How Do Families' Transportation Options Shape School Choices in New Orleans?

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OVERVIEW

This study looks at the transportation options available to families in New Orleans and how these family resources shape the school choices families make. We compare the time required to commute to school by car, public transit, and foot, and we examine how the provision of school bus service might impact commute times. In doing so, we show the number of school options (and how many highly rated schools) families can reach in a given amount of time. We focus especially on how school accessibility differs for families depending on their transportation options and whether they reside in a high-poverty or low-poverty neighborhood. The study also examines whether families in neighborhoods with greater access to vehicles are more likely to request and enroll in schools farther from home.

Focusing on students entering Kindergarten and 9th grade from 2015 to 2017, we find the following:

#1 CAR ACCESS & REACHABILITY

Having access to a car fundamentally shapes families' school options. Families with a car can access essentially any school in a 40-minute commute regardless of where they live.

The same is not true for families who rely on public transit or walking. Commute times to New Orleans' highly rated schools are similar from high-poverty and low-poverty neighborhoods if families have access to the same modes of transportation.

#2 SCHOOL BUS SERVICE

Providing school bus service makes schools considerably more accessible to families without cars who might otherwise rely on public transit.

Many school bus routes are long and inefficient. Better school bus routing could further increase accessibility.

#3 CAR ACCESS & CHOICE

Neighborhood-level car access is strongly associated with families' school requests and placements.

This is the case even after accounting for other neighborhood characteristics such as household income.

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This study's goals are to assess how transportation options affect choices in the New Orleans charter system and how the provision of school bus service changes families' options. In theory, increased school choice in the city means that families have a lot of options because they can enroll in schools across the city. In practice, an assortment of barriers constrain the options that are truly available. Transportation is one of these barriers, and it disproportionately affects families with the most limited financial resources.

BACKGROUND

New Orleans is the only city in the country with a nearly all-charter school district. This means that students do not have a geographically zoned school. To enroll, families must submit an application that ranks up to 12 preferred schools, and then the district uses a placement algorithm to assign students to schools. Families may apply to attend schools across the city. However, families are not likely to choose a school if they do not have efficient, safe, and reliable transportation to and from that school.

In New Orleans, the local school district has the power to determine where schools are located and set policies around wh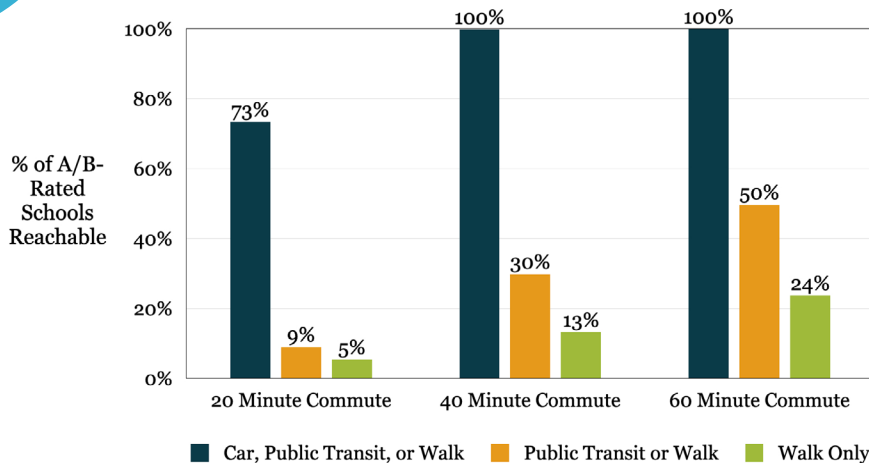ether and how transportation is provided to students. Currently, charter schools are required to provide "free and adequate" transportation to and from school for all students, but schools have autonomy over how transportation is provided and must cover the associated costs. Most schools provide school bus service, and a few provide tokens for public transit instead. Of course, families can opt for alternate modes of transportation if they are able. Student survey results indicate that the vast majority of students either get a ride from a parent/guardian or take a school bus.

Putting this together, transportation could be one of the key barriers that limits equitable access to schools in New Orleans, as well as an expensive and logistically challenging responsibility for schools. Understanding transportation barriers is especially important in a city that prioritizes school choice. This study examines those barriers. In this brief, we focus especially on how transportation barriers might affect families' access to schools rated highly ("A" or "B") by the state of Louisiana.
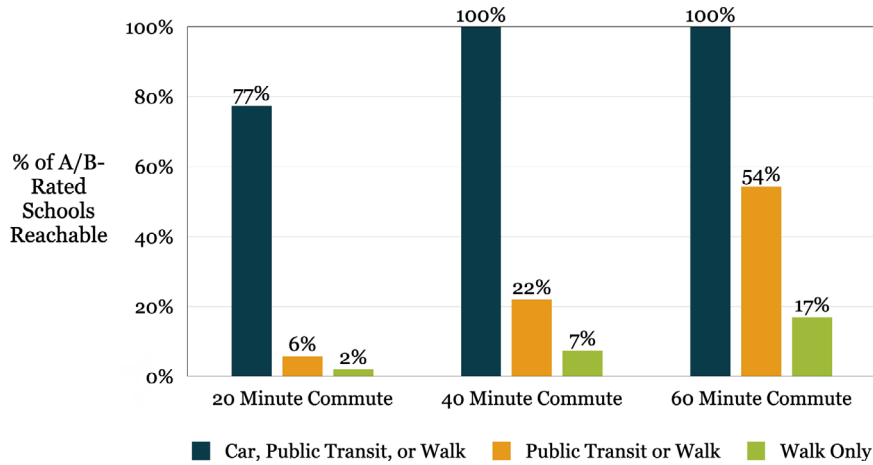
KEY FINDING #1

Families with a car can access essentially any school in a 40-minute commute regardless of where they live, but options are much more limited for students who must walk or use public transit.

Families in <u>low-poverty</u> neighborhoods

Bar chart showing % of A/B-Rated Schools Reachable:
- 20 Minute Commute: Car, Public Transit, or Walk 73%; Public Transit or Walk 9%; Walk Only 5%
- 40 Minute Commute: Car, Public Transit, or Walk 100%; Public Transit or Walk 30%; Walk Only 13%
- 60 Minute Commute: Car, Public Transit, or Walk 100%; Public Transit or Walk 50%; Walk Only 24%

Legend: ■ Car, Public Transit, or Walk ■ Public Transit or Walk ■ Walk Only

Families in <u>high-poverty</u> neighborhoods

% of A/B-Rated Schools Reachable

Legend: ■ Car, Public Transit, or Walk ■ Public Transit or Walk ■ Walk Only

Data points:
- 20 Minute Commute: 77%, 6%, 2%
- 40 Minute Commute: 100%, 22%, 7%
- 60 Minute Commute: 100%, 54%, 17%

Car access is fundamental to the availability of choice in a school system. Even in a city divided by a major river like New Orleans, virtually all families with cars (dark blue bars) can access all A/B-rated elementary schools within 40 minutes. This is true regardless of whether they live in a high-poverty (top graphic) or low-poverty neighborhood (bottom graphic). School ratings come from the Louisiana Department of Education's accountability system and are a visible, though imperfect, indicator of school performance.

Notably, the largest differences in our analyses relate to the modes of transportation that families can access, not neighborhood poverty rates. Families in low-poverty block groups are in walking distance of more high-rated schools than families in high-poverty block groups, but the differences are relatively small. In New Orleans, it appears that families in high-poverty neighborhoods' school choices are more likely affected by their transportation options than by the distance between their homes and high-rated schools.

Prior studies find long commute times can limit students' participation in extracurricular activities, social time with family and friends, and time for activities like homework and sleep. Long commutes come at a cost to students' opportunities and well-being.

Providing school bus service makes schools considerably more accessible to families without cars who might otherwise rely on public transit.

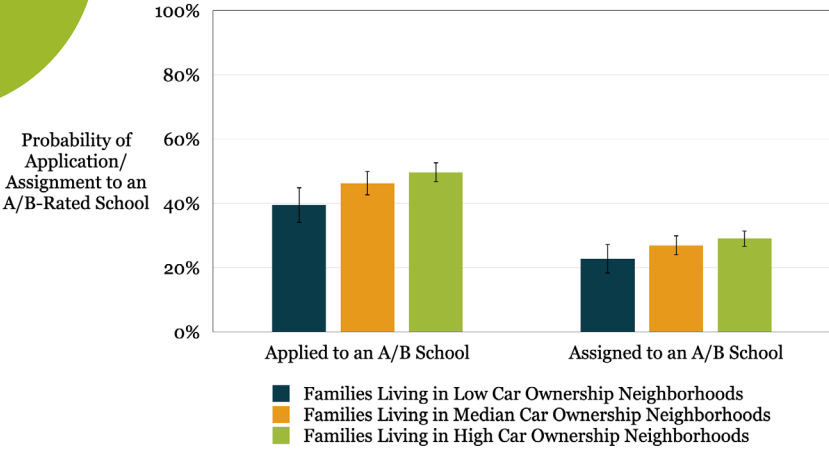**Families in <u>high-poverty</u> neighborhoods**
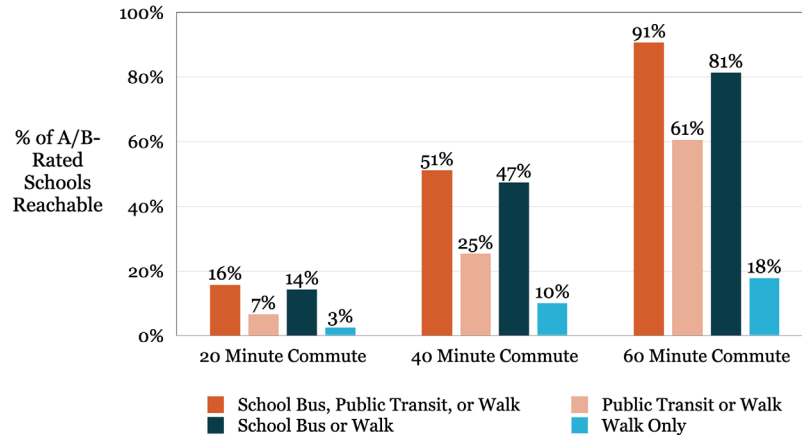
Having school bus service roughly doubles the number of A/B-rated schools reachable within 40 minutes for families who live in low-income neighborhoods and would otherwise use public transit (comparing the red and pink bars). School bus service more than quadruples the number of A/B-rated schools reachable within 40 minutes for families who would otherwise walk (comparing the dark and light blue bars).

Prior research that we released through the Urban Institute shows that a lot of New Orleans school bus routes are long and circuitous, leading to commute times that could exceed 90 minutes each way. Those findings suggest there are opportunities for education leaders to improve efficiencies with bus routes. Still, even with those inefficiencies, school bus service substantially shortens commute times, relative to walking, and improves school accessibility in New Orleans. Notably, these benefits accrue to families without access to a vehicle. While providing school bus service is not enough to eliminate student transportation inequities in New Orleans, it offers some progress in that pursuit.

Neighborhood-level car access is strongly associated with families' school requests and placements.

Probability of Application/ Assignment to an A/B-Rated School

- Families Living in Low Car Ownership Neighborhoods
- Families Living in Median Car Ownership Neighborhoods
- Families Living in High Car Ownership Neighborhoods

Note: Figure shows Kindergarten requests and placements for 2013-14. We define a "low car ownership neighborhood" as being in the 10th percentile of all block groups, "median" as being in the 50th percentile, and "high" as being in the 90th percentile. The small black lines at the top of each bar indicate the 95% confidence interval.

Although we do not have data on which individual families have a car, we can explore the relationships between the share of households in a neighborhood block group with car access and the school requests and placements of families living in that block group.

We find strong relationships between where families live with respect to car access/ownership and their school requests (Finding #3). If families live in an area where they have less likelihood of car access (dark blue bars), they are less likely to request schools that are far away and less likely to apply to highly rated schools. Perhaps this could be a product not of car access in particular but of family income or other characteristics. However, even when we account for family income, parental education, and other variables (at the neighborhood block group level), we see that neighborhood-level car access is predictive of school requests. We take that as suggestive (though not causal) evidence that having a car affects what school options families see as available and which schools they are actually requesting and getting assigned to.

Given these findings, policymakers could explore how improving efficiency in school bus routing would make more schools—and more of the city's most sought-after schools—available to families without access to a car. Policymakers might also wish to consider neighborhood features such as vehicle access and public transit accessibility when deciding where to open, move, or close schools.

For transit time calculations, we divided Orleans Parish into census block groups and identified the geographic center of each block group. Assuming that a student lives at the center of the block group, we then used Google Maps API to figure out how long it would take to get to each school in the city from that block group center by walking, driving, and taking public transit. For example, for a student whose commute involves two city buses, we added the time required to walk from the block group center to the first bus stop, ride that bus, walk to the second bus stop, wait for that bus, ride the second bus, and then walk from the drop-off stop to school. Where there are multiple public transit route options, we choose the route with the shortest walking time to a transit stop. For the subset of schools that provided data on school bus routes, we calculated how long it would take to walk to the bus stop and then travel to school based on the published bus route. To incorporate traffic patterns, we obtained Google's travel time estimates by car, public transit, and foot for a Wednesday morning in October during school commute hours. We assumed that school bus routes also incorporated anticipated traffic delays.

We used data from the American Community Survey, including data at the neighborhood block group level on vehicle access, parental education, and household income and wealth (e.g., eligibility for Food Stamps/ SNAP). We define a high-poverty neighborhood as one in the top quarter of block groups by the percentage of residents receiving Food Stamps/SNAP in the past 12 months, and we define low-poverty neighborhoods as those in the bottom quarter of block groups by the percentage of residents receiving Food Stamps/ SNAP in the past 12 months. We used regression analyses to measure the relationships between these neighborhood characteristics and the types of schools that families in various neighborhoods requested.

ABOUT THE AUTHORS

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In this series of reports, we analyze data to inform New Orleans education policy and practice by answering questions that inform decisionmaking in key areas of consideration.

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