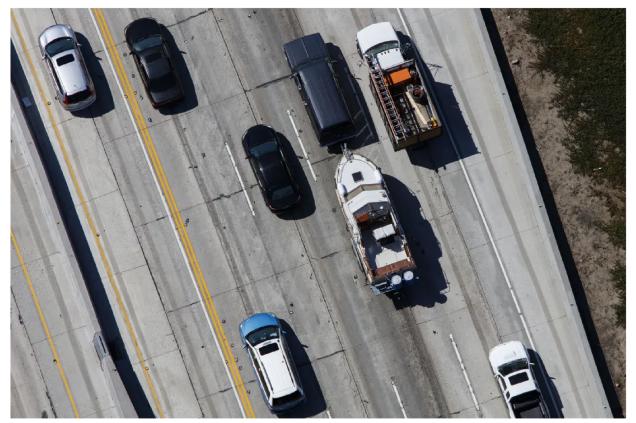
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How SUVs Are Making Traffic Worse

As larger, taller sport utility vehicles took over US roads, they also aggravated highway congestion, according to a new study. It's yet another ill effect of "car bloat."



Some drivers may prefer bigger cars due to their roominess and perceived safety benefits, but their societal drawbacks are legion. *Photographer: Patrick T. Fallon/Bloomberg*

By David Zipper

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Across the US, traffic congestion keeps thickening. <u>According to TomTom</u>, a navigation company, drivers in 86 of 90 large and mid-sized American cities endured more slowdowns in 2024 than in 2023, continuing a <u>trend</u> that goes back decades (with a brief interregnum due to Covid).

Common explanations for worsening gridlock include <u>sprawled</u> <u>development</u>, <u>growing populations</u>, and <u>degraded transit service</u>. But <u>new research</u> proposes another culprit: The ascent of sport utility vehicles, or SUVs.

In the <u>study</u>, published in the journal *Transportmetrica A*, David Levinson, a professor at the University of Sydney's school of engineering, and Yang Gao, a researcher at the School of Data Science at City University of Hong Kong, found that the growing number of SUVs reduced the vehicle capacity of freeway lanes in Minnesota's Twin Cities by 9.5% between 1995 and 2019. Their findings suggest yet another way in which "car bloat" exacerbates problems that affect everyone, regardless of how they travel.

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<u>Car bloat</u> refers to a trend toward upsizing that has reshaped the American automotive market over the last 50 years. The share of new car sales comprised by SUVs and pickups has leapt from <u>less than one in four during the 1970s</u> to roughly four in five today. The rise of SUVs and pickups has come at the expense of station wagons, which have <u>all but disappeared</u>, as well as sedans, whose sales have tumbled. As of last year, none of the Big Three (General Motors, Ford, and Stellantis) <u>produce a single station wagon or non-luxury sedan for the American market</u>. Meanwhile, individual models have steadily grown heavier and larger as their designs are refreshed. The <u>Ford F-150 pickup</u>, for instance, added 800 pounds and seven inches in height between 1991 and 2023.

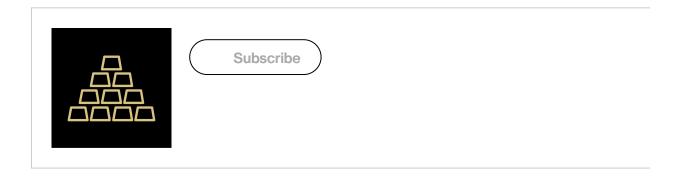
Some drivers may prefer bigger cars due to their roominess and perceived safety benefits, but their societal drawbacks are legion. Last year, *The Economist* concluded that the enormity of the heftiest 1% of US models offered modest added protection for their occupants, but a single life saved corresponded with twelve people killed in smaller vehicles during collisions. Pedestrians and cyclists are even more exposed: Deaths among both groups hit a <u>40-year high in 2022</u>, a trend that researchers have <u>linked</u> to the ascent of SUVs.

Car bloat has other negative externalities that land on society rather than owners, including <u>higher greenhouse gas emissions</u>, <u>faster deterioration of road pavement</u>, <u>reduced on-street parking capacity</u>, and <u>increased tire pollution</u>.

In their new paper, Levinson and Gao explored yet another collective downside. They examined whether expanding vehicle size is limiting "throughput," the maximum number of vehicles that can move through a lane in an hour. To do so, they reviewed highway data from the Twin Cities gathered by the Minnesota Department of Transportation. In an interview, Levinson said that the state collects unusually detailed information through its network of <u>loop detectors</u>, sensors embedded in the pavement that can identify the number and type of motor vehicles passing above.

According to Levinson, several factors could lead SUVs to reduce highways' vehicle capacity. For one, SUVs tend to consume more highway space than sedans: A full-sized Cadillac Escalade measures 211 inches (5.4 meters) in length, or more than 17½ feet, which is 33 inches longer than a compact Honda Civic hatchback. Typical SUVs are also taller and heftier than traditional cars. Because heavier vehicles can need more time to come to a halt, SUV drivers may allow more distance between themselves and the vehicle before them. Those driving behind a tall SUV are likely to do the same. "If you're in a short car and you want to be able to anticipate what's ahead, you're going to give somewhat more headway with the vehicle in front of you," Levinson said.

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Between 1995 and 2019, Levinson and Gao found that the number of SUVs or Twin Cities freeways jumped tenfold, rising from 3.65% of all highway vehicles to 30.8% (the number and share of pickup trucks were comparatively stable). According to their calculations, the surge in SUVs led the average throughput on area highways to decline 9.5% over those 24 years, falling from 1,850 to 1,673 vehicles per lane per hour. (Tractor trailers also grew more numerous from 1995 to 2019, but the authors concluded that their growth had an impact on throughput that was less than half that of SUVs.)

Once a freeway lane hits its maximum capacity, any additional vehicles will cause slowdowns. By implication, the new study suggests that those swapping sedans for SUVs will exacerbate gridlock during peak travel times.

"Any vehicle that's on the road that is at or near a congested level is imposing delay on other vehicles behind them," Levinson said. "SUVs impose a greater delay on the vehicles behind them than do smaller cars."

He believes that governments should consider charging SUV owners more in road pricing schemes, which are gaining new attention due to the <u>long-term</u> <u>decline of gas tax revenues</u> that have traditionally financed road constructior and repairs. Implementing a national road user charge would be a herculean undertaking in the US, but a limited number of toll roads already charge a fee that varies with congestion, such as the <u>I-66 Express Lanes</u> in Northern Virginia. If SUVs exacerbate slowdowns, it may make sense to charge their owners a higher fee to use express lanes.

To address car bloat's other environmental and safety downsides, regulators should pursue a more holistic policy response. In Europe, for instance, countries including France and Norway impose car fees that scale with vehicle weight. In the US, the District of Columbia has adopted annual registration fees that charge owners of the heaviest vehicles seven times more than those with the lightest models. New York and Colorado have considered similar measures.

But the federal government could do much more to counteract car bloat nationwide, such as by removing longstanding loopholes in fuel economy rules that have catalyzed automakers' abandonment of sedans and station wagons. Given the current political climate in the US, that seems unlikely to happen anytime soon. For now, at least, worsening gridlock is likely to be one more imposition that car bloat forces everyone to bear.

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