

Commentary: The economic business cycle and mortality

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There is much evidence that economic recessions can have detrimental health effects for those losing jobs or in fear of losing their jobs. The unemployed in particular are vulnerable as in addition to material losses, they also potentially lose access to social networks, self-esteem, self-confidence, and a structured life schedule—all factors known to affect health.^{1,2} Therefore, it is natural to presume that population health as measured by mortality moves counter-cyclically, i.e. one would expect mortality to be up in economic recessions. Yet, there is mounting evidence to the contrary: mortality is up in times of economic expansion and down in recession.^{3–7} Importantly, the two pieces of evidence are not necessarily inconsistent with each other. This is because economic upturns can affect the health of many more people or affect health more strongly, for example, via higher working times, job-related stress, increased consumption of health-damaging consumer goods, and an increase in work-related accidents. Therefore, the overall effect of economic expansion on mortality can be negative despite the beneficial health effects of reduced fear of job loss and reduced number of unemployed people.

Still, given its seemingly counter-intuitive results, it is important that the evidence showing mortality rates to move pro-cyclically is tested in different samples, different time periods, and with different estimation techniques to check its robustness. Tapia Granados⁶ has provided a valuable addition to this literature. His time-series analysis of mortality rates in the United States over the period 1900–1996 complements nicely existing evidence based on panel data analysis across the states in the United States, Germany,⁷ or OECD countries⁴ from shorter time spans as well as other time-series analysis by the same author for Spain and Sweden.⁵ Time-series analysis evidence is perhaps particularly welcome since Brenner's contrary results suggesting that recessions raise rather than lower mortality rates are largely based on time-series analysis as well,⁸ but note that his research on the issue had started >20 years earlier). I particularly like that Tapia Granados⁶ provides estimates both for the entire time period as well as for selected sub-periods. The fact that the estimated coefficients for the total age-adjusted mortality rate do not differ much across time periods is a striking result, given that most other existent evidence is from much more recent time periods.

However, time-series analysis poses various econometric challenges that are either non-existent or much less prevalent in panel data analysis. Despite space constraints, I would have

liked to see in Tapia Granados a more detailed discussion of issues such as the way in which the percentage deviation from trend was computed, the potential use of different and more advanced time-series estimation techniques or of the problem of autocorrelation. Concerning the latter, the result from regression theory that in the presence of autocorrelation the estimated coefficients remain unbiased, invoked by the author, is only true as long as the variables are strictly exogenous. However, the assumption of strict exogeneity is problematic in the face of mounting evidence on the effect that health has on economic outcomes.⁹

In terms of future research, we need more efforts in two directions. First, we need more evidence from individual rather than aggregate data. Second, we need more research on the channels through which economic expansions negatively affect health. On both accounts, Ruhm^{10,11} provides seminal contributions, but much more is needed despite the fact that such efforts are data-intensive and work-intensive. We need to understand better why recessions lower overall mortality rates to an extent that the well-documented negative health effects of recessions for certain sub-groups of the population, particularly the unemployed, are more than compensated. This relates to the proper policy conclusions drawn from Tapia Granados' and similar findings. Surely, just because mortality is lower in economic recessions does not mean that recessions are desirable from a health perspective. Instead, we need to focus on how the negative effect of economic upturns on mortality rates can be mitigated, if not avoided. Much attention has been paid to the negative health effects of recessions for the unemployed and other sub-groups of the population and to the mitigation of these effects. Rightly so. But maybe it is time to focus much more on how to mitigate the negative health effects of economic upturns.

References

- 1 Brenner MH, Mooney A. Unemployment and health in the context of economic change. *Soc Sci Med* 1983;**17**:1125–38.
- 2 Winkelmann L, Winkelmann R. Why are the unemployed so unhappy? Evidence from panel data. *Economica* 1998;**65**:1–15.
- 3 Ruhm CJ. Are recessions good for your health? *Q J Econ* 2000;**115**:617–50.
- 4 Gertham EG, Ruhm CJ. 2004. *Deaths Rise in Good Economic Times: Evidence from the OECD*. Mimeo, Lund University and University of North Carolina Greensboro.
- 5 Tapia Granados. *Mortality and Economic Fluctuations. Theories and Empirical Results from Spain and Sweden*. Unpublished PhD thesis, New School University, New York, 2002.
- 6 Tapia Granados Increasing Mortality During the Expansion of the US Economy, 1900–1996. *Int J Epidemiol* 2005; doi:10.1093/ije/dyi141.

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⁷ Neumayer E. Recessions lower (some) mortality rates: evidence from Germany. *Soc Sci Med* 2003;**58**:1037-47.

⁸ Brenner MH. (1995). Political economy and health. In: Amick BC III, Levine S, Tarlov AR, Chapman Walsh D (eds). *Society and Health*. Oxford: Oxford University Press, 1995, pp. 211-46.

⁹ Cole M, Neumayer E. The impact of poor health on total factor productivity. *J Dev Stud* 2005; (in press).

¹⁰ Ruhm CJ. Good times make you sick. *J Health Econ* 2003;**24**:637-58.

¹¹ Ruhm CJ. *Healthy Living in Hard Times*. Mimeo. University of North Carolina, Greensboro 2004.