RESEARCH BRIEF • FEBRUARY 2024

Lives vs. Livelihoods: The Impact of the Great Recession on Mortality and Welfare

Based on BFI Working Paper No. 2024-14, "Lives vs. Livelihoods: The Impact of the Great Recession on Mortality and Welfare," by Amy Finkelstein, MIT; Matthew J. Notowidigdo, University of Chicago; Frank Schilbach, MIT; and Jonathan Zhang, McMaster University

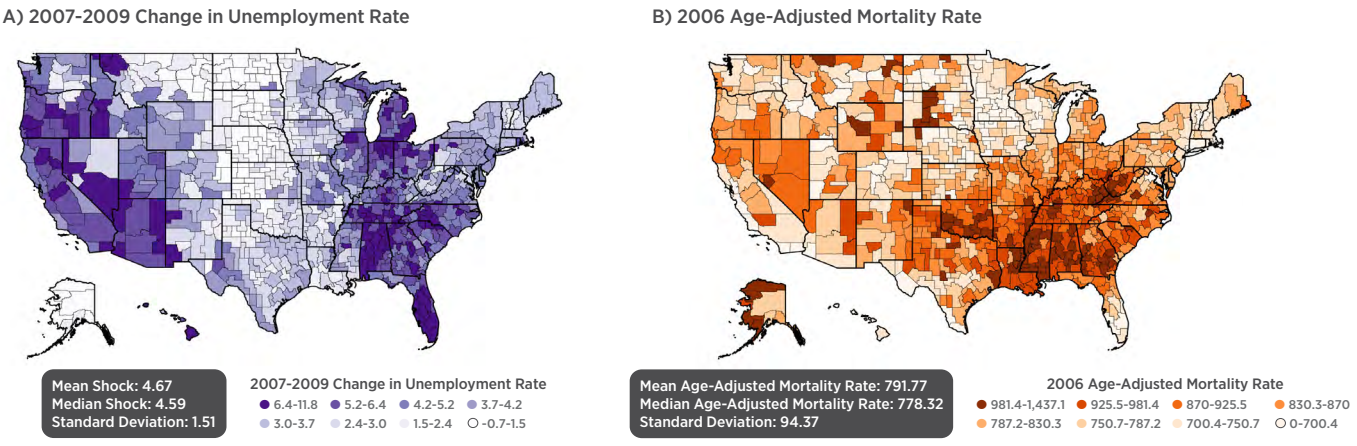
Recessions reduce mortality, driven largely by the external health effects of reduced economic activity (such as decreases in air pollution); this substantially reduces the welfare cost of recessions, particularly for older people and workers with less education.

At the turn of the century, the economist Christopher J. Ruhm authored a paper with the provocative title, "Are Recessions Good for Your Health?"[1] It turns out that the answer is "yes." Recessions increase lifespans. Although Ruhm could not fully explain this phenomenon, his analysis pointed in part to increased smoking and obesity when the economy strengthened, along with less physical activity and unhealthier diets.

This work replicates Ruhm's earlier influential work and expands our understanding of why this phenomenon occurs by studying the effects of the Great Recession of 2007-2009. In doing so, the

[1]Ruhm, Christopher J, "Are Recessions Good for Your Health?" The Quarterly Journal of Economics, 2000, 115 (2), 617–650.

Figure 1 · Geographic Patterns and Correlation of Unemployment and Mortality



Note: Panel A displays a heat map of the unemployment shock, i.e., the change in commuting zone (CZ) unemployment rate from 2007-2009, binned into octiles. Panel B displays a heatmap of 2006 CZ age-adjusted mortality rates per 100,000. The 2006 CZ population-weighted mean and standard deviation of the unemployment shock and mortality rate are reported in the lower left-hand corner of each figure.

authors offer new insights into the health effects of recessions, including into such demographic factors as age and education. They also push the boundaries of existing analysis by translating the mortality effects of recessions into predicted changes in life expectancy. Lastly, they offer an assessment of the quantitative importance of mortality declines for the welfare consequences of recessions. Put another way: Do current measures of recessions accurately measure their impact on social welfare? Do the effects of recessions on mortality offer policy prescriptions that can otherwise extend life expectancy?

Before addressing those questions, let us review the authors' findings. This work studies the effects of people living in **commuting zones (CZs)**, which approximate labor markets.

The authors find the following:

- The Great Recession substantially reduced mortality. For every one-percentage point increase in a CZ's unemployment rate between 2007-2009, its age-adjusted mortality rate fell by 0.5 percent.
- These mortality reductions appear immediately, and they persist for at least 10 years. Since the average national unemployment rate increased by 4.6 percentage points between 2007 and 2009, that means an increase in the unemployment rate of the magnitude of the Great Recession reduces the average, annual age-adjusted mortality rate by 2.3 percent for at least 10 years.
- These estimates imply that the Great Recession provided one in twenty-five 55-year-olds with an extra year of life.

How are these recession-induced effects realized among the population?

- Mortality declines are entirely concentrated among the half of the population with a high school degree or less but are otherwise pervasive across demographic groups.
- They also appear across all major causes of death except for cancer mortality (the second largest cause of death), since cancer incidence is not likely to be tied to business cycles.
- Reductions in mortality rates are similar across gender, race/ethnicity, and age groups. However, because mortality is so much higher among the elderly, about three-quarters of the overall mortality reduction comes from averted deaths among those ages 65 and over.

Why did mortality decline?

- A key contribution of this work is to reveal that the reduced exposure to air pollution explains about one-third of the decline in mortality.
- The authors also replicate earlier research that points to reduced traffic fatalities, which explains another 10-20 percent of decreased mortality.
- The other roughly 40-50 percent of mortality reduction remains unexplained.

With these findings in hand, the authors then turn to the **welfare effects** of the Great Recession. If it is true, as this and previous work finds, that recessions reduce mortality, and it is also true that people value their own lives, then it must also be true that recessions are not as costly as typically measured. The authors incorporate existing estimates of

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Commuting zones: Geographic area intended to more accurately reflect where people live and work

Welfare effects: Changes in economic welfare caused by changes in economic variables, like economic shocks, income, employment, taxes, and so on

the "**value of statistical life**" (or VSL) into their evaluation and find that:

- For a 35-year-old, accounting for the change in mortality reduces the welfare cost of the Great Recession by about 9 percent (from 1.61 percent of average annual consumption to 1.47 percent).
- However, for a 55-year-old, the change in mortality reduces the welfare cost of the Great Recession by about 25 percent (from 2.39 percent of average annual consumption to 1.80 percent).
- For those with more than a high school degree, the authors estimate effectively no mortality impacts of the Great Recession. However, for those with a high school education or less, accounting for the change in mortality reduces the welfare cost of the Great Recession.
- As individuals age, the impact of the change in mortality for the less educated group becomes so large that it closes and ultimately reverses the finding that the Great Recession is more costly for those with less education.

The key insight from this analysis is that older people – who generally experience smaller economic effects of recessions because they are generally less dependent on, say, labor income – receive most of the mortality benefits from recessions since they are at a point in their lives when they are exposed to a higher risk of mortality.

Finally, while the authors do not offer policy prescriptions based on their work, their findings on the benefits of reduced exposure to air pollution are in line with recent research that details the effects of particulate air pollution on life expectancy (see, for example, the Air Quality of Life Index developed by UChicago's Energy Policy Institute.) The authors also raise important questions for further work about the mortality impacts from other economic shocks, such as natural resource booms and busts, adoption of industrial robots, and increased import competition from China.

Value of statistical life (VSL): This is the common method used to put a monetary value on human life and which is often used in policymaking. Formally: The additional cost that individuals (or society) would be willing to bear for improvements in safety (or reduced risk) and to decrease mortality. For example, if an individual is willing to pay $1,000 to reduce the annual risk of death by one in 10,000, she is said to have a VSL of $10 million.

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NO. 2024-14 · FEBRUARY 2024

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