ECC1100: Principles of Macroeconomic

Semester 2, 2016

Topic 1: Australia's National and International Accounts (Chapter 4)
Topic 2: The Macroeconomic Environment (Chapter 5)
Australia's balance of payments: current account problem and national savings not assessed
Topic 3: Aggregate Expenditure Model and Multipliers (Chapter 6)
Leakages-injection approach is not assessed
Topic 4: Aggregate Demand and Aggregate Supply (Chapter 7)
Topic 5: Fiscal Policy and Public Debt (Chapter 8
Topic 6: Money, banking financial systems and how banks create money (Chapter 9 &10)
You are expected to know the RBA's role and functions – **BUT** other details of Australian financial system will not be assessed
Topic 7: Monetary Policy (Chapter 11)
Topic 8: Inflation, Aggregate Supply and Labour Market (Chapter 13 & 14)
Topic 9: Models of Exchange Rate and the International Monetary System (Chapter 17 & 18)
Not covered or assessed:

- Monetary approach
- Fisher equation
- International Fisher equation
- Trade and finance problems: the international setting
- Recent history of Australia's exchange rate

Topic 10: Economics of Growth (Chapter 15)
Not expected to know detailed history of Australian economic growth policies

Topic 1: Australia's National and International Accounts (Chapter 4)

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

Gross Domestic Product

GDP is the total market value of all final goods and services produced in the economy during a specific period (usually a year)

Monetary Measure

- For purpose of comparison, GDP must be a monetary measure
- GDP measures the market value of a period's output in monetary terms
- Idea of relative worth of collections of goods and services produced in different periods

Avoid Double Counting

The separate inclusion of intermediate consumption in the value of final goods and services

Final goods and services	*Goods and services that are being purchased for final use and are not to be subject to further processing, manufacturing or resale*
Intermediate goods and services	*Goods and services that are subject to further processing, manufacturing or resale*
Intermediate consumption	Cost of intermediate goods and services

GDP Excludes Non-productive Transactions

Transactions where no production of goods or services occurs

- Purely financial
  - Public transfer payments - *social security (no contribution is made in return)*
  - Private transfer payments – *payment from parent (simply transfer of funds)*
  - Selling of shares and securities – *stock market exchanges (swapping of paper assets)*
- Second-hand sales
  - Such sales reflect no current production, to include them would involve double-counting

We are not excluding the value added in the form of brokerage fees on transactions such as share purchases and sales - simply excluding the sale/purchase itself, as they do not generate a new flow of income

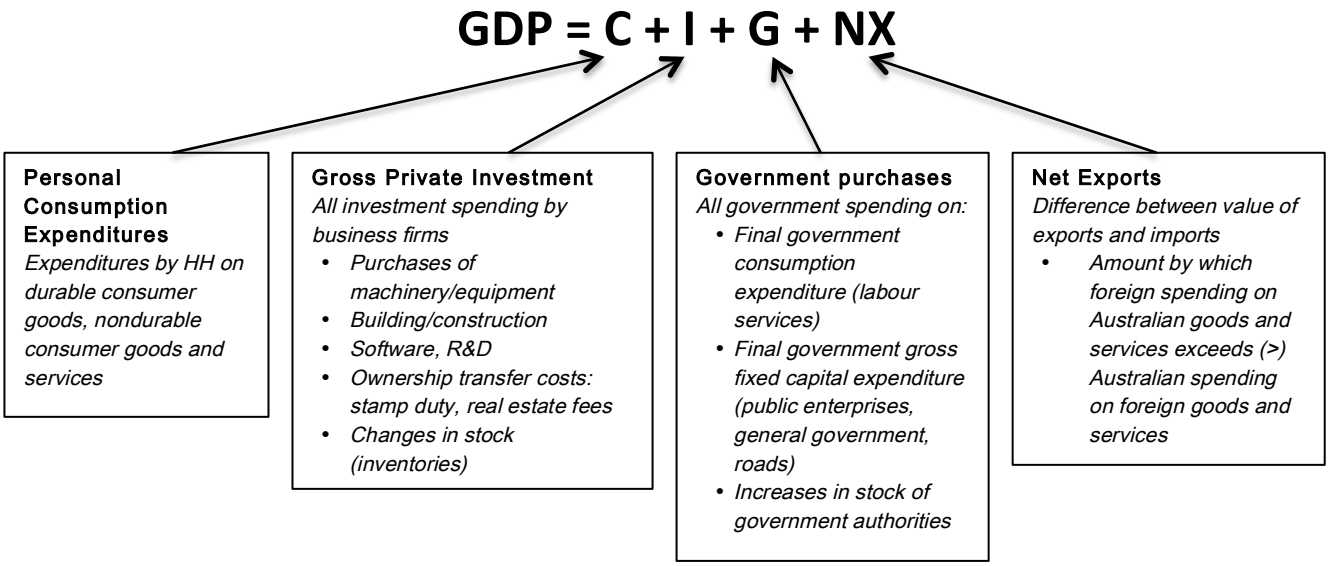
Approaches to Measuring GDP

1. Expenditure approach
2. Income approach
3. Production approach

(1) Expenditure Approach

Measures GDP as the sum of all expenditures involved in taking that total output off the market

- Must add up all total spending on final goods and services:



(2) Income Approach

Some of income derived from the production of the GDP

- GDP is calculated as the sum of wages, salaries and supplements, gross operating surpluses, gross mixed income and indirect taxes (less subsidies)

Compensation of Employees

- *Wages, salaries, superannuation, pension, compensation payments*

Gross Operating Surplus

- *Rent, interest and profits*
- *Depreciation: annual charge that estimates of capital equipment used up in a years production*

Taxes (less subsidies) on production and imports

- *Indirect taxes: excise taxes, license fees and custom duties – business treat these as costs of production and therefore add them to price of products*
- *Flow of indirect business taxes to governments is not earned income – excluded*
- *Subsidies are payments to businesses to encourage production*

(3) Production or 'Value Added' Approach

Sum of the value addition from each step in the production process

- When measuring GDP we avoid double counting by counting only the value added by each manufacturer (each step in production process)

Money (nominal) GDP vs. Real GDP

- The value of different years GDP can be compared only if the value of money does not change due to inflation/deflation
- Inflation or deflation complicates the comparison of GDP over time because GDP is a *Price x Quantity* figure

Problems solved by:

- Deflating GDP when prices rise **OR** Inflating GDP when prices fall

Thus giving a picture of GDP as if price level was constant

Nominal GDP	Measured in current prices
Real GDP	Money GDP, adjusted for inflation, by an implicit price deflator called the 'constant price GDP'

$$Real\ GDP\ = \frac{Money\ (Nominal)\ GDP}{Price\ Index\ (decimal)}$$

$$Price\ Index = \frac{Price\ in\ any\ given\ year}{Price\ in\ base\ year} \times 100$$

Base year: year containing reference price level and output relative to which price and output in other periods are judges

Consumer Price Index (CPI)	Measures the price level of a 'market basket' of a variety of consumer goods and services that are purchased by a typical family
Implicit Price Deflator (IPD)	Broadly based measure of the average level of prices in the economy – based on consumer goods and services, investment goods, goods and services purchased by government and services imported and exported

GDP and Social Welfare

- GDP is a reasonable accurate measure of national income performance
- GDP is not an index of social welfare, but merely a measure of annual volume of market oriented activity
- It is important to understand why GDP may overstate/understate real output and why more output does not necessarily improve society

Leisure Time	Leisure time has increased significantly and has enormously added to our wellbeing – but cannot be measured GDP understates our mental wellbeing – as it does not include satisfaction derived from work
Improved Product Quality	Product quality has improved over time GDP is quantitative not qualitative measure – does not reflect improvements in quality GDP understates material wellbeing
Composition and Distribution of Output	Changes in composition and allocation of output among specific households may influence economic welfare GDP only reflects the size of output and not whether the collection of goods is 'right' for society
Per Capita Output	For many purposes the most meaningful measure of economic wellbeing is per capita output GDP measures the size of total output which may conceal changes in the standard of living of individual households GDP may rise substantially, but if the population is growing rapidly, per capita standard of living may be constant or declining – overstated GDP
GDP and the environment	There are undesirable by-products that accompany production and growth of GDP Spillover costs are not deducted from the total output, and thus, GDP overstates national economic welfare
The Underground Economy	There exists a large and expanding underground sector in our economy • People are engaged in secret/illegal activities and people receiving their income this way will conceal it • Some people are in legal activities, but do not full report their income (tips, sales receipts to avoid tax, unemployment benefits from under table job) This growth distorts GDP and the unemployment rate and thus policies based on these indicators may be inappropriate An understated GDP and an overstated unemployment rate may prompt policy makers to stimulate the economy – causing unwanted inflation rather than increasing real output

Topic 2: The Macroeconomic Environment (Chapter 5)

Macroeconomic stability: Simultaneous existence of full employment, price-level stability and external balance

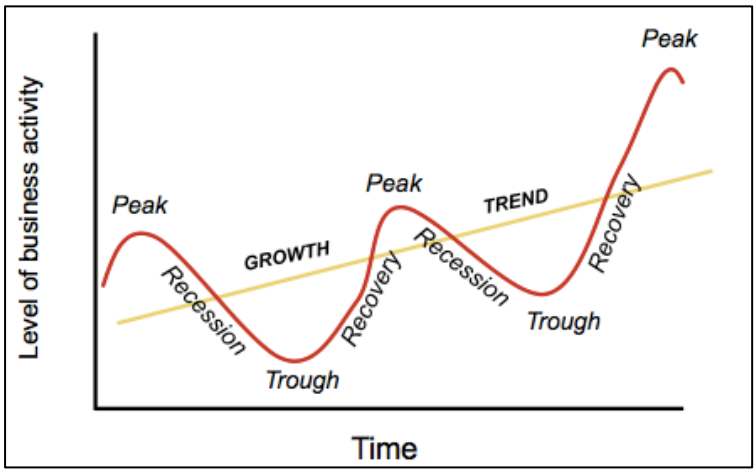
Business Cycle

The recurrent, somewhat cyclic, increases and decreases in the level or rate of growth in economic activity – that typify the pattern of progress of our economy's real GDP over time

- *Level of growth in economic activity over time*

Phases of Business Cycle

Cyclical Peak	Temporary maximum of economic activity
Recession	Decline in output and employment to low/negative levels • Depression is severe recession
Trough	Output and employment 'bottom out' at their lowest levels
Recovery	Output and employment expand towards full-employment level (capacity level)



Business activity is also subject to a secular trend: the *average rate of expansion/contraction of an economy in the long term*

Causes of business cycle (fluctuation):

- Innovation
- Political or random events
- Monetary phenomenon
- Aggregate Expenditure

Non-cyclical fluctuations:

- Season variations in business activity are regular fluctuations in the tempo of business activity, that are independent of the cycle and occur particularly in retail industry (pre-Christmas rush)

Business cycle impact on durables and non-durables:

- Capital goods and consumer durables are most greatly affected by business cycle – are hardest hit by a recession
- Output and employment in consumer non-durables are least affected (retail industry)

Postponability

- Within limits, we can postpone the purchase of hard goods
- As the economy experiences bad times, producers delay updating productive facilities or the construction of new plants
- In bad times, business outlook does not justify increases in stock of capital goods

Monopoly Power

- Monopoly firms have sufficient power to resist lowering prices
- They do this by restricting supply when demand declines, which then primarily falls on production and employment
- In non-monopoly industries (competitive), declining demand primarily falls on prices rather than on levels of production

Unemployment

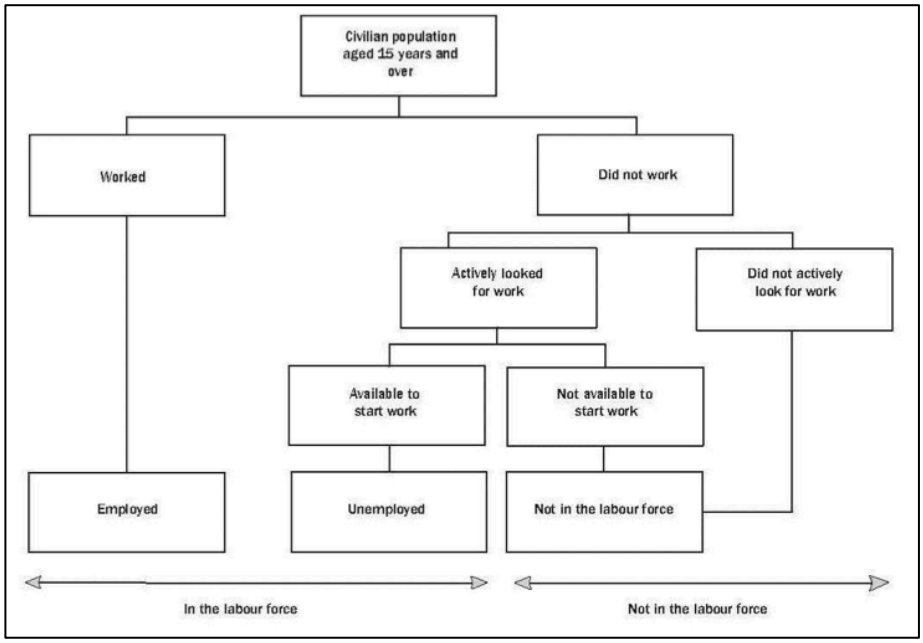
Full Employment: situation of labour market balance consistent with output at the economy's potential output level (zero cyclical unemployment)

- Does not mean 100% of labour market is employed, as some structural and frictional unemployment is regarded as normal or necessary

$$Unemployment\ rate = \frac{Unemployed}{Labour\ force\ (employed + unemployed)}$$

$$Labour\ force\ participation\ rate = \frac{Labour\ force}{Working - age\ population}$$

$$Employment\ to\ population\ ratio = \frac{Employed}{Working - age\ population}$$



Types of Unemployment

Frictional Unemployment
Level of unemployment associated with the efficient movement of workers between jobs (e.g. switching jobs voluntarily, experiencing lay-offs due to seasonality, seeking labour market entry for first time)

- *Allows for movement of labour from low to high productivity*
- *Inevitable and partly desirable – allows for correct job matches – increasing productivity*
- *Workers will typically move from low-paying/low-productivity jobs to high paying/high-productivity jobs – better allocation of labour resources*
- *Have to allow for some level of frictional unemployment to allow people to move from job to job*

Structural Unemployment
Unemployment resulting from mismatches in skills and demographic location of labour, due to changes in composition of total demand for labour, which in turn have been caused by changes in consumer demand and technology

- *Mismatches in skills and geographic location*
- *Not employable without additional training, education and geographical movement*
- *Arises due to changes in the demand of labour*
- *E.g. jobs mat be available in Sydney but the unemployed are located in Victoria*
- *Can never have zero structural unemployment, due to constant technology changes and changes in consumer demands - this is where type of labour demanded differs from type of labour supplied*

Cyclical Unemployment
Unemployment caused by the business cycle, this is by a deficiency or insufficient AD or total spending

- *As overall level of business activity decreases, unemployment increases (and vice versa)*
- *Due to not enough demand in the economy*
- *Cyclical unemployment during the worst period of depression reached 30% of labour force*

Summary of unemployment types:

- Cyclical: 10 people looking for jobs – not 10 job vacancies
- Frictional: 10 people looking for jobs – 10 jobs available – but not the right match
- Structural: 10 people looking for jobs – 10 jobs available – but skills aren't up to date
- Unemployment rate will always be positive (never zero)

Full Employment

A situation of labour market balance consistent with output at the economy's potential output level (zero cyclical unemployment)

Natural-rate of Unemployment (NROE):
Sum of rates of frictional and structural unemployment

- Potential output: real level of output associated with the natural rate of unemployment

NROE is achieved where number of job seekers = number of job vacancies (supply=demand)

- NROE is a positive amount because:
  - It takes time for frictionally unemployed job seekers to find job openings
  - Allows time for structurally unemployment job seekers to achieve skills and relocation needed for re-employment

Limitations of Measuring Unemployment

1. Part time employment – underemployed workers, workers who prefer more hours of work
2. Discouraged workers or the 'hidden unemployed' - those who drop out of labour force, but would return if suitable job prospect arose
    a. *Workers who after unsuccessfully seeking employment become discouraged*
    b. *E.g. Elderly worker leaves current job, will not actively seek out employment but if suitable job were presented – would return*
3. False information – reasons some may give false information is that benefits may depend on intended job pursuit

Costs of Unemployment

1. GDP Gap – output forgone
    a. Amount by which actual level of GDP falls short of potential GDP
2. Okun's Law – quantified relation between unemployment rate and GDP gap
3. Unequal burdens – unemployment is borne more heavily by some groups than others
4. Non economic costs
    a. Creates many social impacts, E.g. Great Depression in 1930s

Inflation

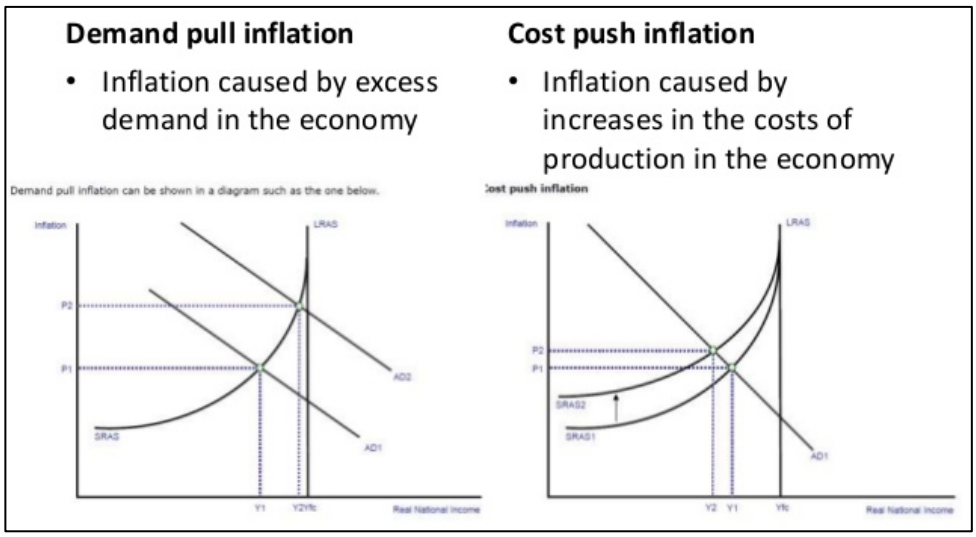
Rising general price levels:

During a period of inflation, prices do not rise proportionately – prices tend to rise very unevenly

$$Inflation\ rate = \frac{Current\ year\ index - Previous\ year\ index}{Previous\ year\ index} \times 100$$

Causes of Inflation

Demand-pull inflation



Inflation resulting form excess demand for output – economy attempts to spend beyond its capacity to produce (beyond its potential output level)

- Excess demand will push up the prices of the fixed real outputs

Cost-push inflation

Inflation arising from the supply/cost side of the market; often explained in terms of market power of unions and businesses

- Unions have considerable control over wage rates – stronger unions can obtain wage increases even during period of moderate deficiency in demand
- Management argues wage increases prompt price increases, and therefore, unions are responsible for cost-push inflation

Wage-push inflation	Cost push inflation initiated through wage increases obtained by unions
Profit-push inflation	Cost push inflation brought about by big businesses through their power to adjust or administer price increases that are not initiated/justified by increases in wage costs
Supply side shocks	Rising product prices caused by increases in costs of raw materials, inputs or energy

Redistributive Effects of Inflation

Nominal and Real Income

- Nominal income is the number of dollars you receive as wages, rent, interest or profits
- Real income measures the amount of G&S your nominal income can buy

If your nominal income increases faster than price level – real income will rise

Fixed-income Earners	*Inflation punishes people living on relatively fixed nominal incomes* • *However the adverse redistributive effects of inflation on social security payments has been offset to some extent by increases in size of benefits*
Savers	Inflation badly effects savers As price level rises, real value or purchasing power of savings falls • *Saving accounts, insurance policies and other fixed-value paper assets decline in real value*
Debtors and Creditors	Inflation redistributes income by altering relationship b/w D & C • *Inflation tends to benefit debtors (borrowers) at the expense of creditors (lenders)* • *Amount repayable has less purchasing power (worth less)* • *Same number of dollars is repaid as borrowed, but each dollar is worth less*
Anticipated Inflation	Redistributive effects of inflation will be less severe if transactors anticipate inflation and have the capacity to adjust their nominal incomes to the expected price level changes 1. *Can agree on increased interest rate in line with anticipated inflation (to alter redistribution between debtor and creditor)* 2. *Most mortgages have variable interest rate*