The Danger of Taking Evidence at Face Value

Alex Edmans
Published in Economia, October 2019

"Corporate governance … can genuinely add value for business"
"CEO remuneration packages actively discourage innovation in UK's top companies"

I was delighted to see two recent studies drawing the above conclusions. In two previous Economia articles, I've highlighted the criticality of corporate governance and pay reform. So I was tempted to accept these statements at face value.

But I was suffering from "confirmation bias" – the tendency to accept a claim uncritically if it confirms what we'd like to be true, and reject statements we disagree with. This bias is pervasive today – it's why we see such polarised views on politics, business, and climate change. I highlighted the danger of confirmation bias in a TED talk, "What to Trust in a Post-Truth World". Here, I'll complement that talk by providing recent examples of this bias in a business context, as well as tips on how to address it.

To illustrate my points, I need to use examples. These examples are *not* chosen to "bash" their conclusions – I have a personal interest in them being true. Moreover, their authors should be commended for bringing large-scale evidence to inform an issue – a refreshing contrast to the common practice of using hand-picked anecdotes. Instead, my intention is to be constructive and highlight the caution that practitioners must exercise in interpreting evidence. Companies underperform, economies stagnate, and societies malfunction. If improving performance was as easy as claimed by some influential books, studies, and talks, this would not be the case. Instead, the underperformance may be due to following conclusions that aren't actually valid.

Let's start with the corporate governance study, which finds a correlation between a corporate governance index and various performance measures. Does that mean that corporate governance causes better performance? No, for two reasons. The first is *reverse causality*. Perhaps poorly-performing companies have to focus on fire-fighting; only once a company has a rosy future outlook can it turn its attention to longer-term issues such as governance. The second is *omitted variables*. A third factor, such as a great CEO, could improve both performance and governance. The study has very few control variables, simply comparing well and poorly-governed companies – many other factors may have driven the performance differences.

Now many studies acknowledge that "correlation does not imply causation", but as a perfunctory disclaimer – the headlines and press releases imply causation. Indeed, the above paper claims a "proven link" and "conclusive proof", and also makes references to finding the "holy grail". Proving causality is very difficult, and shouldn't be the bar to releasing a study. You learn something from correlations, but they shouldn't be presented as "conclusive proof".

The second study gathers high-quality data to usefully document features of actual pay packages. But it claims that "CEO remuneration packages actively discourage innovation in UK's top companies" without even running correlations – it doesn't have any measures of innovation. It finds that pay packages have certain features (e.g. earnings-based bonuses) which it simply *assumes* deter innovation rather than showing this – a case of "sentence first, verdict afterwards", to quote Alice in Wonderland. This assumption might seem logical since

innovation expenditure decreases earnings, but the effect of incentives on behaviour is extremely complicated. Indeed, the same logic implies that bonus will encourage share buybacks, because buybacks increase earnings. But the study that PwC and I conducted for the UK government didn't find this. Moreover, earnings-based incentives may encourage the company to "get its act together" and improve in many dimensions, including innovation.

So what's a practitioner to do upon seeing evidence? The first tip is to be aware of your own confirmation bias. If you're inclined to agree with a study, scrutinise it particularly carefully – does it actually present evidence that supports the claims? Second, play devil's advocate. Ask if there are alternative explanations. Might causality be in the other direction, or might omitted variables drive both? Third, we should draw particularly from papers in top peer-reviewed academic journals. The most stringent journals (e.g. those in the *Financial Times* Top 50 list) reject up to 95% of manuscripts. It's important to stress "top" – the analytics company Cabell's estimates that 8,700 journals claim to be peer-reviewed but actually aren't.

Peer review isn't perfect – mistakes are made – but it's better to go with something checked than something unchecked. When considering treatment options for a medical condition, a patient would want to consider the world's best evidence on the treatments' success, conducted by the top scientists and thoroughly checked. We should apply the same rigour when considering the health of a business.