

# Study links recession recovery, increase in commercial truck fatalities

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Monica He, a Demography doctoral candidate at the University of Pennsylvania

What could be the downside to unemployment rates plummeting in recent years? One place to look is the road.

Research has shown that when the economy improves, motor vehicle fatalities also increase.

According to new findings from Monica He, a demography doctoral candidate at the University of Pennsylvania, the driving force behind this

link during the recent Great Recession was higher deadly crashes involving large, commercial [trucks](#). She published her findings in the journal *Social Science & Medicine*.

"They're not just these large, heavy semi-trailers we only see on interstate highways," said He, "they're trucks we see driving around our neighborhoods. They're construction trucks. They're trucks that deliver packages to us or food to restaurants. These commercial trucks play an integral part in growing our economy but also heighten our risk of motor vehicle fatalities during better economic times."

As a demographer, He uses social and economic data to understand the factors that influence population trends. A pattern she noticed between the economy's status and [car crashes](#) piqued her curiosity.

"Motor vehicle deaths declined almost 18 percent during just two years during the Great Recession from 2007 to 2009, and during that time the unemployment rate also doubled," she said. It turns out fatal car crashes also bounced back as the economy recovered, and He set out to understand why.

One previous theory attributed the change in fatal auto accidents to an uptick in drunk driving cases during good economic spells, when people have more money to go to bars. Another said that people simply drive less when unemployment is high, leading to fewer fatal crashes.

"I didn't find these existing theories compelling in explaining such a large effect," the researcher said. "I wanted to look more closely into how commercial activity plays out on the roads."

He looked at stats from the National Highway Traffic Safety Administration's Fatal Analysis Reporting System, a national census of fatal car crashes in the United States, from 2003 to 2013. After testing

different explanations, she uncovered that accidents involving trucks weighing more than 10,000 pounds were, by far, the biggest factor influencing this trend. For each 1 percentage-point decrease in unemployment rate, she found an increase of more than 8 percent in fatalities involving such trucks. These vehicles are predominantly used commercially, so it's likely that more take to the road when the economy is doing well.

More research into truck-related motor vehicle fatalities could pave the way to policy changes that would improve road safety, according to He. She speculated that interventions such as regulating the trucking industry or infrastructure improvements could potentially increase the safety of large trucks on the road.

As He completes her graduate work, she plans to continue research on motor vehicle injuries, in particular studying them as a prime example of "unintentional injuries," a subject that often does not get significant attention.

"There is a perception that these [unintentional injuries] happen instantaneously and it is unlucky if it happens to you. But there are a lot of social patterns that predict who dies from unintentional injuries, particularly for [motor vehicle](#) fatalities," said He. "Motor vehicle fatalities are a leading cause of death for teens and young adults. It's important that we address these issues."

**More information:** Monica M. He, Driving through the Great Recession: Why does motor vehicle fatality decrease when the economy slows down?, *Social Science & Medicine* (2016). [DOI: 10.1016/j.socscimed.2016.02.016](https://doi.org/10.1016/j.socscimed.2016.02.016)

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