ENVIRONMENTAL RESEARCH GROUP

FACT SHEET

Chicago's Transit: Problems and Policy

On an average weekday, Chicago's trains and buses provide over 750,000 rides.[1] The city's public transit system is its single most effective climate solution, displacing rides and emissions from automobiles. Still, Chicago has significant room to improve its transit system and offer accessible, equitable, and sustainable transportation.

Accessibility and Equity

A major measure of a successful transit system is its coverage of all groups of people. Determining the equitability of a transit system is difficult because the demand for transit is not independent of supply. This is why studies suggest that there is more transit demand on the North Side than on the South Side. Ridership numbers show there is a shortage of transit on the North Side and a slight surplus on the South Side.[2]

A common explanation for this discrepancy in usage is that there is more density of people in jobs in the North Side, which has a significantly higher White population than the South Side. Claims like this illuminate the design philosophy of the Chicago transit system: to take people to jobs and back home. This means that the transit will disproportionately serve communities that have higher job and housing density, which are often higher-income communities, such as the North Side.[3] Because of this lower-income communities receive less benefit from transit and have less access to "valued destinations".[4] This is why it is necessary to look beyond ridership numbers when assessing transit equity. Better studies look at who is using transit. When controlling for race and income, routes in Cook County servicing neighborhoods with fewer professional degree holders (PGHs) saw a smaller decrease in ridership during COVID compared to those servicing neighborhoods with more PGHs. The same trend applied to Chicago community areas with a lower vs higher median income. This study shows that while the transit system caters to high-income people, those who rely on it are often from low-income backgrounds.[5] Very often the people in need of transit the most are using it the least due to a disparity in population density.

Density

The relationship between population density and transit is bidirectional. If a city increases density around transit, then the transit will be more successful; at the same time, if a city has more transit, then there is more incentive to develop around public transit. The issue arises when real estate surrounding a transit station is misused. For instance, many of the Chicago Red Line stations are located in the middle of a highway, resulting in a worse rider experience and lower incentives to ride transit.[6]

Evanston, Illinois began using a Transit Oriented Development (TOD) planning model in 1989. TOD concentrates on high-density, mixed-use development around public transit stations. The city lowered the minimum number of parking spaces per housing unit in these areas and changed zoning to promote mixed-use development. Evanston also promoted initiatives to increase walkability and access, leading to growth in public transit and a 33% reduction in traffic crashes.[7]

Climate Impacts

Growth in public transit could reduce overall CO2 emissions in the United States based on the 28% of Greenhouse Gas emissions currently attributed to transportation, especially private vehicles.[8] Around Chicago, transportation accounted for 23% of 2020 carbon emissions, of which 2% was public transit.[9] Although public transit requires more energy to operate, the energy used is offset by the higher number of riders. Increasing transit reliance and in turn decreasing personal vehicle use is necessary to reduce CO2 emissions.[10] In 2019, CO2 emissions from personal vehicles averaged .47 pounds CO2/passenger mile. Bus emissions averaged .39 pounds CO2 of carbon dioxide/ per passenger mile. However, the climate impact of buses depends heavily on ridership as vehicles with higher ridership will have lower CO2 emissions/per passenger mile, illustrated by transit buses which averaged .95 pounds CO2/passenger mile due to operating at a low capacity. With that, rail transit averaged 0.19 pounds per passenger mile.[11] Increasing ridership and decreasing the carbon content of electricity sources decreases the emissions per passenger mile of heavy-rail transit.[12]

Economic Impacts

Unlike personal transportation, public transit often exhibits elastic demand, hence transit policies can have vastly different effects. Our research finds that implementing a road tax and reducing public transit fares leads to a social welfare benefit of $5.27M/week in Chicago.[13] This welfare benefit includes environmental externalities, consumer surplus, and government revenue. A road tax of 30¢/km would allow the government to cut transport prices from $2.25 to 16¢/bus ride and $2.50 to 25¢/train ride.[14] Charging a road tax would impact middle-income households the most.[15]

Changing transit prices and routes based on rush hours and concentration of jobs are other effective policies. Our research predicted a $1.94M/week welfare benefit when using a heterogeneous time (transit frequency is non-uniform) and route (increasing frequency of high utilization routes) schedule compared to a uniform frequency of public transit.[16]

Chicago Policy and Failures

Unlike other major American cities, Chicago does not have one unified transit system. Instead, it is governed by four different transit boards whose members are appointed by five different regulatory groups. The division between RTA, CTA, Pace, and Metra leads to fiscal problems; the CTA is currently dependent on RTA leadership for funding. For the fiscal year of 2025, the CTA requested nearly a billion dollars (68% of its budget) for debt repayment, interest and finance costs.[17] On top of the fiscal problems this creates, the political gridlock delays transit projects and decisions.[18]

The CTA completed the Damen Green line station this summer and is planning the Red Line Extension (RLE) project. The RLE, which breaks ground next year, will add five miles of rail to the south end of the Red Line, bolstering transit access in an underserved region of the city.[19] In parallel, the CTA is undertaking the Red and Purple Line Modernization (RPM) project, which will rebuild a stretch of track in the North side neighborhoods of Lakeview to Edgewater to improve ADA accessibility and increase the frequency of trains.[20] The project is scheduled for completion in 2025.

The COVID-19 pandemic sparked a major decline in CTA ridership due to mask mandates, stay-at-home orders, social distancing, and most importantly, remote working opportunities.[21] Furthermore, the persistence of remote work may make commuting riders reluctant to return to their pre-pandemic transport routines. As a result, rail ridership, which relies heavily on commuters, decreased more than bus ridership in the wake of the pandemic.

Metro Mobility Authority Act

Chicago's transit system, particularly its rail system, is designed to take people in and out of the downtown area of the city. Because of this, it disproportionately serves some demographics better than others. [22]

Another major failure of the Chicago transit system as a whole is that it lacks funding and flexibility due to its divided organizational structure. A proposed solution for this dilemma is the Metropolitan Mobility Authority Act. The bill has been sponsored in the Illinois General Assembly, and it simplifies the four boards into one, allowing for efficient allocation of funds and increased strategic planning. On top of this, the act allows for increased funding for transit-oriented communities.[23] Part of this funding would be used to ensure that transit-oriented development does not lead to gentrification of minority communities.

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