# Economic Issues

## Economic Growth

Economic growth refers to a sustained increase in the production of goods and services over a period of time measured by percentage changes in real GDP.

**Aggregate demand**

Aggregate demand (AD) refers to the total level of expenditure in the economy over a period of time.

Aggregate supply (Y) refers to the total level of income in the economy over a period of time.

| AD = C+I+G+(X-M) | Y=C+S+T |
|---|---|
| **AD = Aggregate demand**<br>**C = Consumer expenditure**<br>**I = Investment by businesses**<br>**G = Government spending**<br>**X = Export revenue**<br>**M= Import spending** | Y = Aggregate supply/ national income<br>C = Consumer spending by households<br>S = Savings by households<br>T = Taxation by the government |

**Injections and withdrawals**

| **Equilibrium occurs when:**<br>**Y=AD** |
|---|
| **Substitute for AD:**<br>**Y=C+I+G+(X-M)** |
| **Substitute for Y:**<br>**C+S+T=C+I+G+(X-M)** |
| **Equation becomes:**<br>**S+T+M = I+G+X**<br>**Leakages = Injections**<br>**S = Savings**<br>**T= Taxes**<br>**M= Imports**<br>**I = Investment**<br>**G= Government expenditure**<br>**X= Exports** |

- Injection: Expands the circular flow of income leading to increased economic activity
- Leakages: Contracts the circular flow of income and dampens economic activity.
- When injections>Leakages, economic growth occurs.
- When Injections<Leakages, the economy may contract.

## The Simple K Multiplier

The multiplier is a greater than proportional change in national income resulting from an increase or decrease of aggregate demand. It is the number of times a small change in spending can be magnified to cause the final change in the level of national income.

$$K = \frac{1}{1-MPC} \quad \text{OR} \quad K = \frac{1}{MPS}$$

$$\boldsymbol{\Delta Income = \Delta Aggregate\ Demand\ (AD)\ X\ The\ multiplier\ (K)}$$

$$MPC + MPS = 1$$

The higher the MPC and lower the MPS, the greater the multiplier effect will be. The multiplier's effect is dulled with each eave of spending, as the MPS accumulates and income is saved.

## Measurement of growth through changes in real GDP

The rate of economic growth can be calculated by changes in real GDP over time:

$$\frac{Real\ GDP\ (Current\ Year) - Real\ GDP\ (Previous\ Year)}{Real\ GDP\ (Previous\ Year)}\ X\ 100$$

**Nominal GDP** records the market value of all goods and services produced in an economy over time. Real GDP is nominal GDP adjusted for inflation so that comparisons overtime are accurate. It is calculated as:

$$Real\ GDP = \frac{Nominal\ GDP}{Consumer\ Price\ Index}\ X\ 100$$

$$\frac{CPI(current\ year) - CPI\ (Previous\ year)}{CPI\ (Previous\ year)} X100 = CPI\ (Indicator\ of\ inflation)$$

## Sources and effects of economic growth in Australia

Any factor that increases the components of AD: C+I+G+(X-M) will lead to economic growth.

- Increased specialisation into efficient industries and free trade encourages high export volumes. A strong terms of trade also improves trade balance → X>M
- Government policies: Expansionary fiscal policy – through a rise in G expenditure.
- Low interest rates encourages domestic borrowing and spending
- Expectations of future business prosperity increase the propensity for foreign investment.
- Higher income leads to a larger average propensity to consume.

| Benefits | Negatives |
|---|---|
| **Rising income –** A rise in income may lead to greater investment flows in the form of savings for businesses. Expanding businesses will be inclined to employ more resources from the economy, lowering unemployment. | **Inflation** – Occurs when growth in aggregate supply cannot satisfy aggregate demand. |
| **Employment –** Due to higher income, consumers have a higher propensity to purchase G+S leading to greater rates of employment as demand in labour markets is derived from total expenditure. | **External instability** – As income rises, higher amounts of disposable income is spent on competitive imported goods, causing a rise in the CAD. |
| **Living standards –** Higher national income and employment rates mitigate the social consequences of unemployment and softens issues such as relative poverty. | **Environmental impacts –** Higher demand for G+S -> Higher production → Malthusian theory and resource depletion → Inward shift of future PPF |

## Increases in aggregate supply-improvements in efficiency and technology

Aggregate supply refers to the total productive capacity of an economy in its production possibility frontier. It is determined by the quality of factors of production on the assumption that they are fully utilized, and rises when a higher level of output can be produced for the same cost.

- The adoption of new technology and capital that in the long term increases the capacity of businesses to produce goods and services.

- Measures to improve efficiency through economies of scale

Increasing aggregate supply allows for economic growth with price stability through the dearth of inflationary pressures.

## **Trend growth**

An economy's trend growth rate is the maximum rate at which it can grow over the medium term without causing inflationary pressures. It is set by the average rate at which its productive capacity is expanding due to growth in the three P's – the population of the working age, the participation rate and the work force's productivity.

## Business Cycle Trends

The Business cycle refers to fluctuations in the level of economic growth due to either domestic or international factors.

Since 1991 Australia has experienced sustained economic growth averaging at 3.5% of real GDP per anum.

From 2004-08 the economy experienced a boom with GDP growth averaging over 4%, underpinned by a rising terms of trade and strong growth in domestic demand.

When the GFC came about the Australian economy experienced a downswing and recession with a sub-trend growth rate of 1.3%.

Since then the Australian economy has recovered, and relative to other economies experiences strong economic growth. This is due to the mining boom, which in the long term has possibly dampened Australia's overall economic growth. This is due to the erosion of the international competitiveness of Australia's non-commodities sectors as they lose their economies of scale due to contraction due to the dollar's recent high sustained exchange – dutch disease. However, its detriments will be softened or alleviated through the dollar's depreciation as other central banks soften their quantitative easing policy.

After a period of weak economic growth at 2.75% p.a the Australian economy is projected to grow by around 3% over 2013-14 but this may slow in the future due to the continuing retirement of an ageing population. As a result of this the participation rate is in decline and Australia's trend growth rate has been cut from 3.25% to 3% p.a due to low productivity growth rates. In addition these retirees are entitled to pensions which must be supplied through greater tax rates which will place contractionary effects on the circular flow of income.

## Unemployment

**Labour force:** Refers to all the employed and unemployed persons in an economy at any given time. The unemployed population consists of:

People aged 15 and over who are actively seeking for work that they cannot find

**Participation rate:** Refers to the labour force as a percentage of the working age population at any given time.

$$\frac{\textbf{\textit{Labour Force}}}{\textbf{\textit{Total Working Age Population}}}$$

**Unemployment:** Refers to a situation where individuals are seeking work that they are unable to find.

$$Unemployment\ Rate = \frac{Number\ of\ persons\ unemployed}{Total\ labour\ force}$$

**Unemployment Trends**

Since 1991 Australia's unemployment rate has gradually declined to a 30 year low of 4.2% in 2008 before the GFC due to sustained economic growth. The GFC bought about retarded growth rates, and since then there has been a high incidence of long term unemployment rising from 14.2% to 19.5% at the end of 2011.

Since 2011, Australia's unemployment rate has fluctuated within a band of 4.9-5.6%. Being a two speed economy, growth in the mining and resources sector has led to a high dollar which eroded the competitiveness of manufacturing firms such as Mitsubishi. Despite growth in the resources sector, the industry employs only 1% of the labour force as it is largely run by capital.

With employment growth lower than the growth in the working age population, unemployment has risen to 5.6% and is projected to be 6.5% in the 2013-14 financial year. As of 2013 the participation rate is 65%, down from 65.3% in 2010, reflecting the increasing proportion of the baby boomer generation reaching retirement age.

**The main types of unemployment**

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|---|---|
| Structural | Occurs due to structural change caused by patterns of demand for G+S or technological advances resulting in a mismatch between labour skills supplied and demanded. |
| Cyclical | Caused by a contraction in economic activity or aggregate demand due to downturns in the business cycle. |
| Frictional | Caused by people moving between jobs as they transition. |
| Seasonal | Occurs at predictable and regular times throughout the year as their skills are demanded only at certain times |
| Hidden | Includes those that do not fit the ABS definition of unemployed and are not reflected in official statistics. |
| Long term | Refers to persons who have been unemployed for 12 months of longer, usually due to structural change that render their skills obsolete. |
| Underemployment | Refers to part time workers who seek full time work. Caused by economic downturn or supply outstripping demand in labour markets. → reduced costs i.e paid leave. |

**NAIRU**

The Non-Accelerating Inflation Rate of Unemployment in Australia is around a band of 4.5-5% and occurs when there is no cyclical unemployment. However due to declining productivity gains and an ageing workforce the NAIRU has risen to 5.5% according to the Treasury.

When this occurs those in the NAIRU are structurally unemployed, as their skills do not match the economy's demands – hysteresis. If the government uses expansionary policy to lower the NAIRU, only inflation due to wage price spirals will rise.

**Hysteresis:** A process whereby a person who is cyclically unemployed becomes structurally unemployed during the course of a business cycle.

**Okun's Law:** Okun's law states that the rate of economic growth must exceed the sum of productivity growth and increases in the size of the labour force in any one year for the unemployment rate to fall.

**Demographics affected by unemployment**

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|---|---|
| Youth | Most severe in youths aged 15-19, with the unemployment rate up to 3 times the rate of the general population. Employers tend to seek workers with greater skills, training and experience |
| Aged | Workers between 45-54 years have a 30% long term unemployment rate in 2011-12 reflecting the difficulty of older workers to find jobs. These people often stop seeking work and aren't included in unemployment statistics – hidden unemployment. |
| Unskilled workers | Workers with low levels of educational attainment can only apply for jobs in which the supply of labour outstrips its demand. |
| Immigrants | Have a slightly higher average unemployment rate of 5.6% as opposed to 4.9% for Australian born residents due to language barriers. |

**Effects of unemployment**

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|---|---|
| Opportunity Cost | As an economy isn't employing all its resources it's operating below its production possibility frontier. |
| Lower living standards | Employed people have to shoulder the costs of unemployment through welfare payments. |
| Costs to the government | As taxable income falls so too does government revenue which is further discredited due to transfer payments and funding for labour programs |
| Lower wage growth | Unemployment brings a high supply of labour which outstrips its demand, leading to lower wages as employers have more bargaining power. However, lower costs of production will place deflationary pressures upon the economy |
| Increased inequality | Unemployment occurs more frequently among low income earners who are unskilled, leading to greater levels of poverty. This leads to greater supply, then lower wages. Skilled workers have a limited supply, and their wages remain stable. |

# Inflation

**Inflation:** A sustained increase in the general price level of goods and services in an economy.

**Measuring the rate of inflation**

$$Inflation\ rate\ (\%) = \frac{CPI\ current\ year - CPI\ previous\ year}{CPI\ previous\ year} X100$$

**Consumer price index (CPI) –** Summarises the movement in the prices of a basket of goods and services according to their significance for the average Australian household.

| Headline inflation rate | Underlying inflation rate |
|---|---|
| The headline inflation rate is calculated by percentage changes in the CPI.<br><br>Can be a misleading indicator of inflation as it can be distorted by volatile prices and one-off factors that affect them which go against CPI trends. | The underlying inflation rate eliminates those components resulting in a more accurate measure of inflation, calculated by:<br><br>- Trimmed mean: Determined by averaging the middle 70% of the CPI which excludes the 15% of items with the largest price increases and 15% of the items with the largest price falls.<br><br>- Weighted median: Calculated by comparing the inflation rate of every item in the CI and identifying the middle score |

**Trends**

Since 1993 Australia's inflation rate has largely fluctuated in a target band of 2-3%.

Inflationary pressures were strongest in 2005-08 with an underlying inflation rate of 4.7% due to strong global economic activity. However the GFC eased these pressures as global economic activity dampened. Furthermore as the Australian economy and dollar remained strong due to regulation such as the four pillars policy imported inflation fell.

Between 1996 and 2013, both headline and underlying inflation rates averaged at 2.7% with it currently at 2.5%. Consumer price inflation was subdued in 2012-13 as the high exchange rate held down import prices and prices for tradable goods and services fell substantially as businesses passed on the lower cost of imported items to consumers. In 2013-14 price pressures are forecasted to further abate to 2.25%.

**Inflation types and causes**

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|---|---|
| **Demand-pull** | Occurs when aggregate demand exceeds the productive capacity of an economy which leads to a rise in prices. |
| **Cost-push** | Occurs when an increase in production costs such as wage increases are passed onto consumers by higher prices. |
| **Imported** | Occurs when the prices of imported goods rise due to a depreciation of the AUD. Furthermore as import prices rise domestic producers are able to raise their prices as well. |
| **Inflationary expectations** | When prices are expected to increase consumers will attempt to purchase it before it occurs leading to demand pull inflation.<br><br>If employees expect inflation to increase higher wages may be negotiated to preserve their purchasing power leading to cost push inflation and the wage price spiral. |

**Inflation Effects (Opposite for low inflation)**

**Excessive** inflation leads to an erosion of international competitiveness as the prices of domestic produced goods rise. Furthermore high inflationary pressures result in a tightening of monetary policy and rises in interest rates leading to an appreciation of the AUD as speculators expect the raise. Consumers will have a higher propensity to purchase internationally competitive goods from abroad. As a result of a rise in M and lower X in AD=C+I+G+(X-M), economic growth is dampened.

As consumers are purchasing imported goods, domestic producers will lose their market share. In order to preserve themselves, businesses may lower their costs by abandoning their workers or lowering hours. This leads to rising unemployment – **stagflation-** and consequently lowers real incomes as supply of labour outstrips its demand. Low income earners are likely to be severely affected, leading to a rise in the GINI coefficient due to the ability of high income earners to negotiate for increased wages. Furthermore low income earners who have a higher propensity to borrow funds will be burdened with higher interest rates.

However in the long term the Australian dollar will depreciate due to high import purchases and low international confidence in the economy. This leads to the diversion of investment inflows from the economy, and a lower I in the AD equation furthers the dampened economic growth. A benefit of high inflation is that there are no deflationary pressures in the economy, suggesting that economic growth is already rapid.

## External stability

External stability refers to an economy's capacity to service its international financial commitments generally measured through its CAD and levels of debt as percentages of its GDP, and the volatility of its currency.

**CAD as a percentage of GDP**

Not a reliable indicator of external stability as the CAD is too broad. Even if the CAD to GDP ratio is over 100%, the debt can still be sustainable, depending on what composes it. In Australia, the CAD is derived from a high primary income subaccount deficit, which suggests high levels of incoming investment that are making export industries generate profit and wealth. (**Pitchford thesis**).

$$\frac{CAD}{GDP}\ X\ 100$$

**NFD as a percentage of GDP** – Total loans owed by Aus to foreigners minus owed to us. Always bad if high, as debt always accrues interest.

If NFD exceeds GDP, income the economy makes will be outstripped by debt growth. High Foreign debt can lead to the debt trap scenario.

$$\frac{NFD}{GDP}\ X\ 100$$

**NFL as a percentage of GDP** – Deals with only primary income, specific.

$$\frac{NFL}{GDP} X\ 100$$

**Terms of trade**

We can infer the status of the BOGS from the terms of trade, and this allows us to make conclusions about the BOGS and thus CAD then external stability.

**Exchange rate**

Volatility of the Australian dollar can affect the BOP by impacting on international competitiveness and the valuation effect. It was thought that the strong Australian dollar was stable with respect to its persistence despite the softening of global commodity prices and its support of Australia's stable economic fundamentals. However this was due to the central banks of other major economies which employed expansionary monetary policy through quantitative easing, where an economy's money supply is increased. Quantitative easing also results in low interest rates, causing capital flight from those economies to

Australia which has a high interest rate differential with a cash rate of 3%. Thus, the Australian dollar hasn't been stable, but rather these currencies have been depreciating against it. Now that the central banks have ceased their expansionary policy, the Australian dollar is once again below parity with the US dollar. Its stability is further softened due to the herd mentality of speculators and will likely experience capital flight.

## Trends

- CAD averaged around 4.5% of GDP over the last 20 years
- Net foreign debt is worth 60% of Australia's GDP
- The NFL represents the accrued value of all our successive CADS, it is at $870bn. This may shaken Australia's external stability as borrowing in Australian dollars may lead to depreciations and thus an unfavourable valuation effect with the Australian dollar depreciating sharply from all-time highs to subpar the US's. However, the treasury claims almost two thirds of Australia's NFD has been borrowed in the AUD.

## Positive and negative causes and effects of CAD

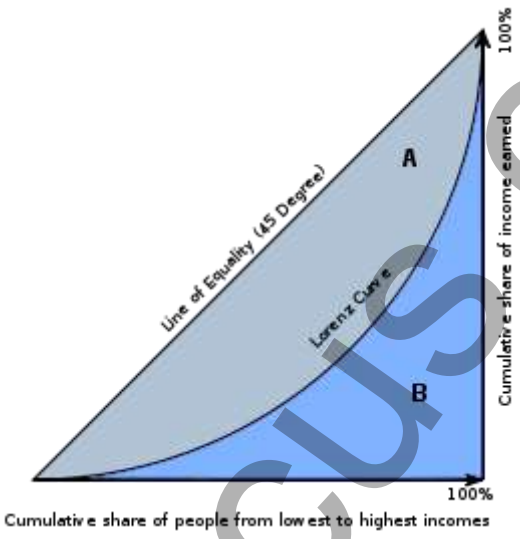
| **Causes** | **Effects** |
|---|---|
| The saving/investment gap, as the domestic saving pool is unable to finance all domestic investment, leading to a net primary income deficit. | Persistent CADS financed by foreign debt and foreign equity borrowings accrue over time with interest which must be serviced possibly leading to the debt trap scenario. Furthermore a high level of net foreign liabilities may lead to a downgrading of Australia's credit rating, making it difficult for domestic investments to be funded. A high CAD also heightens Australia's susceptibility to the valuation effects on its foreign debt. |
| Quantitative easing of the central banks of major economies | As the Australian dollar appreciates against other major currencies such as the USD, the Australian economy's terms of trade rises. This erodes the international competitiveness of domestic producers, and encourages import purchasing, leading to a worsening BOGS and wider CAD. |
| Successive budget deficits | Since 2008 the Australian government budget has been in deficit. This is because of the stimulus packages which were injected into the economy to promote growth – the slingshot effect. However, according to the twin deficit theory this has led to a wider CAD. |

## Distribution of Income and Wealth

**Income inequality:** Refers to the degree which income is unevenly distributed amongst people in an economy measured by the share of total income received by different deciles.

### Lorenz Curve

A Lorenz curve shows the degree of income inequality in a particular economy by plotting the cumulative increase in population against the cumulative increase in income.




If income were distributed evenly across the whole population the Lorenz curve would be the diagonal line through the origin of the graph – **the line of equality.**

The further the Lorenz curve from the line of equality, the greater the income inequality.

### GINI coefficient

The GINI coefficient summarises the distribution of income across the population and is the ratio of the area between the Lorenz curve and the line of equality against the total area under the line.

$$Gini\ Coefficient = \frac{Area\ A}{Area\ A + B}$$

A smaller GINI coefficient denotes more equitable distribution of income, with a range from 0 where there is perfect equality and 1 where a single entity receives all income.

**Sources of Income as a percentage of household income**

- Wages from the sale of labour: The main source of income for consumers which they receive for participating in the labour market. It also includes non-wage benefits such as fringe benefits, employer contributions to superannuation and workers compensation payments.

- Rent from land

- Earnings from capital: People with greater wealth tend to enjoy higher returns from the ownership of factors of production or shares in the form of interest and dividends.

- Transfer payments: Over a third of total income tax collected is used for social security payments.

**Sources of wealth**

Wealth is the value of accumulated assets over time. Income however is a rate of change as it is a flow.

- Net value of real financial assets such as property shares, bank deposits and cash owned by individuals at a particular point of time. It is equivalent to the value of total assets minus total liabilities.

- Share investment and superannuations are growing sources of wealth in Australia.

- Savings and ownership of business assets contribution towards wealth is declining.

**Dimensions and trends**

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|---|---|
| **Gender** | The average weekly earnings of women are two thirds of males in the labour market, and since 1990 there has been relatively little change in this proportion. Suggests discrimination in the workplace. |
| **Age and Education** | Income levels of the young are about the half the income of adults with the mean weekly income about $440. Income peaks when the person is between 25-54 with the weekly mean at $920<br><br>People with higher educational qualifications such as tertiary degrees and diplomas tend to earn higher wagers than those with only vocational training. |
| **Occupation** | Jobs that require skills from education which have lower levels of supply in the labour market enjoy higher income levels. |
| **Ethnic Background** | Migrants from English speaking backgrounds are advantaged with higher income whilst non English speaking backgrounds earn less.<br>This may possibly be due to language barriers, the inability to communicate effectively and discrimination.<br><br>Indigenous Australians are among the lowest income earners in Australia and are reliant on government welfare. Disparities in income between indigenous and non indigenous Australians have grown between 1990 – 2000. |
| **Family Structure/social status** | People with children tend to earn less income as they work lower hours to look after the children. |

Distribution of income in Australia is asymmetric, being that a small number of households have high incomes whilst a large number of households have low incomes. According to the OECD better life index the top 20% of the population earn six times as much as the bottom 20%.

Wealth is more unevenly distributed than income with a greater concentration at the top deciles compared with the distribution of income.

## Economic and social costs and benefits of inequality

Inequality is a natural consequence of the free market functioning effectively since each individual receives a share of income according to their marginal productivity

### Economic benefits and costs of inequality

| Benefits | Costs |
|---|---|
| **Incentive and improved output**<br>Employees will be encouraged to work harder for higher wages, and will be more willing to do so if the reward of labour outstrips the reward of leisure.<br>Furthermore the incentive for greater education stands and will improve the quality of the labour force. | **A reduction in overall utility** by the principle of **diminishing marginal utility** which states as more of a good is consumed, progressively it will provide less satisfaction to the consumer.<br>Thus an increase in income is worth more for low income earners than those who enjoy high wages. |
| **Efficient allocation of resources**<br>The market economy is an efficient allocative mechanism where higher wages attract employees into industries with shortages.<br>This leads to economic growth and rising income levels. | **Dampened Economic Growth**<br>High income earners have a high MPS and spend a lower proportion of their income than low income earners.<br>As the distribution of income in Australia is asymmetric, there are is a high level of leakages in the circular flow of income meaning lower consumption. |
| **National savings**<br>As income rises the MPS tends to increase. This leads to a wider savings pool which provides more domestic funds for investment. In turn our reliance on foreign debt is eased, and improvements in our external stability and CAD will result. | **Increased costs of welfare**<br>Dampened economic growth leads to unemployment and demands on government revenue. This leads to a deterioration of the federal government's fiscal position and increases the tax burden of tax payers. |

# Environmental sustainability

## Ecologically sustainable development

The concept of maintaining a level and quality of economic growth that doesn't result in the long-term damage of the environment or depletion of scarce resources.

Key principles of ESD:

1. Intergenerational equity
2. Integrating economic and environmental goals in policies
3. Ensuring that environmental assets are appropriately valued
4. Managing environmental risks with caution
5. Taking into account the global effects of environmental issues

Rapid economic growth may lead to a rapid depletion of resources which reduces future growth potential, a polluted atmosphere and hence a decreasing quality of life.

The exploitation of natural resources to achieve short term growth can permanently damage the environment and lead a fall in the economy's future potential output – characterised by a left ward shift in the PPF.

**Limits to growth theory:** Sustainable economic development isn't achievable as non renewable resources are used through continuous economic growth. Furthermore the arithmetic progression yield rate of natural resources will be outstripped by growth in the human population which grows in a geometric progression – the **Malthusian theory**.

As an economy expands through either AD or AS gains it will employ a greater amount of resources – capital widening, for production. In doing so, the sustainability of resources is shaken and thus economic growth and ecologically sustainable development are two conflicting outcomes.

Thus, the World Bank endorses for Green Growth based on the principle of capital deepening – suggesting that urban density enables for more efficient land use, which due to close proximity stimulates both efficient transportation and commerce.

**Market Failure: Private and social costs and benefits**

**Market failure:** A situation where the price mechanism fails to allocate resources efficiently as it takes account of private benefits and costs of production but not the wider social costs borne by society.

i.e If suppliers don't bear the entire cost of their production the prices of their products will be low. Consequently demand will be higher and this leads to higher production levels. Ultimately as the suppliers grow and achieve economies of scale a misallocation of resources will occur as they shift from where they should be employed.

If benefits are not taken into account the prices of a supplier will be over valued. This leads to weak demand and underproduction. Thus a misallocation of resources will occur from the supplier.

**Tragedy of the commons:** Refers to a situation where the failure of the market to assign costs to individuals for certain resources which have no advantage for ownership leads to its overuse and exploitation.

**Externalities:** Refer to an unintended market outcome, either positive or negative, which isn't reflected in the price mechanism.

**Demerit goods:** A good that has negative externalities such as cigarettes which damage general health.

However, a positive externality of cigarettes is that they gave rise to a niche market to counter their addiction which employs people.

**Merit goods:** A good that has positive externalities such as the NBN which has benefited Telstra greatly, with shares trading at its highest levels in eight years.

## Public and Private Goods

| Public Good | Private Good |
|---|---|
| Non excludable<br>Able to be enjoyed by the whole of society even if some have not paid for it<br>i.e street lights | Excludable |
| Non Rival<br>Consumption of the good does not reduce the quantity of the good available for others<br>i.e Air, park | Rival |

Public goods allow for **free riding behaviour –** where a consumer or business benefits from a G/S without paying for its production or maintenance.

**Public sector goods:** Goods and services provided by the government that are excludable such as train services.

## Environmental Issues

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| **Preservation of natural environments** | Long term – the economy cannot grow if the environment is degraded which affects human health and restricts the supply of resources. The lack of productivity and lower cap on production leads to underproduction in the economy's PPF.<br><br>A limited supply of natural gases and rising demand for domestic energy needs in Sydney has doubled electricity prices for some households over the past five years. The supply is further constricted by the NSW government's regulations to restrict the development of coal seam gas projects over the past two years due to their negative externalities upon water quality, which has seen NSW importing 95% of its gas needs.<br><br>Australia only protects 0.1% of its land area and the overexploitation of resources by TNC's such as copper mining in QLD has led to desertification. |
| **Pollution, climate change** | Pollution has led to climate change which raises the risk and rate of occurrence of natural disasters. The natural disasters in turn stall economic growth and cause lower living standards. |
| **Depletion of resources** | Agriculture and mining are significant to Australia's export base, and it is important to establish an **optimal rate of resource use** so non renewable resources aren't depleted and so that renewable resources can recover. |