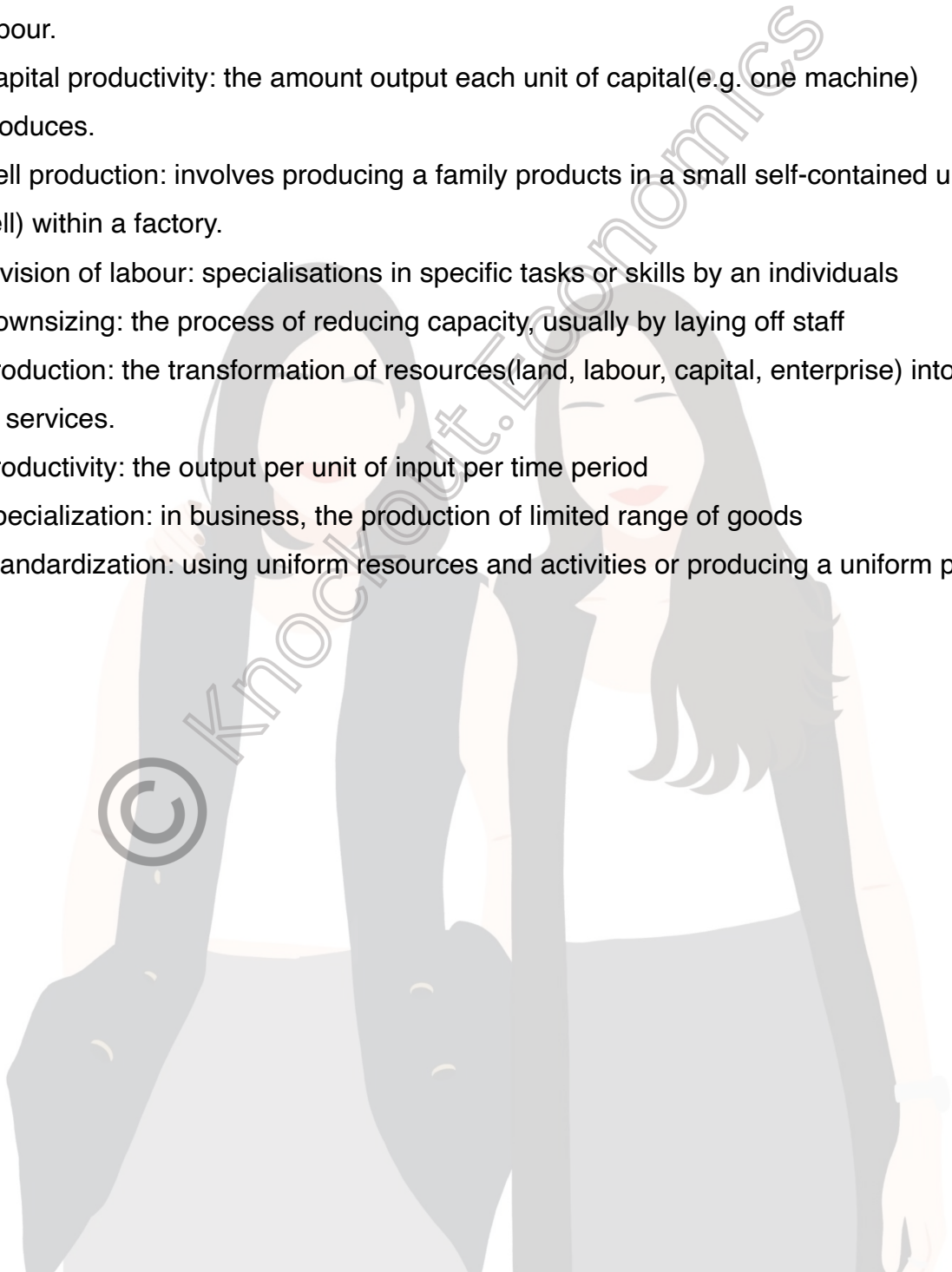


Section 4 :Resource management

CHAPTER 37 production productivity and efficiency

Key terms

1. Batch production: a method that involves completing one operation at a time on all units before performing the next.
2. Capital-intensive: production methods that make more use of machinery relative to labour.
3. Capital productivity: the amount output each unit of capital(e.g. one machine) produces.
4. Cell production: involves producing a family products in a small self-contained unit(a cell) within a factory.
5. Division of labour: specialisations in specific tasks or skills by an individuals
6. Downsizing: the process of reducing capacity, usually by laying off staff
7. Production: the transformation of resources(land, labour, capital, enterprise) into goods or services.
8. Productivity: the output per unit of input per time period
9. Specialization: in business, the production of limited range of goods
10. Standardization: using uniform resources and activities or producing a uniform product.

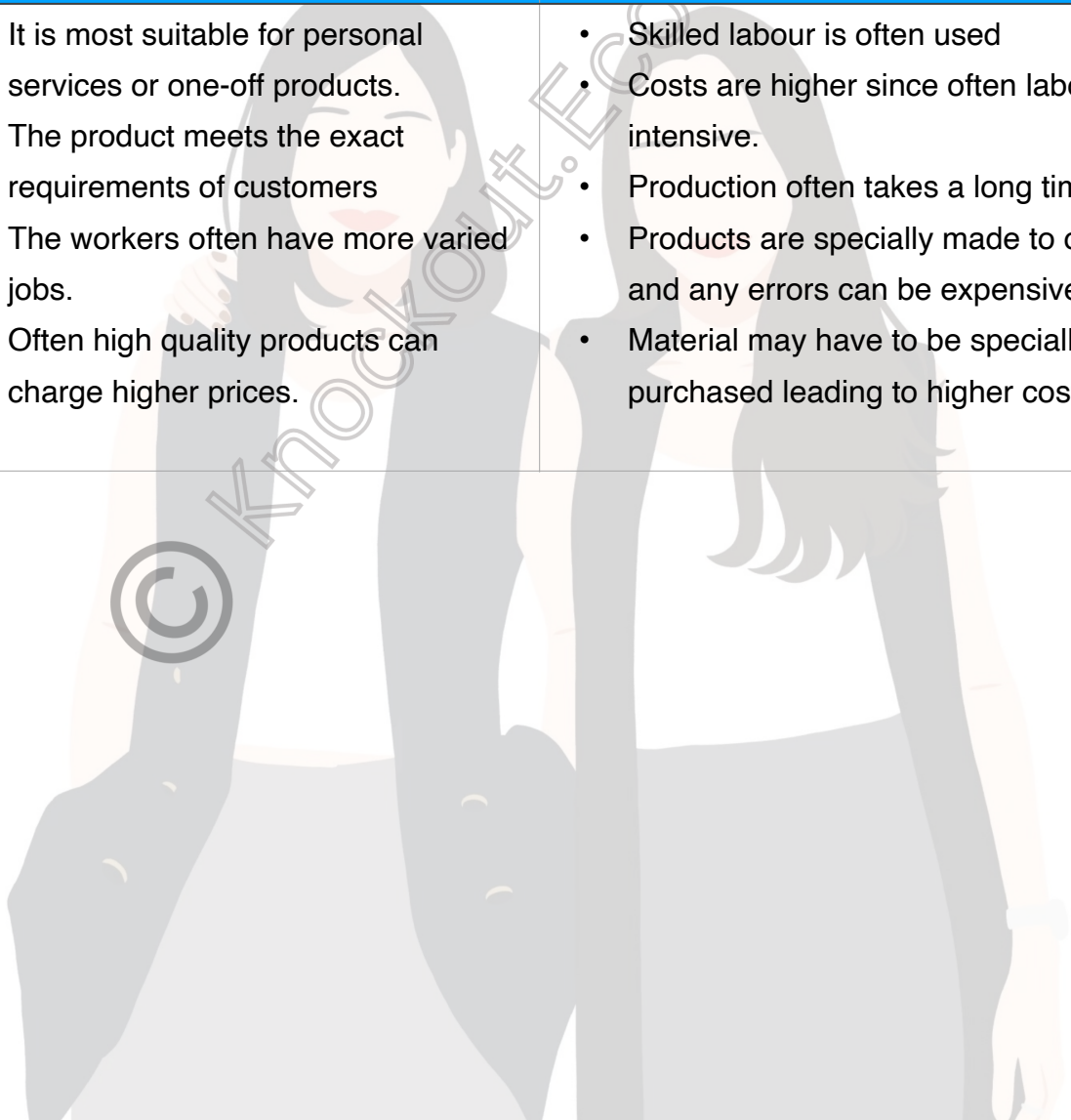


- **Production:** the transformation of resources(land, labour, capital, enterprise) into goods or services.
- **Productivity:** the output per unit of input per time period
- **Productivity of labour:** output per worker per period of time.

1. Job production

- A method of production that involves employing all factors to complete one unit of output at a time.
- It contributes a variety of goods and services.
- It tends to be labour intensive. Workforce is usually skilled workers.

Advantages	Disadvantages
<ul style="list-style-type: none">• It is most suitable for personal services or one-off products.• The product meets the exact requirements of customers• The workers often have more varied jobs.• Often high quality products can charge higher prices.	<ul style="list-style-type: none">• Skilled labour is often used• Costs are higher since often labour intensive.• Production often takes a long time.• Products are specially made to order and any errors can be expensive.• Material may have to be specially purchased leading to higher cost.



2. Batch production

- A method that involves completing one operation at a time on all units before performing the next.
- E.g. furniture factory g breaking bread, soup, canned food,

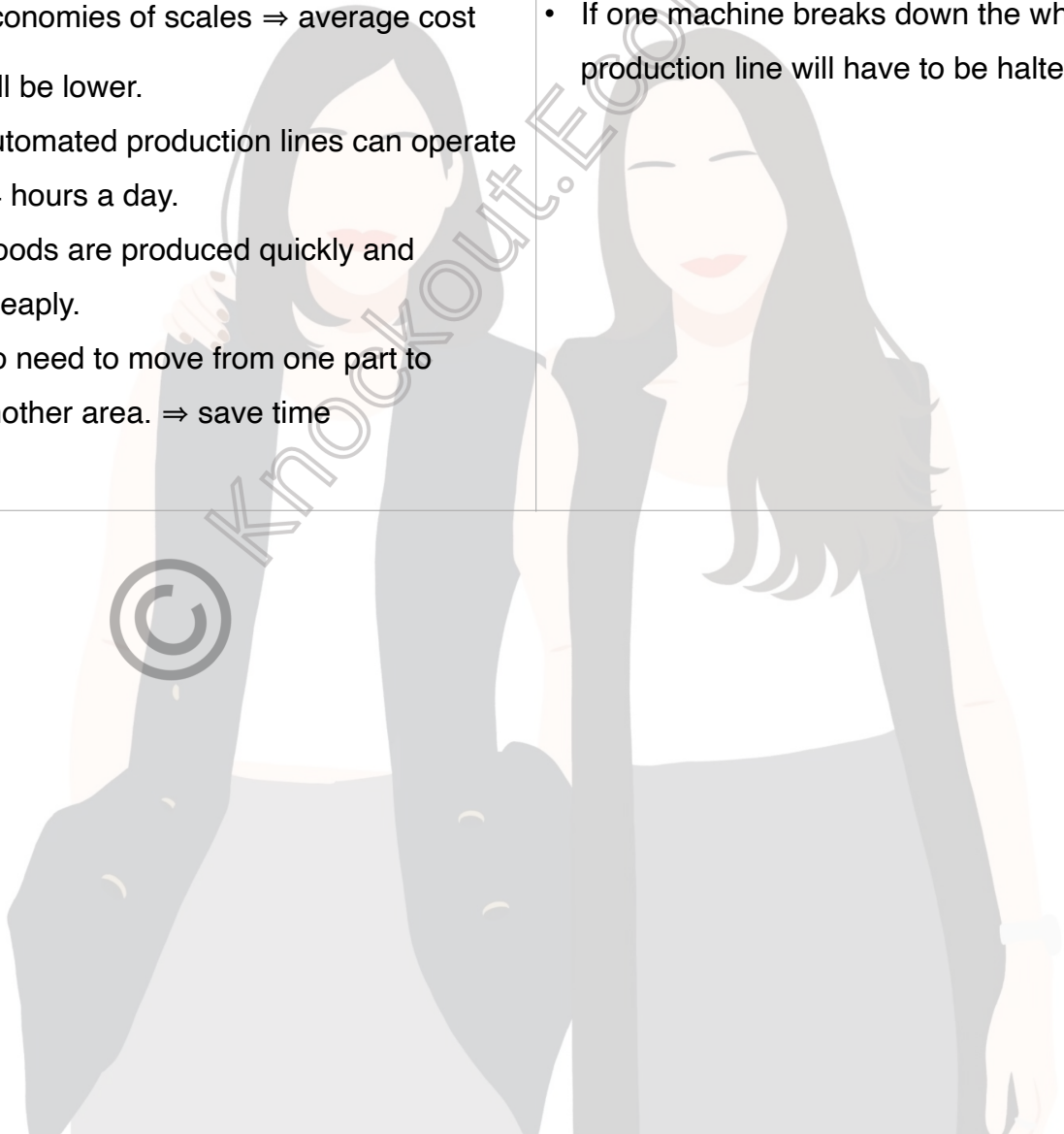
Advantages	Disadvantages
<ul style="list-style-type: none">• It is a flexible way of working and production can easily be changed from one product to another.• It still gives some variety to workers' jobs.• It allows more variety to products which are identical.• Production may not be affected greatly if machinery breaks down.	<ul style="list-style-type: none">• It can be expensive as semi-finished or finished products will need moving.• Machines have to be reset between production batches → waste time and output lost• Warehouse space will be needed for stock material.



3. Flow production

- Large scale production of a standard product, where each operation on a unit is performed continuously one after the other, usually on a production line. e.g. car, interior design
- Mass production of standardised products.

Advantages	Disadvantages
<ul style="list-style-type: none">• Higher output and standardize• Costs are kept low.• Capital-intensive ⇒ reduce labour cost and increase in efficiency.• Economies of scales ⇒ average cost will be lower.• Automated production lines can operate 24 hours a day.• Goods are produced quickly and cheaply.• No need to move from one part to another area. ⇒ save time	<ul style="list-style-type: none">• It is boring system ⇒ little job satisfaction• There are significant storage requirements.• Higher cost of capital.• If one machine breaks down the whole production line will have to be halted.

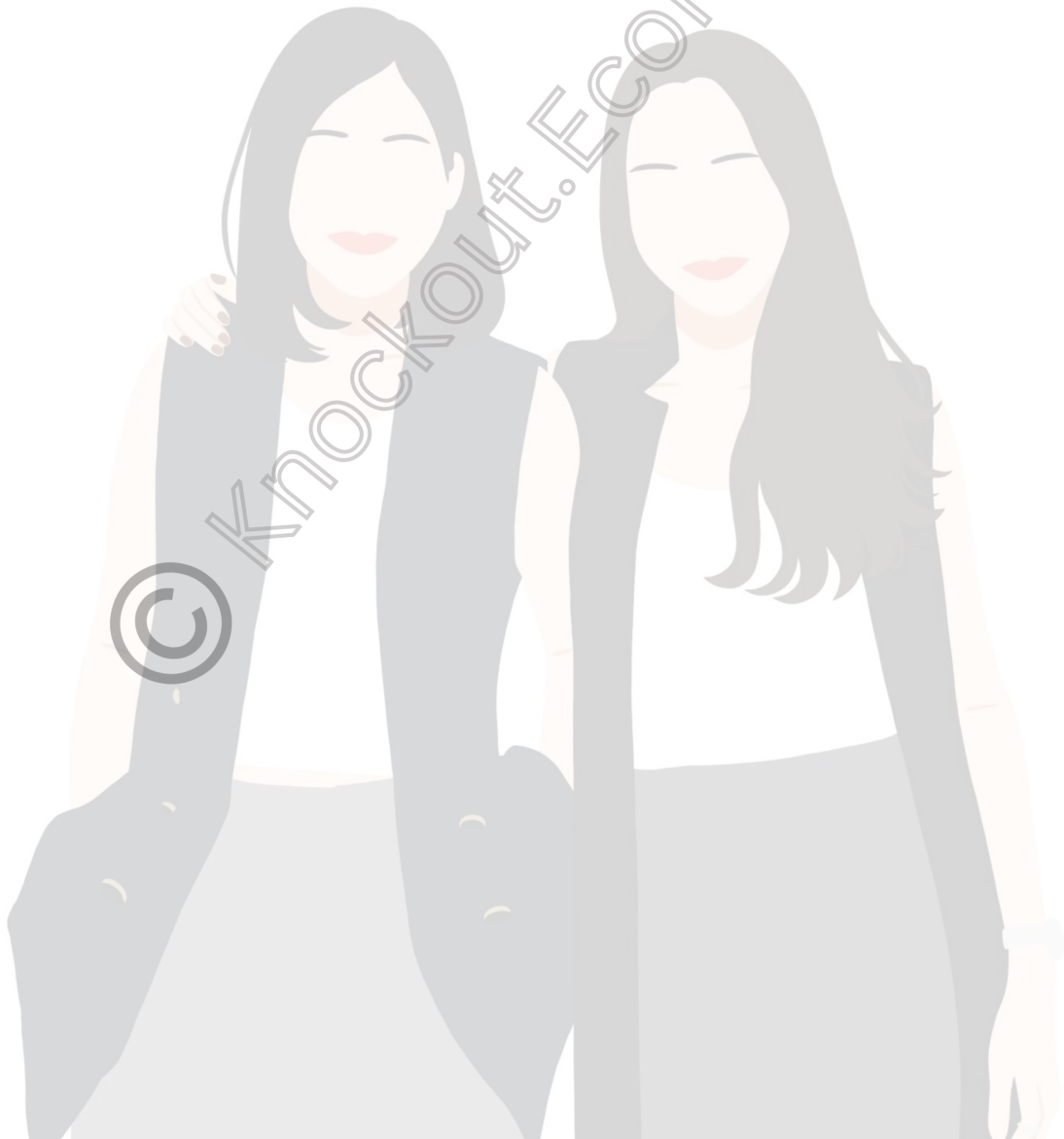


4. Cell production

- Involves producing a family of products in a small self-contained unit(a cell) within factory.
- Cell production has the flow production line split into a number of self-contained units. Each team or cell is responsible for a significant part.
- e.g. furniture manufacturer making parts for a kitchen range in cell.

The raw material, such as wood, would be bought into cell.

The all may also be responsible for task such as designing, schedule planning, maintenance and problem solving



5. Productivity

- 1. Productivity of labour = output / Labour in a given time period**
- 2. Productivity of capital = output / capital in a given time period.**

Factors influencing productivity

1. Division of labour and specialization
2. Education and training
3. Motivation of workers

Productivity and competitiveness

- If business can increase productivity
 - ⇒ generate more output at the same level of resources
 - ⇒ cost falls
 - ⇒ The firm can set lower price than competitors
 - ⇒ the firm can get more market share.

Ways to improve productivity

1. Improving labour productivity

1. Increase specialisation
2. Improve motivation ; wage and non wage
3. Improve training
4. Increase labour flexibility

2. Improving capital productivity

1. Improve service and maintenance
2. update and replace old technology
3. ensure that operatives are well trained.

6. Efficiency

- **Efficiency** is about making the best possible use of all a business's resources.
 - ↳ Production is said to be efficient if average cost is minimised.

Factors influencing efficiency and how it might be improved.

1. **Introducing standardisation:** using uniform resources and activities or producing a uniform product.
2. **Outsourcing**
3. **Relocating**
4. **Downsizing**
5. **Delaying**
6. **Investing in new technology**
7. **Lean production;** using less of everything including space, materials, stock, suppliers
8. **Kaizen;** continuous improvement. ⇒ workers are always coming up with idea to improve quality, reduce waste or increase efficiency
9. **Just in time production (JIT):** involves minimizing the amount of stocks held by business.

7. Distinction between labour and capital intensive production

- **labour intensive** ⇒ using a larger proportion of labour than capital e.g. tutorial institution
- **Capital intensive** ⇒ using a large proportion of capital than labour e.g. car manufacture.

The best mix between labour and capital depends on....

1. The nature of products; service ⇒ labour intensive.
2. The relative price of the 2 factors ⇒ wage & price of capitals.
3. The size of firm; large size firm ⇒ using capital.

8. competitive advantage from short product lead-in times.

- Business can gain competitive advantage from being first mover (reducing time in developing and launching a product)

Advantages of first mover

1. It can make a last impression on customers.
2. It can charge a premium price.

Disadvantage of first mover

1. High cost of development
2. Followers can learn mistakes made by first movers.

