

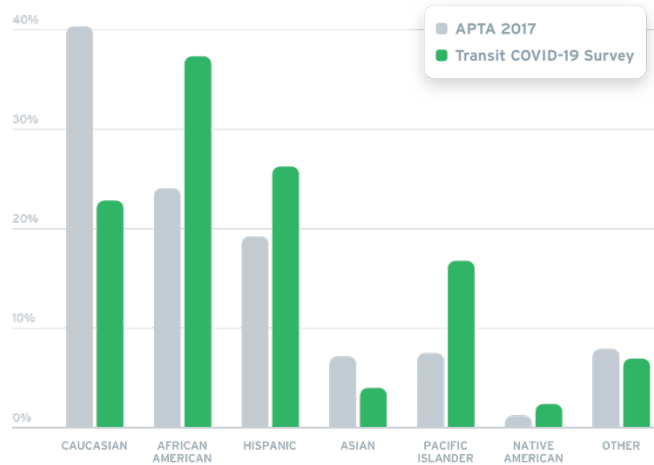
CPLN 650 Advanced Transportation Planning Methods  
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Traffic Policy OP-ED

### **Transit Service Cut is Exacerbating the Transit Inequity in America: How we fix it**

Public transit has been pushed to the brink due to Covid-19 lockdowns around the United States. At the ITE annual meeting on August 13th, Neil Pederson, TRB Executive Director, noted that as of the end of July, DS Metrorail and New York MTA commuter rail still revealed 90% and 78-84% reduction in travelers compared to the same time last year. This sharp and lasting reduction in ridership led to the severe fiscal deficit in public transit systems across the country. To react, many transit agencies chose to cut the services and limit the capacity to save money and protect the safety of drivers and riders. However, these changes highlighted and increased the inequality in public transit in the United States.

Service cuts which are generally used by transit agencies like BART, SEPTA during the pandemic as to respond to financial crisis and depleted workforce are determined basically on the historical ridership data without considering the equity factors. Therefore, the changes in some places ended up in cutting services in low-income areas where there is high concentration of vulnerable groups as Ahmed El-Geneigy noted in his recent study<sup>1</sup>. The news report published on The New York Times, *'We're Desperate': Transit Cuts Felt Deepest in Low-Income Areas*, told a story about an old woman living in New Orleans experienced a huge increase on transit time to the grocery store from one hour to three hours because of the service cut<sup>2</sup>. This is happening everywhere in the United States, and it left vulnerable groups less access to jobs, goods and services, and makes them much harder to recover from the pandemic than others. Most importantly, it will intensify inequality among different income groups, races and genders.

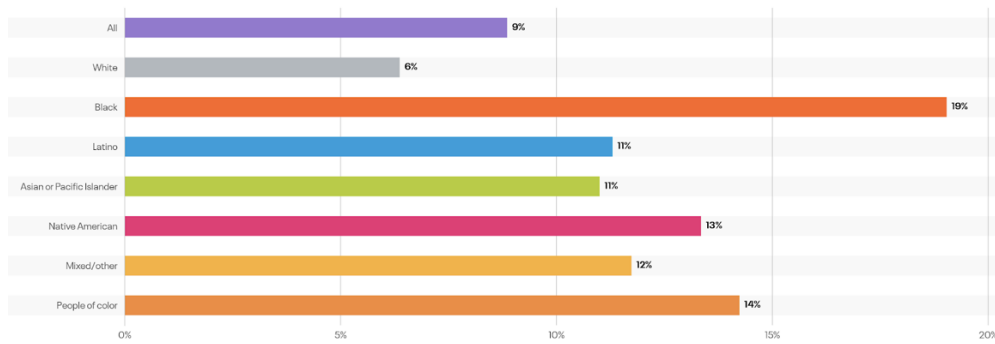
Transit is an essential service especially for the low-income group, who are mostly the racial minorities due to the systemic discrimination in the United States. According to the American Public Transportation Association (APTA), people of color account for less than 40% of the U.S. population, but make up 60% of transit riders<sup>3</sup>. The coronavirus deepens the trend: Black and Latino are making up the majority of transit users while “White flight” from the public transit<sup>4</sup> (*figure 1*). One possible reason that the minorities are big users of public transit is because they have much less access to an automobile than the White and have to choose public transit as their travel option (*figure 2*). They also tend to live far away from the transportation hub in a city because of the unaffordable housing price in the Transit-oriented-development (TOD) area.



Sources: APTA "Who Rides Public Transportation" (2017), Transit survey of US users (April 2020)

Figure 1 Comparison of the rider share before and during the pandemic

Source: Reference [4]



Data source: IPUMS USA | National Equity Atlas

Figure 2 Percent of households without a vehicle by race/ethnicity (2017)

These disparities illustrate the urgent need to rethink and reconstruct transit service plans to respond to the pandemic and post-pandemic. One of the modifications should be attentive to the individual travel needs of riders who continue to make essential trips on transit while introducing route and schedule changes. According to the research by Ahmed El-Geneigy’s team, there are two standards for transit agencies when considering the service adjustments. Some agencies, such as Metropolitan Transportation Agency in New York, Los Angeles County Metropolitan Transportation Authority and Miami Dade County Transit, accounted for horizontal equity, which provide service adjustments equally to each individual or group; Other agencies, such as Tri-County Metropolitan Transportation District of Oregon in Portland, accounted for vertical equity, which they maintained or increase the service to vulnerable groups while decreasing the service where less vulnerable. Considering the inclined impact on the minorities, vertical equity should be widely accepted by transit agencies to offset and reverse the disparities shaped by the history and outdated policies. Transit agencies should adopt a more comprehensive methodology to estimate the transit inequity among different districts in a city. For example, Timothy F. Welch

and Sabyasachee Mishra (2013) proposed a new method to measure the connectivity considering the frequency, speed, distance, capacity, required transfers, and activity density and then integrate it with the Lorenz curve and Gini coefficients calculated by socio-economic and demographic metrics<sup>5</sup>.

To ensure vertical inequity, transit agencies also require sustainable revenue. Otherwise, service cut would be still destructive for vulnerable groups with no transportation alternatives despite it is much less than that in places where mostly the White live, such as the situation in Philadelphia. Even before the pandemic, there are questions about the purpose and role of public transit as an essential public service—not a money-making enterprise, and solutions of the chronic issues with the industry. To offset lower sales tax revenue and state funds, many transit agencies have made explorative attempt and can be served as good examples. First, utilizing new technologies to increase revenue. Some transit agencies have maximized ad space in their stations using online technologies, which has increased revenue and allowed riders to be more productive during their commute. For example, Transportation media sales company Titan, online grocery store company Peapod.com, and transit agencies — including SEPTA, Chicago Transit Authority (CTA) and Massachusetts Bay Transportation Authority (MBTA) — have partnered to use ad space to engage riders and their ever-present smartphones during their commute as well as help increase ad revenue. Second, reusing energy to save money. SEPTA has partnered with the Philadelphia-based smart grid company Viridity Energy, to save and make money from wayside energy storage. The trains can turn electricity into braking energy and then store it in a battery. The battery is projected to decrease the agency's electric bills, saving nearly \$190,000 per year. The savings generated from the regenerative braking will be used to help fund SEPTA's sustainability initiatives.

Except the effort of transit agencies, government should also provide reliable funding to support transit development. The CARES Act has provided \$25 billion for public transportation relief, but as the COVID-19 crisis worsens, the nation's transit systems will need more help from Congress. According to an independent analysis commissioned by APTA, even after the CARES Act, public transit agencies nationwide still face a \$23.8 billion shortfall through the end of 2021. Therefore, reliable federal funding is still needed for the transportation industry. In post-pandemic era, government should still pay attention to the funding shortfall of transit agency especially focus on challenges like vehicle, facility, equipment and infrastructure cleaning and disinfection, innovative mobility such as contactless payments.

The transit inequity deepened in the pandemic is impossible to ignore. We, as transportation planners, should have a more precise understanding of individual public transit behaviors during and after a pandemic, incorporate an updated methodology measuring the inequity over the city and help design an efficient, inclusive public transit system to resist the pandemic and meet the needs of vulnerable groups.

Reference:

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- [5] Timothy F. Welch, Sabyasachee Mishra. A measure of equity for public transit connectivity, Journal of Transport Geography, Volume 33, 2013, Pages 29-41, ISSN 0966-6923, <https://doi.org/10.1016/j.jtrangeo.2013.09.007>.