

5.2 Operations methods

Job production and batch production

If you have had a haircut at a salon or barber shop, or if you have bought bread at a bakery, then you have already encountered two different operations methods: job production and batch production. Sometimes, as with a haircut, businesses need to make each product unique to the customer. Other times, as with breadmaking, businesses can produce a variety of products in groups for greater efficiency. These two operations methods are explored in more detail in this section.

Job production

Job production refers to the production of unique items that are tailor-made to meet the needs of individual customers. The products are highly specialised and often unique. Highly skilled workers produce a single good or provide a service to one customer at a time. Producing these goods and services is usually a very labour-intensive process.

A haircut or style, for example, is usually carried out in a way that meets the customer's specific requirements. Stylists consider the precise cut, colour and style that is required to meet the specific need or want.



Figure 1. A haircut or style uses job production methods to meet a customer’s unique requirements.

Credit: Nitat Termmee, Getty Images

A business may choose to use job production because customers have very specific requirements that cannot be met using other operations methods. Another reason for using job production might be if the number of customers is small and demand is low. In this situation, using other operations methods that require technology, for example, would be too expensive. **Table 1** outlines some of the advantages and disadvantages of job production as an operations method.

Concept

Creativity

Creativity involves generating new ideas and considering existing ideas from new perspectives. Creativity may be evident in the use of inputs, business processes, product outputs and other solutions. The creation of ideas and solutions involves a process of synthesising and evaluating in response to changes in the external environment and consumer needs.

Job production requires a high level of creativity to meet customers’ individual needs and expectations. Collaboration between the customer and designer/producer is necessary for job production to be a success.

Table 1. Advantages and disadvantages of job production.

Advantages of job production	Disadvantages of job production
Flexibility and choice. The product is adapted to meet individual customer requirements.	High costs. Production can be costly because it is carried out by specialised and skilled workers using lower quantities of materials. This makes it difficult to achieve <u>economies of scale</u> .
High quality. Quality is high due to the highly skilled labour and high-quality materials used in production.	Time-consuming. Production takes more time because specific customer needs need to be fulfilled.
High profit margins. The product can be sold for a higher price due to its unique specifications.	Cash flow problems. Large projects, such as bridges or stadiums, will be expensive to produce and there will be fewer of them. Businesses will need to manage cash flow well to ensure they have the funds to produce the product.
High worker motivation. Employees are often more motivated because they can use their expertise and skills.	

Theory of Knowledge

Job production requires an interaction between producer and consumer, so that the consumer can make their needs and expectations known to the producer. With other operations methods, this kind of interaction does not occur as frequently.

- How might the continuous interaction between consumer and producer in businesses that use job production methods lead to greater innovation?

Batch production

Batch production involves producing items in groups of identical products. Small changes are made in each batch so that a range of customers' needs can be fulfilled. This method can be considered a compromise between job production and mass/flow production, which you will learn about in the next section.

Batch production has the advantage of producing large quantities, leading to high productivity and lower average costs through economies of scale. However, it does also allow a range of different products to be produced, which can meet the needs of different target markets.

Businesses that make a range of different products use batch production. An example is a bakery that makes batches of cup-cakes and batches of cookies separately. Clothing manufacturers Zara and H&M are also examples of companies that use batch production, by producing skirts and other clothing items in batches of sizes, colours and styles.



Figure 2. Batch production involves producing items in identical groups such as this batch of bread.

Credit: Phil Boorman, Getty Images

Batch production may be used when the amount of demand created for certain products in the market is unclear. Estimates are made by businesses and then a batch is produced. Alterations to production can be made by analysing the demand after the first batch is created. Batch production is appropriate when a business has a range of similar products that meet different consumers' needs. If this is not the case, then batch production is

unlikely to be appropriate. Batch production may also be appropriate if some of the benefits of economies of scale are desirable, but mass production is not feasible. **Table 2** outlines some of the advantages and disadvantages of batch production as an operations method.

Table 2. Advantages and disadvantages of batch production.

Advantages of batch production	Disadvantages of batch production
Some flexibility and variety. The characteristics of each batch can be adjusted to meet a range of customer needs and expectations.	Less flexibility and variety than job production. Batch production may be unsuitable for products that need to be tailored to very specific customer needs.
Economies of scale. In contrast to job production, larger numbers of products can be produced with the same characteristics, making it possible for the business to realise some economies of scale.	Higher storage costs. Businesses may need to store more resources for different batches of products, thus increasing the stock (inventory) costs. Lower worker motivation. Workers’ jobs are likely to be repetitive, leading to low motivation and boredom.
Lower risks. A variety of products are produced. This creates greater diversification while lowering the risks involved with producing highly specialised products, which would have limited sales and demand.	Higher production costs than mass production. Different batches may require changes to machinery settings, or a move to different machinery, which can increase the time and cost of production.

Activity

Learner profile: Thinkers
Approaches to learning: Thinking skills (critical thinking)

Copy and complete the following table. Consider the products listed and decide whether each would be more suited to job production or batch production. Explain your reasoning for each.

Product	Job or batch production	Explanation
Wedding cakes		
Furniture		
School courses		
Portraits		
Books		
Car repairs		
Garden landscaping		

Exam tip

When discussing appropriate operations methods, it is important to understand the context of the business, particularly with regard to customer specifications. Where there is an expectation of a highly individualised product, job production may be more appropriate than batch production.