Average is the Enemy

Move past the false shortcuts offered by averages.

Brooks C. Mendell
August 2020

Introduction

Averages can inform. Mathematically, the average tells us the arithmetic mean; it gives a sense for where the middle lies within a group or between extremes. Averages offer a sense for magnitudes and common performance. They provide a starting point for exploring and understanding a situation.

But averages, like stereotypes, are incomplete and dangerous as a basis for decision making. Unsupported assertions backed by simple averages reveal lazy thinking or a lack of interest. Rather, when making decisions or evaluating performance, embrace your natural curiosity and dig in.

What is the Average Forest?

In forestry, the average is our enemy. Timber markets, like anything related to real estate or politics or weather patterns, are uniquely local. Buying an acre of timberland in Macon County, Georgia for $1,500 offers a barebones sketch of timberland in nearby Houston County. Each acre, while stitched to the same planetary crust, supports a differing profile of soils, forests, mills and communities. Average timber and timberland prices, for the analyst or investor, can mislead and obfuscate.

Forest management expert Dr. Barry Shiver[1] once told me that the motto of intensive forestry is, "identify variability...then exploit it!" We add value by investing in the best soils and highest performing trees on one end, and through dealing quickly with mortality and disease at the other end. When it comes to managing or buying an asset, we want to understand both the forest and the trees.

Average in What Context?

In his book *The End of Average*, Todd Rose talks about the "tyranny of the average." For any group of people, we can estimate an average height, average weight and average test score. All of this leads us to think in terms of the "average" person when making policy or educational or other decisions. However, in practice, few people are average across multiple categories. Each person is unique, and this uniqueness has context.

This applies to managing teams. Imagine a group of procurement foresters buying wood for a sawmill. It's possible that the forester bringing in the most wood with the best quality may spend higher than average prices to procure that wood. And if the procurement manager insisted that this higher cost forester reduce his per unit prices, the quality and reliability of his wood flows could fall. The "average" informs to a point; it rarely accounts for skill, quality, experience or efficiency.

Nate Silver, in *The Signal and the Noise*, shares an example from baseball when speaking to the risk of using averages in isolation. He compared the performance of

[1] Disclosure: I took Dr. Shiver's "Forest Management" class in graduate school. Since he retired as a Professor Emeritus of Forest Management and since I started Forisk, Barry (Smarter Forestry) and I have worked together on a few forestry research and consulting projects.

statistical models to the judgement of professional scouts in projecting the prospects of baseball players. The study found that scouts outperformed the stats-only approach. In practice, scouts use a “hybrid approach” that includes data, as well as information not available in spreadsheets. For example, scouts test the available data with observations on the ground related to hustle and attitude and toughness. Statistical models, on the other hand, can get fooled by “false positives” where good players boost their statistics by performing well against weak competition.

Conclusion

Some might argue that averaging and generalizing facilitates analysis and the testing of ideas about how things work. Okay, this makes sense. “On average”, timberland in markets with lots of mills have higher values. On average, taller people are more able to dunk a basketball. But averages do not determine value, performance or skill. They offer a general starting point.

The curious mind moves past averages and generalizations. Are you interested or curious?[2] We can skip the false shortcuts offered by averages when it comes to making substantive decisions. Seek to know more than the person across the table. What is the context? What are the upside and downside? Where can I find opportunity in the transitions and variation? Through figuring out how things work at the extremes, we improve our understanding and position ourselves to make better decisions.

[2] I look for this when hiring. Does this person care about the details and how things work?

My thanks to Steve Mendell and Greg Hoffman for their ideas and suggestions on improving earlier versions of this essay.