Chapter 1: Measuring Macroeconomic performance: output and prices

1.1 When is the economy performing well
Macroeconomy is performing well if it meets the following criteria:
1. Rising living standards in the long run
2. Avoiding extremes of short-run macroeconomic performance
   - Short-run business cycle – tendency for economies to pass through periods of economic expansion followed by economic contraction
   - Expansions – output expanding at rapid pace, little difficulty in finding paid employment
   - Contractions – economic performance is disappointing
3. Maintaining the real value of the currency – inflation/deflation can create significant costs for the economy as the real value of the currency will decrease/increase; inflation between 1% and 3%
4. Ensuring sustainable levels of public and foreign debt
   - Public debt – amount owed by the government to the private sector when it spends more money than it receives as tax revenue
   - Foreign debt – amount owed by the nation to other countries
5. Balancing current expenditure against the need to provide resources for the future
6. Providing employment for all individuals seeking work – macroeconomists are concerned with unemployment when it is systemic, affecting the entire economy and caused by identifiable national or international factors

1.2 Gross domestic product: measuring the nation’s output
GDP = market value of the final goods and services produced in a country during a given period; measures rising long-run living standards and the avoidance of extremes in short-run macroeconomic performance.
- Countries with relatively high levels of GDP per person also tend to be countries with high standards of living
- GDP extends across two different time dimensions
  o Short-run (1-4 years) – GDP can fluctuate quite markedly
  o Long-run – most countries experience reasonably steady growth in their GDP
- GDP = aggregate output
- Drawback of using market values is that not all economically valuable goods and services are bought and sold in markets.
- Only final goods and services are included in GDP – intermediate goods and services are not included

The expenditure method for measuring GDP
- The amounts that purchasers spend on various goods and services should be equal to the market values of those goods and services
- GDP can be measured with equal accuracy by either of two methods:
  1. Adding up the market values of all the final goods and services that are produced domestically [Production]
  2. Adding up the total amount spent by each of the four groups on final goods and services and subtracting spending on imported goods and services [Expenditure]
- The four groups of final users include:
  - Consumption expenditure – households
    o Durables – long-lived consumer goods
    o Non-durables – shorter-lived goods
  - Investment – firms
    o Business fixed investments – purchase by firms of new capital goods
    o Residential investment – construction of new homes and apartment buildings
    o Inventory investment – goods that a firm produces but does not sell during the current period
  - Government purchases – purchases by federal, state and local governments
  - Net exports – export minus imports
- National income accounting identity – mathematical relation that shows how GDP is equal to the sum of expenditure on consumption, investment, government purchases and net exports
- [Income approach] GDP = labour income (75% - wages, salaries, incomes of self-employed) + capital income (25% - payments to owners of physical capital)
- Circular flow of income – economy’s national income that can be equivalently measured using the production, expenditure or income approaches
Chapter 2 – Measuring macroeconomic performance: saving and wealth

2.1 Saving and Wealth

- Saving is a **flow** – a measure that is defined per unit of time e.g. $20/week
- Wealth is a **stock** – a measure that is defined at a point in time e.g. $3030
- Changes in the values of the real or financial assets one owns can influence wealth
  - Capital gains – increase in value
  - Capital losses – decrease in value
- Change in wealth = saving + capital gains – capital losses

2.2 Why do people save?

- Three broad reasons for saving:
  1. **Life-cycle saving** – to meet certain long-term objectives e.g. retirement
  2. **Precautionary saving** – to protect oneself and one’s family against unexpected setbacks e.g. loss of job
  3. **Bequest saving** – to accumulate an estate to leave to one’s heirs
- People save by making financial investments that they hope will provide a good return on their savings
- A higher real interest rate has both positive and negative effects on saving – a positive effect because it increases the reward for saving and a negative effect because it reduces the amount people need to save each year to reach a given target
- A person who intends on saving but lacks self-control may choose to use a payroll saving plan where a predetermined amount is deducted from each pay and set aside in a special account
- Downward pressure on the saving rate may also occur when additional spending by some consumers stimulates additional spending by others (demonstration effects)

2.3 National saving and its components

- Current income of country as a whole is GDP (Y)
- Investment spending is done to expand the economy’s future productive capacity so is not part of spending on current needs
- Household consumption – combination of spending on current and future needs
- For simplicity, treat all of both consumption and government expenditure as spending on current needs – important to recognise that this will understate the true amount of national saving
- National saving = Aggregate income – Consumption – Government

**Private and public components of national saving**

- To distinguish between private and public-sector income, we must expand equation to incorporate taxes as well as payments made by government to private sector
- Government payments to private sector include
  - **Transfer payments** – payments the government makes to the public for which it receives no current goods or services in return e.g. welfare
  - Interest paid to individuals and institutions who hold government bonds
- \[ S = Y - C - G + T - T \text{ (net taxes)} \]
- \[ S = (Y - T - C) + (T - G) \]
- \[ S[Private] = Y - T - C \]
- \[ S[Public] = T - G \]

**Public saving and the government budget**

- Public saving is closely linked to the government’s decision about spending and taxing
- Balanced budget – when taxes = spending in a given year
- Government budget deficit – excess of government spending over tax collections
- Government budget surplus – excess of government tax collections over spending; equals to public saving

2.4 Is low household saving a problem?

- National saving, not household saving, determines the capacity of the economy to invest in new capital goods and to achieve continued improvements in living standards
- Although household saving is low, saving by business firms has been significant and public saving has increased recently
Chapter 4 – Business Cycles

4.1 Contractions and Expansions

- **Peak** – beginning of a contraction; high point of economic activity prior to downturn
- **Trough** – end of a contract; low point of economic period prior to a recovery
- **Contraction** – period in which economy is moving from peak to trough
- **Expansion** – period in which economy is moving from trough to peak
- Potential output \((y^*)\) is the amount of output (real GDP) the economy is capable of producing when resources are performing at normal rates
- In the long-run, potential output has a steady increase
- One reason for economic fluctuations are changes in the level of potential output

4.2 Output gaps and cyclical unemployment

- **Output gap** \((y - y^*)\) – how far output is from its normal level at a particular time
  - \(y\) = actual output
  - \(y^*\) = potential output under normal weekly hours of work and capital utilisation
- **Cyclical unemployment** \((u - u^*)\) – deviation of unemployment from normal level
  - Recession \(u > u^*\)
  - Boom \(u < u^*\)
- **Potential output** – amount of real GDP that economy can produce using its resources at normal rates
- **Expansionary gap** – positive output gap
- **Contractionary gap** – negative output gap

4.3 Okun’s Law

- Relates the output gap and cyclical unemployment
- **Cyclical unemployment is positive when the economy has a contractionary gap, negative when there is an expansionary gap and zero when there is no output gap**
- **Okun’s law** – provides quantitative relationship between cyclical unemployment and the output gap
  \[ 100 \times \left( \frac{u - u^*}{y^*} \right) = -\beta (u - u^*) \]  
  [in Australia \(\beta\) is estimated to be about 1.6]
- Each percentage point of cyclical unemployment is associated with about a 1.6% increase in the output gap, measured in relation to potential output
- Example: What is the change in output gap?
  Suppose that over 2009 the actual rate of unemployment is forecast to rise from 5% to 7%
  Assume \(u^* = 5\%\) and \(\beta = 1.5\)
  We have a negative output gap which is equal to 3.0% of potential output or 0.03 x \(y^*\)

Chapter 5 – The AE Model

5.1 Introduction to the Keynesian Model

- Keynesian Model provides explanation for how contractions and expansions might evolve over the short run
- The period of time during which firms adjust their output to match the prevailing level of demand without the price level having changed
- Implication of model is that government policies that affect the level of spending can be used to reduce or eliminate output gaps; policies used in this way are called stabilisation policies
- Firms do not respond to every change in the demand for their products by changing their prices; set price for some period, then meet demand at that price by producing just enough to satisfy their customers at that price

5.2 Aggregate Expenditure (AE)

- **Planned aggregate expenditure (PAE)** – total planned spending on final goods and services
- Four components of spending:
  - Consumer expenditure/consumption \((C)\)
  - Investment \((I)\)
  - Government purchases \((G)\) – transfer payments such as welfare, tax, are not included
  - Net exports \((NX)\)
- \(AE = C + I + G + NX\)
- If firm sells less of its output than planned, \(I < I^p\)
- If firm sells more of its output than planned \(I^p > I\)
- \(PAE = C + I^p + G + NX\)