

## Congestion Myths vs. Reality



**If fixing congestion were as simple as building wider roads, the problem would be solved.**

Congestion is complex and partly a symptom of economic and societal success. Historically, increases in vehicle miles traveled (VMT) have been highly correlated with gross domestic product (GDP) growth. A growing economy means more travel for both work and recreation. At the same time, urbanization is increasing the concentration of transportation demand within dense city centers.

But addressing the problem has proven so difficult because the obvious answers aren't always the right ones. And some widely held beliefs about congestion aren't always well-grounded in fact. That's why it's particularly important to expose some of the most pervasive myths about how to combat congestion.

1

### Myth:

Ride-hailing and car-sharing services reduce the total number of cars on the road.

### Reality:

Transportation network companies (TNCs) often increase the number of vehicles on the road and miles driven. Deadhead miles account for up to 50% of miles driven.<sup>1</sup>

TNC vehicles, on average, travel an extra 0.25-1 mile for every for-hire mile driven, depending on city utilization rates. Additionally, TNCs directly compete with more sustainable transportation modes. One-quarter of ride-hailing service users say they would have used public transit instead if TNCs weren't an option.<sup>2</sup> TNCs also contribute to congestion by giving their drivers incentives to ignore traffic and parking regulations. In a three-month period in 2017, about 66% to 75% of all traffic violations in San Francisco were committed by TNCs.<sup>3</sup>

2

### Myth:

E-commerce has a zero net effect on congestion.

### Reality:

Online shopping is putting more delivery trucks on the road and increasing congestion, particularly at the curb.

It was long thought that the rise of e-commerce would be, at worst, neutral in terms of congestion. The theory was that any increase in delivery truck traffic would be more than offset by a reduction in solo trips to the mall in private vehicles. Changes in consumer behavior enabled by e-commerce have upended this expectation, however. Fast, free shipping, which has become the standard for online sellers, has not only increased orders but also raised the number of single package deliveries. In addition, about 30% of online orders end up being returned, compared to 9% for traditional sales. This creates extra trips.<sup>4</sup> The problem is particularly acute in neighborhoods where congestion is already bad, like urban cores. There, delivery companies compete for space at the curb, often double parking and obstructing traffic.

3

### Myth:

Expensive, long-term capital projects are the best way to address congestion.

### Reality:

No single solution can solve congestion. Both near- and long-term solutions should be used to combat congestion.

A holistic view must be taken when looking at congestion. BTS estimates a backlog of \$90B in deferred public transit maintenance and replacement projects.<sup>5</sup> Upgrading infrastructure alone is a challenging feat. Policy levers such as TDM programs and other demand shifting policies may help to mitigate congestion in the short term and are often less expensive than large capital infrastructure projects. At the same time, capital projects increase transportation capacity (e.g., public transport, roadways, and highways) and are necessary to accommodate for population and economic growth in the long term. Pilots and P3s can be beneficial and effective in the implementation of longer term solutions and capital projects.

4

### Myth:

Current parking policies are effective at setting the right parking supply and reducing congestion.

### Reality:

Current parking minimums lead to an oversupply of parking and induce driving, increasing congestion.

Cities could consider reducing or eliminating regulations that force builders to include a minimum number of parking spaces in new real estate developments. These policies create an oversupply in parking and can leave facilities under-utilized. Further it adds additional cost for developers—increasing the total building development cost.

On-street parking prices are not always set to market rates, which may induce circling, and drive congestion. A combination of setting market rates and introducing new parking technologies – to monitor the availability of spaces in real time – could cut down on miles driven while waiting for one to open up.

5

### Myth:

Autonomous vehicles (AVs) will soon arrive and will reduce congestion.

### Reality:

Fully autonomous (Society of Automotive Engineers Level 5) vehicles won't reach widespread adoption until long after 2030.

Automobile and technology companies will continue to launch numerous AV pilots, but they must clear a significant number of hurdles. There are significant advancements needed in both the technology and cost. AVs will operate in limited setting for some time and cost will remain a major barrier—premium buyers and fleets will remain the primary market for AVs for some time. Once prices do come down, it will still take a long time to replace a meaningful share of the current vehicle base. There are also significant legal and ethical questions related to liability. Lastly, there are questions around how standards and infrastructure develop and who will pay for them.

Once mainstream, it's still up for debate whether AVs will reduce or worsen congestion. The outcome hinges on a few factors: cost, riders' willingness to share, and AVs effect on urban sprawl. It is highly possible that AV's will induce demand for transportation due to the convenience of AVs that could increase urban sprawl and VMT.

<sup>1</sup> Cramer & Krueger. (2016, March). Disruptive Change in the Taxi Business: The Case of Uber. <http://www.nber.org/papers/w22083.pdf>

<sup>2</sup> Sperling, Daniel, Brown, Austin, D'Agostino, UC Davis (2018). "How Ride-Hailing Could Improve Public Transportation Instead of undercutting it". Retrieved from <http://www.govtech.com/fs/transportation/How-Ride-Hailing-Could-Improve-Public-Transportation-Instead-of-Undercutting-It.html>

<sup>3</sup> Brinklow, A. (2017, September 26). Lyft, Uber commit 64 percent of downtown SF traffic violations. <https://sf.curbed.com/2017/9/26/16367440/lyft-uber-traffic-citations-sfpd-board-supervisors>

<sup>4</sup> Kurt Salmon. (2013). Retrieved from <https://www.ups.com/us/en/services/knowledge-center/article.page?name=return-shoppers-by-rethinking-your-online-returns&kid=aa3b199e>

<sup>5</sup> United States Department of Transportation. (2018). FTA FY 2019 Budget Estimates. Retrieved from <https://cms.dot.gov/sites/dot.gov/files/docs/mission/budget/304516/fta-fy-2019-final-cjs-508-compliant.pdf>