## Economies of scale.

Economies of scale can be defined as the cost advantage that arises with increased output of a product. Economies of scale are in a way results of law of variable proportion, and are practical occurrences dependent on the fact that as the number of units of a good produced are increased, the fixed costs are shared over a larger number of goods, therefore the fixed costs per-unit decrease and are rendered more manageable as a meagre permanent cut. In an economy of scale, the variable costs can also be reduced due to increased efficiency, synergy and increased raw material discounts.

## Types of Economies of Scale.

The types of economies of scale can be roughly divided under two main branches.  
1. Internal economy of scale – Arising from within a firm. Dependent on company size.  
2. External economy of scale – Arising from extraneous and indirect factors such as industry size.

An external economy of scale is often divided and profited off by multiple firms. Thus, an internal economy of scale is more beneficial for an owner, in other words, an internal economy of scale provides better competitive advantages.  
  
Industry Example.  
An exemplar benefit of scale is much evident in the industry of printing. Suppose you are a local business owner and can gain a sales boost of your product through printing a marketing brochure. Now, what generally happens is a local printing shop tends to offer a higher price if the require number of copies is low, but can settle on considerable discounts if the required number of copies is even moderately high. For better understanding let us assume that the shop offers a rate of 1500 rupees for 500 copies and a rate of 5000 for 5000 copies. In this case, we can observe a transfer of revenue gained by the shopkeeper from higher number of copies, to you, the customer so as to offer a better deal than the immediate competitors. This transfer of revenue was possible because the cost of initial set-up incurred by the shopkeeper remains the same regardless of whether the number of copies were 500 or 5000, thus a fixed cost shared over smaller and larger output respectively. The discount given by the shopkeeper is somewhat compensated to an extent due to efficiency and bulk-purchasing related to higher number of copies.  
Existence of economies of scale in real world may not be as evident as existence of popular laws such as law of diminishing returns or law of diminishing marginal utility, but the benefits offered by such specific situations are drivers of many not-so-rare phenomenon. Economies of scale can also affect areas like finance, for example during rather frequent mergers of smaller telecom companies in the direction of a monopoly, economies of scale are often cited as major rationale.

## The downward curve and diseconomies of scale

Data analysis suggests that there is a limit to how much a company can grow to attain economy of scale. After a certain cap on the size of a firm, the cost of maintaining and ensuring smooth operations in a gigantic organization far overpower the benefits of an economy of scale, reasons being –  
1. Sheer complexity.  
2. Restrictions by bureaucracy.  
3. Operating inefficiencies.  
This situation is known as ‘Diseconomies of Scale.’

## Examples in India.

1. Narayana Health City (Bengaluru) – This healthcare entrepreneurial effort by Dr. Devi Shetty and team, has been providing quality tertiary care to extremely poor.
2. Narayana health care treats 40% of patients at below the average cost,
3. around 60%-65%, well to do patients pay break-even or more that break-even cost.
4. The cash inflow from profits is then reinjected into the system to treat a considerable percentage of extremely poor for free with state-of-the-art facilities.

All of this was possible only because of scale, a large number of patients requiring cardiac healthcare allowed the fixed costs to be more manageable as it was divided over a large number of treatments. Medical staff is being paid extremely reasonable fixed salaries, due to large competition for a post as a result of both internal and external economy of scale, demands like “pay per care” are illogical and self-harming. Allows the room for additional discounts from providers of medical equipment/injectables/medicines because of bulk purchase.

Benefits of scale at Narayana Health City.

* Learning effect – Doctors become 10000 hours experts, exposure to all possible variants of conditions.
* Scale Effects – Amortized fixed costs and opportunities for negotiation. Test bed for new medical devices and low prices for medical consumables.

1. IITs, NITs and GFTIs fee structure – Due to large admissions in engineering education, the government of India was able to introduce the concept of scale to the fee structure of centrally funded institutions. This system in turn helped to provide financial assistance to needy by formulating a break-even or above break-even fee structure for the able.