

ECONOMIES AND DISECONOMIES OF SCALE

Internal Economies of Scale

↳ Those economies that allow a firm to produce each unit of output at a lower average cost as the scale of production expands within a firm ("internal")

↳ Decrease in LRAC (Long-Run Average Costs)

1. Marketing Economies

- Marketing and advertising is usually expensive.
- Firms producing a large quantity of units of output can spread the cost of advertising over more units than those smaller firms producing fewer units of output.
 - ↳ Large firms can better justify their marketing expenditure than smaller firms.
- If firm A and firm B both spend \$1000 on marketing, but firm A produces 1000 units of output but firm B produces only 100 units, per unit adv. cost of A = \$1 but for B = \$10.
 - ↳ Therefore, in this case, firm A enjoys the internal marketing economies of scale.

2. Purchasing Economies

- Large firms producing more output will buy more raw materials than small firms.
- Therefore, they will be able to buy more materials in bulk at a lower cost per unit of material.
- Wholesale suppliers offer discounts when materials are bought in bulk.
- Cheaper materials → lower C.O.P → purchasing economies of scale

3. Financial Economies

- Banks and other financial institutions will be more likely to offer large loans at lower rates of interest to large firms for a few reasons:
 - Large firms are usually more financially secure
 - Large firms are able to offer larger assets as collateral so that the bank can sell these assets and recoup its money in case the loan is not repaid.
 - Large firms are usually more credible borrowers
- Small firms may have to pay a higher rate of interest as financial institutions are less certain that the firm will survive and be able to pay back the loan.
 - Therefore, a lower cost of borrowing is one example of financial economies of scale
- Large firms that are private or public limited organizations, are also able to raise large amounts of capital (that does not have to be paid back) by selling shares of the company to private individuals or to the public via the stock market.
 - Therefore, selling shares to raise capital is a second financial economy of scale enjoyed by large firms

4. Technical Economies

- Large firms are able to invest in and utilize specialist machinery and equipment and able to take advantage of certain technologies to improve the production process and increase productivity.
- It is also able to increase productivity by training skilled workers in specialized tasks, which they can then perform more efficiently.
- Large firms are also able to invest in more research and development facilities and are therefore able to come up with new technologies and their implementations, and changes to the production process that maximise productivity.
 - Therefore, lower average cost due to specialist equipment/machinery, training of highly skilled workers, and investing in research development are the technical economies enjoyed by large firms producing a high level of output, as such expenditures could not be

justified by smaller firms producing fewer units of output.

5. Risk-Bearing Economies

- Large firms are able to mitigate the risks of losing one or more major customers and / or the risks of losing revenue in the case of falling demand for the output produced by the firm.
- They are able to do this in the following ways:
 - Large firms are able to have more customers by selling in larger and more varied markets than would normally be accessible for a small firm. → As a result, they are able to expand their customer base. (Large firms may have access to both domestic and foreign markets)
 - Another way this risk is mitigated is by the process of diversification.
 - ↳ The process of reducing market risk by producing a variety of products to reach more customers and access more consumer markets.

→ Therefore, a large firm is able to reduce market risk by selling in more markets and diversifying than would be possible for a smaller firm, and thus, enjoys risk bearing economies of scale.

External Economies of Scale

- ↳ The cost advantages enjoyed by firms in a certain industry as the size of that industry increases.
- ↳ LRACs will be further reduced for firms in this industry due to the following economies.

1. Development of Ancillary Industries (Example of an agglomeration economy)

- As the size of an industry grows, suppliers of other goods and services may find it beneficial to invest in infrastructure and support services to the growing industry.
- Therefore, suppliers offering specialist services catering to large scale and growing industries may locate close to the industry → This will reduce transport and other costs associated with finding specialist service providers such as transportation or marketing services for large scale industries.
 - ↳ Easier access to these services will allow the industry to continue growing.

2. Government Expenditure

- As an industry grows, it becomes more and more important for the economy as the output it produces increases, thus contributing more to GDP, and it also contributes to increases in employment; both of which contribute to economic growth.
- Therefore, most governments grant subsidies and tax breaks to firms in growing industries to allow them to grow faster → reduces the C.O.P for the firms in that industry (cost advantage).
- Additionally, instead of granting taxes or subsidies, the government may also invest in infrastructure to support the industry, such as building new roads and railway networks.
 - ↳ This will facilitate the growth of the industry.

3. Lower cost of supplies

- As the industry grows, the suppliers that supply the raw materials for that growing industry will also experience an increase in demand, and thus, will be able to expand their own production as well.
 - ↳ As a result, they will be able to supply the raw materials at a lower cost to the firms in the growing industry without reducing their own profit margin.

4. Collaborative Marketing and R&D

- As the industry grows, the firm in that industry may find it beneficial to pool their

efforts and carry out large scale marketing as a collaborative campaign.

↳ This will be more cost-effective for the involved firms as compared to if they had carried out the campaign individually.

- Similarly, the firms may also carry out collaborative research and development so as to reduce the individual cost incurred by each firm → supports the growth of the industry

5. Access to a pool of highly skilled workers

- As the size of the industry grows, the number of highly skilled workers trained in the appropriate, required fields increases, and their recruitment becomes easier
 - ↳ As firms in the industry are able to hire more of these workers, the overall productivity rises → reduces average costs and allows the firm to grow and expand production.
- Workers may already be trained by the other firms in the same, growing industry, thus reducing the costs incurred by the firm to train its workers.

6. Provision of specialised education

- As the size of an industry grows, more workers and students may want to be employed in that industry or may want to obtain specialised education for employment in that growing industry.
 - ↳ As a result, universities and colleges may begin to offer specialised training and education courses for skills required in that industry
- ↓
- As the pool of available skilled workers increases, the demand for those workers will become more wage-elastic, allowing the firms to hire skilled labour at lower wages
- ↳ Thereby, decreasing the wage bill and increasing the productivity simultaneously.

Agglomeration Economies

↳ External Economies of scale that arise when firms within one or more industries co-locate or cluster together in the same geographical location.

Internal Diseconomies of Scale

↳ The problems faced by a firm when it expands its production excessively

↳ Leads to an increase in LRAC

1. Management Diseconomies

- When a firm expands its production, it also hires additional workers in management positions to oversee the growing level of production
- However, when production increases too much, managing it may prove to be difficult and may give way to problems that cause the LRAC of the firm to rise.
 - ↳ This is especially true if the firm produces a wide variety of products
- For example, arguments and disagreements between different levels of management in the firm or between different departments may reduce the productivity and cause the average costs to grow.

2. Labour Diseconomies

- As the firm expands its production, it will hire more and more workers to work on the factory floor and it will also increase its division of labour → therefore, each worker will perform more and more specific tasks production & division of labour increases.
 - ↳ This may lead to labour dissatisfaction on many levels, and productivity may decline
- For example:

- Workers may feel alienated
- They may feel that their ideas and skills aren't appreciated
- They may feel that they're considered just another part of the assembly line.
- In some cases, this may even evolve into labour disputes and strikes.

External Diseconomies of Scale

↳ The problems faced by firms in a growing industry as the industry grows too much
 ↳ cause LRAC of the firms in the industry to rise.

1. Supply constraints

- As the size of the industry increases, firms in that growing industry may find it harder and more expensive to find and employ factors of production, particularly if the individual firms in that industry are expanding production and growing as well.
- As a result, the firms in the industry may now have to pay more now than before when the industry was smaller and the factors of production were less scarce.
- Firms may also experience shortages, which may disturb their assembly lines / production processes, reduce productivity, and thus, increase long-run average costs.

2. Skill shortages

- As the size of the industry grows, firms will require more and more skilled labour with a particular sets of skills. → In one industry, the requirements for labour will be similar, and as a result, the competition for the acquiring of labour in the market for a specific skill may increase
 ↳ This may result in firms having to pay higher wages to attract more workers, or having to spend more time looking for suitable ones → either way, this will cause the LRAC of the firm to rise.

3. Regulatory Risks

- As the size of a firm grows, it may attract the attention of the government
 ↳ This is because it may take up the majority of the market share and may make it very difficult for smaller firms to compete
- As a result, the government may introduce new laws as a precaution against, or to counter, monopolistic behaviour
 ↳ These laws may include restricting the prices charged by the large firms, as well as stricter quality checks
- Introduction of such regulations will lead to increasing long-run average costs for the larger firms.