The Danger of Averages

Idea In Short

Averages are lazy, reductive and often quietly misleading, useful only as a rough starting point before the real analysis begins. The Pareto principle, shifting definitions and missing time frames all conspire to make a single number look more authoritative than it deserves.

A Four-Letter Word

Ask anyone who solves problems for a living and "average" comes up as something close to a dirty word. Averages are lazy, since citing one often substitutes for doing real analysis. They are reductive, collapsing a distribution into a single misleading point. They are dehumanizing, since no meaningful individual problem was ever solved by staring at an average. And they are only ever a little bit true, which is precisely what keeps the habit alive.1

Life Is Not Evenly Distributed

The Pareto principle shows up everywhere: a small share of inputs consistently drives a large share of outputs. Roughly 5 percent of the population accounts for close to half of healthcare spending in the United States, and the wealthiest 1 percent hold more than a third of total wealth. Talking about the average patient or the average American obscures exactly the concentration that actually explains the outcome.2

A Useful Shortcut, Nothing More

An average functions like a zip code: a rough heuristic that confirms the right general neighborhood, nothing more precise. It is genuinely useful for establishing order of magnitude, distinguishing 100 from 1,000 from 10,000, and genuinely dangerous the moment it gets treated as a final answer rather than a starting point for deeper digging.

Which Average, Exactly?

Median, mean and mode all describe central tendency, and they can diverge sharply depending on how skewed the underlying data is.3 Citing "the average" without specifying which measure was used leaves an audience unable to judge whether the figure is representative or quietly distorted by a handful of extreme values.

Benchmarks Depend on the Comparison Group

A benchmark is only as trustworthy as its sample size and composition. Comparing a result favorably against a weak peer group proves very little, the analytical equivalent of a student justifying a low grade by pointing to a classmate who scored lower still. Real conviction requires a defensible, relevant comparison set, not the most flattering one available.

Time Frames Change the Story

No strategy is eternal, and a snapshot statistic, this percentage this year, can mean something entirely different depending on the trend line behind it. A single data point saying 46 percent of people believe something is nearly useless without knowing what that figure looked like one year, three years and ten years earlier. This is part of why trend charts consistently beat single-moment figures like pie charts for genuine business communication: they show history, momentum and context rather than a frozen instant.

Descend Into the Particulars

Author Malcolm Gladwell's advice to descend into the particulars applies directly here. Before repeating an average in a presentation, it helps to anticipate the functional expert's follow-up questions: how does the figure vary by country, channel or product line, how does it vary by customer segment, what does the year-over-year trend look like and are any outliers quietly driving the number up or down. Even standard reporting benchmarks change their own definitions over time, such as index methodologies that quietly exclude bankrupt companies from long-run return calculations, which can flatter an average without anyone noticing the adjustment.

A Quick Worked Example

Consider a company reporting average customer satisfaction of 80 out of 100. That single figure could describe a business where every customer rates it consistently around 80, or one where half of customers rate it 100 and the other half rate it 60, two utterly different business realities producing an identical headline average. Only a distribution, not a single number, reveals which story is actually true, and the two stories demand entirely different fixes.

Combating the Deadly Sins of Averages

A few disciplined habits help. Insist on a sample size that is both large and genuinely representative of the population being described. Document every assumption, source and calculation so the analysis can be audited rather than treated as a black box. Read the audience correctly, tailoring the level of detail to their fluency with data. Anticipate the standard deviation and outlier questions before they are asked. Represent the same data in multiple formats, histograms and trend lines alongside the single summary number. And build genuine trust with the audience about intent, since no data presentation is ever fully neutral, and audiences who trust the presenter's motives are far more receptive to nuance.

- 1Average
- 2Pareto Principle
- 3Central Tendency

Summary

Averages are a useful zip code, not a destination. Ask about outliers, time frames, definitions and sample composition before trusting a single number. Document assumptions, show multiple views of the data and stay curious enough to ask the second and third question.