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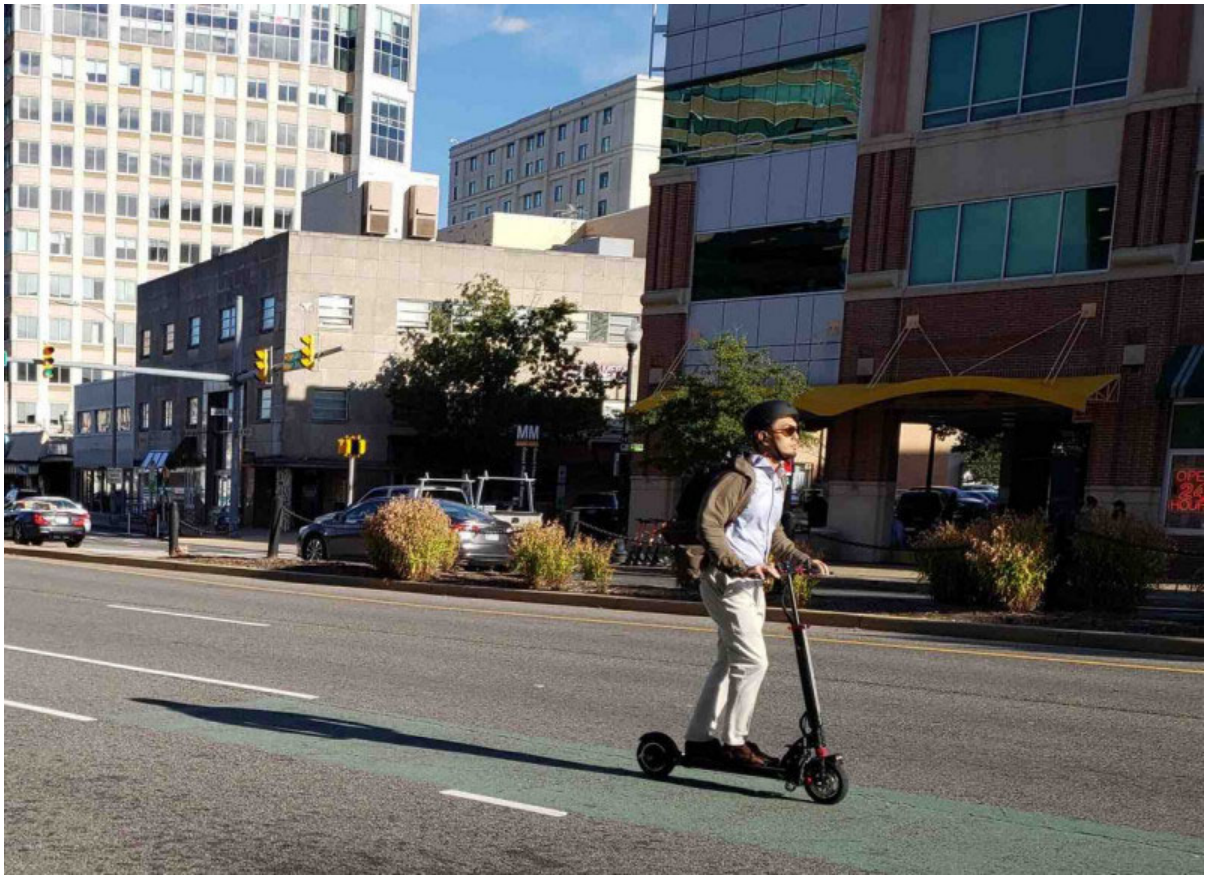
Make e-scooters work with transit, not against it

SCOOTERS OPINION By Xiang 'Jacob' Yan April 5, 2021 7



Wilson Blvd scooter rider by BeyondDC licensed under *Creative Commons*.

When shared e-scooters first showed up in US cities several years ago, many cities considered them "toy vehicles." After running small pilots, cities such as San Francisco and Miami quickly banned e-scooters from their streets due to complaints of illegal parking and safety concerns. But gradually, things have changed. Some cities that once banned e-scooters have now brought these lightweight, mobile devices back. And perhaps to

many people's surprise, some cities including Denver and San Francisco even classified e-scooters as essential businesses during COVID-19.

So why such a dramatic change of attitude toward e-scooters? The most obvious reason is that e-scooters have become extremely popular. According to the National Association of City Transportation Officials, US riders took 88.5 million trips in 2019, more than double station-based bike ridership. Research suggests that most e-scooter trips are not taken for fun but for utilitarian purposes such as work and school commuting. In the past year, for those avoiding crowded spaces like buses and trains because of COVID-19, e-scooters can be a lifeline for people with few other travel options. Seizing on the opportunity for good publicity, some e-scooter companies have offered free or discounted rides for essential workers.

DC has been a pioneer in embracing e-scooters and e-bikes and developing regulations to make them a safe, accessible, and equitable travel option. The District started a dockless vehicle pilot program in September 2017, finding that three quarters of survey respondents agreed that the dockless program should continue. More than half of respondents wanted more vehicles than the 3200 (up to 400 vehicles by each of the eight operators) maximum DC originally allowed. A detailed data analysis of trip patterns showed that while ridership of dockless vehicles grew rapidly in the pilot phase, usage was different from the Capital Bikeshare (CaBi) system — the services were complementary, not competitive.

The popularity of e-scooters and e-bikes suggests that cities like DC should be treating dockless vehicles as an essential component of public transportation systems.

But all of this evidence is likely to leave many e-scooter critics unpersuaded. As the pandemic gradually comes to an end, the argument for e-scooters serving as a substitute for public transit is weakened. There are good reasons to worry that privately operated e-scooters — much like ridesharing companies like Uber and Lyft — could draw riders away from transit and hence threaten the recovery of public transit systems. There are also questions about whether the success of early pilot programs is

scalable; as the fleet size of e-scooters increases, they can create more nuisances for pedestrians and neighborhood residents. Finally, e-scooters may pose safety risks to both their riders and other road users, especially when their speed is too high.

All these are valid concerns that cities and e-scooter operators have to address collaboratively. Cities can determine the appropriate fleet size by carefully analyzing the data provided by e-scooter companies. They can use geofencing techniques to ensure parked scooters don't block pedestrian access. They can improve travel safety by regulating e-scooter speed, encouraging helmet use, and improving bike infrastructure. Finally, cities need to find ways to make e-scooters complement rather than compete with existing public transportation systems.

This final point means that DC's Department of Transportation needs to facilitate a harmonious integration of e-scooter services with Capital Bikeshare and Metro. Here is where my own research comes in.

My colleagues and I studied e-scooter availability and usage patterns in D.C., focusing on their spatial relationships with Capital Bikeshare and Metro. On the positive side, we found that between 8% and 12% of all e-scooter trips were taken to connect with Metrorail before COVID-19. E-scooter trips made in June 2020 were longer in distance and duration than those made in June 2019, suggesting that people have substituted public transit with e-scooters for some essential trips during COVID-19.

Our analysis also revealed, however, that e-scooters may reduce ridership on Metro and CaBi. Places where e-scooters were available largely overlap with the service areas of transit and bikesharing, and more than 90% of e-scooter trips could have been made by Metro or CaBi. While these results do not necessarily mean that e-scooters have siphoned off Metro or CaBi customers (e-scooters users might be a different group of people from those riders), they do imply strong spatial competition effects between e-scooters and existing public transportation options.

Helping these travel modes to complement each other requires

transportation officials to think of e-scooters not as a separate mode but as a part of the transportation ecosystem. For instance, DDOT could start by incentivizing e-scooter companies to place more vehicles in neighborhoods unserved or underserved by Metro and CaBi.

A broader strategy is to view e-scooters as an important ally in the war against car dependence. E-scooters have a great potential to replace short car trips, especially when car parking is expensive or difficult. E-scooters may also serve as a last-mile feeder to public transit, and combined e-scooter and transit use can significantly expand the geographic area that people can reach.

Cities and transit agencies could use several tools to promote combined e-scooter and transit trips. An obvious strategy is to place enough e-scooter parking spaces at transit stops —space for e-scooter charging stations would be an added bonus. Cities could also improve the bike infrastructure surrounding transit stations so that people feel safe riding e-scooters to connect with transit. Transit agencies can also work with e-scooter companies to integrate fare payment and to offer bundled pricing.

My colleague, Dr. Xilei Zhao, and I at the University of Florida are currently studying strategies to promote e-scooters as a last-mile feeder to public transit in DC. If you'd like to get involved, please consider helping this research by taking this survey.

Tagged: bikeshare, covid-19, dc, ddot, metrorail, scooters

Xiang 'Jacob' Yan is a researcher in the Engineering School of Sustainable Infrastructure and Environment at the University of Florida. Trained in urban planning and transportation engineering, he focuses on evaluating and designing policy and planning responses to new mobility options such as Uber/Lyft and shared e-scooters with

the goals of promoting accessibility, equity, and sustainability.

7 COMMENTS

THREADED NEWEST AT BOTTOM NEWEST AT TOP

Jasper *on April 5, 2021 at 3:13 pm*

E-scooters are fine, if not a bit unsafe on the terrible pavement we have in this area.

The main problem to be solved is where to leave them between use in an organized way. They are left in many places where they're in the way, some dangerously so. Oddly, they're also often left near CaBi stations, which suggest that people really don't mind having a station to leave their scooter at. In fact, it would be great if there were stations for them, so they could get charged.

REPLY LINK REPORT

David C *on April 6, 2021 at 12:42 pm*

I'd love to see evidence that either e-scooter use or parking is dangerous in DC.

I'm not sure I see a real downside to people using e-scooters instead of transit/CaBi. Don't we want people to have choice and isn't part of choice choosing the new option?

REPLY LINK REPORT

Kirk on April 6, 2021 at 2:43 pm

A scooter left blocking a sidewalk so that an elderly or disabled person has no room to get by is obviously dangerous. I've seen this countless times all over the region.

REPLY LINK REPORT

David C on April 6, 2021 at 3:04 pm

You're talking about "common sense". I'm asking about facts. Are there any facts to back that up? Any cases of elderly or disabled people being injured?

REPLY LINK REPORT

Jacob Yan on April 6, 2021 at 3:56 pm

Many cities (including DC) are considering designating specific locations (with geofencing techniques or using marked lines) for e-scooter parking. Doing so makes great sense in some areas of the city. Regarding scooter charging stations, I am totally on board — there have been discussions across cities on the concept of "mobility hubs" where people can access a variety of shared modes. These mobility hubs will also be places where shared micromobility can be parked and recharged.

REPLY LINK REPORT

Jim Spall on April 17, 2021 at 8:47 pm

A good article written by Jacob Yan. The arguments are solid. That said, Jacob did not seem to comment on the age distribution for riders of scooters, which I suspect is strongly skewed towards younger people (that may well have been behind the comment "e-scooters users might be a different group of people from those riders [Metro or CaBi]"). The relative age distribution too would seem to have potential consequences for transit use as those younger users either never develop the habit of riding transit or, somewhat conversely, eventually "age out" of riding scooters and move either to transit or private vehicle. Time will tell. I suspect that Jacob has some views on this aspect of the issue.

REPLY LINK REPORT

Jacob Yan on April 26, 2021 at 4:19 pm

Great point, Jim. Yes, research has shown that e-scooters, like most new shared-use mobility options (bikeshare and ridehail), are mainly

used by younger people. People who are younger now will age, but kids will grow to become young adults too. I think the demand for shared micromobility (e-scooters and bike) use is there, but the infrastructure is not there to accommodate the demand. American cities are built cars, and public agencies need to provide people who cannot afford cars or do not want to drive more choices. Facilitating the integration of e-scooters and transit is one of the things to be done.

REPLY LINK REPORT