



The China Shock's Lessons for the Green Economy

How to Limit the Damage of Localized Job Losses

By [Gordon H. Hanson](#) November 8, 2021



Driving away from shuttered steel furnaces in Pennsylvania, April 2016

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Democrats and Republicans do not agree on much, but confronting China has bipartisan support. The Biden administration has kept in place its predecessor's onerous tariffs on Chinese imports, electing to use pressure to change Beijing's behavior and to protect U.S. interests. China, U.S. President Joe Biden told reporters in February, is his country's most "serious competitor," one that threatens the United States' "prosperity, security, and democratic values."

Whatever the merits of this rhetoric and approach, China's rise has certainly hurt U.S. manufacturing regions. There is now an enormous body of evidence showing that import competition from China has gutted industrial towns in the American Midwest and Southeast. Five years ago, David Autor, David Dorn, and I reported that between 1999 and 2011, trade with China appeared to have cost the United States between 600,000 and one million manufacturing jobs, as large U.S. producers were driven out of business by competitors with more affordable Chinese-made products or as they moved their own plants overseas. In new research, we have extended our analysis out to 2019. The picture remains bleak. Most places hurt by the "China shock," as the phenomenon is now known, have seen little in the way of recovery.

At least in part, the recognition of these losses motivated the Trump administration's trade war with China. But research shows that President Donald Trump's tariffs have done little to reverse the economic and social damage suffered in communities that lost industrial jobs thanks to China's boom. Joblessness remains high in impacted regions. Marriage rates have dropped, families headed by single parents have become more common, and more children are living in poverty. Rates of substance abuse have gone up, and thousands of people have died from opioid overdoses. The China trade shock has proved far more durable and powerful than initially imagined.

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This experience is important to remember as U.S. policymakers chart out what could be an equally seismic economic shift: moving the United States away from fossil fuels and toward greener sources of energy. Such a transition may be critical to fight climate change, but it could devastate parts of the country that depend on carbon extraction. In 2019, 2.8 million people worked for companies that extract, process, distribute, and produce electricity from fossil fuels. Many other employers depended on spending by these workers to stay in business. To avoid creating yet more social havoc, the United States must learn from its past mistakes. Rather than counting on markets to sort out the aftermath of shocks, the government will need to proactively invest in policies designed to help regions that bear the brunt of wider transformations in the economy. It will need to design a social welfare system that recognizes that not every community suffers equally and that even when the national economy is growing, some places still struggle. Otherwise, millions more people could be left behind.

A VICIOUS CYCLE

The China trade shock began in earnest around 1992, when the Chinese leader Deng Xiaoping momentarily expanded China's economic reforms to include freer trade and investment with the outside world. From the late 1990s through the early 2000s, industry towns such as Hickory, North Carolina, and St. Marys, Pennsylvania, saw factories close, manufacturing jobs disappear, and housing prices fall. Residents without college degrees watched their middle-class status—or their hopes of reaching the middle class—evaporate.

By 2010, China's share of the U.S. market for various products began to stabilize, and U.S.-based manufacturers stopped laying off large numbers of workers. Many policymakers hoped that as a result, life would begin to improve in former factory communities. But as Autor, Dorn, and I found in our new study, such relief did not arrive. We looked at labor-market outcomes in U.S. factory towns from 2000 to 2019. Our

findings went against cherished economic frameworks, which predict that workers in struggling communities migrate in search of employment elsewhere and that new industries expand into downtrodden areas to take advantage of an idle labor pool. Neither type of recovery materialized. Overall, relatively small percentages of people left their communities, and businesses didn't expand enough to absorb workers who had earlier lost their jobs. Economists still can't explain why workers did not abandon regions in decline, but relationships may play a role. Moving can mean separating from family members, who care for children, provide support when times are tough, and offer a comforting social network.

Manufacturing layoffs initiated a downward spiral of economic distress and social breakdown.

Although the magnitude of manufacturing job loss has been plain to see, many academics and inside-the-Beltway policy analysts have nonetheless downplayed the hollowing out of the heartland. The U.S. economy is dynamic, creating and destroying millions of jobs annually, and so for some, the woes of factory towns seem somewhat inconsequential. Others have argued that the decline of manufacturing employment was inevitable; irrespective of [China's rise](#), automation and artificial intelligence would ultimately cause factory jobs to disappear. But these skeptics fail to appreciate just how acute and concentrated the China trade shock was in both time and place. Because China reformed its economy so quickly, manufacturing cities and towns lost their jobs at an equally brisk pace—far faster than would have been the case even under the grimmest automation timeline. And because many communities in the American Midwest and Southeast were heavily dependent on a narrow range of industries, the losses were profound, and their populations had no good Plan B. Instead, manufacturing layoffs morphed into overall regional joblessness and lower wages, initiating a downward spiral of economic distress and social breakdown.

Consider again Hickory, North Carolina, which anchors a region of 380,000 people and was ground zero for the China trade shock. In 1990, 36 percent of the town's labor force

was employed in manufacturing, mostly in making furniture. But by 2019, after decades of offshoring, just 18 percent of Hickory's workers still had factory jobs. This dramatic decline would have hit any community hard, but it was especially devastating in such a highly specialized region. Just 16 percent of Hickory's working-age population had college degrees, making it very difficult for most residents to find new, well-paying employment opportunities. The overall employment rate has since dropped by an alarming seven percentage points. Yet in 2019, Hickory's working-age population was no smaller than it had been in 2010.

Policy at the national level can very easily overlook places such as Hickory. Major economic contractions prompt government action. A recession can force Congress, for instance, to extend the duration of unemployment benefits beyond the standard six months or increase the generosity of these benefits—as it did in response to the COVID-19 crisis. But the bulk of the job losses induced by the China trade shock occurred in the early 2000s, during a modest national economic expansion. Looking at the forest and not the trees, the federal government paid little attention to the suffering of particular regions. Workers in distressed local economies were largely left to go it alone.

COLLATERAL DAMAGE

The extreme job losses caused by hyperglobalization may be in the past. But the Biden administration's efforts to reduce reliance on fossil fuels, whether via the Build Back Better legislation currently before Congress or through other regulations, could initiate another round of regionalized labor-market disruptions. There are plenty of local economies that still mine coal, drill for oil and gas, and create electricity from these sources. There are plenty more that depend on carbon-intensive industries such as cement and steel, which require enormous amounts of energy to produce. For all the good that decarbonization would do for the world, it represents a seemingly existential threat to these communities. Compounding the potential misery, fossil-fuel-dependent communities in the Midwest sit uncomfortably close to many of the places that were hardest hit by the China trade shock.

The regional manufacturing collapse that punished an older cohort of workers may be followed by an energy transformation that punishes a younger group.

To see why the energy transition could cause so much damage, look back to the decline of coal mining after 1980, when the collapse of oil prices sent the industry into a tailspin. Between 1980 and 1990, national employment in coal mining sank from 264,000 to 151,000 workers, before dropping another 71,000 workers in the ensuing decade. Although the industry recovered modestly in the early 2000s, employment in coal plunged again after 2010. In a manner qualitatively similar to the China trade shock (but on a much smaller scale), job losses were concentrated in the Midwest and the South—namely, Kentucky, Ohio, Pennsylvania, and West Virginia—and overall employment remained depressed all the way through the 2000s, nearly three decades after the decline in mining had begun. That is again because, unlike what economic models would predict, new or existing industries did not flock to coal towns to hire laid-off workers. Nor did the decline of those industries prompt an exodus of workers; outmigration became sizable only after 2010. People had a hard time leaving places their families had called home for generations.

The geographic concentration of industries that extract, refine, and utilize fossil fuels should be of immediate concern to policymakers intent on decarbonizing the U.S. economy. Increased demand for renewable energy will create new jobs in solar, wind, and hydroelectric power, but these jobs may be located far from existing carbon-based production facilities. New power-intensive industries, such as data centers, may choose to be situated near renewable energy providers, which could also make it more difficult for laid-off workers to find other jobs.

Miners, drillers, or frackers don't have to be sacrificed for a green future.

But that doesn't mean miners, drillers, or frackers have to be sacrificed at the altar of a

green future. Policymakers have the tools to help workers hurt by the [energy transition](#). If the government pays attention to the woes of local communities and proactively addresses them, it can spare these places from experiencing a fate similar to that of the China shock.

U.S. policymakers must respond aggressively to localized job losses irrespective of how the national economy is performing. To do so, the government should make the duration and generosity of unemployment benefits depend on regional rather than national economic conditions: losing a job is simply more painful in local economies where unemployment is already high. The government could also launch a system of national wage insurance, which would buttress the incomes of workers who experience sharp declines in pay, thus protecting against the financial insecurity caused by precarious labor markets.

But expanding the [safety net](#) is just one part of the equation. To prevent regional recessions, the government will need to move quickly to encourage new employment in places where jobs disappear en masse. That means taking place-based policies more seriously. One promising example is active labor-market programs, including targeted sectoral training, which provide workers with the skills demanded by industries set to expand nationally. In Northeast Ohio, for instance, the WorkAdvance Program, studied by a group of scholars at Harvard, partnered with local employers in health care and other sectors to identify what skills they required and then helped young workers without a college degree acquire them. The program also supplied these workers with placement services and career coaching. Two years later, the trainees had 14 percent higher earnings than similar workers who did not receive training. These efforts need not bust the bank. Many cities and states spend more on tax incentives to lure trophy companies such as Amazon or, more notoriously, Foxconn to their jurisdictions. Diverting funds to improve the capabilities of workers and businesses already in these communities would be cheaper, more effective, and more ethical.

Without such preparations, the energy transition may add to the unfortunate and painful history of regionalized joblessness. It could fuel more misery, broken families, and addiction. Regional economic divides have intensified political polarization in the United States and provided fertile ground for populists. If the federal government is serious about

decarbonizing the U.S. economy, then it must also get serious about helping people who will lose their jobs in the process. 

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