

COMMENT

## Economics is not statistics (and vice versa)

Peter T. Leeson

Department of Economics, George Mason University, Fairfax, USA

Corresponding author. Email: [pleeson@gmu.edu](mailto:pleeson@gmu.edu)

(Received 23 December 2019; revised 21 January 2020; accepted 21 January 2020; first published online 14 February 2020)

### Abstract

Economic analysis is a *theoretical* approach, not an empirical one. It is a way of thinking, not a way of testing. An analysis that has an empirical component can be economic without being quantitative: economics is not statistics. An atheoretical analysis can never be economic, no matter how impressive its regressions: statistics is not economics.

**Keywords:** Economic analysis; qualitative methods; quantitative methods

Ten years ago at a small economics conference, I presented a paper that was in the style of what is sometimes called an analytic narrative (Bates *et al.*, 1998).<sup>1</sup> The paper explained an unusual institution as one that maximized wealth given some overlooked constraints and then evaluated my explanation using qualitative data. In the middle of my presentation, a participant leapt from his seat with a crumpled copy of my manuscript in hand and barked, ‘Do you plan on doing any *economics* in this paper, or can we stop listening?’

At first I thought he was objecting to my paper’s dearth of mathematics. I articulated my theory solely in words, and from previous encounters I was aware that some members of our tribe regard that as a sin. But that was not the sin for which I was being admonished here. In a spirited back-and-forth my interlocutor set me straight: my paper contained *no economics* because it contained *no quantitative analysis*. I had no regression results to report, so I was not worth listening to.

Perhaps I was not. But if so, the fact that my data were qualitative could not, in and of itself, have been the reason. Skarbek (2020) explains why: ‘if we wish to say something about big historical questions, accurately identify causal mechanisms, or engage thoughtfully with thick concepts and theories, then we’ must be ‘open to engaging with qualitative evidence.’ In some cases, qualitative evidence is the best evidence we’ve got. And for some purposes, qualitative evidence is the best evidence – full stop.

Admittedly, it’s self-serving for me to declare that Skarbek is right. The paper that inspired my interlocutor’s outburst is one of many I’ve authored whose empirical component is based solely on qualitative data, the usefulness of which I therefore have an interest in defending. Still, Skarbek is right; at least, I agree with him that qualitative evidence has value in the study of institutions, and my reasons are largely the same as his.

You can read Skarbek for yourself, so I won’t restate those reasons here. Instead, I’ll opine on a subject that’s related but different, one that Skarbek touches in passing and my interlocutor sought to wield like a mace: the relationship between economic and quantitative analysis. My view of that relationship is simple: there is none.

<sup>1</sup>I did not characterize my paper that way; though it seems that my interlocutor’s reaction (keep reading) would not have been different if I had.

Well, not quite. There is a strong relationship between the way that contemporary economists test their hypotheses and quantitative analysis. So strong, in fact, that some economists think quantitative analysis is required for an analysis to be ‘economic.’ *That* relationship, I contend, is bogus. A well-pedigreed conception of economic analysis sees quantitative analysis as neither necessary nor sufficient for an economic one.

‘I contend,’ because the alleged necessity of quantitative analysis or indeed anything else to economic analysis is a matter of definition, and each of us is free to define terms as he likes. Lionel Robbins, for example, famously defined economic analysis as that ‘which studies human behaviour as a relationship between ends and scarce means’ (1932: 15). Ronald Coase defined it as analysis of ‘a subject matter: the study of the working of the economic system’ (1998: 83): namely, ‘firms, markets for goods and services, labour markets, capital markets, the banking system, international trade’ (1978: 206–207). Jacob Viner purportedly defined economic analysis as ‘what economists do’ (Boulding, 1941: 3). And as Skarbek reports, Dani Rodrick defines it in terms of ‘an apparatus of formal modeling and statistical analysis’ (2015: 7).

Bickering about definitions is rarely worth the trouble. But occasionally it is, and I believe the trouble is worth it when it comes to the definition of economic analysis because something important may be at stake: the ability of young, institutionally curious economists who have interesting questions to ask and illuminating answers to offer, but for whatever reason do not envisage quantitative analysis figuring in their work, to forge ahead with that work and proudly declare it economics.

If at the time I was becoming interested in economics someone had convinced me that economics is in fact statistics, I would have put my books back on the shelf, for I had no interest in statistics. That would have been a great loss to me. Yet suppose it wasn’t me who had been deterred but a highly insightful and creative economic mind. That would have been a great loss *to economics*. So, too, if such a mind quit working on her institutional study that uses ‘only’ qualitative data because, her superiors informed, ‘that’s not real economics.’ How we define economic analysis matters because what counts as economic analysis can influence who pursues economics and, to some extent, what young economists in particular will do.

How, then, do I think we should define it? In the vein of Economics Nobel Laureate Becker (1976, 1993) and, before him, should-have-been Economics Nobel Laureate Ludwig von Mises (1949): as an approach to human behavior grounded in the assumption that individuals maximize (Leeson, 2020).<sup>2</sup> In this view, economic analysis is a *theoretical* approach, not an empirical one – a way of thinking, if you like, not a way of testing.

When applied to observed phenomena, that way of thinking delivers context-specific predictions, which may then be tested. Not necessarily with quantitative data; often, qualitative data can, must, or even may better do the trick. Neither the nature of the data used for testing nor the nature of the test itself is relevant to whether the analysis is economic. That depends only on whether the *theory* that delivered the predictions being tested is economic. Indeed, looking at the analysis as a whole – its theoretical component plus its empirical one – the former alone is economic; the empirical component is, well, just empirical. An atheoretical analysis can therefore never be economic, no matter how impressive its regressions or for that matter its interviews: statistics is not economics and neither is ethnography. By the same token, an analysis that has an empirical component can be economic without being quantitative, or economic without being qualitative: economics is not statistics, nor is it ethnography.

There is something to recommend this conception of economic analysis besides its pedigree and the fact that it creates space for studies that leverage qualitative data: common sense. Think back to the first course you took that described itself as a course in economics. It was not a study in statistics – it was a study in the *economic way of thinking*. Concepts like maximization and constraints featured prominently (though perhaps by other names), or at least they should have. Those economic concepts

<sup>2</sup>Becker refers to ‘maximizing behavior’; Mises refers to ‘purposive behavior’. As I read these authors, they are referring to the same thing, and both of them see *all* human choice, no matter its domain, as amenable to economic analysis. Of course, the assumption of maximization can and has been critiqued. See, for instance, Hodgson (1988).

were then used to develop other ones, like the law(s) of demand, and equilibrium. If quantitative analysis came into play, it did so later, as way to test predictions yielded by the application of economic concepts – and there's a good chance that it did not come into play at all. No doubt you have changed since your first course in economics. But the meaning of economic analysis has not.

**Acknowledgements.** I thank Villiger La Vencedora Churchill for stimulation.

## References

- Bates, R. H., A. Greif, M. Levi, J.-L. Rosenthal and B. R. Weingast (1998), *Analytic Narratives*, Princeton: Princeton University Press.
- Becker, G. S. (1976), *The Economic Approach to Human Behavior*, Chicago: University of Chicago Press.
- Becker, G. S. (1993), 'The Economic Way of Looking at Life', *Journal of Political Economy*, **101**: 385–409.
- Boulding, K. E. (1941), *Economic Analysis*, New York: Harper and Row.
- Coase, R. H. (1978), 'Economics and Contiguous Discipline', *Journal of Legal Studies*, **7**: 201–211.
- Coase, R. H. (1998), 'The New Institutional Economics', *American Economic Review*, **88**: 72–74.
- Hodgson, G. M. (1988), *Economics and Institutions: A Manifesto for Modern Institutional Economics*, Cambridge: Polity Press.
- Leeson, P. T. (2020), 'Logic is A Harsh Mistress: Welfare Economics for Economists', *Journal of Institutional Economics*, **16**: 145–150.
- Mises, L. v. (1949), *Human Action: A Treatise on Economics*, New Haven: Yale University Press.
- Robbins, L. (1932), *The Nature and Significance of Economic Science*, London: Macmillan.
- Rodrik, D. (2015), *Economics Rules: The Rights and Wrongs of the Dismal Science*, New York: W. W. Norton and Company.
- Skarbek, D. (2020), 'Qualitative Research Methods for Institutional Analysis', *Journal of Institutional Economics*, published online. doi:10.1017/S174413741900078X.

