

This is a non-systematic but commendably comprehensive review of the empirical economics literature about relationships between health-related outcomes and productivity-related outcomes. It's certainly not exhaustive, but it specifically does not claim to be, and there are only a few glaring omissions. (Perhaps most notably: the Work and Iron Status Evaluation study is missing from the discussion on experimental studies of nutrition and productivity, and Paul Romer's seminal papers on endogenous technical change are missing from the macroeconomic growth discussion). If anything, the reference list might even be too long--in the sense that the "cost of illness" literature and other alternative approaches to measuring the normative "burden" of disease don't really belong in a discussion about the relationship between productivity and health. Overall, though, the list seems about right, and the author is to be commended for trying to synthesize such an enormous literature into a digestible discussion.

I see a fundamental problem, however, in the way that the author has chosen to go about the actual synthesis. The basic thrust of the discussion appears to posit an "old" zeitgeist among economists that "wealth causes health," which is gradually giving way to a "new" zeitgeist that "health causes wealth."

Characterizing a zeitgeist is extraordinarily difficult of course. However, the proposition that such an enormous field in the empirical social sciences was ever dominated by hypotheses as facile as either of these is striking, and very difficult to swallow. I thought the whole point of the insights offered more than two generations ago by Schultz, Grossman, Becker, and others was to introduce a conceptual framework that rendered obsolete this whole class of questions. As far as I know, nobody would characterize progress in the field of industrial organization as movement in some debate about "does a firm's revenue cause its productivity?" or "does a firm's productivity cause its revenue?" This is not only because the answer is obvious, but also because it is beside the point. Similarly, for two generations or more it would seem more fair to characterize innovations in empirical economics around health to have been devoted to a much richer discussion than the one characterized here.

Some of the major themes around which a synthesis of the literature might be built could include:

- + the astonishing innovations in measurement over the previous generation, so that "health" and "productivity" have been examined in a much more empirically nuanced way
- + methodological innovations in program evaluation and other related fields (including for example increasing use of randomization and field experiments)
- + the "gap" between the results of macro-level analyses and the empirical evidence of their microfoundations (some of which have been subjected to direct test, and others of which have not)
- + an increasing appreciation for dynamic effects (both across generations and over a single life-course)
- + the convergence (or lack thereof) among conceptual and analytical approaches from the fields of biology, epidemiology, demography, and economics over the past half-generation

These, it seems to me, represent more salient themes in the development of the field than any "discussion" over direction of causation. The "directionality debate," in fact, sometimes even seems to be a more normative one. It seems largely confined to advocates from opposing camps who seem to agree only the idea that if "health causes wealth" then more public resources should be invested in health, whereas if "wealth causes health" then they should be invested elsewhere.

Once positive questions around the nature and dynamics of relationships between health and productivity are decoupled from the normative question of how much health should be worth in a world of constrained resources, it becomes difficult to shoe-horn more than two generations' worth of empirical social science into such a facile debate.