeconomics

Microeconomics studies decision making by *individual economic agents*:

- When does it make sense for one firm to merge with or take-over another?
- How does a firm decide whether or not to enter a new market?
- Should Australia join free trade agreements?
- What is the likely impact of high petrol prices on an individual's car usage?

## Macroeconomics

Macroeconomics studies the *aggregate impact* of individual decisions:

- What determines interest rates and exchange rates? How are they linked?
- What determines a country's rate of economic growth and aggregate unemployment rate?
- How will global warming (and government policy responses to this issue) impact on the Australian economy?

**Microeconomics provides a foundation for macroeconomics.**

## Why study macro now?

Major issues coming to a head which will shape our lives in the decades to come:

- The financial crisis (Greece & EU)
- Environmental challenges
- Global free trade
- The rise of new world powers
- The impact of new technology
- Population pressures

## An economist is like a *doctor*

...Your patient is the *economy*:

- Ask the right questions – identify the **issues**
- Look for symptoms – analyse the **data**
- Diagnose the problem – apply the **theory**
- Prescribe the cure – design **policy** response
- Suggests prophylactic strategy for the future – design a **reform** strategy

*The Economist's Hippocratic Oath = don't make things worse!*

### Important lessons for economists:

- There is no one right 'ideology'
- There are no 'free lunches' in economics – behaviour has a cost
- A 'model' is no substitute for common sense

### How is macro useful?

- ✓ As a tool for prediction
- ✓ To understand how the economy works
- ✓ To identify a suitable policy response

### Marginal vs. crucial issues – trends matter

- GFC & mark-to-market accounting
- House prices & council charges/land releases
- State of the economy & the carbon tax
- Temporary fixes: e.g. cash-for-clunkers & 1<sup>st</sup> home owner's grants

### In this course:

- Measuring macro performance:
  - Output
  - Prices
  - Savings and wealth
  - Unemployment
- Short run macro: the business cycle
- Policy issues (and impact on economy):
  - Fiscal policy
  - Monetary policy & the RBA
  - Aggregate demand and supply
- Economic growth: the role of saving
- Exchange rates and the balance of payments

### "Good" economic performance? Objectives:

1. Rising living standards
2. 'Smoothing' the business cycle
3. Maintain the real value of the currency
4. Sustainable levels of debt
5. Balance spending vs saving
6. Full employment

....What else?

<b>Rising living standards</b>	<ul style="list-style-type: none"><li>▪ Industrialised economies have experienced rise in <b>material wellbeing</b></li><li>▪ Long-run growth issues: growth theory, economic history, development economics</li><li>▪ <b>Quality of life</b> (crime rates, pollution), life expectancy, mortality rates, inequality, access to goods and services</li></ul>
<b>Smoothing the business cycle: avoiding extremes</b>	<ul style="list-style-type: none"><li>▪ Short-run expansions and contractions in economic activity cause hardships and costs to the society</li></ul>

<b>of macroeconomic performance</b>	<ul style="list-style-type: none"> <li>Prevent large volatility of GDP evolution</li> </ul>
<b>Maintaining the real value of the currency</b>	Rapid changes in the prices of goods and services alter the real purchasing power of a dollar and create significant costs to the society
<b>Sustainable levels of public and foreign debt</b>	Debt accumulation is justifiable and sustainable if it generates returns exceeding its costs
<b>Balance spending vs saving</b>	<ul style="list-style-type: none"> <li>Balancing current expenditure against future needs</li> <li>Saving means postponing consumption today to provide more for the future</li> </ul>
<b>Full employment</b>	<ul style="list-style-type: none"> <li>Providing employment for all individuals seeking work</li> <li>Complicated topic as it covers both microeconomic and macroeconomic elements</li> </ul>

## Economic output: GDP

**GDP:** The **market value** of final goods and services produced in a given time period.

### Measurement problems:

- Prices change
- Multi-stage production
- Multinational production
- Informal economy + public goods

### How is GDP measured?

- Value of production ('value added')
- Value of expenditure
- Value of labour + capital income

→ The **market value** of **final goods and services**:

### **Market value:**

- Goods and services are counted at their market price *times* quantity
- Unpaid work is not counted
- Public goods and services do not have market prices and are counted at their cost of provision

### **Final goods and services:**

- The final good is the good that is consumed by the consumer: e.g. 'bread.' The wheat and flour are the 'intermediate goods', which are goods used in the production of the bread
  - A Macbook is a final good. CPU, LED display, other hardware are intermediate goods

## Value added method

**Example:** A MacBook is sold for \$1500

Value added by each component = revenue – cost of purchased input (i.e. all components making up Apple)

Company	Revenues	Cost Inputs	Value Added
<u>Small hardware</u>	50	0	50
Intel	450	50	400
<u>LEDscreen</u>	300	0	300
Apple	1500	750	750
<b>Total</b>			<b>1500</b>

## E.g. Measuring GDP 3 ways

Example: A MacBook is sold for \$1500

1. **Expenditure method:**  $C = \$1500$  if bought by a household
2. **Value-added approach:** small hardware (\$50) + CPU (\$400) + LED display (\$300) + Apple design (\$750)
3. **Income approach:** Employee wages (\$1000) + Profit (\$500)

## Expenditure method

How is it calculated? All current production by firms must be either:

- Bought by households, other firms, government and foreigners; or
- Left unsold as inventories bought by the firm which makes it

As such, GDP can also be measured as the sum of 'expenditure' on domestic production by households, all firms, government and foreigners.

## Composition of GDP

$$GDP = C + I + G + NX$$

- **C** = household consumption on durables and non-durables (consumed immediately)
- **I** = firm spending on final goods and services; business fixed I, residential I (construction of houses), inventory I (what is left unsold)
- **G** = government purchases of final goods (not transfer payments e.g. social security)
- **NX** = net exports

During recession, GDP growth rate is below zero.

## Real GDP & Economic Wellbeing

*Real GDP is not the same as economic wellbeing.* It is an imperfect measure of economic wellbeing because it only captures those goods and services that are priced and sold in markets. Many factors that contribute to people's economic wellbeing are not priced and sold in markets and thus are largely omitted from GDP, for example:

- |                                  |                         |
|----------------------------------|-------------------------|
| • Leisure time                   | • Quality of life       |
| • Non-market economic activities | • Environmental quality |

However, real GDP per person does tend to be positively associated with many things people value, including a high material standard of living, better life expectancies and education.

The lesson for policymakers lies in causality. Time path of GDP = no free lunches – composition of GDP (importance of saving).

## Exercise: Calculate nominal & real GDP in 2011 & 2012

(Level of) Production:

	2011	2012
Good 1	50	30
Good 2	40	20
Service 1	20	10

Prices (\$/unit):

	2011	2012
Good 1	2	1
Good 2	1	2
Service 1	3	4

Nominal GDP of 2011 = 200 (100 + 40 + 60)

Nominal GDP of 2012 = 110 (prices of 2012 x quantities produced in 2012 = 30 + 40 + 40)

Real GDP for both years (year base 2011) = 200 and 210

Growth rate of real GDP of the economy = (real GDP 2012 – real GDP 2011/..) = 5%

Growth rate of nominal GDP = -45%

Nominal GDP = GDP at current year prices = quantity of each commodity x price

If we want to use GDP to compare economic activity across different points in time we need some method of excluding the effects of price changes (we need to adjust for **inflation**). The standard approach is to pick a particular year – the **base year** – and use the prices from that year to calculate the market value of output. This is **real GDP**.

**Why?** Physical quantities of the goods and services produced in any given year, not the dollar values, are what determine's people's economic wellbeing.

Real GDP = quantity of each commodity x base year prices

## Conclusion

You should now be able to discuss:

- Distinctions between microeconomics and macroeconomics
- Recent Australian macroeconomic performance
- What GDP is and is not, how to calculate it, the distinction between nominal and real GDP
- National income accounting identity
- Caution with the use of GDP

# Measuring Macro Performance: The Price Level Savings & Wealth

## Consumer Price Index (CPI)

The CPI is a measure of the 'cost of living' during a particular period. CPI measures the maintenance of the purchasing power of a currency – an indicator of macroeconomic performance.

1. Define a **base year** (to compare all price changes)
2. Determine basket of goods and services consumed – what products are we looking at?