

Pareto principle

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The term "Pareto principle" can also refer to Pareto efficiency. The Pareto principle (also known as the 80–20 rule, the law of the vital few, and the principle of factor sparsity) states that, for many events, roughly 80% of the effects come from 20% of the causes. Business-management consultant Joseph M. Juran suggested the principle and named it after Italian economist Vilfredo Pareto, who observed in 1906 that 80% of the land in Italy was owned by 20% of the population; he developed the principle by observing that 20% of the pea pods in his garden contained 80% of the peas. It is a common rule of thumb in business; e.g., "80% of your sales come from 20% of your clients." Mathematically, where something is shared among a sufficiently large set of participants, there must be a number k between 50 and 100 such that " $k\%$ is taken by $(100 - k)\%$ of the participants." The number k may vary from 50 (in the case of equal distribution, i.e., 100% of the population have equal shares) to nearly 100 (when a tiny number of participants account for almost all of the resource). There is nothing special about the number 80% mathematically, but many real systems have k somewhere around this region of intermediate imbalance in distribution.

The Pareto principle is only tangentially related to Pareto efficiency, which was also introduced by the same economist. Pareto developed both concepts in the context of the distribution of income and wealth among the population.

In economics

The original observation was in connection with population and wealth. Pareto noticed that 80% of Italy's land was owned by 20% of the population. He then carried out surveys on a variety of other countries and found to his surprise that a similar distribution applied.

Due to the scale-invariant nature of the [power law](#) relationship, the relationship applies also to subsets of the income range. Even if we take the 10 wealthiest individuals in the world, we see that the top three ([Warren Buffett](#), [Carlos Slim Helú](#), and [Bill Gates](#)) own as much as the next seven put together.

A chart that gave the inequality a very visible and comprehensible form, the so-called 'champagne glass' effect was contained in the 1992 United Nations Development Program Report, which showed the distribution of global income to be very uneven, with the richest 20% of the world's population controlling 82.7% of the world's income.

The Pareto principle has also been used to attribute the widening economic inequality in the [United States](#) to 'skill-biased technical change'—i.e., income growth accrues to those with the education and skills required to take advantage of new technology and globalization.

In business

The distribution shows up in several different aspects relevant to entrepreneurs and business managers. For example:

- 80% of your profits come from 20% of your customers
- 80% of your complaints come from 20% of your customers
- 80% of your profits come from 20% of the time you spend
- 80% of your sales come from 20% of your products
- 80% of your sales are made by 20% of your sales staff¹

Therefore, many businesses have an easy access to dramatic improvements in profitability by focusing on the most effective areas and eliminating, ignoring, automating, delegating or re-training the rest, as appropriate.