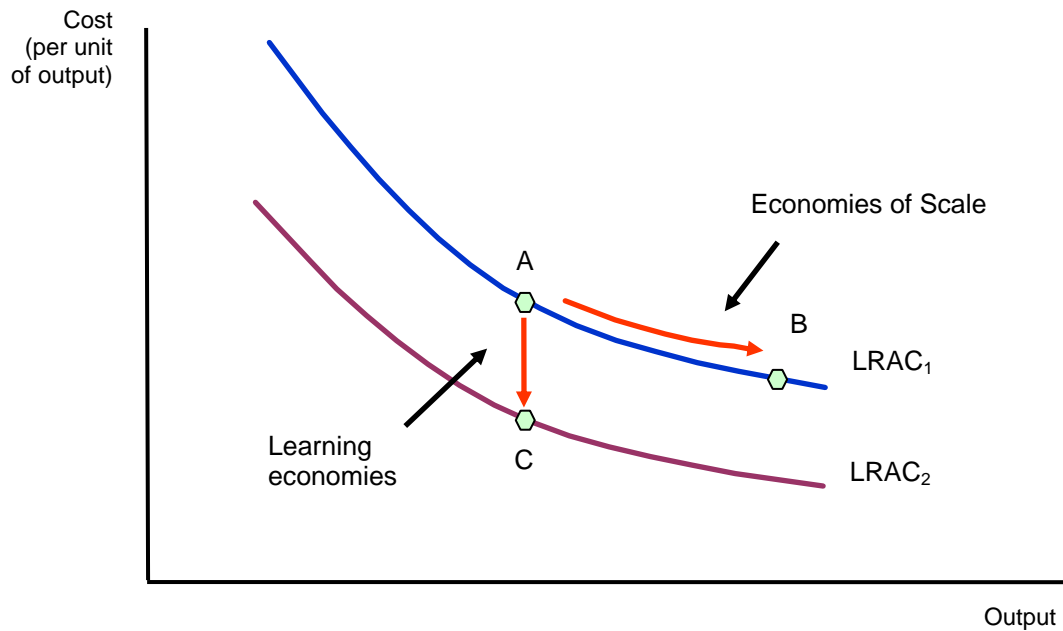


Economies of Scale (Examples)

Internal economies of scale (IEoS)

Internal economies of scale come from the long term growth of the firm itself. Examples include:

1. **Technical economies of scale:** (these relate to aspects of the production process itself):
 - a. **Expensive capital inputs:** Large-scale businesses can afford to invest in **expensive and specialist capital machinery**. For example, a supermarket might invest in new database technology that improves stock control and reduces transportation and distribution costs. It may not be viable for a small corner shop to buy this technology. We find that highly expensive fixed units of capital are common in nearly every mass manufacturing production process – for example the hugely expensive machinery used in printing millions of newspapers and magazine every week in the UK.
 - b. **Specialization of the workforce:** Within larger firms there is the possibility of splitting production processes into separate tasks to boost **productivity**. The use of **division of labour** in the mass production of motor vehicles and in manufacturing electronic products is an example of this type of technical economy of scale.
 - c. **The law of increased dimensions** (or the “**container principle**”). This is linked to the **cubic law** where doubling the height and width of a tanker or building leads to a more than proportionate increase in the cubic capacity – the application of this law opens up the possibility of scale economies in distribution and [freight industries](#) and also in travel and leisure sectors with the emergence of super-cruisers such as [P&O's Ventura](#). Consider the new generation of super-tankers and the development of enormous passenger aircraft capable of carrying well over 500 passengers on long haul flights. The law of increased dimensions is also important in the energy sectors and in industries such as office rental and warehousing.
 - d. **Learning by doing:** There is growing evidence that industries **learn-by-doing!** The average costs of production decline in real terms as a result of production experience as businesses cut waste and find the most productive means of producing output on a bigger scale. Evidence across a wide range of industries into so-called “**progress ratios**”, or “**experience curves**” or “**learning curve effects**”, indicate that *unit manufacturing costs typically fall by between 70% and 90% with each doubling of cumulative output*. Businesses that expand their scale can achieve significant **learning economies of scale**.



2. **Monopsony power:** A large firm can purchase its factor inputs in bulk at discounted prices if it has **monopsony (buying) power** in the market. A good example would be the ability of the electricity generators to negotiate lower prices when finalizing coal and gas supply contracts. The national food retailers also have significant monopsony power when purchasing supplies from farmers and wine growers and in completing supply contracts from food processing businesses. Other controversial examples of the use of monopsony power include the [prices paid by coffee roasters and other middle men to coffee producers](#) in some of the poorest parts of the world.
3. **Managerial economies of scale:** This is a form of **division of labour** where firms can employ specialists to supervise production systems. Better management; increased investment in human resources and the use of specialist equipment, such as networked computers can improve communication, raise productivity and thereby reduce unit costs.
4. **Financial economies of scale:** Larger firms are usually rated by the financial markets to be more '**credit worthy**' and have access to credit with favourable rates of borrowing. In contrast, smaller firms often pay higher rates of interest on overdrafts and loans. Businesses quoted on the stock market can normally raise fresh money (extra financial capital) more cheaply through the sale (issue) of equities to the capital market. They are also likely to pay a lower rate of interest when they issue bonds because of a better credit rating.
5. **Network economies of scale:** *(Please note: This type of economy of scale is linked more to the growth of demand for a product – but it is still worth understanding and applying.)* There is growing interest in the concept of a **network economy**. Some networks and services have huge potential for economies of scale. That is, as they are more widely used (or adopted), they become more valuable to the business that provides them. We can identify networks economies in areas such as **online auctions** and **air transport networks**. The **marginal cost of adding one more user** to the network is close to zero, but the resulting financial benefits may be huge because each new user to the network can then **interact**, trade with **all** of the existing members or parts of the network. The **rapid expansion of e-commerce** is a great example of the exploitation of network economies of scale. [EBay](#) is a classic example of exploiting network economies of scale as part of its operations.

External economies of scale (EEoS)

External economies of scale occur **outside of a firm but within an industry**. Thus, when an industry's scope of operations expand due to for example the creation of a **better transportation network**, resulting in a decrease in cost for a company working within that industry, external economies of scale have been achieved.

Another example is the development of **research and development facilities** in **local universities** that several businesses in an area can benefit from. Likewise, the **relocation of component suppliers** and other support businesses close to the centre of manufacturing are also an external cost saving.

Agglomeration economies may also result resulting from the **clustering** of similar businesses in a distinct geographical location.