Costs of Production

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Economics
Note 6 • Leaving Cert • 5th Year

JT Economics

The Business Guys

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Introduction

In later hound outs we will discuss market structures. Market structures identify the different types of firms that can exist in an economy. It is important to remember that, in theory, the costs of production, what we are studying now, are the same for any type of firm that can exist in an economy. While each firm faces different numerical costs, the theory behind these costs is the same for all firms in an economy.

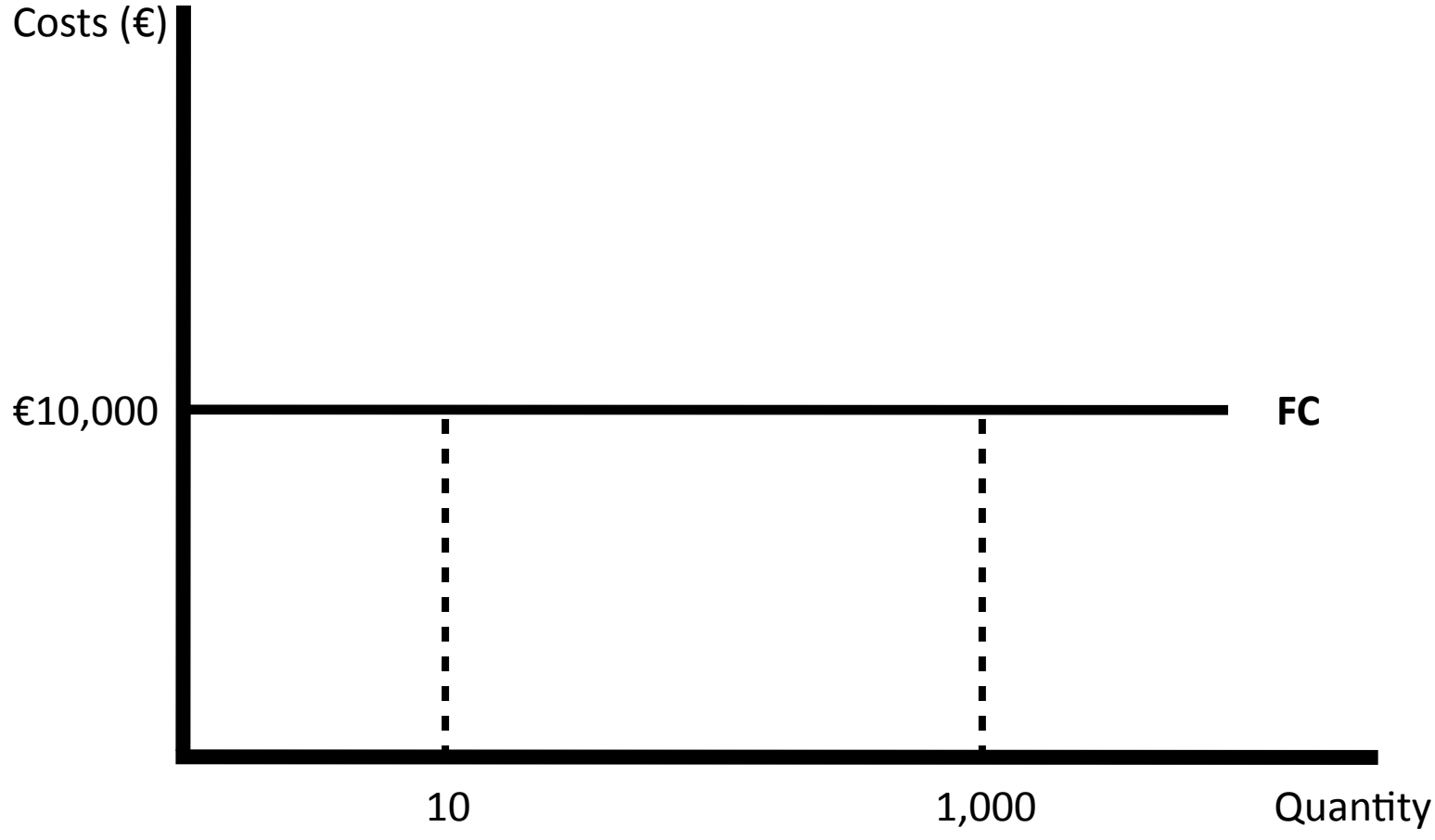
Fixed Costs: are costs that remain the same irrespective of the level of output.

E.g. Rent, Loan repayments etc.

If I buy a computer factory, I will have to get a loan from the bank to provide me with the necessary money to purchase that factory. These loan repayments are a fixed cost as I have to give the bank a set or fixed amount of money every month. E.g. my loan repayments are €10,000 per month. Whether I produce a million computers per month or none, I still have to pay the bank this €10,000.

Therefore this loan repayment does not change with the amount of output I produce and as such is an example of a fixed cost.

Fixed Costs Curve



The graph overleaf shows that fixed costs do not change as output changes and as such is a horizontal line. Whether I produce 10 units or 1,000 units, my fixed costs remain constant at €10,000.

Variable Costs: are costs that change that output changes

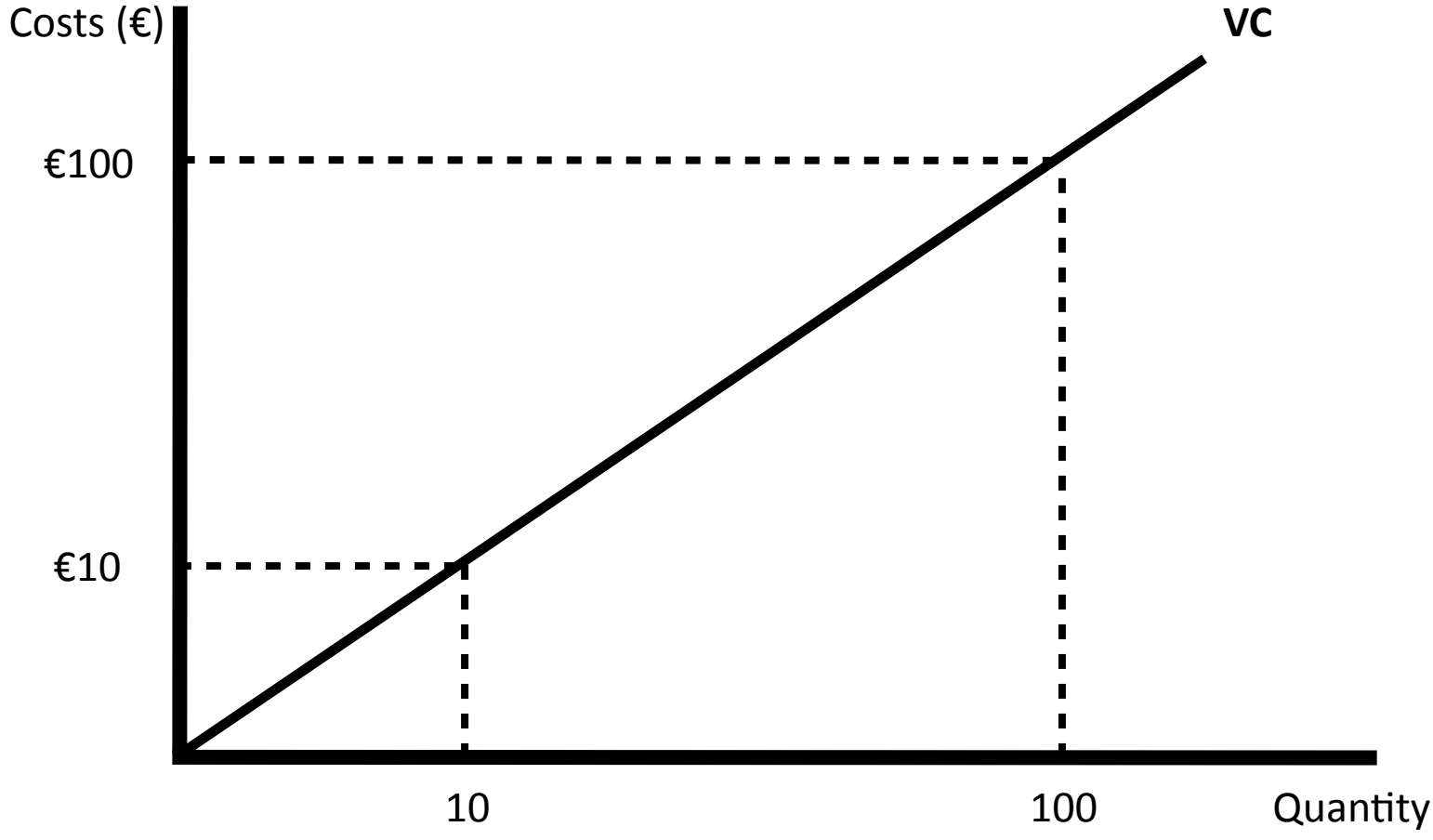
E.g. Electricity costs, input costs, labour.

Staying with the computer factory example, if I am currently producing 1,000 computers per month and I wish to produce 2,000 computers month, I have to buy more plastic and microchips, I have to keep the factory open longer and as such use more electricity to power the machines and lights etc, and I have to pay my workers more as they are working longer or hire new workers which again causes my wage bill to increase.

Therefore, as output expands Variable Costs rises.

As output falls Variable Costs fall.

Variable Costs



The graph overleaf shows that variable costs change as output changes.

It is important to note that at 0 output, variable costs are 0.

As output rises variable costs rise and as output falls variable costs fall.

As we move from producing 10 units to producing 100 units our variable costs have changed from €10 to €100. An increase in output causes an increase in variable costs.

But conversely, if we move from producing 100 units to producing 10 units our variable costs fall from €100 to €10. A decrease in output causes a decrease in variable costs.

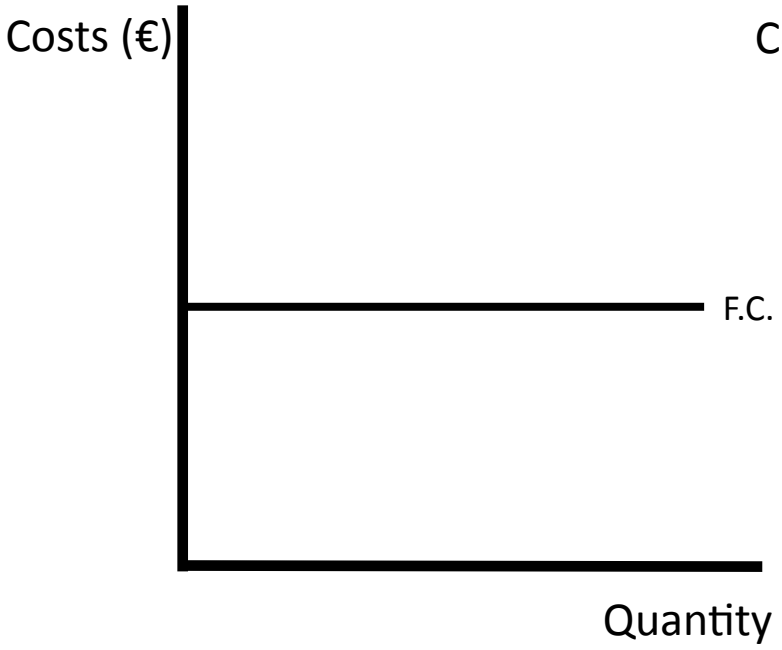
Total Costs: Is the entire cost of production faced by the firm

Mathematically
TC = FC + VC

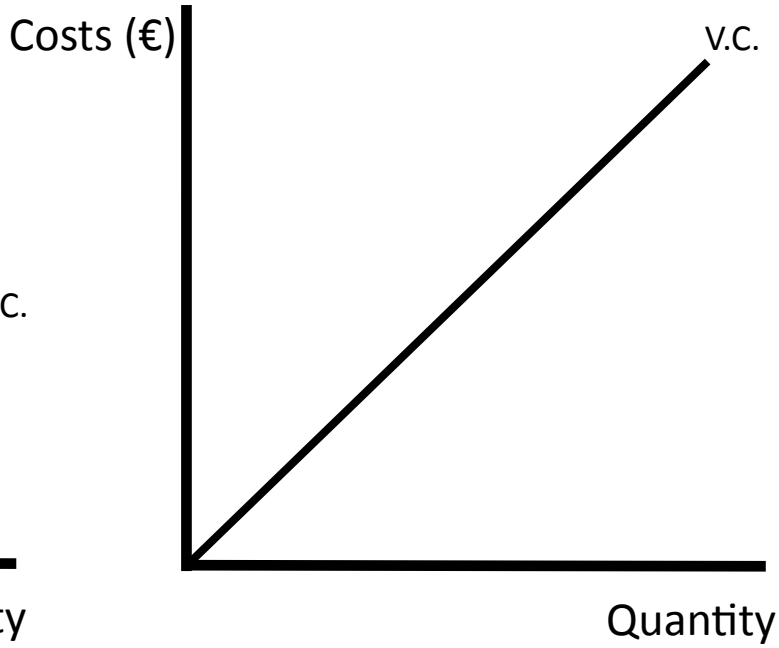
Total Costs is simply the addition of Fixed Costs and Variable Costs.

Let's take another look at our fixed and variable cost curves.

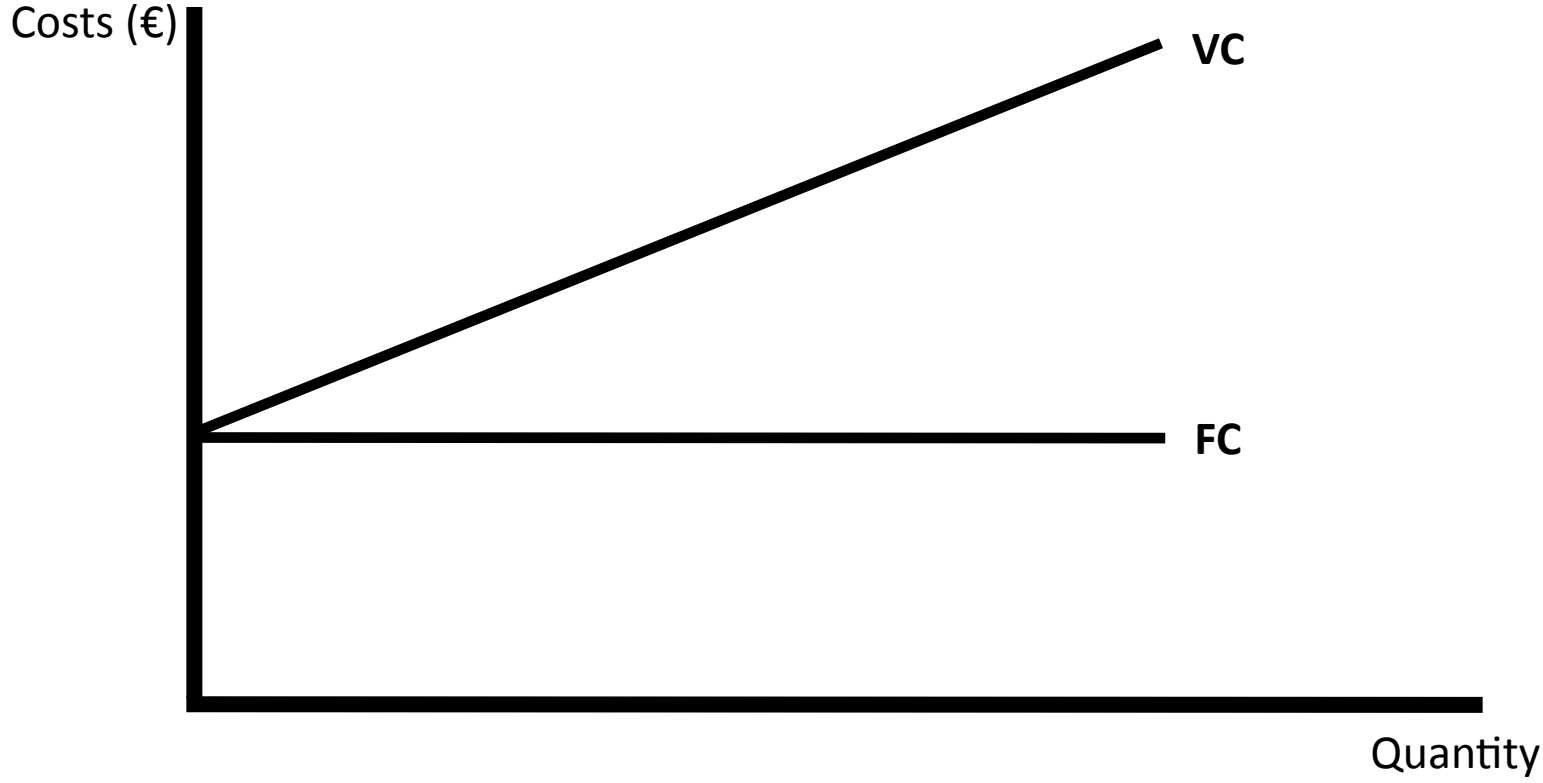
Fixed Costs



Variable Costs



If we add the two curves above we get the curve overleaf.

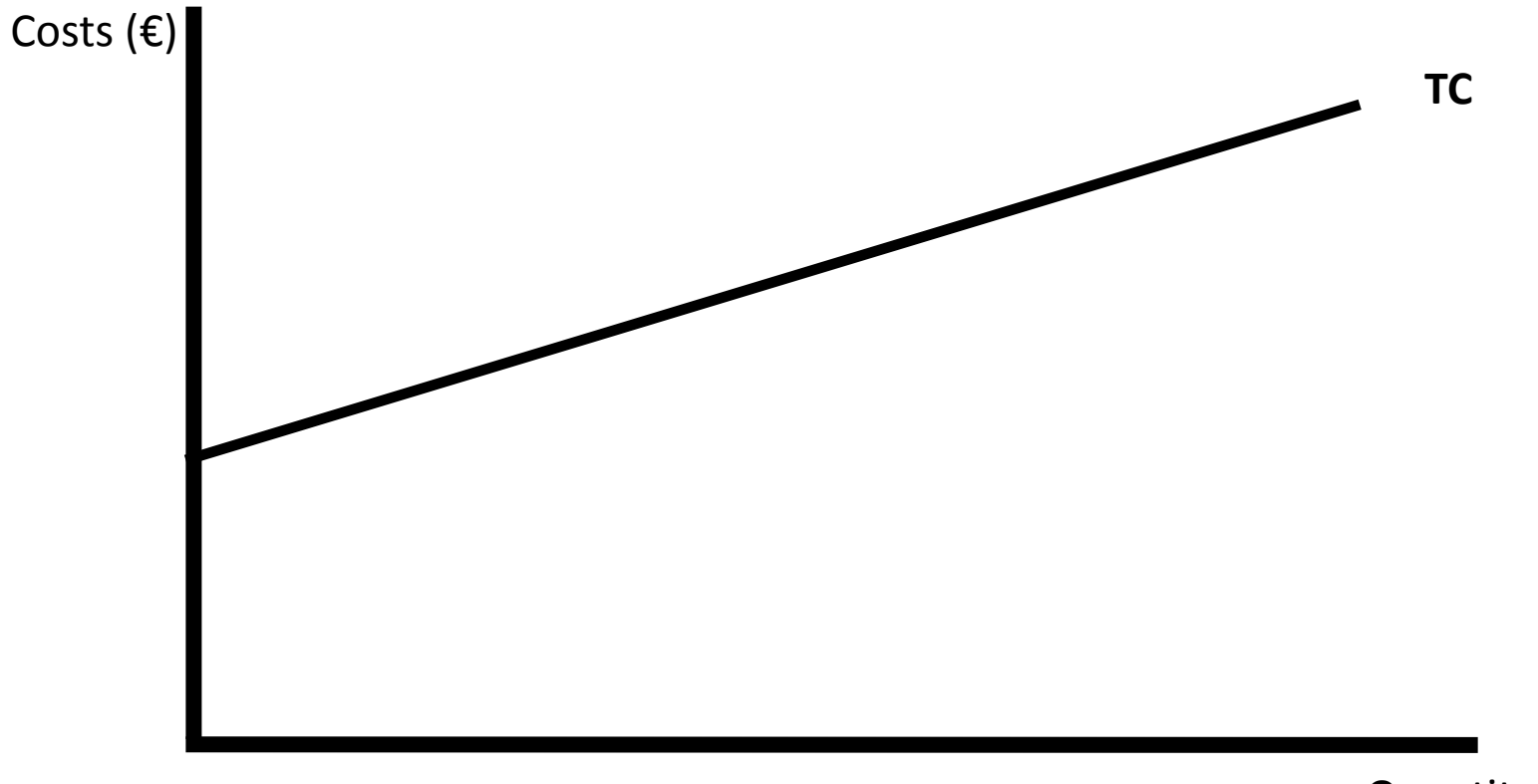


The graph above shows the addition of Fixed Costs and Variable Costs. In our definition for Total Costs we said that

TC = FC + VC

Therefore, if we slightly change the graph above we get our graph for Total Costs.

Total Costs Curve



Average Fixed Costs

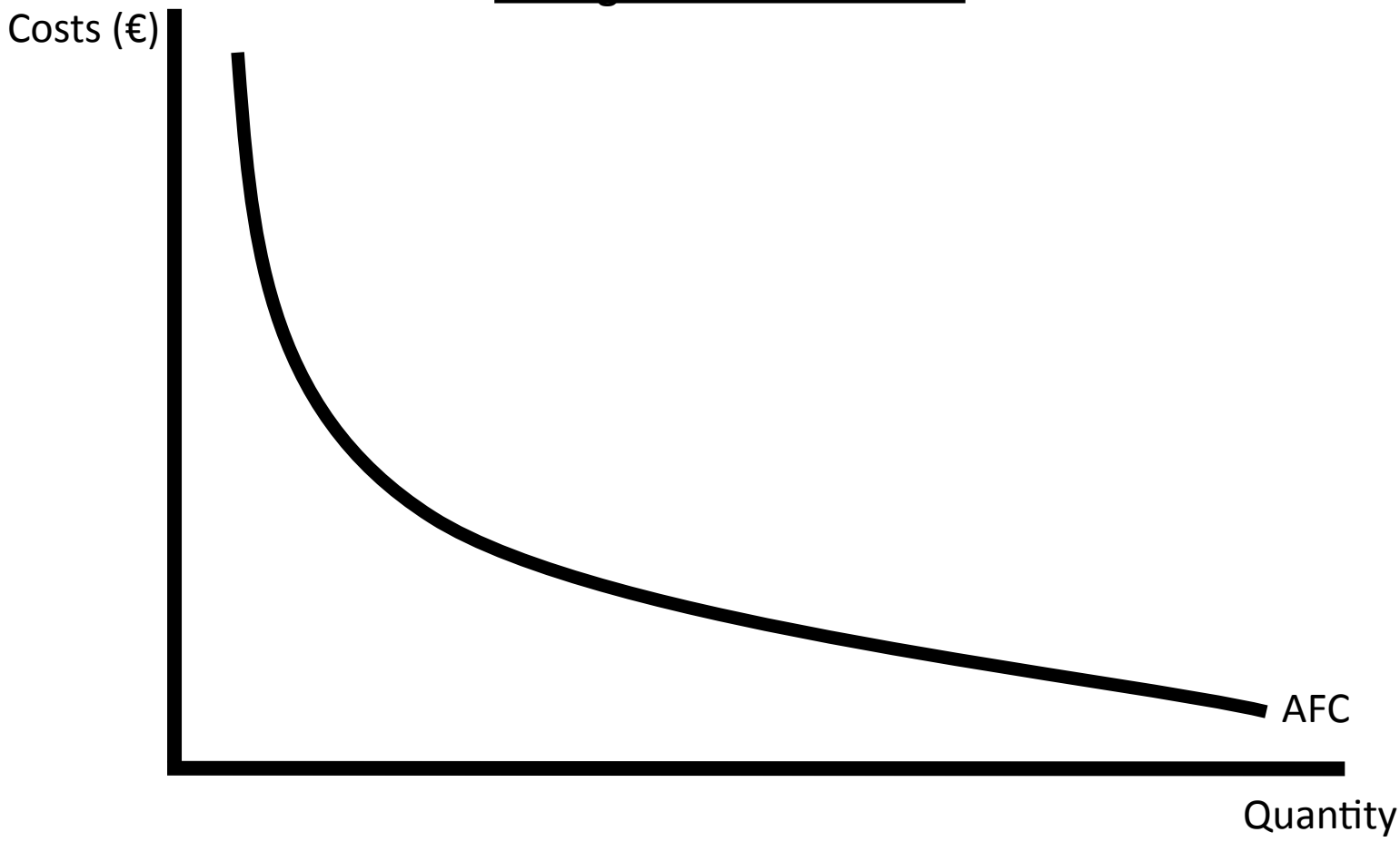
Average Fixed Costs (AFC): are the fixed costs per unit of output.

Mathematically

$$AFC = \frac{FC}{Q}$$

It is calculated by dividing Fixed costs by output (quantity).

Average Fixed Costs Curve



The graph above shows that AFC falls steeply at the start and then begins to flatten. It continues to fall as output increases but at an increasingly slower rate.

This is due to the fact that, as increasing amounts of output are produced, fixed costs are being spread over a greater range of output.

AFC can never reach zero.

Remember Average Fixed Costs is calculated by dividing Fixed Costs by quantity.

Going back to the computer factory example, our fixed costs were €10,000. See the table below.

Average Fixed Costs		
Quantity of Output	Fixed Costs	Average Fixed Costs (AFC)
1	€10,000	€10000.00
2	€10,000	€5000.00
3	€10,000	€3333.33
4	€10,000	€2500.00
5	€10,000	€2000.00
6	€10,000	€1666.67
7	€10,000	€1428.57
8	€10,000	€1250.00
9	€10,000	€1111.11
10	€10,000	€1000.00

We can see from the table above that AFC falls steeply initially and then its reduction gets smaller and smaller as output increases.

Remember Fixed Costs is a number that does not change. To compute AFC you divide fixed costs (a constant) by output, q, (a number that is getting bigger)

Therefore, as Q rises and fixed costs remains the same, AFC must fall.

Average Variable Costs

Average Variable Costs (AFC): are the variable costs per unit of output.

Mathematically

$$AVC = \frac{VC}{Q}$$

Average Variable Costs are calculated by dividing Variable costs by output.

Before we have a look at a numerical example, we will quickly discuss Marginal Physical Product.

Marginal Physical Product (MPP): is the extra output that is generated by employing an extra unit of a factor of production.

We will cover this concept in much greater detail in a later handout, but for now all it is, is the extra amount of output that is made from hiring an extra worker.

E.g. If the total amount of output that a firm produces in a week is 100 computers and they hire an extra worker and now their output is 110 computers per week. In this case the MPP is the extra 10 computers that the extra worker was responsible for producing.

Now let's look at a numerical example. Again let's consider the computer factory example which pays its employees €1000 per week and furthermore we assume that this firm has no other Variable Costs. (This is a simplification but is useful for our analysis)

Number of Workers	Variable Costs(Weekly)	Total Output (Computers)	Marginal Physical Product (MPP)	Output per worker	Average Variable Cost (AVC)
1	€1,000	6	-	6	€166.67
2	€2,000	16	10	8	€125.00
3	€3,000	31	15	0.333333333333	€96.77
4	€4,000	56	25	14	€71.43
5	€5,000	86	30	17.2	€58.14
6	€6,000	106	20	7.666666666666	€56.60
7	€7,000	124	18	7.714285714285	€56.45
8	€8,000	140	16	17.5	€57.14
9	€9,000	154	14	7.111111111111	€58.44
10	€10,000	166	12	16.6	€60.24

Points to Note

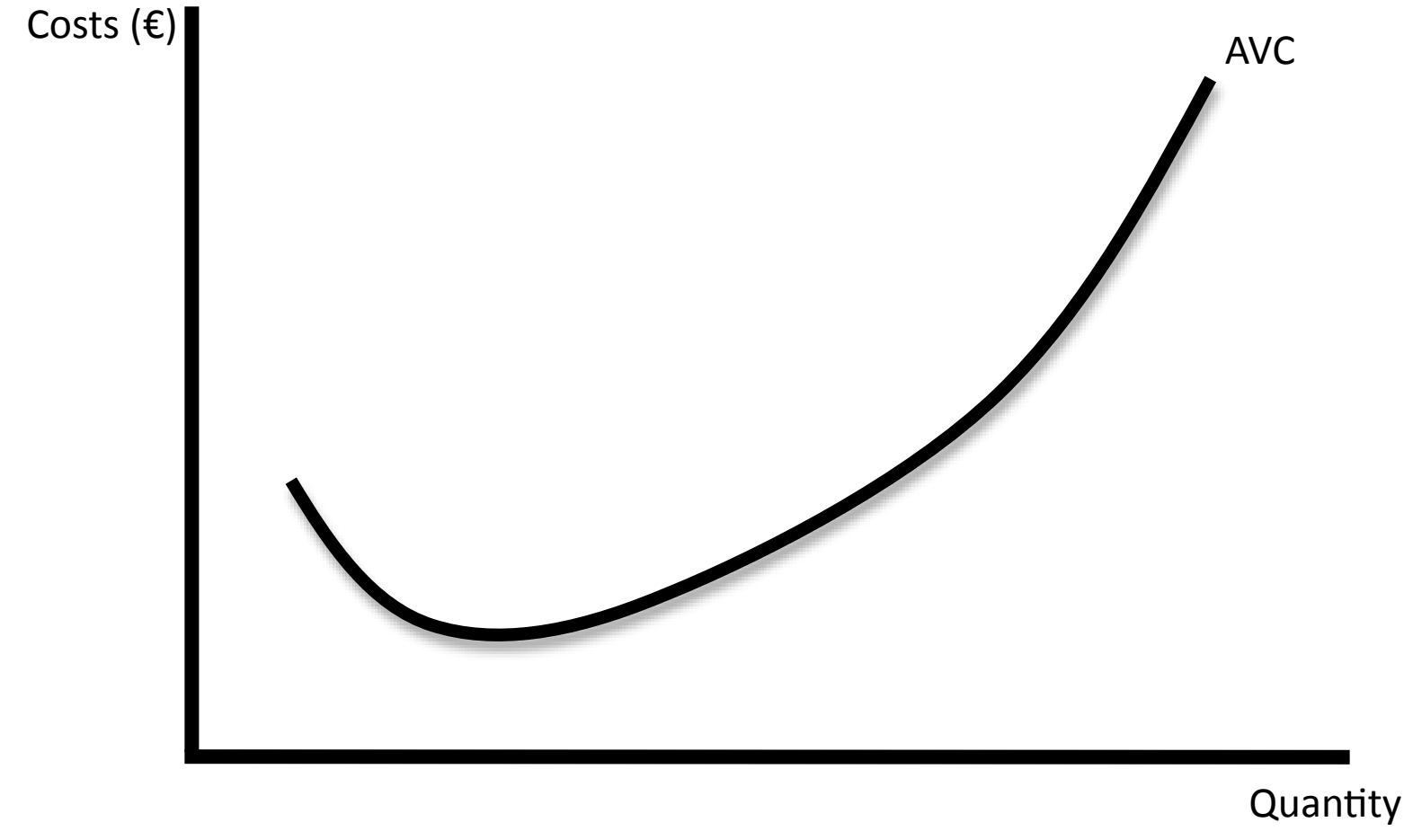
1) The first worker produces 6 computers.
2) The second worker adds more to total output than the first worker.

3) The MPP of the third worker is 15 computers, which is greater that the MPP of the second worker,10 computers.

Up to and including the fifth worker, the extra output produced by each extra worker (MPP) is increasing. This is due to the increased specialisation of labour. However after the fifth worker, the MPP of each worker is less than the worker previous. This is due to the Law of Diminishing Marginal Returns.

The Law of Diminishing Marginal Returns: states that as extra units of a variable factor of production are added to a set sized fixed factor of production, eventually a point will be reached when the extra output caused by the last unit of the variable factor employed begins to decline.

Average Variable Cost Curve



The graph above shows that AVC falls initially and then rises quickly as greater quantities of output are produced. It slopes downward due to the increase in the degree of the specialisation of labour (helps reduce cost

per unit) and slopes upwards again due to increasing VC per unit because of the Law of Diminishing Marginal Returns.

Average Total Costs

Average Total Costs is invariably referred to as Average Cost and as such I will adopt that convention for the rest of these notes.

Average Cost (AC): are total costs per unit of output.

Mathematically

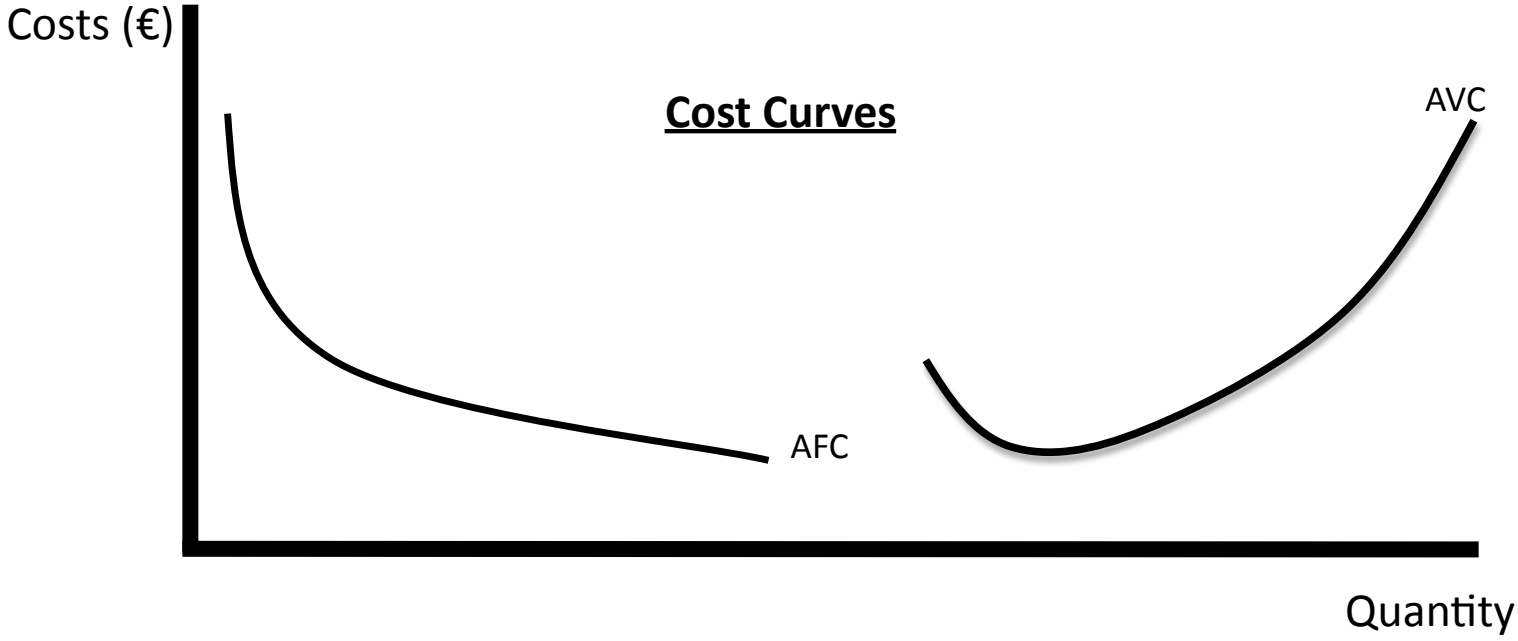
1) **AC = FC + VC**

or

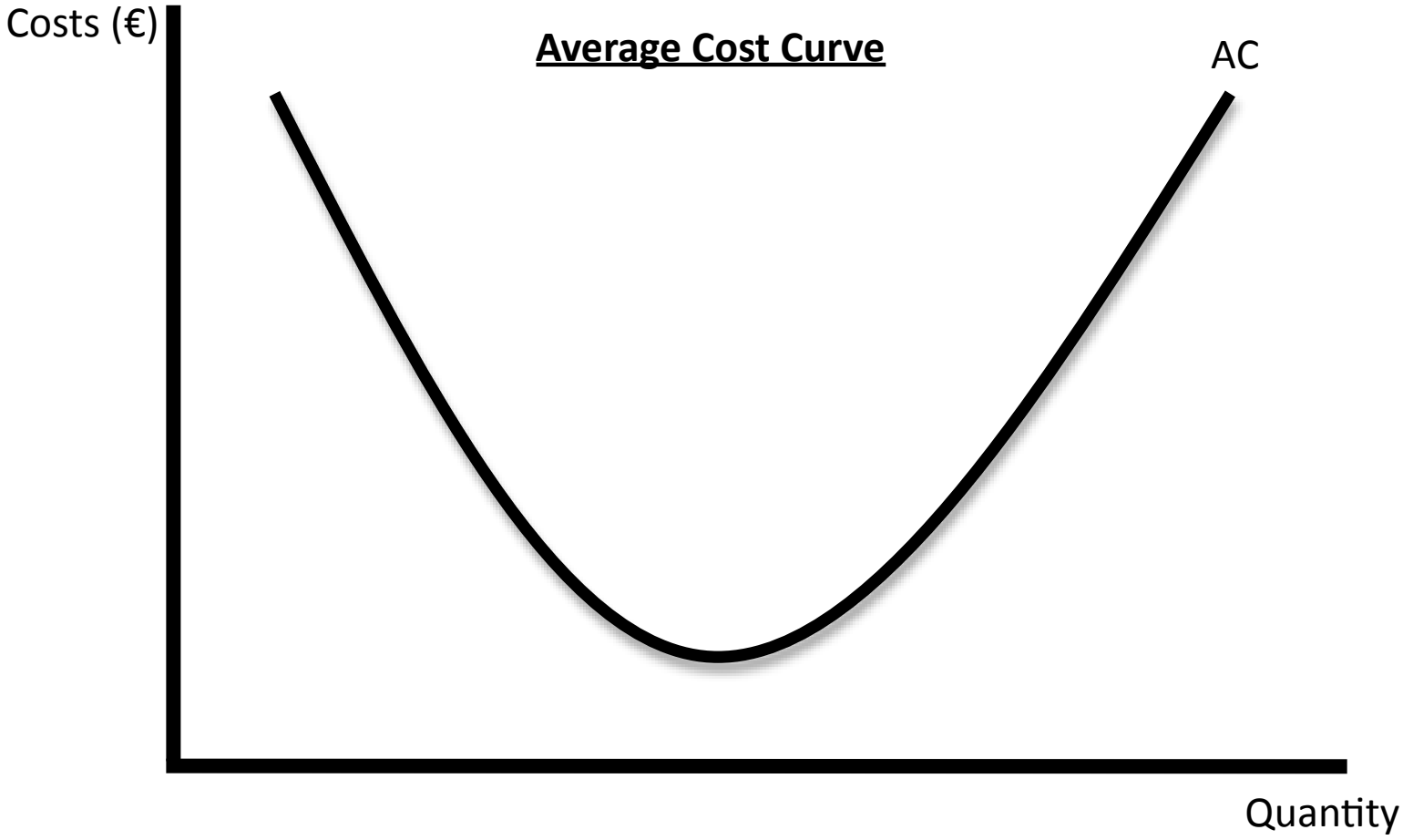
2) $\mathbf{AC = \frac{TC}{Q}}$

If we take the first formula for calculating AC, we see that it is simply the addition of AFC and AVC.

If we draw these different curves separately on the same graph we get what we see below.



Now, if we combine the two curves we get the Average Cost Curve.



We can see from the diagram that the Average Cost (AC) curve is U-shaped but it is necessary to understand why this curve is U-shaped.

Shape of the Average Cost Curve

Average Cost is made up of Average Fixed Cost and Average Variable Cost

AC = AFC + AVC

The AC curve is U-shaped for the following reasons

The AC curve initially slopes down due to

1) The Spreading out of Fixed Costs over a Greater Range of Output.
2) The Increased Specialisation of Labour: As a firm increases output it hires more staff. As extra staff are hired each member of staff does one specific job. That is, they specialize in one type of work. This increases the efficiency of the production process and as such manifests itself as a reduction in costs.

The Average Cost (AC) curve slopes upwards again due to

1) The Law of Diminishing Marginal Returns: As more and more workers are added to a factory, eventually the extra output caused by each extra worker falls. The company is paying the same amount of money for less work being done. This manifests itself as an increase in costs and causes the AC curve to slope upwards.

Even though it may not be explicitly obvious, the Average Cost curve is a measure of the efficiency of production for the firm. The cheaper a firm can produce each product, the more efficient that firm is. This is the definition or the yardstick with which economists use to efficiency.

Marginal Cost

Marginal Cost (MC): is the addition to Total Cost as a result of producing one extra unit of output

Mathematically

1) $\mathbf{MC = TC_2 - TC_1}$

or

2) $\mathbf{MC = \frac{\Delta TC}{\Delta Q}}$

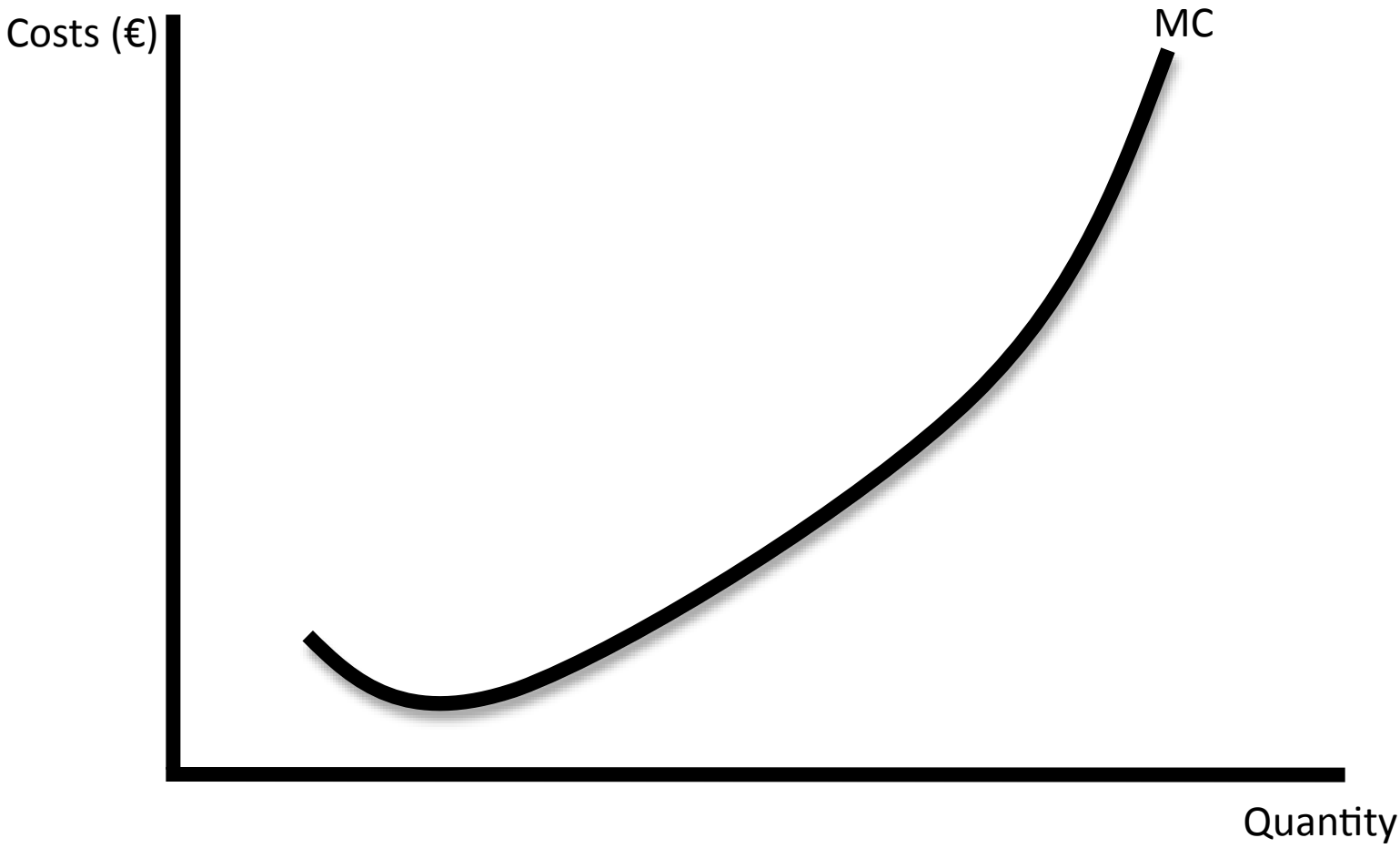
Where the Greek letter Δ (pronounced "Delta"), represents "the change in" a variable.

E.g. If the TC of producing 100 computers is €20,000. If the TC of producing 101 computers is €20,500 the marginal cost of the 101st computer is

€20,500 - €20,000 = €500

MC = €500

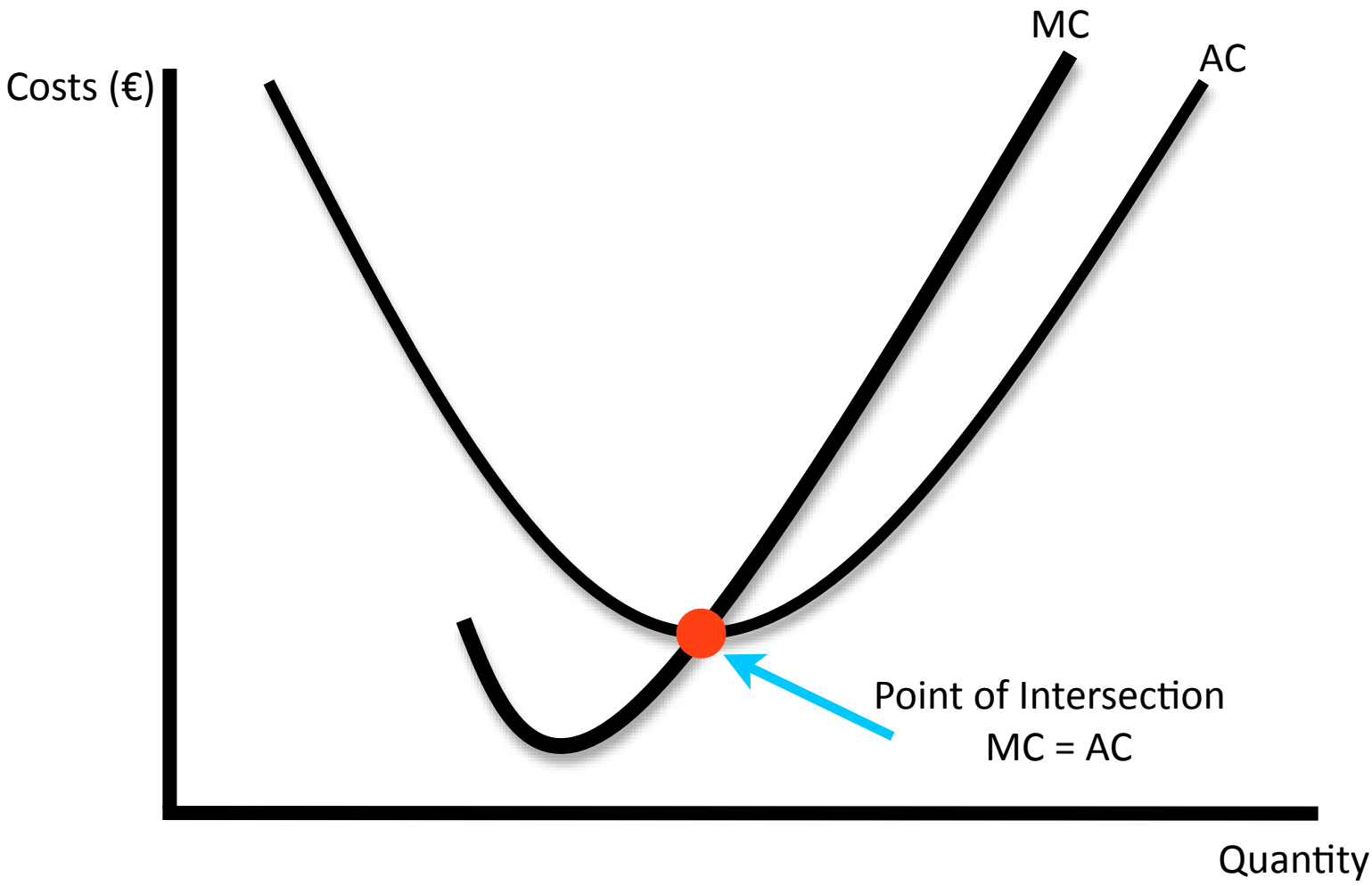
Marginal Cost Curve



Explanation

The Marginal Cost curve slopes downward initially due to the extra returns from increasing specialisation of labour and then begins to rise again due to The Law of Diminishing Marginal Returns.

The Relationship between Marginal Cost and Average Cost



If you look at the graph above you will see that when MC is less than AC, AC is falling. When MC is greater than AC, AC is rising. Where they cross, MC = AC.

1) When MC < AC, then AC is Falling
2) When MC > AC, then AC is Rising
3) When MC = AC, then AC is at a Minimum

The Marginal Cost (MC) curve crosses the Average Cost (AC) curve at the minimum point of the Average Cost (AC) curve.

This is because at low levels of output, MC is below AC causing AC to fall. But, after the two curves cross, MC rises above AC. For this reason AC **must** start to rise again.

Hence this point of intersection (MC = AC) is the minimum point of the AC curve.

The Short Run and the Long Run

So far all of the cost curves that we have been discussing have been in what is called the short run.

The Short Run (SR): is a period of time where at least one factor of production is held constant.

The idea here is that a firm cannot change everything about how it does business quickly. That is it cannot change the size of its factory, where it is located, the number of machines it has, what it produces overnight. Some factors of production take a long time to change.

So if a computer firm looks at all its production processes and believes that it will take five years to change everything about how it does business, then it's short run is five years long.

Remember, the Short Run is a period of time where at least one factor of production is held fixed or constant.

The factor of production that takes the longest time to change is usually its Fixed Capital.

E.g. Buildings, machines etc.

Therefore the Short Run is usually the period of time it takes a company to change its quantity of capital stock.

Also, the Short Run is specific to each different company. For our computer company the Short Run was five years long. However for a hotdog vendor, he could buy a new hotdog cart in three months or so. So his SR is three months.

Any amount of time longer than the short run enters into the Long Run.

The Long Run (LR): is a period of time long enough for all factors of production to be variable.

In the Long Run every factor of production is variable. The size of the factory, the number of machines etc.

Therefore, if every factor of production is variable in the LR, there are no Fixed costs in the LR.

Here is where we run into a problem. We have just said that there are no Fixed Costs in the LR. But at every time that the firm is producing, it always faces fixed costs. So how can the LR even exist?

In practice we say that the LR is a series of consecutive short runs. The analogy below should help explain.

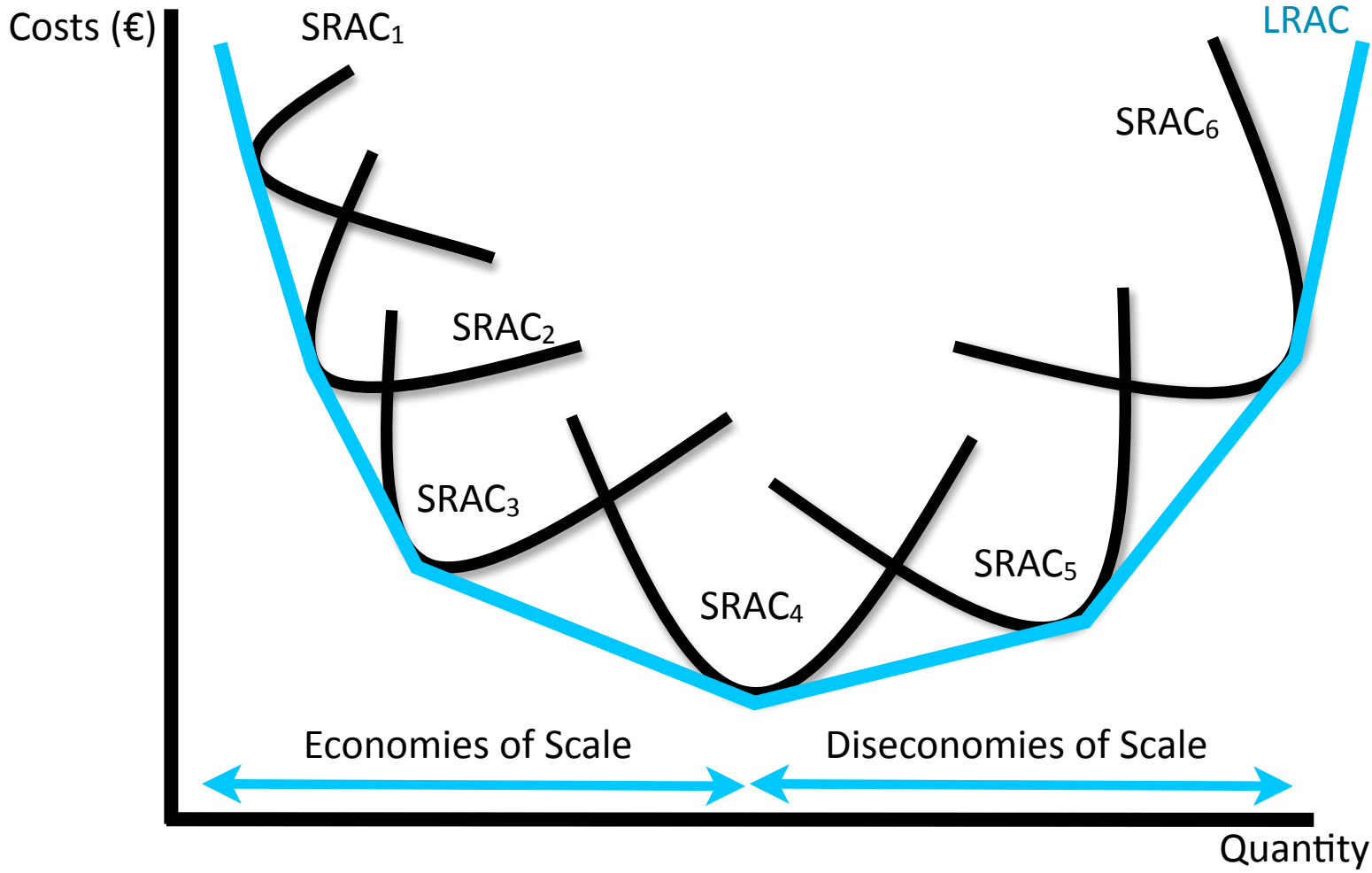
We go back to the factory where we were producing computers. This factory is a building which is fixed in size and the quantity of machines is also fixed. Therefore we are in the short run as at least one factor of production (Capital) is held constant. (Short Run 1). As sales increase we start to hire more workers but as we do, eventually the Law of Diminishing Marginal Returns sets in which causes our AC curve to rise. At some point we must move to a larger factory and buy more machinery to accommodate our extra workers and as such make them more efficient. So we move to a larger factory, buy more machines and start again (Short Run 2).

Again as sales increase we hire more workers, the Law of Diminishing Marginal Returns sets in, AC rises and we move to a bigger factory, buy more machines and start again (Short Run 3).

This whole process continues at infinitium until the firm closes.

Therefore, if we put all our Short Run Average Cost (SRAC) curves in sequence we get the Long Run Average Cost (LRAC) curves.

The Long Run Average Cost Curve (LRAC)



The Shape of the Long Run Average Cost Curve

From the above diagram we can see that by joining all of the lowest points on each of the SRAC curves we get the LRAC curve.

Again it is U-shaped. It slopes down at the start due to economies of scale and then slopes upwards due to diseconomies of scale.

ECONOMIES OF SCALE

Economies of Scale: are the forces at work which result in a reduction of the Long Run Average Costs (LRAC) of production as the firm or industry expands in size.

These Economies of Scale can be either Internal or External

Internal Economies of Scale: are forces within a firm which cause the average / unit costs of that firm to decline as the firm grows in size.

In other words the internal economies of scale represent the internal advantages to the firm of large scale production.

INTERNAL ECONOMIES OF SCALE

1. **Increased Use of Specialised Machinery:** A firm may be able to buy or use more specialised equipment or machinery resulting in a reduction in unit costs of production.
2. **Construction Economies:** Large plants cost less per cubic foot than smaller ones. E.g. If factory A is twice the size of factory B, it doesn't mean that factory A cost twice as much to build as factory B.
3. **Economies in the use of Labour:** If a particular job can be separated into separate and distinct components it may result in a reduction in costs. A large firm is more likely to have specialized workers for specialized jobs. This means workers skill increases. Therefore, output is increased and the cost per unit of output falls.
4. **Indivisibility Problem Reduced:** If the volume of production increases the unit cost may be lower e.g. glass-making furnaces may operate around the clock to save costs of cooling and re-heating.

5. **Production Process Economies:** A large firm may be able to run one process into the next without costly discontinuities. e.g. a supermarket could have its own bakery; where as a small newsagent would have to buy bread from a bakery, thus increasing costs.

6. **Economies in the use of Raw Materials:** The bigger the firm the wider the range of products. If a raw material doesn't need to be used in one section, it can be used in another.

7. **Financial Economies:** Larger firms may avail of lower interest rates from financial institutions. Also larger firms have a better chance of acquiring a loan.

8. **Purchasing Economies:** Large firms are more likely to secure favourable trading terms as they buy in bulk. Larger quantities bought may result in bigger discounts

9. **Economies in Distribution:** A firm with a high volume of sales can organize a more efficient transport and distribution system than a small firm with only a few deliveries to make. This results in lower unit cost of delivery.

10. **Marketing Economies:** Bigger firms have bigger advertising campaigns. This results in savings in the cost of advertising e.g. NIKE advertising globally and as such it's advertising costs per unit are lower as they produce a higher volume of goods.

11. **Managerial Economies:** As a firm grows, management costs may not grow in proportion to the growth in the firm.

External Economies of Scale: These are forces outside a firm which cause the average costs of production of that firm to decline as the industry grows in size.

While internal economies of scale refer to what happens within the individual firm, external economies are the advantages of large scale production which are common to all firms in the industry.

EXTERNAL ECONOMIES OF SCALE

1) **Better infrastructure:** As roads / communications etc. improve they will benefit all firms.
2) **Bulk Purchasing of Raw Materials by the Industry:** As an industry expands firms require more materials / components. These may become cheaper as suppliers expand to meet the increase in demand.
3) **Development of Specialist Firms:** Some of the jobs, which a firm once performed may be, contracted out to specialist firms at reduced costs e.g. the supply of linen to hotels.
4) **Development of separate R & D units:** As industry becomes very large R&D agencies may set up to provide facilities for individual firms / The costs of research may be shared between firms or with a public body like Teagasc.
5) **Suppliers of Machinery:** Manufacturers of machinery will be encouraged to design, develop and produce machines for expanding industry. These advanced machines will help reduce costs.
6) **Development of Training Courses:** Workers in expanding industries may be provided with training courses by VEC's, FÁS helping them become more efficient.
7) **Supports from Public Bodies:** Some public bodies help particular industries in general e.g. Bord Failte / FAS may help such firms in the tourism industry.
8) **Subsidiary Trades may develop:** As an industry grows subsidiary trades may develop to service the expanding industry e.g. Hotels, B&B's locating close to airports, seaports

DISECONOMIES OF SCALE

Diseconomies of Scale: Are the forces at which result in an increase in the Average Cost of production as the firm or industry increases its size of operation.

These Diseconomies can be either Internal or External

Internal Diseconomies of Scale: Are the forces at work within a firm which cause the Average Cost of production to rise again once the firm reaches a certain size.

In other words, they are the disadvantages within the firm of large scale production.

INTERNAL DISECONOMIES OF SCALE

1. **Managerial Diseconomies:** The bigger the firm, the harder it is to manage. The directors of the firm are a small group of people who may not know all the necessary information which leads to communication problems.
2. **As a Firm expands, the interest of workers and management may conflict:** Workers may feel like a cog in the wheel of production.
3. **Specialisation of Labour:** Although job specialisation ensures that workers become better at their job, it may mean that workers become bored with the constant repetition of the same tasks.
4. **Higher proportion of Non-Productive workers:** As the firm grows in size it will employ full time accountants and solicitors etc. These workers are necessary but do not increase output. This is not where the firm gets its money.
5. **Unreasonable Worker Demands:** Workers may feel that, due to the size of the firm, they are better able to increase wages to unreasonable levels.

EXTERNEL DISECONOMIES OF SCALE

External Diseconomies of Scale: Are the forces at work, outside a firm, which cause Average Costs to rise as the industry expands in size. These are common to all firms in the industry

In other words, they are the disadvantages of large scale production common to all firms in the industry.

1. **Increased demand for raw materials:** As demand rises, price rises thus increasing costs to the firm. Inferior goods may be used also.
2. **Increased demand for Labour:** Skilled labour becomes short in supply causing wages to rise. The firm may be forced to employ less skilled workers. Either way, costs will rise.
3. **Greater need for Infrastructure:** As an industry expands, greater demands are made on the economy's infrastructure. The current maybe inadequate for the demands being made.

Assumptions underlying the Law of Diminishing Marginal Returns

1) **Technology Remains Constant:** The LDMR assumes that there are no advancements in technology during the production process. If a technological breakthrough does occur, the Law begins again from the start.
2) **Constant Quality:** The law also assumes that the quality of the Variable Factors that are being added to the set sized Fixed factor are the exact same as the ones that were previously added. i.e. Each worker is of the exact same skill and education level.
3) **All Factors:** The LDMR applies to all factors
4) **One Fixed Factor:** This Law assumes that at least one Factor is fixed. It only applies in the short run and varies from business to business and from industry to industry.

Discuss the Economic Advantages of Falling Costs of Production for the Irish Economy.

1) **Increased Competitiveness:** With lower costs prices may fall for Irish goods and exports may become cheaper.
2) **Lower Prices:** With lower prices inflation may fall and this may entice consumers to purchase more goods.
3) **Increased Demand:** Businesses may have increased demand resulting in increased sales, profits and a more secure future. Tax revenue to the government may also increase.
4) **Increased Employment:** With rising demand businesses may increase their demand for labour / maintain existing labour.
5) **Attract Investment / Improve International Reputation:** Lower costs for businesses will encourage expansion and attract foreign firms into Ireland.
6) **Profits may Increase:** As a result of lower costs business profits may increase, leading to an increase in CPT revenues.

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.

Social Costs

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 process 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.

Economic Development

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

Social Costs of Economic Development

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

Why Small firms Succeed in Some Markets

1) **Personal Service:** Small firms provide personal attention in the provision of certain goods and services e.g. hairdresser, plumber etc.
2) **Size of Market doesn't Justify a Large Supplier:** The restricted size of the market may not facilitate the operation of large scale business e.g. a small shop in a rural area may be viable while a large supermarket may not.
3) **Government Assistance for Small Firms:** The government may provide aid in the form of grants or subsidies for labour.
4) **Consumer Loyalty:** Small firms may have built up a reputation over the years in the provision of goods and services to its customers who may respond by being loyal to that firm.
5) **Viable Community:** Citizens in small communities may support local business so that continuity of supply is ensured e.g. a community may support its local shop so that it continues in existence.

6) **Niche or Traditional Markets:** The type of product or service being supplied might make it more suitable for a small firm. Examples include: wedding planners; handmade/ craft products; perishable products etc. A small firm may find it easier to locate close to the market where it might be difficult for a larger firm to do so e.g. roadside sellers of local produce can be flexible in choosing their location.

7) **Nature of Product:** Heavy goods which are costly to transport may be manufactured locally on a small scale to supply local markets e.g. concrete blocks

Why some Markets are Dominated by Large Firms

1) **Existence of Economies of Scale:** Larger firm benefit from the advantages of large scale production whereby unit cost falls as a firm expands in size. The nature of small firms makes it difficult to achieve such economies of scale.

2) **Existence of Barriers to Entry:** Makes it difficult for new firms entering the market e.g. Mobile phones industry; banking sector.

3) **Advertising:** The cost of using national media e.g. TV, newspapers, cinema etc. is expensive and this cost is prohibitive for small firms e.g. local supermarkets.

4) **Product Differentiation:** Investment in R & D to such an extent that small firms would not have the resources to compete.

5) **Brand Proliferation:** Large firms have the resources to invest in establishing many brands and small firms would not be able to compete on such a basis.

Outline the Benefits and Challenges for Irish SMEs Operating in Foreign Markets.

The Benefits for Irish SMEs Operating in Foreign Markets

1) **Access to Larger Markets to Increase Sales and Profits:** As Ireland is a very small market, entering foreign markets gives Irish SMEs access to more customers and more opportunity to expand. If Irish SMEs can sell more goods abroad this will boost their revenue and consequently their profits.
2) **Economies of Scale:** If they are successful in increasing sales abroad, they will be able to increase production and gain the advantages of large scale production and the benefit of economies of scale.
3) **Diversifying Risk:** Rather than being overly dependent on the home market Irish SMEs have the opportunity to have a range of customers in different markets and would suffer less should demand in the home market fall.
4) **Easier to Access Finance:** Larger firms are able to raise finance for future expansion more easily and find it easier to access credit.
5) **Government Support Available:** The Irish government may offer grants or subsidies and assistance in entering the export market through the various state agencies e.g. Enterprise Ireland

The Challenges for Irish SMEs Operating in Foreign Markets.

1) **Transport Costs:** These increase the prices of the exports. As Ireland is an island nation these costs can be significant and can make our goods more expensive.
2) **Labour Costs:** Labour costs in Ireland tend to be high which will increase costs of production and make it difficult to compete with goods produced in other countries.
3) **Exchange Rate Risks in Trading Outside Eurozone Countries:** If the Euro rises in value relative to the trading partners, then Irish exports become more expensive and this presents a challenge when Irish firms are trying to compete abroad.
4) **Language Skills:** A lack of language skills has always been a challenge for Irish business but poses more of a challenge in the emerging markets in Asia.
5) **Bureaucracy and Regulatory Hurdles in Other Countries:** These regulatory hurdles, particularly outside the EU, hinder the possibility

for Irish SMEs to expand. It is challenging for Irish SMEs to break into new markets e.g. China.

6) **Level of Costs if coming from a Small Market:** Irish SMEs don't have the benefits of economies of scale compared to large MNCs and this makes it difficult for them to attract business, based on price.

7) **Competitiveness:** If the inflation rate in Ireland is higher than that of our competitors, then this makes Irish goods less attractive abroad. Other costs e.g. insurance costs, utilities such as electricity, gas, broadband etc. are generally higher in Ireland than in other European countries –increase costs of production and will affect the competitiveness of Irish firms abroad.

8) **Accessing Credit:** If Irish firms can't get access to credit from banks to fund expansion it will make it difficult for them to enter international markets.

9) **Capacity of the Firm:** Irish SMEs may not have the capacity to meet demand for their products abroad if they successfully secure contracts.

Discuss three economic factors which influence a firm's decision on where to locate its operations within Ireland.

1) **Closeness to Similar Firms:** Many IT/ Tech companies (Google, LinkedIn, Facebook) have now located within the same area in Dublin (known as the "Silicon valley" of Dublin). The essential support services are available close by.

2) **Availability of a Skilled Workforce:** Firms need a workforce with diverse language skills / engineering skills / IT Specialists so that they can commence operations and do so with minimum training costs.

3) **Proximity to Market and Raw Materials:** A firm which relies on a steady flow of consumers must locate close to the market i.e. a boutique. A firm which relies on the usage of large amount of raw materials must locate close to the availability of these e.g. a power generating station.

4) **Well Developed Infrastructure:** Having a well developed infrastructure is crucial when firms are deciding where to locate. This includes road, rail and air transport network etc. The availability of high speed broadband is also critical in this regard.

5) **Government Incentives:** Availability of Advance Factories together with attractive grants are another consideration to take into account when deciding where to locate. The IDA and Enterprise Ireland provide supports.

6) **Commercial Property Prices:** With the downturn in the economy and the property crash, commercial property prices together with commercial rents have significantly reduced. This has made Ireland a more attractive place to locate industry. Google has purchased commercial property recently in Barrow Street, Dublin.

7) **Social Infrastructure:** Firms will consider the availability of schools, hospitals, parks etc so that their workforce can have a good lifestyle.

8) **Planning Laws:** Irish planning laws are flexible enough to facilitate large multinationals who wish to set up here. Such laws facilitated the construction of the Swedish Ikea outlet close to Dublin, which led to the largest retail outlet in the history of the state, being built.