AQA Economics A-level
Microeconomics

Topic 4: Production Costs and Revenue

4.5 Economies and diseconomies of scale

Notes

Internal economies of scale:

- These occur when a firm becomes larger. Average costs of production fall as output increases.
- Examples of internal economies of scale can be remembered with the mnemonic **Really Fun Mums Try Making Pies**

- **Risk-bearing:** When a firm becomes larger, they can expand their production range. Therefore, they can spread the cost of uncertainty. If one part is not successful, they have other parts to fall back on.
- **Financial:** Banks are willing to lend loans more cheaply to larger firms, because they are deemed less risky. Therefore, larger firms can take advantage of cheaper credit.
- **Managerial:** Larger firms are more able to specialise and divide their labour. They can employ specialist managers and supervisors, which lowers average costs.
- **Technological:** Larger firms can afford to invest in more advanced and productive machinery and capital, which will lower their average costs.
- **Marketing:** Larger firms can divide their marketing budgets across larger outputs, so the average cost of advertising per unit is less than that of a smaller firm.
- **Purchasing:** Larger firms can bulk-buy, which means each unit will cost them less. For example, supermarkets have more buying power from farmers than corner shops, so they can negotiate better deals.

- There are also **network economies of scale.** These are gained from the expansion of ecommerce. Large online shops, such as eBay, can add extra goods and customers at a very low cost, but the revenue gained from this will be significantly larger.

External economies of scale:

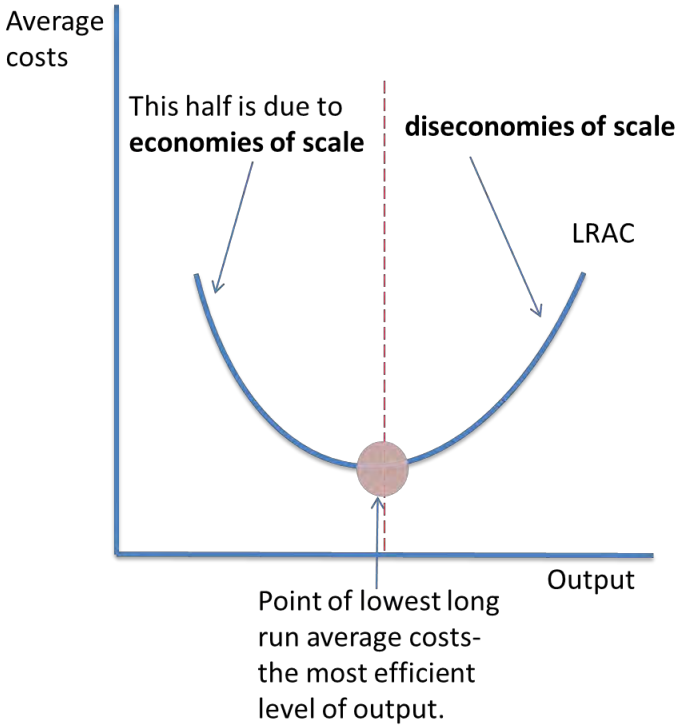
- These occur within the industry.
- For example, local roads might be improved, so transport costs for the local industries will fall.
- Also, there might be more training facilities or more research and development, which will also lower average costs for firms in the local area.

Diseconomies of scale:

- These occur when output passes a certain point and average costs start to increase per extra unit of output produced.
- Examples include:

- **Control:** It becomes harder to monitor how productive the workforce is, as the firm becomes larger.
- **Coordination:** It is harder and complicated to coordination every worker, when there are thousands of employees.
- **Communication:** Workers may start to feel alienated and excluded as the firm grows. This could lead to falls in productivity and increases in average costs, as they lose their motivation.

Long run average cost curve:

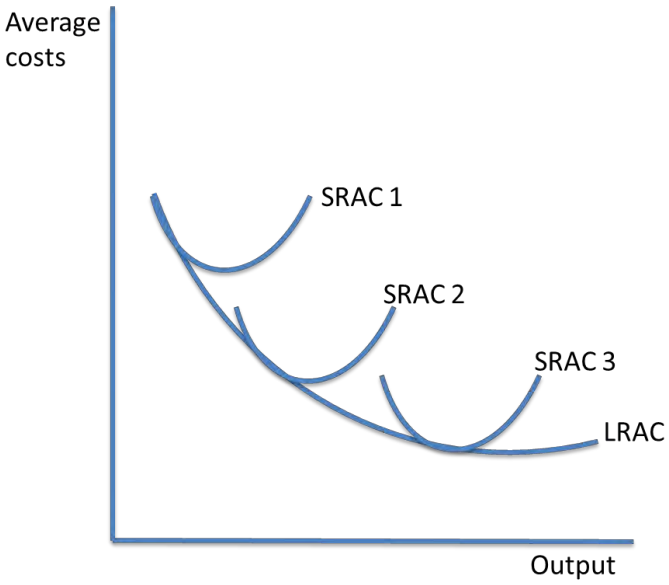


- Initially, average costs fall, since firms can take advantage of **economies of scale.** This means average costs are falling as output increases.
- After the **optimum level of output,** where average costs are at their lowest, average costs rise due to **diseconomies of scale.**
- The point of lowest LRAC is the **minimum efficient scale.** This is where the optimum level of output is since costs are lowest, and the economies of scale of production have been fully utilised.

The relationship between returns to scale and economies or diseconomies of scale

- Returns to scale increases when the output increases by a greater proportion to the increase in inputs. For example, if input doubles, and output quadruples, there is said to be increasing returns to scale. This occurs where there are economies of scale and factor inputs become more productive.
- If, on the other hand, a doubling of input leads to a 1.5 times increase in output, there are decreasing returns to scale. This is linked to diseconomies of scale, since it occurs when factor inputs become less productive.

The L-shaped LRAC curve



- The diagram above shows the relationship between the SRAC curve and the LRAC curve. The LRAC curve envelopes the SRAC curve, and it is always equal to or below the SRAC curve. The LRAC curve shifts when there are external economies of scale, i.e. when an industry grows.
- SRAC falls at first, and then rises, due to diminishing returns. In the long run, costs change due to economies and diseconomies of scale.
- If SRAC = LRAC, the firm operates where it can vary all factor inputs.
- The L-shape curve is a development in cost theory from the traditional U-shaped curve. It suggests that to begin with, costs per unit fall as output increases, due to economies of scale.

- Even if there are diseconomies of scale within the firm, such as if managerial costs increase, they are offset by the economies of scale gained by technical or production factors.
- This means that in the long run, costs continue to fall, even if the pace of falling output costs slows (shown by the flat part of the curve).