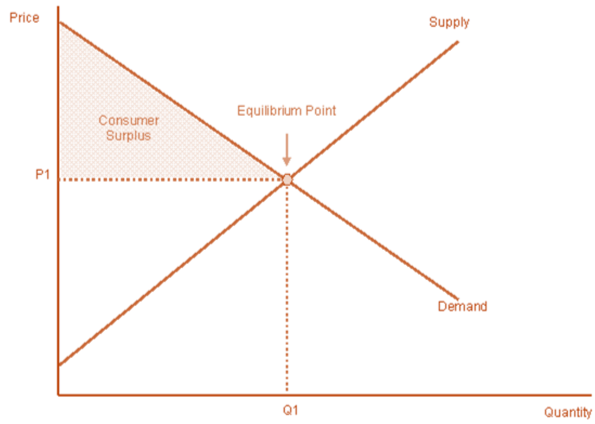
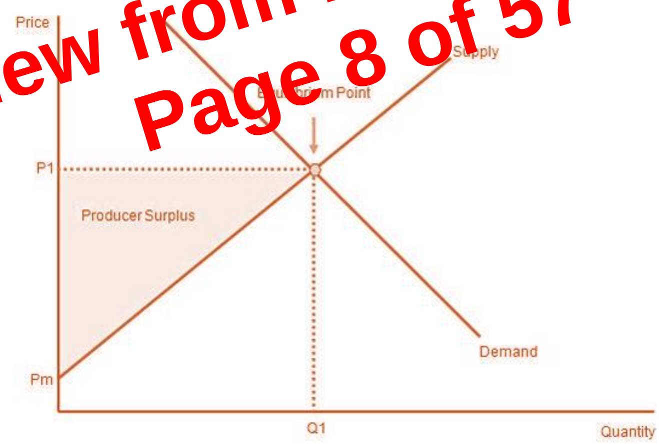
The consumer surplus is the difference between the price the consumer is willing to pay and the price the consumer actually pays. If you look at a demand curve, you'll see the first customer was willing to pay much more than the equilibrium price. The total surplus is the area of the triangle under the demand curve and above the equilibrium point.



The producer surplus is the difference between the price the firm would be willing to sell a product for and the price they actually sell it for. If you look at the supply curve, you'll see that the first product sold is valued at much less than the equilibrium price. The total producer surplus is the area under the equilibrium point and above the x axis.



In a free market economy, producer and consumer surplus are always maximised, and are both equal.

each economic agent is rational and has perfect information, so that nothing is bought on impulse and there is no market failure.

In reality, economic agents aren't rational. People often don't shop around for the best deal, they just buy the first version of the item that they see. Things are also sometimes bought on impulse. There may be externalities. People may be altruistic. People are often irrational – they may commit actions that don't increase, or even decrease, their marginal personal utility.

Market often interact with each other. For example, an increase in prices in a product market may lead to a decrease in demand in the relevant factor markets. An increase in the price of cars would decrease the demand for petrol.

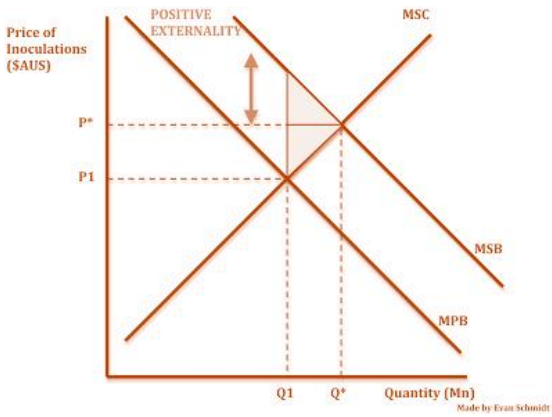
UNDERSTANDING MARKET FAILURE

Markets, when functioning correctly, allocate goods in a way which maximises consumer and producer surplus. However, due to a variety of reasons, this doesn't always happen.

Public goods are goods that are non-exhaustive and non-exclusive. This means that when one person uses it, it isn't used up, someone else can use it too, and that everybody can use it at once. Examples of public goods are street lights, and defence. Because once one person pays for it, everyone can use it; people are usually unwilling to pay for public goods. This means when the market is left to its own devices, public goods are undersupplied. Most public goods are supplied by governments.

Merit and demerit goods are goods that are under and overvalued respectively. This is often due to a lack of information, or a disregard of long term effects. Examples of merit goods are healthcare and education. If left to market forces, these will be undersupplied. Education would be undersupplied because you may not get the benefits for fifteen years or more. The opposite is true of demerit goods. These are valued too highly, because people don't think of detrimental effects they may have in the future. One example is cigarettes. They're over supplied because people don't think of the harmful effects they can have in the future.

An ***externality*** occurs when the cost or benefit to society is different to the private cost. For example, the private benefit of a vaccine is you not getting the disease. The social



If a good is too cheap, due to a negative externality, then a ***minimum price*** can be introduced. This raises prices to the socially optimum level, but leads to a massive production surplus, which often leads to a black market. In the case of farming, introducing a minimum price for crops leads to negative consequences. They're almost always bought by the government at a loss, and because there's a surplus, much of it is wasted. It also leads to farmers relying on those price set by the government, not free market prices. This means they aren't competitive in the free market, and the difference between the minimum price and the free market price will only increase, and the government's losses will get bigger and bigger.

THE EFFECTS OF GOVERNMENT INTERVENTION

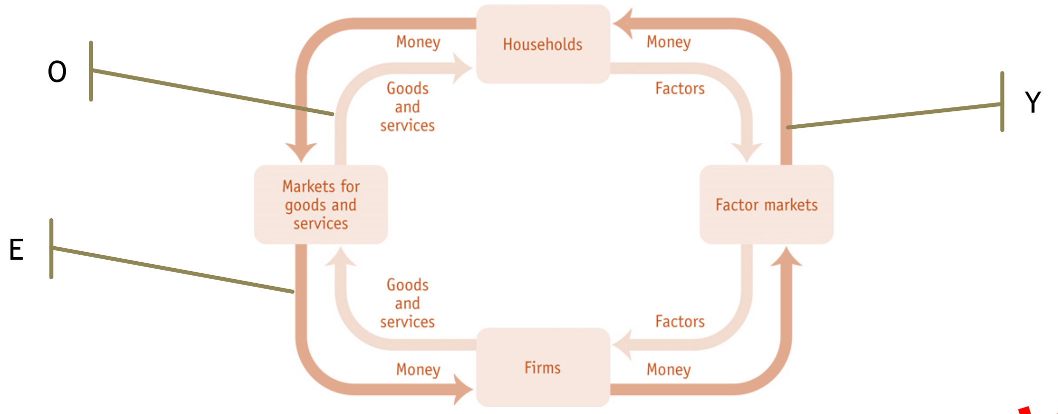
If government intervention leads to a net loss of economic welfare (msc > msb), then this is ***government failure***. One example of this is market distortion. A prominent example of this is the agricultural industry. Tariffs are often imposed on foreign imports , which allows local farmers to compete. This, however, leads to a higher price for domestic consumers, and the inefficient use of capital. It's very easy for the cost to the consumer to be greater than the benefit to the farmer, and this would be government failure.

An example of this is the EU's Common Agricultural Policy, implemented in 1962, which gave minimum prices for agricultural goods. This lead to a boom in agriculture in the EU - people were attracted to it because of the high profits. As a result of this there was a massive surplus of goods. These were all offloaded on the global market, which depressed their price greatly. This damaged farmers in other countries, especially the USA, Australia and agriculture dependent emerging economies, like Mauritius. It also had the effect of halting development, the EU was acting like a monopoly undercutting global prices, which meant that other countries didn't have large enough profits to invest in capital and technology, so the long term cost of these goods will be higher. It was also harmful to EU citizens, who had to pay much, much more for agricultural products than the rest of the world. In 2005, the cost of sugar was 4p a pound in the world market, and 15p a pound in the EU. In addition to the cost of more expensive food, there was also the cost of the subsidies themselves. In 1985 it accounted for 73% of the EU's total spending, at almost £100 bn, which was much higher than the EU ever planned to spend. This was a protectionist policy, intended to protect the 12 million EU farmers. It did do that; but it also lead to higher food costs for the other 500 million EU citizens, which not only caused problems for the poorest in society, but also reduced the purchasing power of the Euro, leading to an unsustainable trade deficit. It also led to the loss of countless jobs internationally. Overall, the social cost of the policy greatly outweighed the social benefit.

Markets can also be distorted by a minimum wage. If it's set too high, then a lot of workers will be laid off, and so the msc will be large.

THE CIRCULAR FLOW OF INCOME MODEL

The ***circular flow of income model*** gives three ways of measuring national economic activity. Firstly, the national output (O). This is the flow of goods and services from firms to households. Secondly, there is national expenditure (E). This is household expenditure on goods and services. This is national income (Y), which is the amount paid to households by firms in return for land, labour and capital.



In this simplistic flow of income model, O, E and Y must be identical, $E \equiv O \equiv Y$. In reality, however, the economy is subject to injections and withdrawals, which add and subtract from the national income respectively.

An injection consists of spending that doesn't come from households. They consist of:

- Government spending
- Investment
- Exports

A withdrawal is when household income is not spent in firms. They consist of:

- Taxes
- Saving
- Imports

If withdrawals are equal to injections, then the economy is said to be in equilibrium. If injections are larger than withdrawals, then Y is rising. If withdrawals are larger, then Y is falling. An increase or decrease Y will change the equilibrium level.

John Maynard Keynes argued that at £1 injection into an economy would increase Y by more than £1. Any money invested in firms requires workers. They will give a million pounds in wages to the households, who will then spend it in the firms, who will then spend it again on workers, ad infinitum. Households, however, don't spend all of their income. The Keynesian multiplier is the increase in income a £1 investment will give you. It's calculated like this:

$$K = \frac{1}{1 - MPC} = \frac{1}{MPS + MPT + MPM} = \frac{1}{MPW}$$

Where MPC is the marginal propensity to consume, $\frac{\Delta C}{\Delta Y}$, MPS, MPT and MPM are the marginal propensity to save, tax and import respectively, and MPW is the marginal propensity to withdraw. MPW is given by:

$$MPW = MPS + MPT + MPM = 1 - MPC$$

For example, if MPT was 0.4, MPS was 0.1, and MPM was 0.2, then an investment of £100 million would increase national income (Y) by:

$$£100\, million \times \frac{1}{0.4 + 0.1 + 0.2} = £143\, million$$

The lower the MPW, the more effective investment will be.

THE UNITS OF AGGREGATE DEMAND

The aggregate demand is the total demand in the economy. The AD is made up of:

- Consumption (C) – The spending by households on goods and services.
- Investment (I) – The spending by firms on investments.
- Government Spending (G) – The total government expenditure, including salaries.
- Net Exports (X-M) – Exports minus imports.

AD can be calculated by:

$$AD = C + I + G + X - M$$

Consumption in an economy is influenced by several factors. One is the interest rates. The lower the interest rates, the more likely it is that a consumer can afford to buy an item on credit. In times of low interest, demand for items like cars goes up. High employment also increases the amount of items bought on credit, as people feel more stable in their job, and so borrow more. A fall in the real value of wealth will also decrease consumer spending. In times of high inflation, consumers can simply afford less. In times of deflation, consumption also falls, because consumers think that they'll be able to buy an item cheaper in the future, so stop buying now. A decrease in tax will increase a household's disposable income, and so they will spend more. New technologies can also increase AD, as households go out and buy these new products.

Investment is also affected by interest rates. The higher the interest rates, the less profitable a venture will be, and so less firms will invest. Investment is also affected by business confidence. If Keynes' 'animal spirits' are high, for example if the economy is in a boom, then investment will increase. A fall in corporation tax would increase profits, and so increase investment.

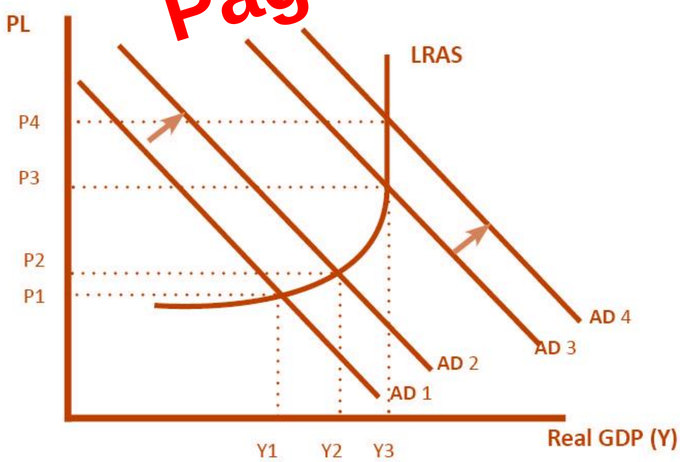
- An increase in the efficiency of the factors of production. This comes about for mainly the same reasons as quality, but also happens naturally as part of the free market economy.
- An increase in labour market flexibility will maximise the allocation of labour in the economy, and so increase the LRAS.

Government policy can be aimed at increasing the LRAS. These are called supply-side policies. Examples are:

- Privatisation. By breaking up a state monopoly, the market is subject to more competition, which should increase efficiency.
- Education. By increasing the duration of mandatory education, or providing subsidised further education and training, you can increase the quality of the economy's human capital.
- Legislation against trade unions. Trade unions decrease the flexibility of labour markets, which may lead to unemployment or inefficiently used capital, as the industry won't be in it's free market equilibrium position.
- Unemployment benefits. If unemployment benefits are high enough, it may increase unemployment, and so the LRAS will fall.

AD AS ANALYSIS

The equilibrium level of output is determined by AD and AS. If the AD is low enough, then the economy will never reach it's maximum capacity. An increase in AD when the economy is below full capacity will increase output. An increase in AD at full output will be purely inflationary.



An increase in the LRAS when the economy is below maximum output will have little or no effect on the equilibrium position. An increase in the LRAS when the economy is at it's full potential will increase national output. An increase in both the AD and the LRAS will increase output without causing inflation.

MONETARY POLICY: THE OPERATION OF MONETARY POLICY AND MONETARY STABILITY

There are two main types of monetary policy: expansionary and contractionary. Expansionary policy is designed to stimulate the economy. It involves lowering interest. This leads to more investment in the private sector, because any venture will become more profitable, and also an increase in consumer spending as they can buy things on credit more easily. This increases the amount of money in circulation, because money is cheaper. Expansionary monetary policy will reduce unemployment, and is useful in times of recession. It may however lead to high inflation.

Contractionary policy involves increasing interest rates. This will lead to a slow in the increase of the economy, or even a recession, but it can be used to curtail high inflation. While in the short term it may lead to negatives, contractionary policy provides a basis for stable economic growth in the future, and prevents high levels of inflation from being as damaging. One of the most prominent uses of contractionary policy was its use by Raegan in the early 1980s in an attempt to combat the stagflation in the US, and reduce the double digit inflation.

A decrease in interest rates will shift the AD curve outwards, and an increase in interest rates will shift the AD curve inwards.

An increase in interest rates makes the pound more valuable. This will lead to fewer exports and more imports. The exchange rate will increase, i.e. you will get more yen for every pound.

The Bank of England's interest rates are set nationally, and so although they may be appropriate for London, they may be too high or too low for Wales. This could lead to regional unemployment, high inflation, or slow economic growth.

EXCHANGE RATES IN A FREE MARKET

In a free market, the exchange rate is dictated by supply and demand for that currency in international markets. If there is a lot of demand for the pound, its value will increase. The demand for a currency is equal to exports plus capital inflow, minus imports and the capital outflow. If there is a large supply of currency, due to expansionary monetary policy, then its value will decrease.

The exchange rate is affected by:

- Interest rates – the higher the interest rates, the more valuable the pound.
- Quantitative easing – this increases the supply of money, which depreciates its value.
- Trade balance – the more the UK exports, and the less it imports, the higher the demand for the currency.

- Lost potential output for the economy
- Waste of resources - unused capital, plus anything spent on education/training is wasted if the individual doesn't work.
- Less tax - no income tax + less indirect tax due to lower consumption.
- Loss of human capital - after long periods of unemployment skills can be lost.
- Externalities - there are social issues associated with unemployment, such as increased crime, and alcoholism/smoking.

Unemployment can be caused by:

- Cyclical unemployment - as the economy goes through the business cycle, the economy grows and shrinks, leading to jobs being created and lost.
- Lack of jobs - if the population is increasing too fast, or the economy is too small, there may be more workers than jobs.
- Frictional unemployment - workers may be looking for jobs after leaving school/university, re-joining the workforce form retirement, losing your job, etc.
- Geographical inflexibility - there may be no jobs in the area, and the worker may be unable or unwilling to move.
- Occupational inflexibility - the worker may have a very specific set of skills and if they cannot find work in their industry will become unemployed due to a lack of other skills.
- Lack of incentive to work - if wages aren't high enough, then working may not be worth the time.
- Technology - some unskilled labour is being replaced by machines, and new jobs are being made in building and processing these machines.
- When wages are set too high, usually because of the minimum wage or trade unions, then the supply of labour will be larger than the demand for labour, and unemployment will occur.

Unemployment can be prevented by:

- An increase in GDP created by demand side policy - this will lead to more jobs.
- Education - better educated or trained workers will find it easier to get a job.
- Removing regulation in the labour market.
- Creating job finding programmes.
- Subsidise investment in areas with job shortages.
- Lower minimum wage to reduce real wage unemployment, and so does reducing union power.
- Reduce the amount paid in benefits, or introduce stricter standards - this should increase the incentive to work.
- Incentivise companies to cut hours and not wages.

- It's ensured that consumer data is kept safe.
- They make sure banks lend responsibly, to prevent them going into liquidation.

INTERNATIONAL TRADE

Free trade can be beneficial to all parties involved, because it can lead to lower prices for everyone, even if one country has an absolute advantage over the other.

An absolute advantage is when one country can produce more of a good using the same resources, i.e. they make that good more efficiently.

Free trade can still be beneficial if the opportunity cost of producing items is different. This is called a comparative advantage.

Say Germany could produce 1 car at the cost of 2 tonnes of trainers, and Vietnam could produce 1 car at the cost of 5 tonnes of trainers. Germany could produce only cars and Vietnam only trainers. They could then trade cars for, say, 3 tonnes of trainer per car. Germany would end up with three tonnes of trainers per car, instead of the opportunity cost which was 2. Vietnam would get 1 car for 3 tonnes if trainers, instead of a car for 5 tonnes, which is what it would have cost otherwise.

Protectionism is government intervention in the free market in an attempt to make domestic exports more competitive.

The possible advantages are:

- Protecting infant and senile industries - companies that aren't competitive on the international stage now might be in the future if given a chance to grow or recover.
- Tariffs can raise government revenue.
- Safeguard jobs.
- Diversify the economy.

Possible disadvantages are:

- Retaliation - other countries may impose their own tariffs.
- Higher costs in other industries - e.g. a tariff on steel would protect steel workers but damage car makers.
- Promote inefficiency.
- Smaller domestic firms may not be able to capitalise on economies of scale.

Types of protectionism are:

- Tariffs - a tax on imports
- Quotas - a limit to the number of imports
- Exchange rate manipulation - making exports more competitive by devaluing the currency.