URBAN INSTITUTE · ELEVATE · THE · DEBATE

Will Implementing Class Size Caps Exacerbate Hiring Challenges in New York City's Highest-Poverty Schools?

An Essay for the Learning Curve by Matthew Chingos, Ariella Meltzer, and Jay Carter

July 2024

New York City will need to hire thousands of new teachers to comply with the state's mandate to reduce class sizes in its public schools.[1] These newly hired teachers will be concentrated in lower-poverty schools, which are more likely to have class sizes that currently exceed the caps, but data from prior rounds of teacher hiring indicate that these new openings may exacerbate hiring challenges at higher-poverty schools.

In 2022, Governor Kathy Hochul signed a law requiring New York City's public schools to reduce class sizes to no more than 20 students in grades K–3, 23 in grades 4–8, and 25 in high school, all by the 2027–28 school year. The district estimates it will need to hire 10,000 to 12,000 teachers to comply, a 16 percent increase in its workforce.[2] This hiring is in addition to the regular hiring that replaces teachers who leave, which has ranged from 3,800 to 5,600 in recent years.

This additional need is likely to strain hiring in subjects and schools where vacancies have historically been harder to fill. The district has reported that it receives fewer than three applications for each teacher vacancy in shortage areas, such as bilingual education, math, Spanish, some science courses, and secondary special education. It has also noted that higher-poverty schools have additional hiring needs because of their lower teacher retention rates compared with lower-poverty schools.[3]

---

[1] Matthew Chingos and Ariella Meltzer, "Class Size Reductions May Be Inequitably Distributed under a New Mandate in New York City" (Washington, DC: Urban Institute, 2023).

[2] "FY25 Class Size Reduction Plan for NYC Public Schools" (draft, May 7, 2024). The city's Independent Budget Office estimated 17,000 additional teachers will be needed. See Tainá Guarda and Sarita Subraminian, "How Would the New Limits to Class Sizes Affect New York City Schools?" (New York: New York City Independent Budget Office, 2023).

[3] "FY25 Class Size Reduction Plan for NYC Public Schools" (draft, May 7, 2024).

In practice, the disproportionate hiring impact of the class size mandate on higher-poverty schools may be blunted by the fact that they will have to hire fewer teachers because their students are more likely to be in classes that already comply with the size caps. In prior work, we estimated that the teacher hiring costs of implementing the class size law in the highest-poverty schools will be about two-thirds of the costs at the lowest-poverty schools.[4]

But these new teachers must come from somewhere. In recent years, about one-third of teachers who are new to a school came from another school in the district. Our analysis of teacher hiring data indicates that the highest-poverty schools are a common source of teachers other schools hire. A simulation we run suggests that within-district transfers that may result from the class size law will produce roughly three additional vacancies at the highest-poverty schools for every one additional vacancy created at the lowest-poverty schools.

Combined with prior evidence on other inequitable effects of the class size mandate, these findings point to the need for targeted strategies to blunt a likely reduction in educational equity. These strategies include tweaks to teacher recruitment practices the district is already considering, as well as more ambitious structural reforms to how teachers are compensated.

Higher-Poverty Schools Hire More New Teachers Every Year

Our analysis draws on New York City Public Schools (NYCPS) hiring data from 2022 and 2023 that we obtained from the district under the state's Freedom of Information Law. We focus on the more recent year of data but obtain similar results using the 2022 data (appendix table A.2).

We divide schools into quartiles based on their economic need index (ENI), an estimate of the share of students from families with low incomes from the 2022–23 school year.[5] We construct the quartiles so that each has the same number of students (though not necessarily the same number of schools) across New York City.[6] We use these quartiles to classify both the "sending schools" (i.e., the schools teachers transfer out of) and the "receiving schools" (i.e., the schools those teachers are hired into) in the teacher transfer data.

We find that higher-poverty schools hire more teachers than lower-poverty schools, in part because they tend to be smaller and employ more teachers per student (figure 1). They also have higher teacher attrition rates.

Most newly hired teachers are new to teaching or come from schools outside the district, but a substantial minority are within-district transfers. The highest-poverty schools (those with ENIs from

[4] Matthew Chingos, Ariella Meltzer, and Jay Carter, "How Will Implementing Class Size Caps in New York City Affect Funding Equity?" (Washington, DC: Urban Institute, 2023).

[5] "Student Economic Need Index," Citizens' Committee for Children of New York, accessed July 17, 2024, https://data.cccnewyork.org/data/bar/1371/student-economic-need-index#1371/a/1/1622/127.

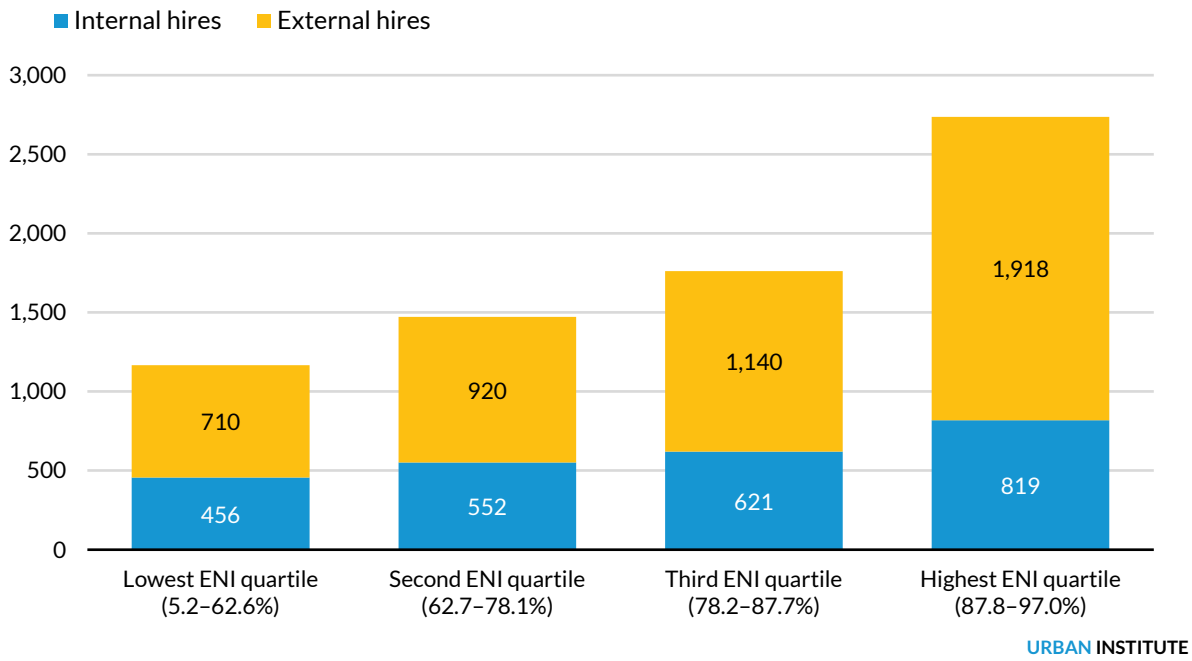
[6] We obtained ENI and school enrollment data from the 2022–23 New York City Department of Education Demographic Snapshot.

87.8 to 97.0 percent) are somewhat less likely to hire teachers from within the district than other schools (30 percent versus 35 to 39 percent).

FIGURE 1

Higher-Poverty Schools Have Greater Hiring Needs

Number of teachers hired in 2023, by school ENI quartile



Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.
Notes: ENI = economic need index. ENI quartiles are weighted by student enrollment.

Within-District Teacher Transfers Disproportionately Affect the Highest-Poverty Schools

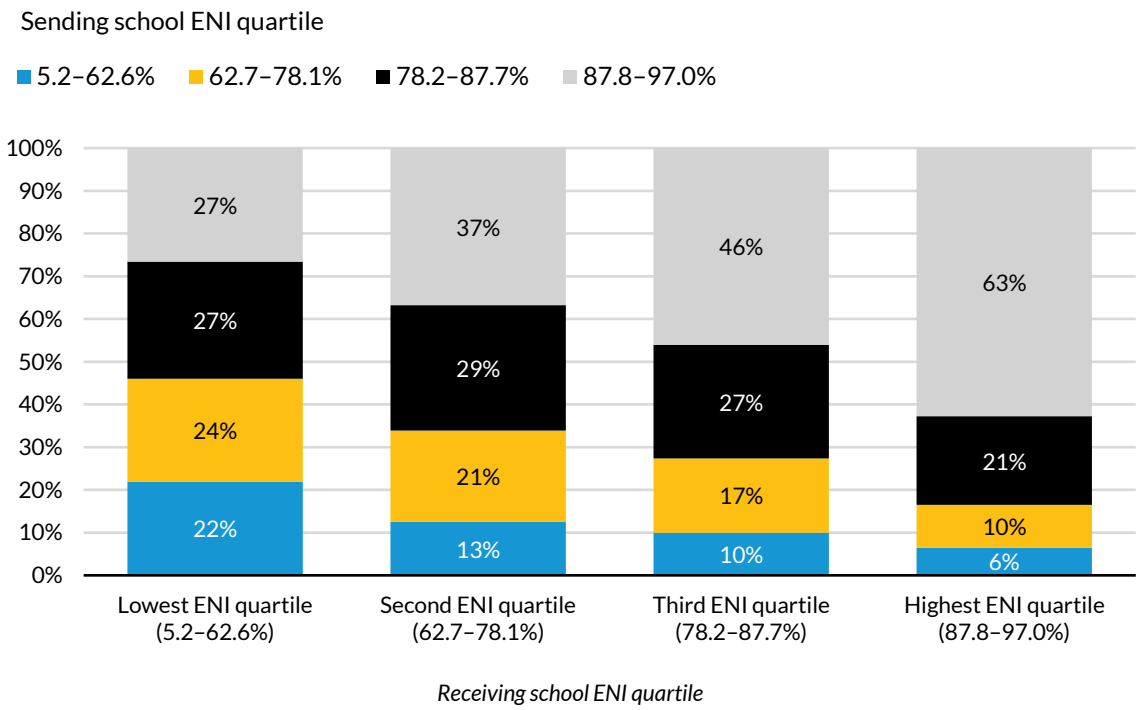
If past data are any indication of where some schools may get the teachers they need to reduce class sizes, other schools in the district are an important potential source. And when schools hire teachers from within NYCPS, they tend to hire them from the highest-poverty schools (figure 2). Overall, 46 percent of within-district transfers came from the highest-poverty schools in 2023 (appendix table A.1).

This is true for the highest-poverty schools themselves, which hired 63 percent of their within-district transfers from other high-poverty schools in 2023. The pattern is also true for schools in the second and third ENI quartiles, which hired 37 and 46 percent of their transfers, respectively, from the highest-poverty schools. The lowest-poverty schools hire internal transfers roughly equally from across ENI quartiles.

FIGURE 2

The Highest-Poverty Schools Are a Frequent Source of Within-District Transfers

Within-district teacher transfers in 2023, by sending and receiving school ENI quartile



URBAN INSTITUTE

Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.
Notes: ENI = economic need index. ENI quartiles are weighted by student enrollment.

To approximate what these patterns might mean for teacher hiring to comply with the class size mandate, we ran a simple simulation to see what would happen if schools hired all the teachers they needed to reduce class sizes in the same manner they hired teachers in 2023.[7] We focus on K–5 teachers because we can more accurately approximate elementary school hiring needs from the available data, but our calculations from middle and high schools indicate a similar pattern of results (appendix figure A.1).

For example, we estimate that the lowest-poverty schools will need to hire 1,956 K–5 teachers in the coming years to reduce class sizes (figure 3). Our simulation indicates that following similar hiring patterns from 2023 would mean hiring approximately 168 teachers from the lowest-poverty schools, 185 from schools in the second ENI quartile, 210 from the third quartile, 203 from the highest-poverty schools, and 1,191 teachers from outside the district.

[7] The simulation assumes that each ENI quartile of schools hires teachers to reduce class sizes in the same proportions by source (sending school ENI quartiles and external hires) as they did in 2023.

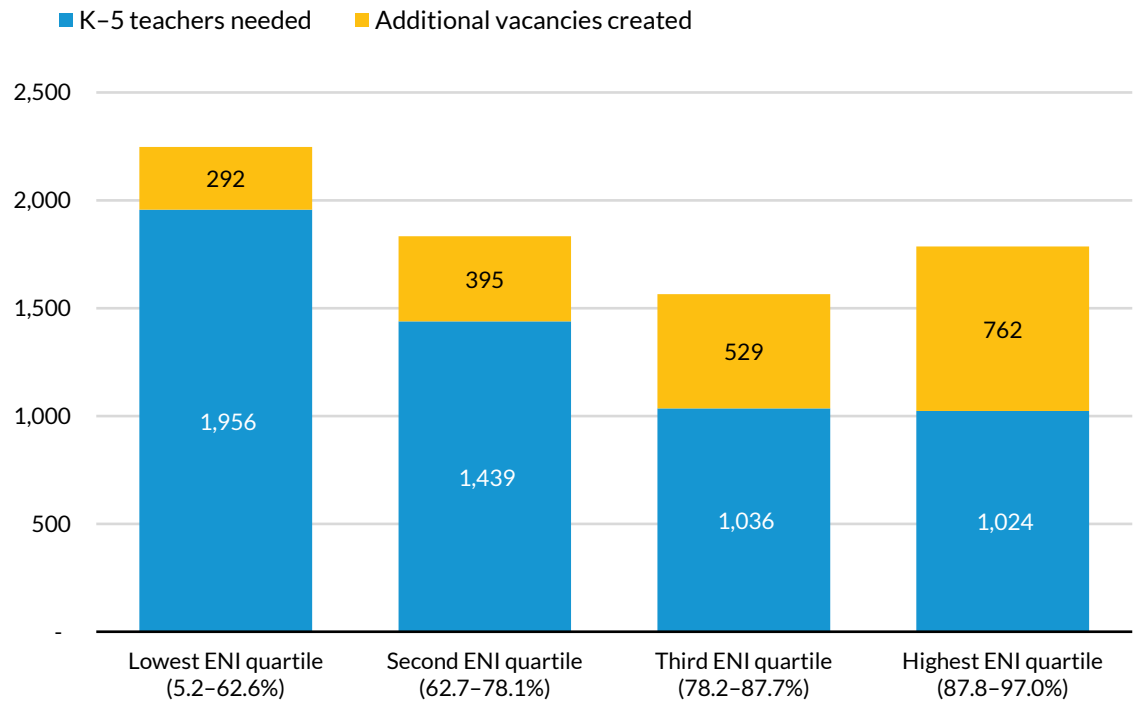
We repeat this calculation for the other three ENI quartiles (of receiving schools) and then add up how many vacancies are created at the sending schools by poverty level (figure 3). We find that the transfers resulting from class-size-related hiring will lead to more additional vacancies at higher-poverty schools than at lower-poverty schools. For example, our simulation suggests that hiring for class size will create about three additional K–5 vacancies at the highest-poverty schools for each additional vacancy created at the lowest-poverty schools.

These results suggest that the additional vacancies created by transfers will have a much bigger impact on hiring needs at the highest-poverty schools. For example, at the highest-poverty schools, the vacancies created by the transfers that result from class-size-related hiring represent a 74 percent increase in the amount of hiring schools will need to comply with the mandate, compared with only a 15 percent increase at the lowest-poverty schools.

FIGURE 3

Within-District Transfers Are Likely to Create More Openings at the Highest-Poverty Schools

K–5 teachers needed to reduce class sizes and additional vacancies created by within-district transfers



URBAN INSTITUTE

Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.

Notes: ENI = economic need index. ENI quartiles are based on all schools (K–12) and are weighted by student enrollment.

Implications

Hiring enough teachers to meet the class size caps will pose challenges both in higher-poverty schools, which have historically faced greater hiring and retention challenges, and lower-poverty schools, which must hire the greatest number of teachers to meet the caps. For example, we estimate that the lowest-poverty schools will need to hire 36 percent more K–5 teachers versus 20 percent more in the highest-poverty schools.[8]

But our analysis suggests that, if recent teacher transfer patterns hold, within-district transfers may substantially increase the number of teachers that the highest-poverty schools need to hire because they are disproportionately likely to lose teachers to other NYCPS schools. Combining the hiring and transfer-out estimates suggests that the lowest-poverty schools will have hiring needs equivalent to 41 percent of their current K–5 teachers, compared with 35 percent at the highest-poverty schools.[9]

Our transfer projections assume that regular hiring patterns will persist in the next few years as the class size mandates are implemented. We suspect this is more likely to be true if teachers are hired gradually than if the district attempts to hire many teachers at the same time.

Teacher hiring is a significant focus of the draft 2024–25 class size reduction plan that NYCPS released in May. Hiring levers proposed by NYCPS include providing hiring resources to schools, expanding pathways for current NYCPS students and paraprofessionals to become teachers, strengthening recruiting efforts with schools of education, leveraging alternative certification programs such as NYC Teaching Fellows, and expanding teacher retention efforts such as bonuses.[10]

Some of these proposals prioritize schools in locations that have historically faced staffing challenges (e.g., the Bronx) or with higher poverty rates. For example, NYCPS proposes to "ensure that a select group of schools that meet the criteria of higher ENI and have class sizes above the mandated limits and are located in harder-to-staff districts are a part of the earlier application window for school…. allowing principals to make offers earlier than other schools are able to make offers to teachers." These kinds of targeted approaches are critical if the district is to have any chance of mitigating the inequitable impacts of the class size mandate.[11]

But most of these levers are focused on expanding the pipeline of teachers across the board. A larger applicant pool would help all schools meet the hiring needs created by class size reduction and

[8] The corresponding statistics for the second and third quartiles are 32 and 28 percent. At the middle and high school level, we estimate that the lowest-poverty schools will need to hire teachers for 15 percent more classroom sections in the lowest-poverty schools, compared with a 4 percent increase in the highest-poverty schools (the corresponding statistics for the second and third quartiles are 11 and 8 percent).

[9] The corresponding statistics for the second and third quartiles are both 41 percent. For middle and high schools, the corresponding estimates are 17 percent for the lowest-poverty schools and 9 percent for the highest-poverty schools (the corresponding statistics for the second and third quartiles are 14 and 12 percent).

[10] "FY25 Class Size Reduction Plan for NYC Public Schools" (draft, May 7, 2024).

[11] Chingos and Meltzer, "Class Size Reductions May Be Inequitably Distributed"; and Chingos, Meltzer, and Carter, "How Will Implementing Class Size Caps in New York City Affect Funding Equity?"

attrition but would not address the long-standing inequities in teacher hiring challenges across schools. Mitigating those inequities will require addressing their root causes, such as school segregation by income and race or ethnicity, or substantially reforming how teachers are compensated, such as paying teachers more to work in higher-poverty schools or harder-to-staff subjects.

Our analysis does not consider teacher quality (e.g., as measured by experience levels or evaluation scores), which prior research has shown is often inequitably distributed across schools.[12] For example, transfers to the highest-poverty schools may be disproportionately less experienced or less effective than transfers to lower-poverty schools. It will be important to track measures of teacher quality across schools as the class size caps are implemented, especially in light of prior evidence that these caps may reduce educational equity.[13]

[12] Don Boyd, Susanna Loeb, Hamp Lankford, and Jum Wycoff, *Understanding Teacher Labor Markets: Implications for Equity* (Albany: University at Albany, State University of New York, 2003); and Dan Goldhaber, Lesley Lavery, and Roddy Theobald, "Uneven Playing Field? Assessing the Teacher Quality Gap between Advantaged and Disadvantaged Students," *Educational Researcher* 44, no. 5 (June/July 2015): 293, https://doi.org/10.3102/0013189X15592622.

[13] Chingos and Meltzer, "Class Size Reductions May Be Inequitably Distributed"; and Chingos, Meltzer, and Carter, "How Will Implementing Class Size Caps in New York City Affect Funding Equity?"

Appendix

TABLE A.1

Teacher Transfers and External Hires, 2023

	Receiving School ENI Quartile				
	5.2–62.6%	62.7–78.1%	78.2–87.7%	87.8–97.0%	Total
Sending school ENI quartile					
5.2–62.6%	100	69	62	53	284
62.7–78.1%	110	118	108	82	418
78.2–87.7%	125	162	165	170	622
87.8–97.0%	121	203	286	514	1,124
Total internal hires	456	552	621	819	2,448
External hires	710	920	1,140	1,918	4,688
Overall total	1,266	1,466	1,780	2,624	7,136

Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.

Notes: ENI = economic need index. ENI quartiles are weighted by student enrollment.

TABLE A.2

Teacher Transfers and External Hires, 2022

	Receiving School ENI Quartile				
	5.2–62.6%	62.7–78.1%	78.2–87.7%	87.8–97.0%	Total
Sending school ENI quartile					
5.2–62.6%	135	77	49	45	306
62.7–78.1%	116	102	98	91	407
78.2–87.7%	139	151	147	123	560
87.8–97.0%	132	206	241	433	1,012
Total internal hires	522	536	535	692	2,285
External hires	584	692	989	1,551	3,816
Overall total	1,106	1,228	1,524	2,243	6,101

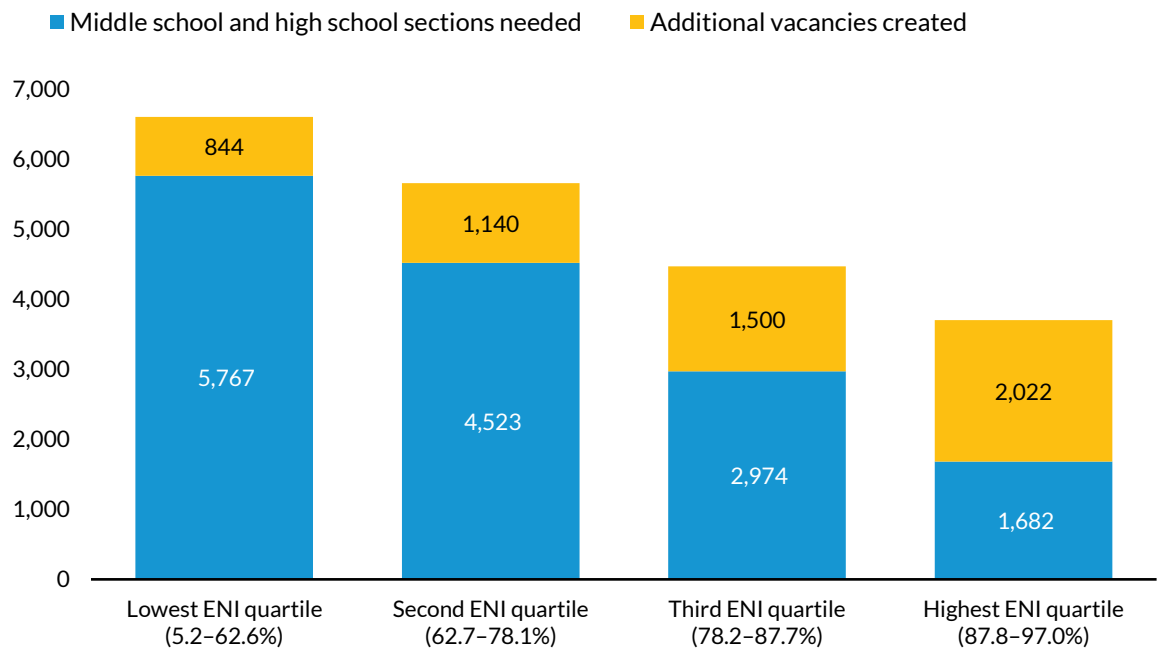
Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.

Notes: ENI = economic need index. ENI quartiles are weighted by student enrollment.

FIGURE A.1

Within-District Transfers Are Likely to Create More Openings at the Highest-Poverty Middle and High Schools

Middle and high school classroom sections needed to reduce class sizes and additional section vacancies created by within-district transfers



Source: Authors' calculations from 2022–23 New York City Department of Education Demographic Snapshot and file of school-level transfers in 2023.
Notes: ENI = economic need index. ENI quartiles are based on all schools (K–12) and are weighted by student enrollment.

Matthew Chingos is vice president for education data and policy, Ariella Meltzer is a research analyst, and Jay Carter is a senior education data and research associate in the Center on Education Data and Policy at the Urban Institute.

Acknowledgments

This essay was funded by the Walton Family Foundation, the Gates Foundation, and the Robin Hood Foundation as part of the Learning Curve essay series. We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at www.urban.org/fundingprinciples.

500 L'Enfant Plaza SW
Washington, DC 20024

www.urban.org

ABOUT THE URBAN INSTITUTE

The Urban Institute is a nonprofit research organization that provides data and evidence to help advance upward mobility and equity. We are a trusted source for changemakers who seek to strengthen decisionmaking, create inclusive economic growth, and improve the well-being of families and communities. For more than 50 years, Urban has delivered facts that inspire solutions—and this remains our charge today.