

Trading Goods for Lives: NAFTA's Mortality Impacts and Implications

Based on BFI Working Paper No. 2026-33, "[Trading Goods for Lives: NAFTA's Mortality Impacts and Implications](#)," by Amy Finkelstein, Massachusetts Institute of Technology; Matthew J. Notowidigdo, University of Chicago; and Steven Shi, Massachusetts Institute of Technology

In the 15 years post-NAFTA, an area with average NAFTA exposure experienced increased mortality overall; these mortality increases were particularly pronounced among working-age men, who also experienced disproportionate NAFTA-induced employment declines.

More than a decrease in employment, the **secular** decline in US manufacturing in recent decades is linked with societal ills like declining marriage rates and increases in opioid addiction and, of key interest to researchers, mortality. Given that the 1994 **North American Free Trade Agreement**

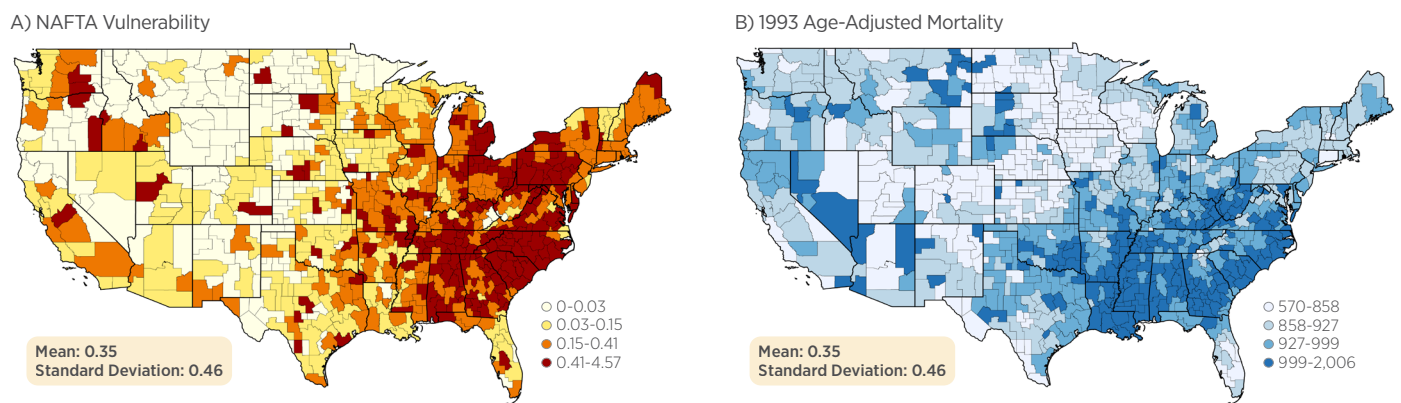
(NAFTA) was a driver of the decline in US manufacturing, the question arises as to the link between NAFTA and to what are aptly labeled **deaths of despair**. To what degree was NAFTA responsible for this increase in mortality rates within manufacturing **commuting zones**; further,

secular: a secular economy refers to long-term, structural, and fundamental forces, including up and down shifts, that persist for decades, regardless of short-term business cycles. Secular shifts are often driven by technology, demographics, policy, or behavior.

North American Free Trade Agreement (NAFTA): a 1994 treaty between the United States, Canada, and Mexico that created a trilateral trade bloc by eliminating most tariffs and investment barriers, and which aimed to boost economic growth by reducing trade costs. It was replaced by the United States-Mexico-Canada Agreement (USMCA) in 2020, which intended to strengthen North American trade, including new provisions to enhance labor laws, to increase regional content requirements for the automotive sector, and to expand intellectual property protections.

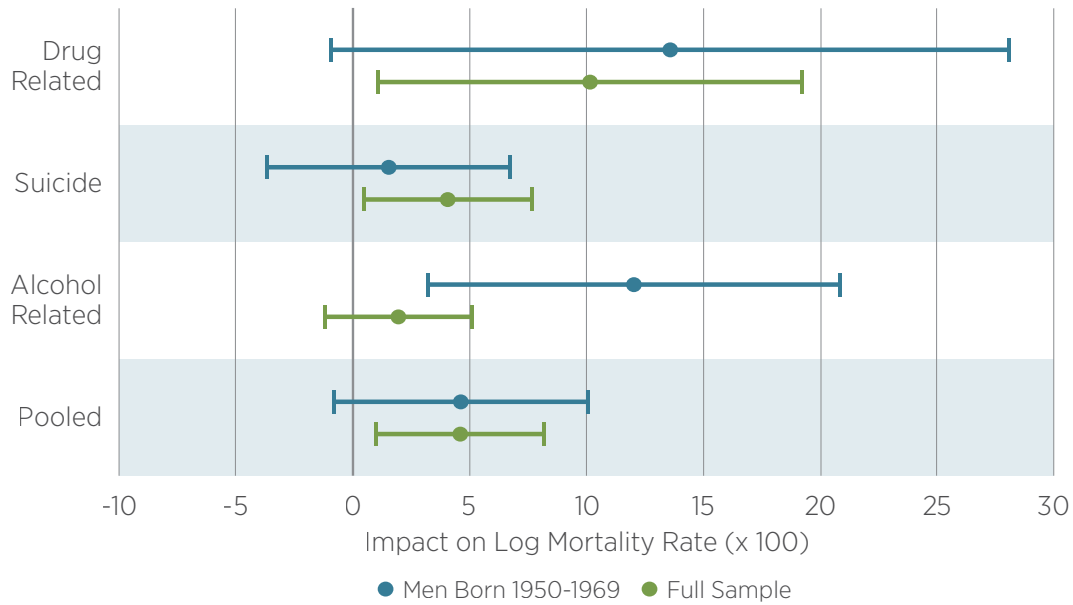
commuting zones (CZs): geographic areas defined by the USDA Economic Research Service that cluster US counties based on worker commuting patterns, rather than administrative lines. Thus, they represent functional local labor markets, covering both rural and urban areas. The 2020 CZs grouping includes the 3,222 counties and county-equivalents in the United States and Puerto Rico into 598 distinct labor markets. These CZs are based on commuting flows to and from counties, which allow researchers to aggregate county-level data to examine the socioeconomic differences across labor markets. See [here](#) for a CZ map.

Figure 1 • Geographic Distributions and Correlations of NAFTA Vulnerability and Mobility



Note: Panel A displays a heatmap of the NAFTA vulnerability measure across community zones, illustrating significant spatial variation within and across US states in their vulnerability to NAFTA, while Panel B displays a heatmap of 1993 age-adjusted mortality rates per 100,000, showing documents substantial variation in age-adjusted mortality rates across community zones.

Figure 2 - NAFTA Mortality Impacts on Deaths of Despair



Note: This figure shows the impacts on deaths classified as "deaths of despair," as well as for the three sub-categories: drug-related deaths, suicides, and alcohol-related deaths. For the full sample, there is a statistically significant increase in deaths of despair, with increases in all three sub-categories, and statistically significant increases in drug-related deaths and in suicides. For men who were 25-44 in 1994, there is a statistically significant increase in alcohol-related mortality, and large but imprecise increases in drug-related mortality. Horizontal lines denote 95% confidence intervals. Please see working paper for more details.

beyond NAFTA, to what degree does a decline in manufacturing affect mortality rates?

These and related questions motivate this new research, which builds on prior work that shows that areas more exposed to NAFTA experienced declines in wages and in the employment-to-population ratio (EPOP), while welfare benefits were negligible (political favor also shifted rightward). To determine whether NAFTA led to increased mortality, the researchers compare regions of the United States that were heavily affected by increased competition from cheaper Mexican imports against regions that were largely unaffected. They find the following:

- Areas more exposed to NAFTA experienced an increase in all-cause mortality. In the 15 years post-NAFTA, a commuting zone with average exposure to Mexican import competition experienced an increase in annual, age-adjusted mortality of 0.68 percent.

Qualitatively, recession-induced declines in local area manufacturing EPOP also increase mortality, while recession-induced declines in local area non-manufacturing EPOP reduce mortality.

The mortality impacts of NAFTA grew over this period, as tariffs were phased out and manufacturing employment gradually declined.

- Mortality increases appear across all broad age by sex groups, but were disproportionately concentrated in working-age men, the group who also experienced disproportionately large declines in employment from NAFTA.
- Mortality increases appear across most major causes of death, as well as for deaths of despair. Exposure to NAFTA also worsened self-reported health and increased smoking rates.

The authors then study the difference in EPOP between manufacturing and non-manufacturing commuting zones. They examine four sources of local labor market variation in EPOP over the 1986 to 2016 period: area-year variation in EPOP, exposure to the Great Recession, exposure to import competition from Mexico due to NAFTA, and exposure to import-competition from China, to find the following:

- Most trade-induced declines are in the manufacturing sector. The authors estimate that a 1 percentage point trade-induced decline in area EPOP from either NAFTA or exposure to trade from China increases age-

adjusted mortality by the same magnitude (about 1.5 percent).

- The mortality effects resemble those from plant closings but work in the opposite direction, that is, a 1 percentage point recession-induced drop in employment *reduces* mortality by about 0.5 percent.

As to the mortality impacts of different types of local area EPOP declines, the authors find the following:

- Qualitatively, recession-induced declines in local area manufacturing EPOP also increase mortality, while recession-induced declines in local area non-manufacturing EPOP *reduce* mortality.
- Quantitatively, the results imply that a counterfactual recession in which the share of the local area EPOP decline that comes from the manufacturing sector were like that from trade shocks would produce quantitatively similar mortality increases to what their estimates for NAFTA and the China Shock.

Together, these findings suggest that whether mortality increases or decreases, and its magnitude, likely depends on how much these shocks affect the manufacturing sector relative to non-manufacturing sectors. The authors offer two speculative explanations for this phenomenon: first, declines in manufacturing EPOP per se do not increase mortality, rather declines in EPOP among the demographic that is disproportionately employed in manufacturing, namely prime-aged men; and second, manufacturing jobs likely have higher rates of unionization, wages, and job tenure, making it harder for displaced workers to find a complementary replacement. Further research is needed to explore these explanations.

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