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How does marginal cost of production relate to economies of scale?

By Investopedia

A: Economies of scale describe a declining marginal cost of production. In economics, marginal cost is the total cost that comes from producing one additional unit of a good. A company is said to enjoy economies of scale whenever it gains operating efficiency and is able to reduce the total cost of making successive goods. If the opposite is true, and marginal costs are increasing, the company experiences diseconomies of scale. The primary purpose for studying marginal cost is to determine when and how economies of scale can be achieved.

Suppose the 100th unit of a product costs a company $15 to produce. If the 101st unit costs $14.99, it represents an economy of scale. If the 101st unit instead costs $15.01, it is a diseconomy of scale. No scales exist if the 101st unit costs $15. The point at which marginal unit costs no longer decrease is considered the optimal production level.

Firms are always looking to improve their economies of scale. At lower marginal costs, additional units represent increasing profit margins. It offers companies the ability to drop prices if need be, improving the competitiveness of their products. Large, warehouse-style retailers such as Costco and Sam's Club package and sell large items in bulk due in part to realized economies of scale.

Marginal costs never decrease perpetually. At some point, operations become too large to keep experiencing economies of scale. This forces companies to innovate, improve their working capital or remain at their present optimal level of production.

Globalization has helped spread economies of scale across a much larger market. Companies can increasingly seek out lower-cost inputs to reduce their average and marginal costs. Theoretically, globalization offers companies opportunities to maximize their economies of scale consistent with the resource capabilities of the entire world.