

The Multiplier

As we have seen from the Circular Flow of Income diagram, any injection into the circular flow of income results in an increase in Aggregate Demand. As Aggregate Demand increases,

- More Goods and Services are bought.
- When more goods and services are bought, employers need more workers.
- When more workers are hired, employment increases and there is more produced in the economy.
- This means that the residents of the economy are richer and their standard of living is higher.
- This is shown as an increase in National Income statistics (Increased Output).
- Don't forget however, an increase in Aggregate Spending can also cause inflation.

Likewise, any leakage out of the circular flow of income (out of the economy), results in a decrease in Aggregate Demand. As Aggregate Demand decreases,

- Less Goods and Services are bought.
- When less goods and services are bought, employers need less workers.
- When workers are fired (employment falls), there is less produced in the economy.
- This means that the residents of the economy are poorer and their standard of living is lower.
- This is shown as a decrease in National Income statistics (Reduced Output).
- Don't forget however, a decrease in Aggregate Spending can also cause a reduction in inflation (or deflation).

Injections and Leakages

It would generally accepted that one of the roles or jobs of the government is to try to increase the standard of living of the residents of the country. We have seen from our study of the Circular Flow of Income diagram that government spending is an injection and if the government were to increase government spending by €100 million, then National Income would increase.

However, the surprising result from this is that an increase in government spending (an injection of €100 million), leads to a greater increase in National Income (an increase in National Income of more than €100 million).

This effect of an injection into the economy causing a greater increase in National Income than the initial injection is called the multiplier effect.

The same is true for any leakage. To continue on with our example of government, if the government were to raise taxes and from this increase in taxes they were to receive an extra 100 million in tax revenue, this increase in taxes would cause National Income to drop by more than €100 million.

This effect of a leakage out of the economy causing a greater decrease in National Income than the initial leakage is called the multiplier effect.

The Multiplier: shows the relationship between an initial injection into the circular flow of income and the eventual total increase in National Income resulting from this injection

E.g. Ross gets €10 in pocket money. Ross spends €10 in a clothes shop. The shop owner spends €8 on a haircut. The hairdresser spends €7 of this on groceries in a local shop. The shopkeeper spends €5 of this on a taxi. The initial injection of €10 into the economy has increased National Income by €30.

Ross = Clothes €10 + Hairdresser €8 + Shopkeeper €7 + Taxi driver €5 = €30

The Size of the Multiplier

The size of the multiplier depends on the following.

- 1) The Marginal Propensity to Consume.
- 2) The Marginal Propensity to Save.
- 3) The Marginal Propensity to Tax.
- 4) The Marginal Propensity to Import.

We will now look at each of them individually

Marginal Propensity to Consume (MPC)

Marginal Propensity to Consume (MPC): This is the proportion of each additional unit of income which is spent.

If I earn an extra €1 and I spend 80c of it on consumption goods, then my MPC is

$$\frac{80}{100} = 0.8$$

$$MPC = \frac{\Delta C}{\Delta Y}$$

Where ΔC = The change in Consumption

ΔY = The change in Income

The higher the MPC (the closer it is to 1), the greater the effect that any injection (or leakage) will have on National Income.

In short, the bigger the MPC, the bigger the Multiplier.

Marginal Propensity to Save

Saving is that portion of Income which is not spent

$$Y = C + S$$

If I earn an extra €1 and I spend 80c of it on consumption goods, then I have saved 20c of it. Therefore, my Marginal Propensity to Save is

$$\frac{20}{100} = 0.2$$

Marginal Propensity to Save (MPS): This is the proportion of each additional unit of income which is saved.

$$MPS = \frac{\Delta S}{\Delta Y}$$

Where ΔS = The change in Savings

ΔY = The change in Income

From the above examples, we should be able to see that $MPC + MPS = 1$. The reason for this is that if money is not spent, by its definition, it must have been saved. Therefore $MPC = 1 - MPS$ and conversely $MPS = 1 - MPC$

The bigger the MPS, the smaller the Multiplier

The Marginal Propensity to Import

Marginal Propensity to Import (MPM): This is the proportion of each additional unit of income which is spent on imports.

If I earn an extra €1 and I spend 10c of it on imported goods, then my MPM is

$$\frac{10}{100} = 0.1$$

$$MPM = \frac{\Delta M}{\Delta Y}$$

Where ΔM = The change in Imports

ΔY = The change in Income

The bigger the MPM, the smaller the Multiplier

Marginal Propensity to Tax

Marginal Propensity to Tax (MPT): This is the proportion of each additional unit of income which is paid in taxes

If I earn an extra €1 and I have to pay 30c of it to the government in taxes, then the MPT is

$$\frac{30}{100} = 0.3$$

$$MPT = \frac{\Delta T}{\Delta Y}$$

Where ΔT = Change in taxes paid to the government

ΔY = Change in income

The bigger the MPT, the smaller the Multiplier

Different Versions of the Multiplier

There are many different versions of the Multiplier. It can include any combination of MPC (or MPS as these are opposite sides of the same coin), MPM or MPT. However, in general, there are three main versions that are used.

- 1) The Multiplier for a Closed Economy (an economy that does not trade with any other countries) with no taxation (no government).

$$\frac{1}{1 - MPC} \quad \text{Or} \quad \frac{1}{MPS}$$

- 2) The Multiplier for an Open Economy (an economy that trades with other countries) with no taxation (no government).

$$\frac{1}{(1 - MPC) + MPM} \quad \text{Or} \quad \frac{1}{MPS + MPM}$$

- 3) The Multiplier for an Open Economy that includes Taxation

$$\frac{1}{MPS + MPM + MPT} \quad \text{Or} \quad \frac{1}{(1 - MPC) + MPM + MPT}$$

Multiplier Questions

- 1) Define the term “The Multiplier”.
- 2) State the Formula by which it is measured.
- 3) Explain the variable elements of the formula.
- 4) It has been estimated in the Irish economy that (2011)

$$\text{MPT} = 0.22 \quad \text{MPM} = 0.3 \quad \text{MPS} = 0.28$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an injection of
€100M

- 5) It has been estimated in the Irish economy that (2006)

$$\text{MPM} = 0.4 \quad \text{MPT} = 0.24 \quad \text{MPS} = 0.26$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an injection of
€200M

- 6) It has been estimated in the Irish economy that (2005)

$$\text{MPM} = 0.2 \quad \text{MPT} = 0.1 \quad \text{MPC} = 0.9$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an injection of
€500M

- 7) Outline briefly, how taxes effect the multiplier (2011)

Answers to Multiplier Questions

1) Define the term “The Multiplier”.

The multiplier shows the relationship between an (initial) injection into the circular flow of income and the eventual total increase in national income resulting from the injection.

2) State the Formula by which it is measured.

$$\frac{1}{\text{MPS} + \text{MPM} + \text{MPT}} \quad \text{OR} \quad \frac{1}{(1 - \text{MPC}) + \text{MPM} + \text{MPT}}$$

3) Explain the variable elements of the formula.

MPC – Marginal Propensity to Consume

This is the proportion of each additional unit of income which is spent.

MPM – Marginal Propensity to Import

This is the proportion of each additional unit of income which is spent on imports.

MPS – Marginal Propensity to Save

This is the proportion of each additional unit of income which is saved.

MPT – Marginal Propensity to Tax

This is the proportion of each additional unit of income which is paid in taxes

4) It has been estimated in the Irish economy that (2011)

$$\text{MPT} = 0.22 \quad \text{MPM} = 0.3 \quad \text{MPS} = 0.28$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an initial injection of €100M

$$\frac{1}{\text{MPS} + \text{MPM} + \text{MPT}} = \frac{1}{0.28 + 0.3 + 0.22} = \frac{1}{0.8} = 1.25$$

The Multiplier for the Irish economy is 1.25. This means that if there was an initial injection of €100M, National Income would rise by (100 X 1.25) €125M.

5) It has been estimated in the Irish economy that (2006)

$$\text{MPM} = 0.4 \quad \text{MPT} = 0.24 \quad \text{MPS} = 0.26$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an injection of €200M

$$\frac{1}{\text{MPS} + \text{MPM} + \text{MPT}} = \frac{1}{0.26 + 0.4 + 0.24} = \frac{1}{0.9} = 1.11$$

The Multiplier for the Irish economy is 1.11. This means that if there was an initial injection of €200M, National Income would rise by (200 X 1.11) €222M.

6) It has been estimated in the Irish economy that (2005)

$$\text{MPM} = 0.2 \quad \text{MPT} = 0.1 \quad \text{MPC} = 0.9$$

Calculate the value of the Multiplier in the Irish economy.

Calculate the Increase in National Income if there was an injection of €500M

$$\frac{1}{(1 - \text{MPC}) + \text{MPM} + \text{MPT}} = \frac{1}{(1 - 0.9) + 0.2 + 0.1} = \frac{1}{0.1 + 0.3} = \frac{1}{0.4} = 2.5$$

The Multiplier for the Irish economy is 2.5. This means that if there was an initial injection of €500M, National Income would rise by (500 X 2.5) €1,250M.

7) Outline briefly, how taxes effect the multiplier (2011)

- Taxes decrease spending within the economy / taxes are a leakage from the circular flow of national income.
- When spending decreases less economic activity is generated within the economy.
- The value/the magnitude of the multiplier decreases.

Average Propensity to Consume and Average Propensity to Save

Average Propensity to Consume (APC): is the fraction of total income which is spent on goods and services (consumption).

$$APC = \frac{C}{Y}$$

L.C.Q.: Define the term 'Average Propensity to Consume' (APC) and calculate the APC for 2012 from the information below.

Year	Disposable Income	Savings
2012	€34,000	€5,200

ANSWER: The fraction of total income which is spent on goods and services

$$€34,000 - €5,200 = €28,800$$

$$\frac{€28,800}{€34,000} = 0.847 \text{ or } 84.7\%$$

$$\text{ANS} = 0.847 \text{ or } 84.7\%$$

Average Propensity to Save (APS): is the fraction of total income which is saved.

$$APS = \frac{S}{Y}$$

$$\text{Again, } APC + APS = 1$$

$$APC = 1 - APS$$

$$APS = 1 - APC$$

Looking up at the question above where our APC was 0.847, this means that our APS in this situation is $(1 - 0.847) 0.153$. An APS of 0.153 means that on average people save 15.3% of their disposable income (income after taxes have been paid or 15.3% of their net income).

More Multiplier Questions

- 1) The following table shows the level of National Income; its Consumption, Investment and Export components at the end of periods 1 and 2, and the level of Imports at the end of period 1. (For the purpose of this question you may ignore the government sector).

	National Income	Consumption	Investment	Exports	Imports
Period 1	€40,000	€30,000	€15,000	€15,000	€20,000
Period 2	€50,000	€39,000	€18,000	€21,000	?

Calculate the following, showing all your workings:

- i) Level of Imports at the end of period 2
- ii) Level of savings at the end of period 2
- iii) Marginal Propensity to Consume (MPC)
- iv) Size of the Multiplier

Answer

- i) Level of Imports at the end of period 2

$$Y = C + I + X - M$$

$$50,000 = 39,000 + 18,000 + 21,000 - M$$

$$50,000 - 39,000 - 18,000 - 21,000 = -M$$

$$50,000 - 78,000 = -M$$

$$-28,000 = -M$$

$$M = 28,000$$

- ii) Savings at the end of period 2

$$Y = C + S$$

$$Y - C = S$$

$$50,000 - 39,000 = S$$

$$S = 11,000$$

- iii) Marginal Propensity to Consume

$$MPC = \frac{\Delta C}{\Delta Y} \quad MPC = \frac{39,000 - 30,000}{50,000 - 40,000}$$

$$MPC = \frac{9,000}{10,000} \quad MPC = 0.9$$

iv) Size of the Multiplier

$$\text{The Multiplier} = \frac{1}{(1-\text{MPC}) + \text{MPM}}$$

$$\text{MPM} = \frac{\Delta M}{\Delta Y} \quad \text{MPM} = \frac{8,000}{10,000} \quad \text{MPM} = 0.8$$

$$\text{The Multiplier} = \frac{1}{(1-0.9) + 0.8}$$

$$\text{The Multiplier} = \frac{1}{0.1 + 0.8} = \frac{1}{0.9} = 1.11$$

A multiplier of 1.11 means that every initial injection into the economy causes an increase of 1.11 times that injection in National Income (Y).

More Multiplier Questions

- 2) The table shows the level of National Income, Consumption, Investment; Exports, and Imports at the end of Year 1 & Year 2

Year	National Income	Consumption	Investment	Exports	Imports
1	€10,000	€8,600	€1,000	€1,200	€800
2	€11,200	€9,500	€1,300		€1,100

Calculate the following, showing all your workings

- The level of Exports in Year 2
- The Marginal Propensity to Import
- The Marginal Propensity to Save
- The size of the Multiplier. Explain the economic meaning of this figure.

Answer

- i) The level of Exports in Year 2

$$\begin{aligned}
 Y &= C + I + G + X - M \\
 €11,200 &= €9,500 + €1,300 + 0 + X - €1,100 \\
 €11,200 &= €10,800 - €1,100 + X \\
 €11,200 &= €9,700 + X \\
 €11,200 - €9,700 &= X \\
 €1,500 &= X
 \end{aligned}$$

- ii) The Marginal Propensity to Import

$$\text{MPM} = \frac{\Delta M}{\Delta Y} = \frac{1,100 - 800}{11,200 - 10,000} = \frac{300}{1,200} = 0.25$$

- iii) The Marginal Propensity to Save

$$\text{MPC} + \text{MPS} = 1$$

$$\text{MPS} = 1 - \text{MPC}$$

$$\text{MPC} = \frac{\Delta C}{\Delta Y} = \frac{9,500 - 8,600}{11,200 - 10,000} = \frac{900}{1,200} = 0.75$$

$$\text{MPC} = 0.75$$

$$\text{MPS} = 1 - 0.75$$

$$\text{MPS} = 0.25$$

- iv) The size of the Multiplier. Explain the economic meaning of this figure.

$$\text{The Multiplier} = \frac{1}{\text{MPS} + \text{MPM}}$$

(**NOTE:** There is never any government in these table questions so there cannot be any MPT)

$$\text{MPM} = 0.25$$

$$\text{MPS} = 0.25$$

$$\text{The Multiplier} = \frac{1}{0.25 + 0.25} = \frac{1}{0.5} = 2$$

This figure [2] means that for any given injection into the economy, national income will increase by twice the original injection.

More Multiplier Questions

- 3) The table below shows the levels of National Income, Consumption, Investment, Exports and Imports at the end of Year 1 and Year 2. (For the purpose of this question you may ignore the government sector.)

Year	National Income	Consumption	Investment	Exports	Imports
1	€5,000	€4,300	€500	€600	€400
2	€5,600	€4,750	€650	€750	

Calculate the following, showing all your workings:

- The level of Imports in Year 2.
- The Marginal Propensity to Import.
- The Marginal Propensity to Save.
- The size of the Multiplier. Explain the economic meaning of this figure.

Answer

- i) The level of Imports in Year 2

$$\begin{aligned}
 Y &= C + I + G + X - M \\
 €5,600 &= €4,750 + €650 + 0 + €750 - M \\
 €5,600 &= €6,150 - M \\
 €5,600 - €6,150 &= -M \\
 -€550 &= -M \\
 €550 &= M
 \end{aligned}$$

- ii) The Marginal Propensity to Import

$$\text{MPM} = \frac{\Delta M}{\Delta Y} = \frac{550 - 400}{5,600 - 5,000} = \frac{150}{600} = 0.25$$

iii) The Marginal Propensity to Save

$$MPC + MPS = 1$$

$$MPS = 1 - MPC$$

$$MPC = \frac{\Delta C}{\Delta Y} = \frac{4,750 - 4,300}{5,600 - 5,000} = \frac{450}{600} = 0.75$$

$$MPC = 0.75$$

$$MPS = 1 - 0.75$$

$$MPS = 0.25$$

iv) The size of the Multiplier. Explain the economic meaning of this figure.

$$\text{The Multiplier} = \frac{1}{MPS + MPM}$$

(**NOTE:** There is never any government in these table questions so there cannot be any MPT)

$$MPM = 0.25$$

$$MPS = 0.25$$

$$\text{The Multiplier} = \frac{1}{0.25 + 0.25} = \frac{1}{0.5}$$

This figure [2] means that for any given injection into the economy, national income will increase by twice the original injection.

More Multiplier Questions

- 4) The following table shows the levels of National Income, Consumption, Investment, Exports and Imports at the end of Period 1 and Period 2. For the purpose of this question you may ignore the government sector.

Period	National Income	Consumption	Investment	Exports	Imports
1	£5,800	£4,800	£1,200	£1,000	£1,200
2		£5,250	£1,300	£1,200	£1,350

Calculate the following, showing all your workings:

- The level of National Income in period 2.
- The Marginal Propensity to Save.
- The Marginal Propensity to Import.
- The size of the Multiplier.

Answers

- The level of National Income in period 2.
 $Y = C + I + G + X - M$
 $Y = £5,250 + £1,300 + £0 + £1,200 - £1,350$
 $Y = £7,750 - £1,350$
 $Y = £6,400$
- The Marginal Propensity to Save
 $MPC + MPS = 1$
 $MPS = 1 - MPC$

$$MPC = \frac{\Delta C}{\Delta Y} = \frac{5,250 - 4,800}{6,400 - 5,800} = \frac{450}{600} = 0.75$$

$$MPC = 0.75$$

$$MPS = 1 - 0.75$$

$$MPS = 0.25$$

iii) The Marginal Propensity to Import.

$$\text{MPM} = \frac{\Delta M}{\Delta Y} = \frac{1,350 - 1,200}{6,400 - 5,800} = \frac{150}{600} = 0.25$$

iv) The size of the Multiplier. Explain the economic meaning of this figure.

$$\text{The Multiplier} = \frac{1}{\text{MPS} + \text{MPM}}$$

(**NOTE:** There is never any government in these table questions so there cannot be any MPT)

$$\text{MPM} = 0.25$$

$$\text{MPS} = 0.25$$

$$\text{The Multiplier} = \frac{1}{0.25 + 0.25} = \frac{1}{0.5}$$

This figure [2] means that for any given injection into the economy, national income will increase by twice the original injection.

Economic Growth

If you have ever spoken to your grandparents about what their lives were like when they were young, most likely you learned an important fact about economics.

Material standards of Living have improved substantially over time for most families, in most countries.

Why do most Irish people today enjoy a much higher standard of living than their grandparents and great grandparents? The answer is long run economic growth.

Economic Growth: An increase in real GNP per capita, without any changes in the structure of society

Real GNP per Capita and Economic Growth

The key statistic used to track economic growth is *Real GNP per Capita*. This is Real GNP divided by the population size. We use GNP because GNP measures the total value of an economy's production of final goods and services, which is the same as the income earned by Irish people in a given year. We use Real GNP because we want to separate changes in the quantity of goods and services from rises in the Price Level. We use Real GNP per capita because we want to isolate the effect of changes in the population. For example, other things equal, an increase in the population lowers the standard of living for the average person. There are more people to share a given amount of GNP. An increase in Real GNP that only matches an increase in population leaves the average standard of living unchanged.

Discuss the Economic Effects of an Increase in the Rate of Economic Growth in the Irish Economy

Positive

- 1) **Increased Employment:** Economic growth will lead to increased demand with more labour being demanded to produce this.
- 2) **Improved Government Finances:** With a rise in spending – indirect tax revenue rises; more people at work will result in an increase in direct tax revenue; expenditure on social welfare should fall.
- 3) **Effects on Balance of Payments:** If the increase in the rate of economic growth is export led then the balance of payments position improves.

- 4) **Improved Standard of Living:** Economic growth will result in increased wealth in the economy allowing us to buy more goods and services / a reduction in poverty / better state services.
- 5) **Effects on Migration:** If jobs opportunities exist then people who had planned to emigrate may stay here and more immigrants may be attracted to the economy.
- 6) **Investment Opportunities:** Economic growth indicates a growing economy and this may attract additional investment.

Negative

- 1) **Inflationary Pressures:** With a rise in the level of economic activity the level of demand- pull inflation will rise.
- 2) **Use of Scarce Resources:** Economic growth results in an increased demand for scarce resources e.g. oil. The increased demand may involve damage to the environment.
- 3) **Increased Demand for Imports:** Economic growth increases incomes and spending power and demand for imports may rise, worsening the balance of payments position.
- 4) **Revised Expectations by Citizens:** With economic growth citizens may alter their expectations of government and expect more services from the state e.g. revised taxes; growth in incomes; wage demands etc.
- 5) **Uneven Distribution of Wealth:** If the increase in wealth is not fairly distributed then the gap between rich and poor may widen.

Discuss the Economic consequences which a fall in the level of Economic Growth (GNP) may have on the Irish Economy

Positive

- 1) **Moderation in Price Increases:** With the fall in the level of economic activity the level of demand induced inflation will fall.
- 2) **Reduction in Labour Shortages:** The fall in demand for goods & services may decrease the demand for labour in certain sectors, easing labour shortages.
- 3) **Moderation in Wage Demands:** Expectations by workers may decline with respect to pay increases.
- 4) **Revised Expectations by Citizens:** During an economic boom our expectations grow and may conflict. With falling GNP we may revise our expectations downwards i.e. expect less investment in infrastructure.

- 5) **Reduced Demand for Imports:** A reduction in GNP lowers incomes and spending power and demand for imports may fall thus improving our Balance of Payment position.
- 6) **Restore Balance in the Housing Market:** The fall in GNP will reduce spending power and help reduce inflation in this market, easing it towards equilibrium
- 7) **Reduced Immigration:** Reduced GNP will lower demand and reduce opportunities for employment, leading to a possible fall in immigration
- 8) **Less Pressure on State Infrastructure:** Lower GNP results in less demand for scarce resources/ less damage to the environment/ lower incomes will reduce demand for commodities i.e. cars

Negative

- 1) **Unemployment:** A reduction in GNP reduces demand and this may lead to a reduction in employment.
- 2) **Strain on Government Finances:** The government may suffer a decline in their tax revenues and an increase in current spending on social welfare will put a strain on government finances.
- 3) **Reduced Investment Opportunities:** With lower GNP and contracting demand entrepreneurs may have fewer opportunities for profitable investments.
- 4) **Reduction in Standard of Living:** The fall in GNP lowers average incomes and this will reduce the average standard of living.
- 5) **Provision of State Services/Infrastructure:** The dis-improvement in state finances will make it more difficult to fund improvements in current state services i.e. the health and education sectors and may make it more difficult to fund major infrastructural developments e.g. our road infrastructure.
- 6) **Private Sector Workers Targeted:** With falling GNP businesses may rationalise and hence private sector employees may be affected more adversely, than public sector employees.

Outline Possible Restrictions on the Growth of Businesses in the Irish Economy at Present

- 1) **Limited Availability of Credit:** The banking crisis has resulted in a lack of credit, which is a major obstacle to the expansion of business.
- 2) **Reduction in Domestic Demand:** The continuing recession has resulted in a major drop in spending resulting in a drop in domestic demand and less opportunities for business.
- 3) **Restrictive Wage Agreements:** The existence of the minimum wage; the existence of JLC agreements limits the ability of firms to hire labour which restricts the ability of firm to expand/ grow.
- 4) **Legislative Requirements / Framework:** Permission may have to be obtained from the local authority; state body etc. For example if a person wants to extend a restaurant then certain requirements must be fulfilled.
- 5) **Merger / Takeover Legislation:** Some businesses wishing to expand may face an investigation under EU (Irish) merger and takeover legislation. The proposed takeover of Aer Lingus by Ryanair was prohibited under EU laws.
- 6) **High Costs of Production:** Businesses find it difficult to expand due to high operating costs e.g. rates; utility costs; insurance costs; costs of raw materials; and high interest rates makes borrowing more expensive.

Less Developed Countries (LDC's)

We have discussed the importance of economic growth. We have said that it is the reason for the difference in standard of living that we enjoy compared to our grandparents. Looking back at the lives of our great grandparents, their lives appear to be quite spartan. No access to antibiotics, modern medicine like MRI's, X-Rays etc. No internet, no sky digital, no cars. In the case of our great grandparents, no running water. This is an incredibly harsh way of life, but there are many countries today that the situation just described for our great grandparents is the norm. As important as it is for every country to encourage economic growth, it is more important for Less Developed Countries. Before we look at how LDC's can promote growth, we will look at what they are.

Characteristics of LDC's

- 1) **High Rate of Population Growth:** Rates are very high resulting in economic problems which the government finds hard to resolve.
- 2) **Famine:** Too frequently famine occurs in LDCs resulting in disease; deaths at early age; high medical costs.
- 3) **Foreign Debts:** These are very high. Their repayment uses up government revenue and their repayments can cripple the economy.
- 4) **Uneven Distribution of Wealth:** In some LDC's, a minority may control a large part of the country's wealth resulting in widespread poverty.
- 5) **Over-Dependence on one Crop:** Some LDCs are over-dependent on one crop. The country may be subject to crop failure and/or a wide variation in export prices .
- 6) **High Percentage of the Population engaged in Extractive/Primary Industries:** This results in not enough workers in secondary & tertiary sectors, resulting in low standards of living.
- 7) **Poor Terms of Trade:** LDCs may suffer from low export prices and high import prices and hence the gains from trade are reduced.
- 8) **Poor Living Conditions / Inadequate infrastructure:** A large percentage of the population live in shanty towns with no water and poor sanitation.
- 9) **Lack of Capital:** LDCs may lack the capital which is essential for economic development & employment generation.
- 10) **Low Per Capita Income for the Majority of the Population:** This results in a poor standard of living and a consequent low demand for goods and services.

- 11) **Poor Levels of Education/Literacy:** This will act as an impediment to economic development, resulting in high unemployment.
- 12) **Political Corruption:** Some LDCs spend a lot on bureaucratic administration / military spending which can result in civil unrest.
- 13) **Exploitation by Multinationals of LDCs / Economic Dualism:** This may take the form of low wage rates; lack of care for the environment; control over key exports etc.

Economic Growth V's Economic Development

We have talked about economic growth and said that it is an increase in GNP per capita with no structural change to society.

Economic Growth: An increase in real GNP per capita, without any changes in the structure of society

It just means that there was more stuff made this year than last year.

When discussing less developed countries (LDC's), huge changes have to occur if their standard of living is to converge to that of the First World. More than just economic growth, economic development has to occur.

Economic Development: An increase in real GNP per capita, which is accompanied by a fundamental change in the structure of society

Less Developed Countries need economic development. They need to change how they produce their economic goods. Looking back at the characteristics of LDC's, there are a lot of things that LDC's must fix if they are to converge to the wealth of developed nations. They need to control the rate of population growth, stop relying on one crop which would avoid famine. Increase the amount of capital and literacy levels, which would increase worker productivity and allow other workers to work outside the extractive industries. This involves a change in the structure of society. Greater amounts of capital, higher education levels, better roads and technology, this is economic development. One way to look at economic development is that it is the addition of economic growth over a number of years.

Now that we understand the importance of economic development we will look at the ways that the government of LDC's and first world governments could do to promote economic development.

Policies that Government's in LDC's could take to Promote Economic Development

- 1) **Promote Population Control:** Governments could encourage a reduction in population by various measures including: educating the population [in methods of family planning]; improving the welfare of its citizens; providing better social services for its citizens
- 2) **Improve Basic Infrastructure:** Provision of clean water & proper sanitation. Development of public housing. Development of roads, power supplies etc.
- 3) **Promote Land/Agricultural Reform:** Decrease emphasis on one crop - diversify production. Try to spread ownership of land. Improve production methods - modernise the agricultural industry.
- 4) **Improve Education:** Start with a basic literacy programme to improve literacy skills. Provide technical skills to the population. Provide primary education. Develop the secondary sector and initiate further education programmes.
- 5) **Incentives for Development of Enterprise:** Try to foster a movement away from a dependency culture and encourage enterprise. Use borrowings to encourage enterprise so as to create sustainable employment.
- 6) **State Bureaucracy/Corruption; Spending on Arms:** Try to reduce bureaucracy within state institutions. Eliminate corruption - so that aid flows to those who it was intended for. Divert funds from arms spending to more urgent current requirements.

Policies that Government's in Other Countries could take to Promote Economic Development in LDC's

- 1) **Assist Foreign Aid Programmes:** Governments can continue with aid to help in emergency situations. They can also provide more long term aid to help with the development of the infrastructure / provision of education etc.
- 2) **Restructure their National Debts:** If the respective national debts were cancelled then these funds would become available for the country to use for development.
- 3) **Improve Trading Opportunities:** Improve access to markets in the developed world - outlet for their exports. Improve the terms of trade available - higher prices for their exports.
- 4) **Encourage Multinationals to Set up Firms There:** These could provide the workers with skills . The (fair) wages received could help boost domestic demand and provide tax revenue for the state.

- 5) **Assist LDC's with Available Technologies:** The provision of simple technologies to the LDC's would help with improving standards of living ; increase productive capacity .
- 6) **Assist Peace Measures and Promote Political Stability:** Economic development requires a peaceful environment. Foreign countries could provide peacekeeping troops and encourage the movement towards political stability.

Economic Benefits of Economic Development to LDC's

NOTE: The list below also answers the question “What are the Economic benefits of Economic Growth for LDC's”

- 1) **Increased Standard of Living:** Better education, improved health services, increased life expectancy, better housing, incomes should improve.
- 2) **Employment:** Increased opportunities for employment through increased demand.
- 3) **Increased Resources Available to the Governments:** Tax revenue will allow the government scope for further investment .
- 4) **Alleviation of Poverty:** More schools and houses and other essentials services will help reduce poverty.
- 5) **Investment in Research & Development:** More monies should become available for investment which will increase economic growth.

Economic Costs of Economic Development to LDC's

- 1) **Unfair Distribution of Benefits / Widening poverty gap:** The increased wealth may not trickle down to the people who most need it.
- 2) **Costs to Environment:** Increased pollution, Disfigurement of the landscape; large scale urban sprawl.
- 3) **Migration:** Large scale movement from rural to urban areas. Loss of traditional values.
- 4) **Welfare may not Improve:** The increase in wealth may have been brought about through changed working practices ; movement of the population ; crime in areas etc.
- 5) **Scarcer Resources:** By achieving economic development these countries further use up the scarce resources of the world.

Advantages for the Irish Economy of Increased Growth Rates in LDCs

- 1) **Increased Exports or Larger Market:** With higher incomes people in LDCs may be able to buy more exports resulting in increased economic growth in Ireland.
- 2) **Lower Irish Consumer Prices:** LDCs may be able to sell their commodities in Ireland at cheaper prices than domestically produced goods.
- 3) **Employment:** If exports increase then the opportunities for jobs in Ireland increases.
- 4) **Less Need for Irish State Aid:** If LDCs experience growth then this may reduce the need for the Irish government to fund development / the government can use this money for something else.
- 5) **Disposable Incomes in Ireland:** There may be less need to give financial aid and so Irish citizens may have increased disposable income.
- 6) **Economies of Scale:** If Irish firms increase production to supply the LDCs they may benefit from economies of scale.

Disadvantages for the Irish Economy of Increased Growth Rates in LDCs

- 1) **Re-location of Companies:** Some MNCs / Irish firms may re-locate to LDCs resulting in unemployment in Ireland.
- 2) **Greater Import Bill:** If the goods from LDCs are cheaper it may result in increased imports, a higher import bill, job losses in Ireland.
- 3) **Increased World Pollution:** Economic growth may cause increased pollution with the consequent necessity of Ireland having to address this / increased carbon emissions.

Social Costs of Economic Development

Social Costs: are the cost that society has to pay for the existence of a particular good or service

Examples of Social Costs

- 1) **Pollution of Air or Water:** When businesses dispose of waste products from the production process in a lake beside it killing wildlife.
- 2) **Disfigurement of the Landscape:** The construction of roads configures the landscape
- 3) **Possible loss of Cultural Heritage:** The construction of the M3 through the hill of Tara
- 4) **Traffic Congestion:** This causes stress, further air pollution and noise pollution
- 5) **Reduction in Public Amenities:** Communities have less public spaces like parks, playgrounds etc.
- 6) **Global Warming:** Increased carbon emissions affects global weather patterns

Oil Prices rose steadily last year. State two economic reasons for this development. Give one social cost and one social benefit of the rising prices.

Reasons

- 1) **Greater Demand for Oil:** Newly industrialised countries such as China, India (BRIC).
- 2) **Affluence/Economic Growth:** with higher disposable incomes/greater purchasing power, as a result of economic growth there is a greater demand for bigger vehicles, more airline travel driving up oil prices.
- 3) **Reserves of Oil Declining/ High Cost of Extraction:** Oil is a non-renewable resource.
- 4) **Green Taxes/Excise Duties:** In many countries a percentage of the price is a form of taxation.
- 5) **Lack of Production in Middle East;** e.g. Iraq conflict, political uncertainty.
- 6) **Speculation:** investors are speculating on future prices of oil in world markets.

Social Costs

- 1) **Environmental Damage:** Oil exploration increases as reserves run low (Irish coastline)/destroying rain forests in order to grow crops for bio fuels.
- 2) **Loss of Excise Duty:** If people cut back on use of oil, government loses tax revenue.
- 3) **Increasing Inflation:** The rising price of oil has added to inflationary pressures in some economies and a consequent fall in economic growth.
- 4) **Rising World Food Prices:** As countries switch production to crops for bio fuels, food prices rise.
- 5) **Shortage of Food:** particularly in developing nations.

Social Benefits

- 1) **Environment:** there may be a reduction in pollution as people cut back on use thus helping environment/greater economy in the use of oil.
- 2) **Public Transport:** If oil costs rise consumers may be more willing to use public transport.
- 3) **Less Traffic Congestion:** Consumers cut back on use of cars.
- 4) **Incentive to Source Alternative Sources of Energy:** As oil becomes expensive other sources of energy may become a more viable solution.

What are the Social Effects of Constructing New Roads in Ireland

Social Benefits

- 1) **Traffic Congestion:** With new roads, traffic congestion in an area may ease.
- 2) **Less Stress:** With fewer delays, stress for travelers may be reduced.
- 3) **Shorter Traveling Time:** Better roads may make it possible for shorter commuting time to work or school.
- 4) **Improvement of Infrastructure:** With the infrastructure improving, attracting new industry may be easier.
- 5) **Enhanced Environment:** If new roads by-pass towns, it may allow the towns to redevelop and enhance their physical environment to the benefit of all citizens.

- 6) **Toll Road Revenues:** If the roads are toll roads, this will bring revenue to the government in the form of VAT receipts and eventually ownership may pass to the state.
- 7) **Improved Safety:** Newer roads may improve safety and help reduce fatalities on the roads.

Social Costs

- 1) **More Pollution:** Greater noise and increased emissions for those that live close to the new roads.
- 2) **Increased Payment:** If the new roads are toll roads then the driver must now pay for their use which was free beforehand.
- 3) **Increase in Land Prices:** Land Prices adjacent to these new roads may increase, causing difficulty to those who may wish to buy land.
- 4) **Damage to local Environment:** The landscape through which the new roads are constructed may be disfigured.
- 5) **Disruption to Local Communities:** The new roads may effect the nature of the community life for existing communities.