

## Aggregate Demand

Aggregate demand is the total amount of demands (or expenditures) in the economy at any given price level. It is calculated by the formula:

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

Where:

C: Consumer expenditure; spending on durable goods, non-durable goods and services.

I: Investment or spending by firms on capital goods.

G: Government spending on current goods and services.

X: Exports, spending by overseas buyers of UK goods and services.

M: Imports, spending by UK buyers of overseas goods and services.

## Consumption

Consumption within the UK economy has increased at a reasonably steady rate from ~£170bn per annum in 1955 to ~£500bn per annum in 1998 at constant (1995) prices. Spending on essential items such as food and energy has remained relatively constant whilst spending on durable goods has increased dramatically. Real income has increased approximately 4-fold and consumption has increased to match this meaning that generally the extra money individual's gain in disposable income is spent on durable goods and not invested.

$$\text{MPC, Marginal Propensity to Consume} = \frac{\text{Change in consumption}}{\text{Change in income}}$$

$$\text{MPC, Marginal Propensity to Save} = \frac{\text{Change in savings}}{\text{Change in income}}$$

$$\text{APC, Average Propensity to Consume} = \frac{\text{Consumption}}{\text{Income}}$$

$$\text{APC, Average Propensity to Save} = \frac{\text{Savings}}{\text{Income}}$$

APS + MPS = 1, APC is inversely proportional to APS; MPC is inversely proportional to MPS.

An individual can have an APC or an MPC greater than one as they can either borrow money (a loan, for example) or spend money that they have previously saved, so meaning that they are spending more money than they are earning.

The six factors that affect consumption and saving in the economy are:

- Wealth – the value of stocks in a household's portfolio may increase so making them feel richer and more able to spend on consumption. Rising house prices allow

consumers to borrow more against the (now higher) value of their home and so they can spend the borrowed money.

- Inflation – In the short run a high rate of inflation may cause people to purchase now instead of in the future when they know the same good will cost more.
- The rate of interest – To buy expensive items households borrow money and what is more important to the consumer than the price of the item such as a car or kitchen is the cost of the repayments. High interest rates cause these rates to rise and so consumption to fall.
- The availability of credit – Credit is now widely available yet before the early 1980s the market was highly restricted by the government. Now the main factor affecting the availability of credit is the rate of interest.
- Expectations – Expected increases in the price of goods and services will cause the consumer to spend now. Expected increases in their income will allow the consumer to feel more secure in borrowing larger sums of money.
- The composition of households – Generally older and younger people spend a greater proportion of their income than those in middle age. For the young this is due to the costs involved in setting up a home. For the old they may run down savings as their pension gives them a much more limited income.

	<b>APC</b>	<b>MPC</b>
<b>1958</b>	1.02	1.50
<b>1968</b>	0.98	1.49
<b>1978</b>	0.95	0.71
<b>1988</b>	1.01	1.43
<b>1998</b>	0.96	132.0

APC tells us the proportion of income being spent on consumption, MPC tells us how much of an increase in income is being spent, i.e. for every £1 increase how much of that £1 is being spent on consumption.

1958 – Households are spending more than their income. In this period households are dissaving, that is spending their savings. In the 1950s most households were able to own their own property for the first time and labour saving devices were widely available for the first time. Many houses also had television sets. There were prosperous expectations and an average growth for the decade of 3%.

1968 – 2% of income is saved. For every extra £1 earned £1.49 is spent as the consumer feels prosperous.

1978 – 5% of income is saved. For every extra £1 earned only 70p is spent on consumption. Uncertainty for many households about job security after two oil crisis'.

1988 – Households spending slightly more than their income. Higher expectations for the future. For every £1 earned £1.43 is spent. Financed by dissaving and now increasingly borrowing which is a relatively new idea for purchases of consumer durables.

1992 – During a recession so probably similar to the 1978 figure.

1998 – The UK has a high APC and so a low APS. Low savings mean low investment. However there have been very low interest rates so it is easier to borrow and finance large loans in the current economic climate. Bright expectations within the economy as unemployment reaches the natural rate within the economy after a steady decline for many years. The MPC is extortionately large primarily due to house prices, for every £1 increase in income the consumer spends an extra £132 on consumption!

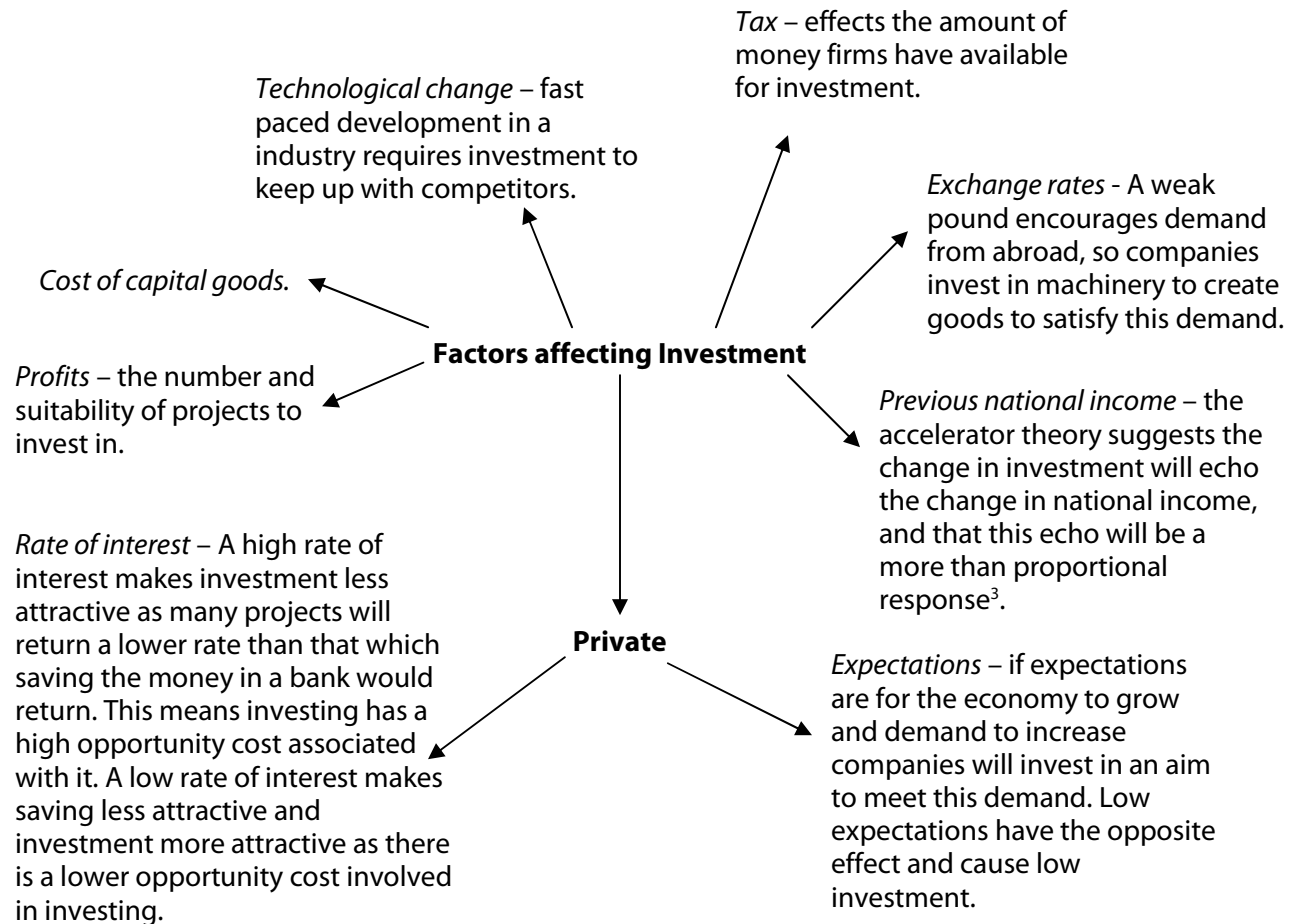
**Changes in consumption over recent years in the UK economy**

	<b>Disposable income</b>	<b>Wealth</b>		<b>Inflation</b>	<b>Rate of interest</b>	<b>Availability of credit</b>	<b>Expectations<sup>1</sup></b>	<b>Consumption of households</b>
<b>Early 80s</b>	Increased steadily over the period from ~£320bn in 1980 to ~£520bn in 1998.					Fewer restrictions on borrowing money and paying on credit has lead to a massive boom in borrowing. Availability has increased vastly over recent years.	High U caused low expectations so C low.	An aging population has caused an increase in C as older people generally spend more than their incomes as they use up savings. This has increased throughout the period.
<b>Late 80s</b>		High house prices cause C to increase. Strong stock market increases wealth so C increase.		High inflation (double figures). As value of money falls households tend to save APC decreases and APS increases.	15% inflation pushed the roi up. C of durables generally on credit.		All time high consumer confidence caused a vast increase in C.	
<b>Early 90s</b>		Negative equity causes a decrease in C. After black Monday in 1987 there is a weak stock market, causes C to decrease.			Less discretionary income as mortgage payments rise, and lower borrowing so C decreases.		Consumer confidence very low so C decreased.	
<b>Late 90s</b>		Increasing house prices, families feel wealthier so C increases.	Strong stock market performance, C increases.				Growing consumer confidence causes an increase in C.	
<b>Early 00s</b>			Weaker stock market performance, C decreases.	Very low and stable causes APC to increase.	Low and stable causes APC to increase. <sup>2</sup>		Confident consumers and low U caused C to rise.	

<sup>1</sup> Is measured using the GfK confidence index, calculated from surveys of the public.

<sup>2</sup> Average UK citizen now owes £4,500.

## Investment



### Public investment (by the government)

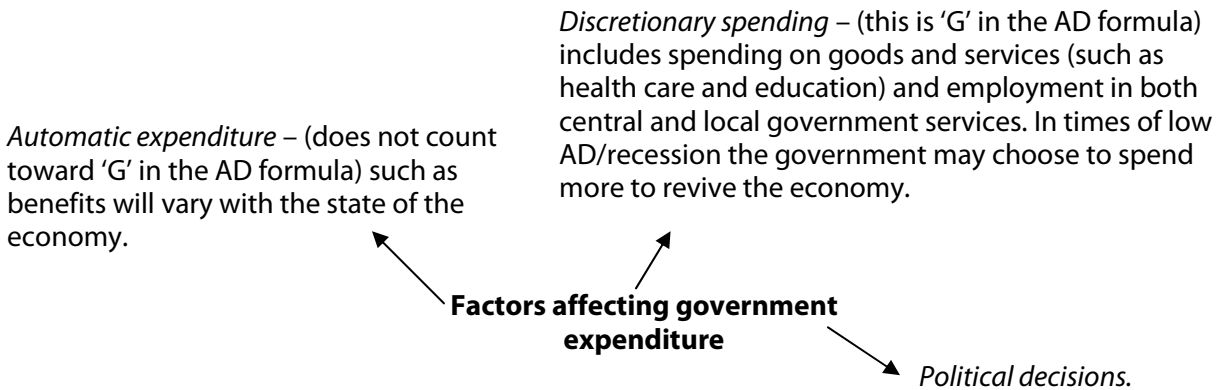
*Less volatile* – generally planned many years in advance, however high interest rates may discourage excessive borrowing and during a recession the government may invest to revive the economy.

### Household investment

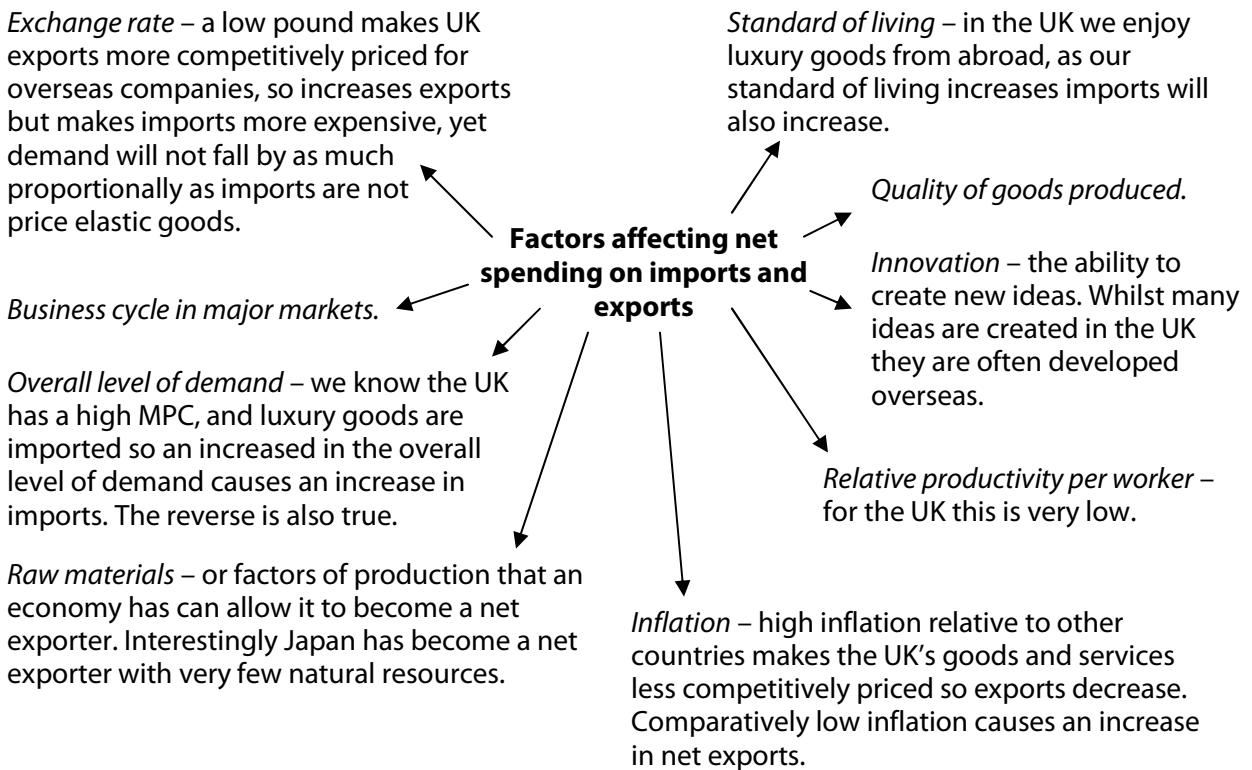
*Interest rates* are the foremost factor effecting household investment into fixed assets, such as houses.

<sup>3</sup> See Alain Anderton, "Economics – AS Level" pp.207-208

## Government spending



## Imports and Exports



### High price level (high inflation)

$C$  – decreases as inflation pushes interest rates up and makes saving more attractive<sup>4</sup>.

$I$  – decreases as saving is more attractive for businesses too. Only project offering a higher rate of return than the interest rate will be considered as the opportunity cost of investment has increased.

$G$  – little change although *may* decrease slightly as the repayments on any planned borrowing will be much higher.

$X - M$  – decreases as exports become less competitive overseas and foreign goods become more competitive in UK markets.

High prices therefore cause  $AD$  to *decrease*.

### Low price level (low inflation)

$C$  – increases as saving is less attractive and repayments on borrowed money are lower.

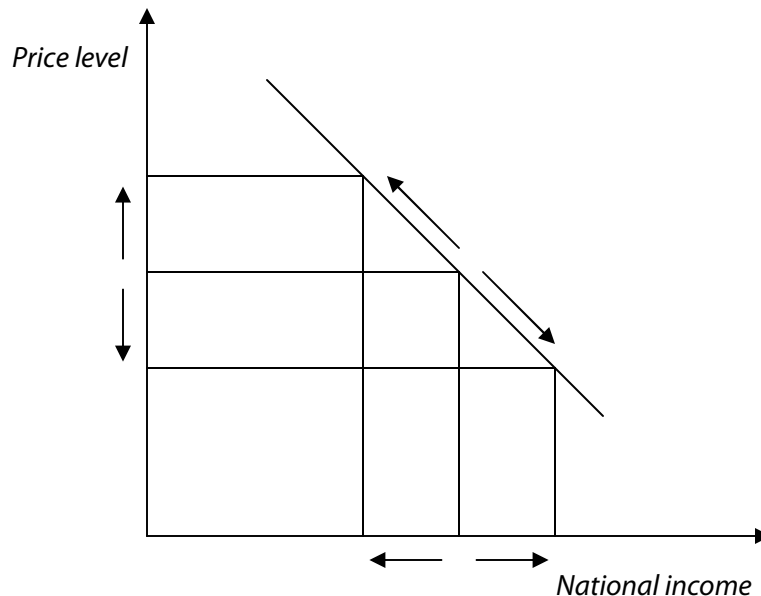
$I$  – increases as saving is made less attractive and the repayments on borrowed money are cheaper for businesses too. The opportunity cost of investment has decreased so it seems more attractive.

$G$  – little change although *may* increase slightly as the government chooses to borrow more.

$X - M$  – increases as exports become more competitive overseas and foreign goods become less competitive in UK markets.

High prices therefore cause  $AD$  to *increase*.

This therefore gives the demand curve a downward sloping shape:



<sup>4</sup> Consumers also desire to keep the *real* value of their savings the same. To this they must save more.

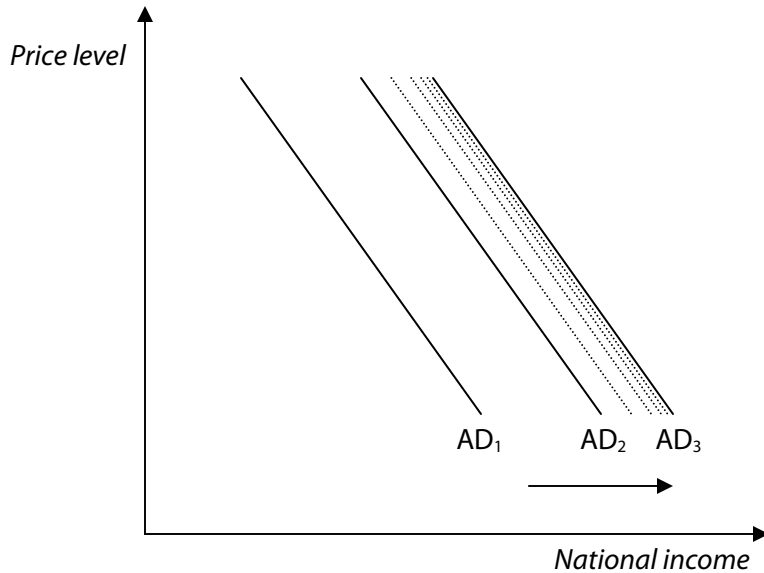
### The multiplier

The UK has a very high MPC so money given to factors of production as a reward for participating in the production of goods and services is very likely to be consumed. The average UK MPC is approximately 0.9, so in this 'second round' of consumption about 90% of the income received will be consumed. In consecutive spending rounds the amount of money spent will decrease as the MPC is

less than 1. The overall increase in consumption (and so GDP) from an initial investment of £1,000m into the UK economy would be ~£10,000m.

Studies of the UK economy have shown this figure to be nearer to 1.3 times the initial investment due to much of the money spent by household's flows out of the UK economy by buying imports, paying taxes or saving money. Therefore an investment of £1000m is likely to cause an increase in GDP of approximately £1300m.

Initial investment	£1000m
First round	£900m
Second round	£810m
Third round	£729m
Fourth round	£656m
Fifth round	£590m
Sixth round	£531m
Seventh round	£478m
.....	.....
<b>Total</b>	<b>£10000m</b>



The shift from  $AD_1$  to  $AD_2$  demonstrates the initial investment into the economy, causing an increase in  $I$ , and rounds of spending cause  $C$  to increase causing an eventual shift to  $AD_3$ .

$$\text{Multiplier} = \frac{1}{1 - \text{MPC}}$$