

4 What operations management does – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)		
Inventory	库存	_____	_____	_____
holding costs	持有成本	_____	_____	_____
just-in-time	准时制	_____	_____	_____
just-in-case	备货制	_____	_____	_____
Capacity	产能	_____	_____	_____
Capacity utilisation	产能利用率	_____	_____	_____

Recall

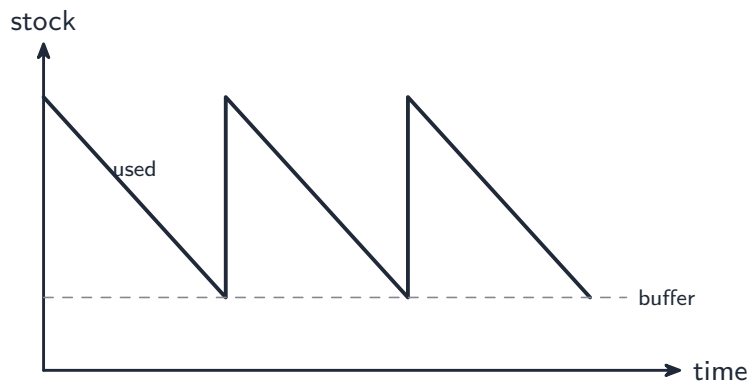
In **Part 1** you met the transformation process (inputs → process → outputs), productivity, efficiency, and the three methods of production. Part 2 looks at holding **stock**, two ways to manage it, and how fully a firm uses its **capacity**.

New ideas

■ 1 Inventory (stock)

Inventory 库存 (stock) is the goods a business holds: raw materials, part-finished goods, and finished goods waiting to be sold.

A firm holds stock so it can keep producing and meet orders quickly. But stock has **holding costs** 持有成本 — storage, insurance, and money tied up — and goods may go out of date. Holding too **little** is also risky: the firm may run out and lose sales.



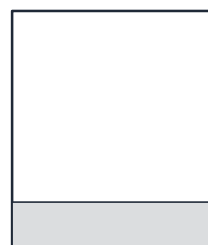
Micro-check. Give one cost of holding too much stock.

[1]

■ 2 Just-in-time and just-in-case

Two ways to manage stock:

- **just-in-time** 准时制 (JIT) — stock arrives **only as it is needed**, so almost no inventory is held. This cuts holding costs, but a late delivery can stop production.
- **just-in-case** 备货制 — extra stock is held **in case** of problems. This is safer, but costs more to store.



just-in-time
(low stock)



just-in-case
(buffer stock)

Micro-check. Which method holds almost no stock?

[1]

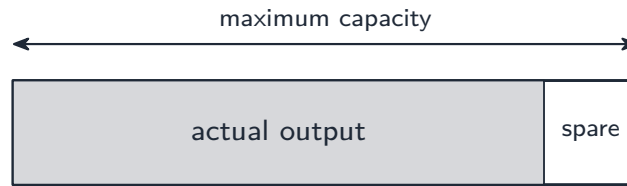
■ 3 Capacity utilisation

Capacity 产能 is the most a business can produce with its current resources. **Capacity utilisation** 产能利用率 shows how much of that capacity is being used:

$$\text{capacity utilisation} = \frac{\text{actual output}}{\text{maximum output}} \times 100\%.$$

A **low** figure means resources sit idle (high cost per unit); **near 100%** leaves no time

for repairs. Most firms aim for a high but not full level (about 85–90%).



Micro-check. A firm makes 800 units out of a maximum of 1000. Find its capacity utilisation. [1]

Watch out: JIT holds almost *no* stock (low cost, but risky if a delivery is late); just-in-case holds *extra* stock (safer, costlier). Capacity utilisation = $\text{actual} \div \text{maximum} \times 100\%$; aim high but not 100% (you need time for repairs).

Practice

4.1 State what **inventory** is, and give **one** cost of holding too much of it. [2]

4.2 State one **advantage** and one **disadvantage** of just-in-time (JIT). [2]

4.3 A factory can make 5000 units a week but makes 4000. Find its capacity utilisation. [2]

4.4 State **one** problem of running at very close to 100% capacity. [1]

4.5 Explain why holding too **little** stock can be a problem. [2]

4.6 Challenge. A factory's capacity utilisation rises from 60% to 90%. Explain why this usually lowers the cost per unit. [2]
