Business location

Every business has to be located somewhere. A sole trader who works as a window cleaner may operate from home, whereas a multinational car company will have factories, offices and outlets in many countries. For both businesses however, where to locate may be the most important decision they make and can determine their success. It is a very expensive decision to put right later.

Factors affecting location

There are many factors that determine where a business will locate:

- Cost of site
- Availability of labour
- Proximity to raw materials
- Proximity to market
- Infrastructure
- Government incentives

Cost of site

The amount, type and cost of land are all important factors in choosing a location. The cost of land will vary greatly across regions and countries. For example the cost of a site in the South East of England will be significantly higher than a similar site in the North East. Also the kind of land may be important (e.g. avoiding areas of possible mining subsidence).

The ability to expand and to build new premises may be important. This would require the support of the local authorities for planning permission.

Availability of Labour

The availability of workers, their skill level and wage rate they need to be paid is crucial in deciding where to locate. Some businesses may need skilled labour whereas others require a large supply of lower-cost, unskilled labour.

Where labour skills are in short supply (e.g. in some high-tech industries) it often happens that similar businesses locate themselves close to each other. They might also be close to colleges and other training organisations that provide the main source of newly trained employees.

Businesses that require large numbers of unskilled workers might prefer to be located in areas of low labour costs. These are also often areas of high unemployment – where recruitment may be easier than in areas where there are labour shortages. Many multi-national companies that require large amounts of unskilled labour, such as Nike to make trainers, have located factories in SE Asia where the wage rate is very low and there are many available workers.

Proximity to raw materials

Businesses that use substantial quantities of raw materials may find it cheaper to locate near to the source of those inputs as this will reduce transport costs. Such businesses are often called "bulk-reducing" as the weight or size of the finished product is less than the combined raw materials that went into making it. Good examples include:

- Steel-producers
- Sawmills
- Sugar factories
- Oil refineries

Proximity to Market

By contrast, businesses that assemble components ("bulk-increasing") often choose to locate closer to where the customer markets are. This is because the cost of transporting the bulkier or heavier finished product is greater than the cost of transporting the raw materials or components. Good examples include:

- Breweries
- Car manufacturers
- Bakeries

In some cases moving the final product is not possible, such as for services like restaurants and high street shops. In these cases the businesses will locate at the market itself.
**Infrastructure**
Infrastructure covers the modes of transport for people, materials and information. Businesses need to ensure there is adequate infrastructure provision or costs can rise, such as extra transport costs. It is the government that is largely responsible for providing and maintaining local infrastructure.
The key infrastructure considerations are:

**Road/rail/sea and air links.** The most appropriate mode will depend on the type of business and product, but road is used by over 80% of business.

**Communications network.** For example is there mobile phone coverage and suitable telephone lines (e.g. availability of broadband internet access).

**Access to basic facilities** such as water and electricity (and enough power).

**Government Incentives**
Government policy also influences business location. Governments often offer incentives to start new businesses, or relocate existing ones, in areas that need economic development ("regeneration"). This has led to certain areas being called enterprise zones or assisted areas where firms are offered grants or low interest loans if they locate into these economically depressed regions.
Another example is “Regional Development Agencies” which were first set up by the current government in 1999. Their aim is to:
- Encourage economic development and regeneration
- Promote business efficiency, investment and competitiveness
- Promote employment
- Provide training to the labour force to assist in growing employment
Both the UK Government and the European Commission offer financial support to businesses willing to move to areas of high unemployment. Businesses are also encouraged to redevelop “Brownfield” sites (e.g. old farms, inner city wasteland) rather than build on “Greenfield” land on the outskirts of cities.
**Stages of production**

Production within an economy can be divided into three main stages: primary, secondary and tertiary.

**Primary production**
Primary production involves the extraction of raw materials (e.g. coal, iron, agricultural commodities). Raw materials can be:
- **Extracted** – e.g. coal, iron ore, oil, gas and stone
- **Harvested / collected** – e.g. fish
- **Grown** – e.g. timber, cereal crops

There is little value added in primary production. The aim is usually to produce the highest quantity at lowest cost to a satisfactory standard.

**Secondary production**
Secondary production involves transforming raw materials into goods. There are two main kinds of goods:
- **Consumer goods** – e.g. washing machines, DVD players. As the name implies, these are used by consumers
- **Industrial / capital goods** – e.g. plant and machinery, complex information systems. Industrial and capital goods are used by businesses themselves during the production process.

In the secondary production sector, value is “added” to the raw material inputs. For example, foodstuffs are transformed into ready meals for sale in supermarkets; metals, fabrics, and plastics are transformed into motor vehicles.

There are many different industry sectors in secondary production. For example:
- Construction
- Electronic instruments
- Pharmaceuticals (drugs)
- House-building

**Tertiary production**
Tertiary production is associated with the provision of services (an intangible product). As with the secondary sector, there are many tertiary production markets. Good examples include:
- Hotels
- Private healthcare and education
- Accountants
- Tourism
**Economies of scale**

**Economies of scale** arise when the **cost per unit falls as output increases**. Economies of scale are the main advantage of increasing the scale of production and becoming ‘big’.

**Why are economies of scale important?**
- Firstly, because a large business can pass on lower costs to customers through lower prices and increase its share of a market. This poses a threat to smaller businesses that can be “undercut” by the competition.
- Secondly, a business could choose to maintain its current price for its product and accept higher profit margins. For example, a furniture-maker which could produce 1,000 cabinets at £250 each might expand and be able to produce 2,000 cabinets at £200 each. The total production cost will have risen to £400,000 from £250,000, but the cost per unit has fallen from £250 to £200. Assuming the business sells the cabinets for £350 each, the profit margin per cabinet rises from £100 to £150.

There are two main types of economies of scale: **internal** and **external**. Internal economies of scale have a greater potential impact on the costs and profitability of a business.

**Internal economies of scale**
- Internal economies of scale relate to the lower unit costs a single firm can obtain by growing in size itself.
- There are five main types of internal economies of scale.

**Bulk-buying economies**
- As businesses grow they need to order larger quantities of production inputs. For example, they will order more raw materials. As the order value increases, a business obtains more bargaining power with suppliers. It may be able to obtain discounts and lower prices for the raw materials.

**Technical economies**
- Businesses with large-scale production can use more advanced machinery (or use existing machinery more efficiently). This may include using mass production techniques, which are a more efficient form of production. A larger firm can also afford to invest more in research and development.

**Financial economies**
- Many small businesses find it hard to obtain finance and when they do obtain it, the cost of the finance is often quite high. This is because small businesses are perceived as being riskier than larger businesses that have developed a good track record. Larger firms therefore find it easier to find potential lenders and to raise money at lower interest rates.

**Marketing economies**
- Every part of marketing has a cost – particularly promotional methods such as advertising and running a sales force. Many of these marketing costs are fixed costs and so as a business gets larger, it is able to spread the cost of marketing over a wider range of products and sales – cutting the average marketing cost per unit.

**Managerial economies**
- As a firm grows, there is greater potential for managers to specialise in particular tasks (e.g. marketing, human resource management, finance). Specialist managers are likely to be more efficient as they possess a high level of expertise, experience and qualifications compared to one person in a smaller firm trying to perform all of these roles.

**External economies of scale**
- External economies of scale occur when a firm benefits from **lower unit costs as a result of the whole industry growing in size**. The main types are:

**Transport and communication links improve**
- As an industry establishes itself and grows in a particular region, it is likely that the government will provide better transport and communication links to improve accessibility to the region. This will lower transport costs for firms in the area as journey times are reduced and also attract more potential customers. For example, an area of Scotland known as Silicon Glen has attracted many high-tech firms and as a result improved air and road links have been built in the region.
Training and education becomes more focused on the industry
Universities and colleges will offer more courses suitable for a career in the industry which has become dominant in a region or nationally. For example, there are many more IT courses at being offered at colleges as the whole IT industry in the UK has developed recently. This means firms can benefit from having a larger pool of appropriately skilled workers to recruit from.

Other industries grow to support this industry
A network of suppliers or support industries may grow in size and/or locate close to the main industry. This means a firm has a greater chance of finding a high quality yet affordable supplier close to their site.

However...
Dis-economies of scale

Increasing the size of a business does not always result in lower costs per unit. Sometimes a business can get too big!

Dis-economies of scale occur when a business grows so large that the costs per unit increase. Diseconomies of scale occur for several reasons, but all as a result of the difficulties of managing a larger workforce.

Poor communication
As the business expands communicating between different departments and along the chain of command becomes more difficult. There are more layers in the hierarchy that can distort a message and wider spans of control for managers. This may result in workers having less clear instructions from management about what they are supposed to do when.
In addition, there may be more written forms of communication (e.g. newsletters, notice boards, e-mails) and less face-to-face meetings, which can result in less feedback and therefore less effective communication.

Lack of motivation
Workers can often feel more isolated and less appreciated in a larger business and so their loyalty and motivation may diminish. It is harder for managers to stay in day-to-day contact with workers and build up a good team environment and sense of belonging. This can lead to lower employee motivation with damaging consequences for output and quality. The main result of poor employee motivation is falling productivity levels and an increase in average labour costs per unit.
What can a business do about this? Possible solutions include:
- Delegation of decision-making (empowerment)
- Making jobs more interesting (job enrichment)
- Splitting employees into teams (team working)
There is also a close link between communication and motivation (which the motivational theorist Elton Mayo recognized) and so as communication becomes harder, motivation will decline. This is particularly true as managers are less able to take a personal interest in the workers.

Loss of direction and co-ordination
It is harder to ensure that all workers are working for the same overall goal as the business grows. It is more difficult for managers to supervise their subordinates and check that everyone is working together effectively, as the spans of control have widened. A manager may be forced to delegate more tasks, which while often motivating for his subordinates, leaves the manager less in control.
**Productivity & efficiency**

A business should constantly be trying to improve its efficiency. In many markets, a business needs to be at least as efficient as its main competitors in order to be able to compete and survive in the long-term. A more efficient business will produce lower cost goods than competitors and may generate more profit possibly at lower prices.

Increasing efficiency will boost the capacity of a business, assuming there is no change in the number of inputs employed. The capacity of a firm refers to how much a business can produce during a specific period of time. Where a business has efficient production, it is operating at maximum output at minimum cost per unit of output. **Efficiency** is, therefore, a **measure of how well the production or transformation process is performing**. However, this is not always easy to assess.

There are several ways to measure efficiency:

**Productivity**

This measures the relationship between inputs into the production process and the resultant outputs. The most commonly used measure is labour productivity, which is measured by output per worker. For example, assume a sofa manufacturer makes 100 sofas a month and employs 25 workers. The labour productivity is 4 sofas per person per month.

There are several other measures of productivity.
- Output per hour / day / week
- Output per machine

**Unit costs**

Unit cost (also referred to as cost per unit) divides total costs by the number of units produced. A falling ratio would indicate that efficiency was improving.

Unit costs = Total Costs / Units of output

**Stock levels**

A business will have set itself a target stock level of finished goods that it should achieve. This is calculated to satisfy the demand expected by the marketing department plans and based on what the production department thinks they can produce. If the stock level falls below this level then the productive efficiency has reduced since the output per worker has not met the planned requirements.

**Non-productive (“idle”) resources**

Which resources are not in constant use in the business? Are employees often left with nothing to do? Are machines only used for part of available time? Too many idle resources are a common sign of inefficiency in production.

**Poor quality**

There are many measures of poor quality – any of which could indicate a problem with efficiency:

- Customer complaints
- Rejected finished goods identified by the quality control department
- Customer returns of defective goods

**Ways to improve efficiency**

There are several ways a business can try to improve efficiency levels.

**Train the workforce**

Training the workforce in order to give them more skills or knowledge is clearly a cost to firms. They will often have to pay experts to train employees and will also lose the productive time of employees whilst they are training.

However this increase in cost should be more than offset in the long term by improvements in the workers productivity levels. This is because training should enable workers to work more quickly and more accurately (produce better quality products).
**Improve motivation**
A better-motivated workforce will work harder and take pride in their work. This should increase the speed of production and also improve the quality of products that are being produced. There are many different financial (e.g. bonuses) and non-financial ways (e.g. empowerment) for businesses to motivate their workers.

**More capital equipment**
Investment into new, higher technological machinery can have a number of advantages.
- Longer hours can be worked
- Increased speed of production (machine can perform repetitive and complicated tasks more quickly)
- Increased accuracy and therefore less wastage

**Use better quality raw materials**
This can reduce the amount of time wasted on rejected or defective products. A business should ensure they find the supplier who can supply the best quality resources, but at a competitive price and also with reliable delivery.

**Conclusion**
Improvements in efficiency are not that easy to obtain. For instance managers may find workers resistant to changes such as introducing new machinery or new working practices. This is because workers fear that changes will lead to redundancies. It can also take a long time for any new strategies to feed through into the form of increased efficiency. In addition, there can be a conflict between productivity and quality. Increasing productivity by its nature implies increasing the speed of production, and if managers are not careful this can mean that workers focus solely on quantity and not the quality of their work.
Production process

The way that businesses create products and services is known as the production process. There are three main parts to the production process as can be seen in the diagram below:

A firm must purchase all the necessary inputs and then transform them into the product (outputs) that it wishes to sell. For example a football shirt manufacturer must buy the fabric, pay someone for a design, invest in machinery, rent a factory and employ workers in order for the football shirts to be made and then sold. How well-organised a firm is at undertaking this transformation process will determine its success. This is known as the productive efficiency of a firm and it will want to be as efficient as possible in transforming its inputs into outputs (i.e. using the minimum number of inputs as possible to achieve a set amount of output). This will reduce the cost per unit of production and allow the firm to sell at a lower price.

Ultimately, the objective of the production process is to create goods and services that meet the needs and wants of customers. The needs and wants of customers will be met if a business can produce the correct number of products, in the shortest possible time, to the best quality and all at a competitive price.

Job production method

Job production involves firms producing items that meet the specific requirements of the customer. Often these are one-off, unique items such as those made by an architect or wedding dressmaker. For an architect, each building or structure that he designs will be different and tailored to the needs of each individual client. With job production, a single worker or group of workers handles the complete task. Jobs can be on a small-scale involving little or no technology. However, jobs can also be complex requiring lots of technology. With low technology jobs, production is simple and it is relatively easy to get hold of the skills and equipment required. Good examples of the job method include:

- Hairdressers
- Tailoring
- Painting and decorating
- Plumbing and heating repairs in the home
- High technology jobs are much more complex and difficult. These jobs need to be very well project-managed and require highly qualified and skilled workers. Examples of high technology / complex jobs include:
  - Film production
  - Large construction projects (e.g. the Millennium Dome)
  - Installing new transport systems (e.g. trams in Sheffield and Manchester)

Advantages

The advantage of job production is that each item can be altered for the specific customer and this provides genuine marketing benefits. A business is likely to be able to ‘add value’ to the products and possibly create a unique selling point (USP), both of which should enable it to sell at high prices.

Disadvantages
Whether it is based on low or high technology, Job production is an expensive process as it is labour intensive (uses more workers compared to machines). This raises costs to firms as the payment of wages and salaries is more expensive than the costs of running machines.

**Batch production method**
As businesses grow and production volumes increase, the production process is often changed to a "batch method". Batch methods require that a group of items move through the production process together, a stage at a time.

For example, when a bakery bakes loaves of wholemeal bread, a large ball of wholemeal dough will be split into several loaves which will be spread out together on a large baking tray. The loaves on the tray will then together be cooked, wrapped and dispatched to shelves, before the bakery starts on a separate batch of, for example, crusty white bread. Note that each loaf is identical within a batch but that loaves can vary from batch to batch.

Batch production is a very common method of organising manufacture. Good examples include:
- Production of electronic instruments
- Fish and chip shops
- Paint and wallpaper manufacturers
- Cereal farming

**Advantages**
The batch method can be an advantage for businesses that produce a range of products. It is cheaper to produce a number of each item in one go because machines can be used more effectively, the materials can be bought in bulk and the workers can specialise in that task. There are two particular advantages of workers being able to concentrate their skills.

They should become more expert at their tasks, which will in turn increase productivity (output per worker). This will lower costs, as fewer workers are needed to produce a set amount.

Better quality products should be produced as workers are more familiar with the task and so can find ways of improving it.

**Disadvantages**
Batch production requires very careful planning to decide what batch will be produced when. Once a batch is in production it is difficult to change, as switching to another batch takes time and will mean a loss of output. Batch methods can also result in the build up of significant "work in progress" or stocks (i.e. completed batches waiting for their turn to be worked on in the next operation). This increases costs as it takes up space and raises the chance of damage to stock.

**Flow production method**
Flow production involves a continuous movement of items through the production process. This means that when one task is finished the next task must start immediately. Therefore, the time taken on each task must be the same.

Flow production (often known as mass production) involves the use of production lines such as in a car manufacturer where doors, engines, bonnets and wheels are added to a chassis as it moves along the assembly line. It is appropriate when firms are looking to produce a high volume of similar items. Some of the big brand names that have consistently high demand are most suitable for this type of production:

- Heinz baked beans
- Kellogg's corn flakes
- Mars bars
- Ford cars

**Advantages**
Flow production is capital intensive. This means it uses a high proportion of machinery in relation to workers, as is the case on an assembly line. The advantage of this is that a high number of products can roll off assembly lines at very low cost. This is because production can continue at night and over weekends and also firms can benefit from economies of scale, which should lower the cost per unit of production.

**Disadvantages**
The main disadvantage is that with so much machinery it is very difficult to alter the production process. This makes production inflexible and means that all products have to be very similar or standardised and cannot be tailored to individual tastes. However some “variety” can be achieved by applying different finishes, decorations etc at the end of the production line.
Lean production

There is much evidence to suggest that the traditional mass production methods, used widely for much of the 20th century, can create problems, which leads to inefficiency. The main problems are:

- **Employee boredom and low morale** – particularly where employees undertake repetitive jobs
- **Equipment failure** – regular breakdowns of equipment that can cause hold-ups elsewhere in the production process
- **Equipment obsolescence** – where a machine quickly becomes outdated, although there is little incentive to replace it if the machine had cost a lot of money

As a result of these problems, businesses have increasingly looked to see if they can make their production more efficient by becoming more “flexible” and “lean”.

**Lean production** is an approach which originated in Japan during the 1950’s and 1960’s and has recently been increasing in popularity among UK firms. Its main objective is to **eliminate all forms of waste in the production process** and so **produce more by using fewer inputs**. There are several forms of waste that lean production aims to eliminate.

- Waste from materials
- Waste of worker's time and effort
- Waste of floor space
- Waste from defective products (poor quality)

By reducing this waste the costs of firms will decrease and they will become more efficient and competitive. The idea is to make the product right first time (not spend time checking and re-checking).

There are several popular **management techniques** that have been developed to help achieve “lean production”. The three most popular are:

- Cell production
- Kaizen (continuous improvement)
- Just-in-time (“JIT”) manufacturing.

**Lean production methods**

**Cell production**

In traditional production, products were manufactured in separate areas (each with a responsibility for a different part of the manufacturing process) and many workers would work on their own, as on a production line. In **cell production**, workers are organised into **multi-skilled teams**. Each team is responsible for a particular part of the production process including quality control and health and safety. Each cell is made up of several teams who deliver finished items on to the next cell in the production process.

Cell production can lead to efficiency improvements due to increased motivation (team spirit and added responsibility given to cells) and workers sharing their skills and expertise.

**Kaizen**

Kaizen is a Japanese word for an **approach to work** where workers are told they have two jobs to do:

Firstly to carry out their existing task; and

Secondly to come up with ways of improving the task

The concept known as **“continuous improvement”** therefore implies a process where the overall progress and gains in productivity within a firm, come from small improvements by workers being made all the time.

For example, an employee may simply re-organise the lay out of his work area, which saves 2 minutes looking for and filing paperwork each day. When added up the course of a week, 10 minutes extra productive time is gained, which over a year equates to an extra days work. If other workers also adopt this, then a firm can benefit from a significant increase in output per worker (productivity) over a year.

**Just in time**

JIT means that stock arrives on the production line just as it is needed. This minimises the amount of stock that has to be stored (reducing storage costs).

JIT has many benefits and may appear an obvious way to organizes production but it is a complicated process which requires efficient handling. For example, JIT relies on sophisticated computer systems to ensure that the quantities of stock ordered and delivered are correct. This process needs to be carried out very accurately or production could come to a standstill.
<table>
<thead>
<tr>
<th>Reduces costs of holding stock e.g. warehousing rent</th>
<th>Needs suppliers and employees to be reliable</th>
</tr>
</thead>
<tbody>
<tr>
<td>No money tied up in stock, can be use better elsewhere</td>
<td>May find it difficult to meet sudden increase in demand</td>
</tr>
</tbody>
</table>
Production Quality

What do we mean by the “quality” of a product or service? A simple definition is:
“A quality product needs to be 'fit for purpose'. This means the product must meet or exceed the
customer requirements.”

It should be noted that a good quality product does not therefore have to be an expensive product; it merely
has to fulfill its purpose within the eyes of the customer.
For example, a cheap biro or cheap pair of trainers can be good quality as long as they do at least what the
customer expects them to do.

It is important to remember that it is the customer who sets the “quality standards” in terms of
their overall expectations of quality. There are several ways that a customer may define quality:
- Reliability
- Fit for purpose
- Design
- Safety
- Long-lasting

In some cases, government act to encourage minimum standards for certain products. For example, the British
Standards Institute in the UK operates a well-known “Kitemark” scheme.
The Kitemark is a certification mark that offers proof that a product or service complies with the relevant
publicly available specification. It symbolises quality and safety and is recognised by over 80% of the UK
population.
Quality is important for two main reasons: reputation and costs.

Reputation
For virtually all purchasing decisions, customers choose which product to buy based on price and/or quality,
and occasionally on other factors such as the delivery time. The reputation of a business therefore depends on
these factors and it is often quality which can have the longest lasting impression (think of the long-standing
jokes about the quality of the old Skoda cars).
Customers often complain about the poor quality of the products and services they buy. Conversely, a positive
recommendation by a customer (for example by recommending a product or service to a friend) helps to
develop a positive reputation for quality.
There are many situations in which quality can prove to be less than expected: for example:
- Poor service at a restaurant
- A flight that runs late or is cancelled
- A washing machine that breaks down
- Clothing that unexpectedly shrinks in the wash

A good quality product can therefore provide a competitive edge over rivals and can lead to significant
marketing advantages. For example, a business will benefit from more repeat purchases and a longer life cycle
for its product. It may also be able to charge a premium (higher) price and so boost revenue.

Costs
A poor quality product does not only harm reputation and therefore sales but also increases costs to
businesses. There are many costs of poor quality, including:
- Cost of reworking or remaking the product
- Costs of replacements or refunds
- Wasted materials
- Costs of employing more staff to detect and solve quality problems

These extra costs will decrease the competitiveness of a business, as it may have to raise prices to cover them.

Ways to Manage Quality

Quality Control
The objective of quality control is to ensure each finished product meets the standard set out by the business
for a quality product. The traditional method by which a firm tries to achieve this quality standard is by having
a separate Quality Control department whose inspectors check the finished items and reject defective or
substandard products.
This method therefore detects quality problems at the end of the production process before they reach the final customer. The Quality Control department would then try and change an aspect of the production process and procedure, in order to solve quality problems that seem to occur most often. This approach hopefully stops defective products getting to the market place and harming a firm’s reputation but evidence shows that it has limited success at reducing the number of sub standard products being produced and therefore wasting a firm’s resources.

**Total Quality Management**

An alternative and increasingly popular method of ensuring quality is known as “Total Quality Management” or “TQM”. TQM is best described as being an “attitude” in a business where everyone in the business is committed to achieving quality – not just the people in the Quality Control or production departments. It means that quality is being checked at every stage of the production process, as all employees are trained to check their own work (self-checking).

Two of the main aims of TQM are “zero defects” and “total customer satisfaction”. “Zero defects” refers to the aim of producing goods and services with no faults or problems. To achieve this requires:

- Strong teamwork
- Open sharing of information about what quality problems are arising and how they are caused
- Investment in improving and refining production processes

There are various advantages and disadvantages of introducing TQM:

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improves reputation - faults and problems are spotted and sorted quicker (zero defects)</td>
<td>Initial introduction costs - training workers and disrupting current production whilst being implemented</td>
</tr>
<tr>
<td>Higher employee morale - workers motivated by extra responsibility, team work and involvement in decisions of TQM</td>
<td>Benefits may not be seen for several years</td>
</tr>
<tr>
<td>Lower costs – Decrease waste as fewer defective products and no need for separate Quality Control inspectors</td>
<td>Workers may be resistant to change – may feel less secure in jobs</td>
</tr>
</tbody>
</table>

There is no guarantee that TQM will be a success and there have been cases of firms abandoning their new TQM initiatives. This is often because after several years the benefits have not yet been fully achieved and have not offset the initial costs. The success of TQM will depend upon the attitudes of workers throughout the business and how readily they accept the changes to their traditional working practices.
Stock control

There are three types of stock that a business can hold:

**Stocks of raw materials** (inputs brought from suppliers waiting to be used in the production process)

**Work in progress** (incomplete products still in the process of being made)

**Stocks of finished products** (finished goods of acceptable quality waiting to be sold to customers)

The aim of stock control is to **minimise the cost of holding these stocks** whilst ensuring that there are enough materials for production to continue and be able to meet customer demand. Obtaining the correct balance is not easy and the stock control department will work closely with the purchasing and marketing departments.

The marketing department should be able to provide sales forecasts for the coming weeks or months (this can be difficult if demand is seasonal or prone to unexpected fluctuation) and so allow stock control managers to judge the type, quantity and timing of stocks needed.

It is the purchasing department’s responsibility to order the correct quantity and quality of these inputs, at a competitive price and from a reliable supplier who will deliver on time.

As it is difficult to ensure that a business has exactly the correct amount of stock at any one time, the majority of firms will hold buffer stock. This is the “safe” amount of stock that needs to be held to cover unforeseen rises in demand or problems of reordering supplies.

Stock management

Good stock management by a firm will lower costs, improve efficiency and ensure production can meet fluctuations in customer demand. It will give the firm a competitive advantage as more efficient production can feed through to lower prices and also customers should always be satisfied as products will be available on demand.

However, poor stock control can lead to problems associated with **overstocking** or **stock-outs**.

If a business holds too much **buffer stock** (stock held in reserve) or overestimates the level of demand for its products, then it will **overstock**. Overstocking increase costs for businesses as holding stocks are an expense for firms for several reasons.

- Increases warehouse space needed
- Higher insurance costs needed
- Higher security costs needed to prevent theft
- Stocks may be damaged, become obsolete or perish (go out of date)

Money spent buying the stocks could have been better spent elsewhere.

The opposite of an overstock is a **stock-out**. This occurs when a businesses runs out of stocks. This can have severe consequences for the business:

- Loss of production (with workers still having to be paid but no products being produced)
- Potential loss of sales or missed orders. This can harm the reputation of the business.

In these circumstances a business may choose to increase the amount of stock they hold in reserve (buffer stock). There are advantages and disadvantages of increasing the stock level.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can meet sudden changes in demand</td>
<td>Costs of storage – rent and insurance</td>
</tr>
<tr>
<td>Less chance of loss of production time because of stock outs</td>
<td>Money tied up in stocks not being used elsewhere in the business</td>
</tr>
<tr>
<td>Can take advantage of bulk buying economies of scale</td>
<td>Large stocks subject to deterioration and theft</td>
</tr>
</tbody>
</table>