Economics

1. Introduction to Economics

Economics is a complex topic studying the allocation of resources to fill people's unlimited wants with only limited resources. Often resources are distributed to maximise profit, however we should also consider the roles of government to step in to give a more equal and equitable allocation of resources. They may distribute them via infrastructure projects, welfare benefits and other such schemes to bring about a collective benefit.

Opportunity costs is the cost of satisfying one want over another one. The production possibility frontier provides a visual way to determine whether we are producing to the most of productive capacity. If you are inside the curve, all the resources are not being used efficient. While moving along the curve indicates a shift in spending habits. While the scale could shift with invention of new production techniques or more resources.

$$\text{Opportunity costs} = \frac{\text{What you lose}}{\text{What you gain}}$$

We can either spend on:

- Consumer good: satisfied consumer demand immediately
- Capital good: will increase our future productive capacity (does not give a current benefit)

Most economies operate in a market system, where people earn income for the value of their labour (demand) and prices are set on the amount people are willing to pay for it.

Consumers try to maximise utility (satisfaction).
Consumers save because:

- Transitionary: to finance cash purchases (e.g., house)
- Precautionary: to hold money for unforeseen circumstances (insurance)
- Speculative: saving money for later investment

The **Business Cycle** is a graph of economic activity, which has fluctuations.
Booms: increased economic activity, investment, employment, demand and inflation.
Recession: are the inverse.

The circular flow of income measures the flow of money around an economy, ***aggregate demand***. With leakages being money going out (taxation, savings, imports) and injections (gov. expenditure, investment, exports). Equilibrium is when injections = leakages, this is the statement the economy always shifts to.

Two types of economies:

- **Free**: individuals have complete freedom, only has transactions between private entities
- **Command**: government determines what is produced and who for

In free economies there is a wealth inequality, so the government intervenes through: income distribution, economic stability and regulation.

2. Consumers and Businesses

Consumer sovereignty - the power of consumer to choose what is produced by their demand. Governments support this *sovereignty* **aka** increasing competition/buying power through tariffs, anti-monopolistic practises and regulations.

$$\overbrace{APC}^{\text{Average Propensity to Consume}} = \frac{\overbrace{C}^{\text{Consumption}}}{\overbrace{Yd}^{\text{Disposible income}}} \qquad APS = \frac{\overbrace{S}^{\text{Saving}}}{Yd} \qquad \overbrace{MPC}^{\text{Maginal...}} = \frac{\Delta C}{\Delta Yd} \quad MPS = \frac{\Delta S}{\Delta Yd}$$

$$APC + APS = 1, \qquad MPC + MPS = 1$$

Age has a large effect on savings (young – low income = low savings, middle – high income = higher savings, old – no income = marginal savings)

More factors that affect savings/consumption:
- Cultural factors
- Price of good
- Price of **substitute** good / **complement** good
- Consumer preferences
- Advertising

Consumers can get income from a range of sources:
Labour = wage **Land** = rent **Capital** = interest **Enterprise** = profit
Transfer payments – social welfare: **transfer** from the rich to the poor

<u>Businesses</u>: entrepreneurial skills which organise factors of production to produce G/S.
Firms seek to answer:

What to produce? - Skills & experience - Consumer demand - Business opportunities - Capital required	Based on demand and availability of productive resources.
How much to produce? - Expected level of demand - Economies of scale with capital required	
How to produce? - The most efficient combination of productive factors	Based on the most efficient options.

Goals of business = maximise profits, growth & market share; shareholder expectations; and satisficing (adequate result – pragmatic decision)

Productivity is the output produced given set inputs.
With increasing productivity, more output is produced with the same inputs.
Productivity can increase with *specialisation* of labour (skilled labour), land (proximity to like firms) and/or capital (technology/machinery)
Law of diminishing returns – increasing inputs in production to an extent will hinder their productivity per unit as the factors are impeding each other.
Economies of scale – it is more efficient to produce more units as you spread the fixed costs over the goods (land & capital).
***Dis**economies of scale* – managerial overhead increases with higher duplication and paperwork, increasing tension between management and workers leading to administrative inefficiency
External Economies of Scale – increasing localisation of industry (labour pool), growth in industry (more R&D) and growing capital market (cheaper/accessible funds)
*External **dis**economies of scale* – pollution, industry location saturation (traffic), industry grows (raw material price rises)

Ethical Decision Making: making decisions based outside law to be *morally* right.
Impacts of *technological change*:
- Prices: lower production costs = lower prices for consumers
- Employment: structural unemployment, demand for specialist labour skills
- Output: increases, economies of scale
- Profits: increases profits and market share
- Types of products: impacts the type of products

Horizontal: merging/acquisition of a firm in the same industry
Vertical: merging/acquisition of a firm in your supply chain
Conglomerate: acquires a firm in a different industry for the potential of improvement

- Sustainability: making sure that non-renewable resources are not over-exploited

The environment provisions: land, waste receptable, amenities (tourism).
Government intervenes through acts e.g., ACCC, ASIC.

3. Markets

The market is where buyers and sellers exchange goods & services.

Product market: final goods & services are bought and sold.

Factor market: where factors of production are bought and sold (labour, capital, raw materials)

Derived demand – demand for productive resources from upstream goods & services.
Price mechanism – where the forces of supply and demand determine market price and quantity.
Prices:

- Reflect scarcity
- Allocate resources to highest profit
- Are incentives for entrepreneurs
- Rationing of resources
- Create equilibrium in supply and demand

Relative prices: the opportunity cost of choosing an alternative product.
Ceteris paribus: all other things being constant.

Demand

Law of demand: *ceteris paribus*, the higher the price of goods & services, the lower the demand and vice versa.
Demand is effected by:

- Price of goods & services
- Price of alternative goods & services
- Expected future prices
- Consumer tastes and preferences
- Level of income
- Size and age distribution

Contraction = increased prices, decreased demand

Expansion = decreased prices, increased demand

Price Elasticity – **Demand**:

$$\overbrace{E}^{\text{Price Elasticity}} = \frac{\overbrace{\%\Delta}^{\text{Percentage change}} \times \overbrace{Qd}^{\text{Quantity demanded}}}{\%\Delta\ \overbrace{P}^{\text{Price}}}$$

Total outlay: $\Delta(Qd \times P) = (Qd_2 \times P_2) - \overbrace{(Qd_1 \times P_1)}^{\text{previous time data}}$

	Normal:	Total Outlay Method *(with increasing price)*
Relatively elastic:	$\%\Delta Qd > \%\Delta P$	$\Delta(Qd \times P) < 0$
Relatively inelastic:	$\%\Delta Qd < \%\Delta P$	$\Delta(Qd \times P) > 0$
Unit elastic:	$\%\Delta Qd = \%\Delta P$	$\Delta(Qd \times P) = 0$

Price elasticity is effect by: (**More inelastic, more elastic**)

- **Necessity or Luxury**
- **Number of close substitutes**
- **Proportion of income spent**
- **Length of time since price change**: allows for development and adoption of alternatives
- **Habit-forming/Addictive**

Supply

Law of supply: *ceteris paribus*, the higher the price of goods & services, the higher the supply and vice versa.

Contraction = decreased prices, decreased supply

Expansion = increased prices, increased supply

Supply is effected by:

- Regulations/tariffs
- Future price of good
- Price of alternative goods (determines where supply is)
- Costs of factors of production
- Quantity of the resources
- Climate
- State of technology

Price Elasticity – **Supply**:

Normal:

Relatively elastic:	$\%\Delta Qs > \%\Delta P$
Relatively inelastic:	$\%\Delta Qs < \%\Delta P$
Unit elastic:	$\%\Delta Qs = \%\Delta P$

Supply elasticity is influenced by:
- Time lag after price change: allows time for increased productive capacity.
- Ability to hold/store stock: businesses are to outwait downturns, being more elastic.
- Excess capacity: can easily ramp up production to meet price changes.

Equilibrium:
Where the quantity supplied and quantity demanded equal, so consumers are satisfied.
When there is too much **supply** = surplus: **supply** contract, **demand** expands as excess stock
When there is too much **demand** = scarcity: **supply** expand, **demand** contracts due to bidding up

Market failure and government intervention: when the market doesn't account for the social costs of production.
- **Price** intervention:
  - Ceiling price: stops price from **rising**, is below market equilibrium (shortage) can lead to black markets and rationing.
  - Floor price: stops price form falling, is above market equilibrium (surplus) can lead to government buying excess.

Negative externalities: the negative social costs because of the production process.
Laws: safety laws and permits Taxes: increase production costs – *restrict production*

Positive externalities: consumers may not consider the social benefits of some goods and services (e.g., museums, parks, art galleries)
Merit goods: create positive externalities (does have rival access), is subsidised by government (to increase production) e.g., education.
Public goods: supplied by government and non-excludable, so pay involuntarily, e.g., military, cleaning.

Market structure refers to **structure** (# and size of firms, barriers to entry), **conduct** (pricing and policies/intervention) and **performance** (economic efficiency, production process).

Pure competition	Identical product	Price takers	Negligible market share	No barrier to entry	Fruit/veg market
Monopoly	No substitutes	Price maker	All market share (one company)	Significant barriers to entry	Water
Monopolistic competition	High product differentiation	Price makers – market power	Low market share	Low barriers to entry	Cafes, restaurants
Oligopoly	Product differentiation	Price makers	High market share	Significant barriers to entry	Airlines, banking

4. Labour Markets

Labour is an example of derived demand, as the demand of labour is directly influenced by the demand for a companies' good & services.

Influenced by:
- Output of the firm
- Productivity of labour
- Cost of other inputs: the ease of substituting between capital and labour, cost of international labour

Factors affecting supply of labour:
- Wages
- Working conditions
- Human capital: level of education
- Mobility of labour: geographic and occupation (moving between industries)
- Participation rate: percent of population in the workforce

State of economy	School retention/education	Cultural attitudes
Demographics	Skilled migration	Government regulation
Wages	Government regulation	

When wages go up, workers can achieve the same income by working less (influencing supply).
Labour productivity = $\frac{\text{GDP}}{\text{employed}}$

Workforce is effected by size and quality of population.
- Size
- Age distribution
- Educational patterns

Underemployed are those who want to work more hours.

Wage outcomes is the balancing of the *fairness* and the *efficiency* of the labour market.
- Rate of wage growth
- Distribution of wages and salaries
- Other forms of income e.g., bonuses and loading

Wage outcomes influenced by occupation (higher education/in demand = higher pay), gender, age and cultural background. Occupational mobility: the degree to which skills can be transferred between industries, leading to higher supply and lower ages (as the businesses have more control over the industry).

Gender pay gap: discrimination, interruptions in working life and "segregated" industries.

Non-wage outcomes: additional benefits for employees including sick/holiday leave, superannuation and other fringe benefits. Improves wellbeing and quality of life.

Employment Contracts:
Award: designed by the government covers all employees in the same industry.
Enterprise agreement: between the employer and their employees, small number of businesses within an industry.

BOOT test: *Better off overall* than the original award.

Common law contract: just between their employer and <u>the</u> employee, more flexible.

Distribution of Income:
Inequality in income encourages people to work harder and take more risks. While it reduces overall utility and reduces potential economic growth.

Within the social sphere, inequality leads to lower wellbeing and a larger class divide.

Unemployment:

- Cyclical: due to an economic downturn
- Structural: due to changes with the skills required e.g., shutting down manufacturing
- Frictional: caused when moving between jobs
- Seasonal: regular unemployment due to certain job tied to a specific season
- Hidden: unemployed people who have been discouraged from actively seeking employment
- Underemployment: people who want to work more hours
- Long-term: people who have been unemployed for more than a year
- Hard-core: long-term unemployed who are unemployed due to personal circumstances

Labour Market Institutions

Unions are institutions which negotiate on behalf of workers for better pay & conditions. Acts as legal consul for employees, unions can advocate for increased wages (floor *wage*) and restrict labour supply through advocating for labour qualification change (decreased supply)

Union decline because of shift away from wage centralisation, move to tertiary sector and casualisation.

Employers combine to lobby government for their own interests they push for tax emptions and industry assistance (increase employment).
Government policy has moved away from giving industry assistance as it can hurt productivity of other industries.

Industrial relations allows for fair outcomes for both firms and employees. Governed by the Fair Work Commission under the Fair Work Act 2009.
Creates the National employment standards (NES) that provide foundations for all employment contracts (Awards, Enterprise Agreements, Common Law Contracts)
Formal system (awards and enterprise agreements) which is arbitrated and controlled by the FWC
Informal system (common law contracts and incorporated entities) which is arbitrated by the courts and controlled by the employer.

5. Financial Markets

Banks connect lenders and borrowers through deferred and brought forward consumption.
Financial Markets are the *factor* market for capital.

Primary market: where investors buy securities directly from companies.
Secondary market: investors trade securities between themselves.

Markets:

Consumer credit:	debt an individual incurs for purchasing a good or service.
Home loans:	long-term loans used to purchase property, with periodic payments with interest.
Business loans:	loans for firms used to acquire new technology or expand land. Typically, higher rates of interest than home loans.
Short-term money market:	lending with a maturity period of less than a year, individuals & firms lending various debt securities (bank bills or promissory notes)
Bonds:	agreement to enter a loan, holder receives the interest and principal on maturity. Can be traded on secondary when inflation is low – higher price vice versa.
Shares:	financial assets which are tied to the ownership of a company.

Financial futures:

Allows for both investors and sellers to protect themselves against fluctuations in market rates.
Futures contract: an agreement to buy/sell an instrument later.
Options: the <u>right</u> to buy/sell an instrument later, it allows to both alleviation of risk and favourable outcomes. Purchased for a fee.

Put: the right to purchase   Call: the right to sell

Forex: is the buying and selling of currencies, it is open 24/7 and subject to significant fluctuations.
Currency swap: allows for a domestic business to use a domestic loan (which is more favourable) then **swap** the currency for a foreign one and then swap back later.

Superannuation: mandatory scheme, where employers pay extra income to retirement 'trust'.

ASX is both a primary and secondary market, used through a registered broker on a series of computers.
Investor: gets a stake in the company, potentially dividends and the potential to make capital gains.
Shares are a good indicator of a country's economic performance, especially share indices (XAO).
When share purchases are purely speculative leading to high volatility.

Globalisation has allowed for more revenue flow into Australia, relies upon loans to foreign entities.
Net foreign debt: all the money we owe to other countries.
Overseas foreign equity: Australian shares owned by foreigners.

Bank of International Settlements: promotes stability with central banks.
International Monetary Fund (IMF): assists nations in crisis.

RBA: stability of Australian currency, maintenance of full employment, increased welfare, influences interest rates, controls banknotes, holds gold reserves, banker to the banks.

Australian Prudential Regulation Authority (**APRA**): protects savings, monitors stability, regulates insurance and superannuation.

Australian Securities and Investment Commission (**ASIC**): protects against misleading conduct (i.e. insider trading, frauds), oversees consumer credit, supervises securities markets (e.g., ASX)

Treasury: advises the government on economic decisions, helps devise budgets
Council of Financial Regulators consists of all the institutions above and co-ordinates policies for the Australian financial system.

Debt: money borrowed from an external source which is tied to interest repayments.
Equity: ownership is diluted for extra finance.

Interest: money paid to pay back the loan
Interest rate: the percentage extra charged for taking out the loan.
Maturity: time taken to repay the loan.
(Un)secured: collateral is used to guarantee the loan (e.g., house, car).

Individuals: long-term borrowing = mortgage, short-term = personal loans and credit cards
Business: directly issue ownership (shares or investors) = raise equity or bonds, indirectly through financial institution = overdraft
Governments: borrow the cover extra spending or to fund major infrastructure.
Long-term = Commonwealth bonds, short-term = treasury notes

Liquidity = ease of transferring financial assets into cash

Transactionary motive = holding money for day-to-day purchases
Speculative motive = holding money for future investment
Precautionary motive = holding money for unforeseen events.

Business' *demand* for funds effected by: cash flow, economic conditions, interest rates.

Individuals, businesses and governments can all lend money when they have excess.

Foreign Direct Investment (FDI): foreign entities invest into Australia through investing in companies or bonds.

Money is a medium of exchange, measure of value, store of value and method of deferred payment.

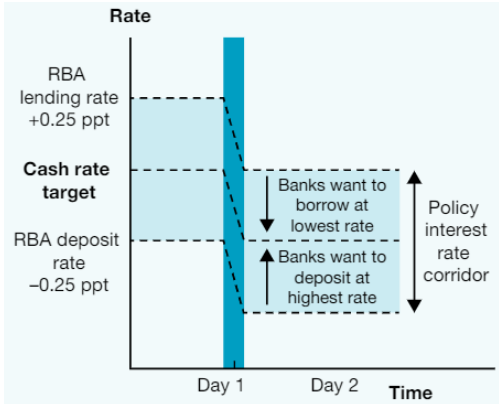
Financial aggregates: *layers below comprise of the layers above.*

Currency	Holdings of notes of coins by the private sector
M1	Currency and deposits in transactional bank accounts.
M3	NON-transaction deposits (i.e., term deposits)
Broad money	NBFI (not including deposits)

RBA and the cash rate:
Cash rate *policy corridor* (ceiling and floor) to implement changes to the cash rate target.
Domestic market operations (DMOs) to ensure cash rate stays on target through supply manipulation.

These both effect exchange settlement (ES) funds used between banks (including the RBA) to settle payments.

Cash rate influences interest rates by changing bank profit margins, to maintain profit margins a bank may increase interest rates when the cash rate increases (as increased costs).



RBA manipulations:

- **Asset purchases** (quantitative easing: 'printing' money by depositing new *ES* funds into accounts in exchange for government securities)
- **Forward guidance** (official communications – influences government bonds: *speculative*)
- **Liquidity** (size of DMOs, additional loans to commercial banks)
- **Size of corridor** (increasing the size of the corridor allows for more drastic cash rate target movements)

Through manipulating the cash rate target, the RBA is able to initiate monetary policy by changing interest rates however it acts with a time lag of 6-18 months as people adjust their behaviour.

Transmission channels:

Saving and Investment	↓ interest rates = ↓ **saving** = ↑ **consumption**, ↑ **borrowing** = ↑ demand for assets, ↑ **consumption** = ↑ investment spending
Cash-flow	↓ interest rates = ↓ **interest payments** = ↑ **disposable income**, can also ↓ income from investments/deposits = ↓ **spending**
Asset and Wealth	↓ interest rates = ↑ asset prices due to ↑ demand, leads to higher value of collateral = ↑ **borrowing**, ↑ asset prices = ↑ wealth = ↑ **consumption**
Exchange rate	↓ interest rates = ↓ **lower investment returns** = ↓ exchange rate, ↓ exchange rate = ↑ exports & ↓ imports = ↑ inflation

6. Government and the Economy

Market failure:

In the provision of goods and services, can create demerit goods (those which cause harm)
Collective goods and services benefit the whole community. While natural monopoly is where goods can only be efficiently provided by one supplier due to high cost of infrastructure e.g., rail, water.

In income distribution: inequality widens over time, relative poverty = 30% below average while absolute poverty = having barely enough income to survive based on a poverty line. Means testing allows governments to restrict welfare to certain people based off income and assets.

In externalities: the price doesn't take into effect the 3rd party effects of externalities on the production or consumption side.
Advertising: warn consumers and reduce their consumption.
Legislation: reduce certain activities which are harmful for society.
In abuse of market power: few firms create imperfect competition and high concentrated industries.
Monopolisation: use of dominant position to eliminate competition (e.g., through price cuts)
Price discrimination: selling the same good in different markets at different prices.
Exclusive dealing: firms/suppliers force suppliers/firms to only deal with them.
Collusion: firms form a cartel to increase pricing and market share. (illegal)

Pure monopoly: firm is sole seller of good or service.

Public Trading Enterprise (PTEs): government backed organisation to provide and source goods & services.
Privatisation: the sale of either part or all a PTE into the public market.
Corporatisation: structuring PTEs like private sector companies.

	Government **macroeconomic** policies	Government **microeconomic** policies
Influence	Entire economy	Individual firms and industries
Examples	Fiscal policy Monetary policy	Competition policy Trade policy

Economic costs of inflation:
- Reduction in purchasing power
- Redistribution of income from labour to capital
- Misallocation of resources
- Reduction in real savings and investment

Economic costs of unemployment:
- Loss of human capital with increasing taxation burden from eroding tax base
- Rise in expenditure of welfare payments

Social costs of unemployment:
- Rising crime rates
- Increasing alcohol and drug dependency
- Health, relationship and mental-health problems
- Development of social underclass

Formed in 1901, the Federal government is federated form of the states under the constitution.
Federal government manages income tax and provides direct grants to states.
States receive all Goods and Services Tax (GST) that is collected by the Commonwealth.
<u>Vertical fiscal imbalance</u>: Commonwealth most taxation powers and states have most expenses.

States revenue: payroll tax, stamp duty, licenses, land tax, privatisation.
Council of Australian Government (COAG) early form of National Cabinet for states and federal.

Local governments manage community problems (rubbish, facilities) raise money through rates and ¼ from grants.

Public sector: all workers in government or government enterprise, declining as increased efficiency from technology.

Federal deals with macroeconomic and national issues, while states deliver services.

Government can reallocate resources through:

Influencing behaviour through (indirect) **taxation**:

Direct tax: paid directly and cannot be passed on e.g., income tax, company tax.
Indirect tax: levied but can be passed on e.g., GST.

Spending: direct reallocation of resources to address market failure
Funding, grants, subsidies and cash payments.

Government can provide goods and services directly:
Mid-20th century: popular for government intervention.
Late 20th century: government businesses seen as inefficient.

Prohibit goods & services (direct)

Average rate of tax (ART): proportion of total income paid in the form of tax. $ART = \frac{\text{tax payable}}{\text{total income}}$
Marginal rate of tax (MRT): the proportion of increased income paid in tax. e.g., 40c for every dollar (40%)

Progressive tax: the higher the income the higher proportion paid in tax (e.g., income) ART rises with income.
Regressive: the **lower** the income the higher the proportion paid in tax (e.g., GST disproportionately affecting poorer people) ART falls with income.
Proportional: same proportion for all income earns

Taxation revenue redistributed to lower-income households through welfare.

Government stabilisation of the economy through macroeconomic policies:
Fiscal policy: budget – allocates spending to areas in need.
Monetary policy: RBA acting on behalf of government to change interest rates.

The government seeks to stabilise the economy to improve long-term outcomes: better economic growth and living standards, based on Keynesian theory = *stimulating* in bust and *stifling* in boom.

Productivity and lower prices with privatisation due to increased competition due to the removing of natural monopolies. However, this doesn't always work (i.e., gas) as the private sector exported all of it.

Other roles of government:
Competition: gov. promotes workable competition, as competition encourages efficient use of resources, lower prices and increased innovation.
Consumer Protection: through Competition & Consumer Act 2010 which ensures fair business conduct and prohibits practises that restrict competition i.e., cartels, misleading ads
Environmental Protection: preferring use of renewable resources and making sure prices reflect (environmental) externalities in production i.e., CO_2 emissions and water contamination

Budget outcomes:

Balanced budget: revenue = expenditure
Surplus: revenue > expenditure
Deficit: revenue < expenditure

Discretionary (structural) changes in fiscal policy: result of government initiative.
Non-discretionary (cyclical) component: automatic stabilisers which play a counter-cyclical role, e.g., unemployment benefits (handouts change with economic activity and change aggregate demand)

Expansionary fiscal policy stance: ↑ expenditure and/or ↓ taxes: moves towards a (larger) deficit.

Contractionary fiscal policy stance: ↑ taxes and/or ↓ expenditure: moves towards a (larger) surplus.
Neutral fiscal policy stance: government doesn't change budget outcome from previous year.

Governments have a very powerful influence upon economic policy, this is countered by the fact they need a majority votes from both the House of Representatives and the Senate.

Influences on government economic policy:

- *Political parties:* review, propose and vote on economic policy and its implementations.
- *Businesses:* support for policies which increase their profit, market share or capital.
- *Unions:* support for rights for workers.
- *Environment groups:* environmental issues
- *Welfare agencies:* support for the poor and disadvantaged.
- *Media:* cover the issues to the public – sway public opinion for an issue.
- *Interest groups:* string singular focus.
- *International influences:* influence FOREX market and foreign investment based on potential returns.