

4 Decision making to improve operational performance

- 1 Fewer complaints about the quality of the product; lower waste (in terms of the fish/chips that have to be thrown away).
- 2 Minimising packaging; sustainability.
- 3 It might make operational targets harder to achieve. For example, it may lead to lower productivity and a reduction in reliability and quality as new measures are introduced to the firm.
- 4 It might make operational targets easier to achieve. Firms will have more money available to buy capital or introduce new quality procedures that cost money to implement. They may find it easier to get investment or take loans from banks in this climate too.
- 5 Poor workforce motivation might mean that operational targets are harder to achieve. Labour productivity might suffer with poor motivation. Unmotivated workers may be slower (less willing) to adapt to change as well.
- 6 The product design may have to change and this may affect the production process. This may mean that previous standards (quality, productivity) are no longer effective in this new paradigm. Operations needs to liaise with marketing as it will make forecasts from market research as to what and how much should be produced.
- 7 Capacity refers to the maximum (total) amount a business can produce in a set time period. Capacity utilisation is a measure of the proportion of total capacity that is being used in that time period.
- 8 capacity utilisation = $(\text{output}/\text{maximum output}) \times 100$
 $= (20,000/25,000) \times 100 = 80\%$
 labour productivity = $\text{output}/\text{number of employees}$
 $= 20,000/75 = 266.67$ units per employee
 unit costs of production = $\text{total costs of production}/\text{units of output}$
 $= \text{£}1\text{m}/20,000 = \text{£}50$
- 9 Unit costs of production will decline when capacity utilisation and productivity increase in the short term only — variable costs will increase and the fixed costs will be spread across more units of output.
- 10 High unit costs (still paying for the same number of staff even if half of the rooms are empty). Loss of revenue. May lead to low levels of customer satisfaction (lack of atmosphere). (Any two of these.)
- 11 Customer satisfaction may decline. More difficult to ensure safety of customers in the pool.
- 12 Purchase of new machinery that can be used by staff. It can speed up manual processes. Job redesign could lead to division of labour in the factory which can lead to more efficient production.
- 13 A motivated engineer may feel able to get through more jobs per day. With labour force reduction, the same number of tasks need to be

completed but with fewer staff. Therefore, labour productivity rises.

- 14 Two advantages of JIT production are lower costs due to the reduced need for storage space and lower wastage as there is less likelihood of products being damaged or going out of fashion.

Two disadvantages are that production may be halted if stock fails to arrive on time due to weather or other problems, and costs may be higher due to missing out on bulk purchase discounts.

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Benefits	Drawbacks
If achieved by introduction of technology, quality and reliability may improve.	Resistance of employees.
Job redesign and training may improve motivation.	Cost.
	Quality may fall, e.g. if piece rate is used.

- 16 A capital-intensive approach to production puts a greater emphasis on capital than labour in production. This will benefit a UK manufacturing business as labour is expensive in the UK, so such an approach will help reduce the overall costs of production and increase competitiveness.
- 17 Excess production capacity occurs when a business is producing below maximum capacity. A lack of production capacity occurs when demand is greater than the maximum capacity level.
- 18 Capacity utilisation may be improved by increasing sales or reducing the maximum capacity. Increasing sales might be achieved through better marketing or targeting new markets (such as commercial or residential construction areas). Reducing capacity involves selling off unwanted production capacity (such as machinery and tools) or labour force reduction. This should only be done if a business is sure that the capacity is no longer needed.
- 19 Some examples of the implications of a decision to use new technology:

<p>(i) Marketing</p> <p>New production processes allowing lower prices or new products increasing sales.</p>	<p>(ii) Finance</p> <p>Initial costs but possibly resulting in increased profits in the long term.</p>
<p>(iii) Operations management</p> <p>The use of technology may assist a business in meeting its quality targets.</p>	<p>(iv) People in business</p> <p>Production line technology may increase productivity.</p>

- 20 Quality is important as it may provide a USP for a business. This could enhance its reputation with consumers and lead to word-of-mouth promotion.
- 21 Total quality management instils a culture of quality throughout the business. Quality issues

- should be spotted at an early stage as everyone is responsible, thereby reducing costs and wastage.
- 22** Staff may be resistant to change. In particular, staff may be difficult to retrain (given that they are already experts in their field) and there may not be better-quality applicants in the general labour force. Cost of any retraining may be very high.
- 23** Poor quality is likely to lead to increased costs as a result of wastage and the cost of replacing or repairing returned goods.
- 24** Mass customisation is the tailoring of goods to specific customer requirements. In other words, customers build their own products. This is likely to give a business a competitive advantage and greater customer satisfaction. For example, in the car industry customers can build their own vehicle in terms of colour, trim and accessories.
- 25** JLR can achieve mass customisation by offering to build cars to different specs, according to its customers' wishes, e.g. different colour, type of interior, type of upholstery etc.
- 26** Amazon Prime does next-day delivery (speed) and it has a vast network of delivery drivers, which means it is very dependable. Customers are eligible for refunds if delivery is not on time. The firm emails or texts to tell the customer when the parcel will arrive.
- 27** Demand is likely to be higher during school holidays, therefore prices can be higher during

these periods and lower at other times. In addition, at the start and end of the season when snow is less reliable, prices are likely to be lower and there may be more promotions.

- 28** If the product is perishable, less inventory will be held. If demand is seasonal, the level of inventory is likely to be higher than for products that have regular demand.
- 29** Four key features of an inventory control chart are maximum inventory level; reorder level; buffer inventory level; lead time.
- 30** Payment terms may be more important when a business has concerns over cash flow and a longer payment period may be beneficial.
- 31** Outsourcing is hiring a party from outside a company to perform services or create goods that were traditionally performed or created in-house by the company's own employees and staff.
- 32**

Advantages of outsourcing	Disadvantages of outsourcing
Respond faster to increases in demand.	Likely to be more expensive.
Dependability for consumers.	Quality may not be as good.
Lower costs as do not have to invest in capacity.	