Working Paper 2020-4

GEOGRAPHIC DISPROPORTIONALITY IN THE FIRST YEAR OF ILLINOIS'S TAX-CREDIT SCHOLARSHIP PROGRAM

Andrew D. Catt
dcatt@edchoice.org

Michael Shaw
mshaw@edchoice.org

May 04, 2020

ABOUT EDCHOICE

EdChoice is a nonprofit, nonpartisan organization dedicated to advancing full and unencumbered educational choice as the best pathway to successful lives and a stronger society. EdChoice believes that families, not bureaucrats, are best equipped to make K–12 schooling decisions for their children. The organization works at the state level to educate diverse audiences, train advocates and engage policymakers on the benefits of high-quality school choice programs. EdChoice is the intellectual legacy of Milton and Rose D. Friedman, who founded the organization in 1996 as the Friedman Foundation for Educational Choice.

The contents of this publication are intended to provide empirical information and should not be construed as lobbying for any position related to any legislation.

EdChoice Working Papers are meant for wide circulation, inviting reader feedback, and for informing national and state conversations about reform ideas, policymaking, and implementation, driven by educational choice. EdChoice internally reviews each paper but does not necessarily send out for external reviews.

We welcome and encourage hearing from you. Please feel free to contact the authors directly – or Paul DiPerna, our Vice President of Research and Innovation – about your impressions and comments.

Drew Catt: dcatt@edchoice.org

Michael Shaw: mshaw@edchoice.org

Paul DiPerna: paul@edchoice.org

Authors are responsible for the content provided in EdChoice working papers.

Table of Contents

List of Figures

List of Tables

Executive Summary

The statutory geographic segmentation of Illinois's tax-credit scholarship program is unlike any seen in any other single statewide private school choice program. The findings from our research indicate that there is a geographic disproportionality when comparing the regional distribution of tax credits to the regional distribution of students, schools, and families. However, this disproportionality will deter program access inequality due to market saturation of scholarships.

The program's apportionment of credits to regions mirroring state appellate court districts is based on the percentage of students attending private school in said regions. The geographic disbursement of school-age children and families who are income-eligible for Illinois's school choice program, however, does not align with the disbursement of private school students statewide or by program region.

Although it may not have been the legislative intent behind the program, allocating credits by region instead of allowing them to be claimed on a first-come-first-served basis to all income-eligible families statewide may be a form of disincentivizing of access inequality within any one region of the state that may have arisen through a truly free education market with a single, dominant metropolitan area such as Chicago-Cook County. On the supply side, market expansion like that being incentivized within the state's private schooling sector through the distribution of scholarship dollars is not associated with inequality at the level where it occurs unless saturation is approached.[i]

Joining first-year participation data of the Invest in Kids Tax-Credit Scholarship Program with statewide population, income, and drive-time data, this report measures access disproportionality to Illinois's school choice program within the confines of its legislatively mandated geographic segmentation.

Among these findings:

- Chicago–Cook County is overly represented in terms of credit allocation when compared to its percent of school-age children
    - While a little more than half (51.2%) of credits were allocated to Region 1's Cook County, only 38.5 percent of Illinois students reside in Cook County
    - Overrepresentation in Cook County likely contributes to underrepresentation of credit allocation compared to student populations for the program's other four regions
- Additional spatial access measures paint a nuanced picture of geographic disproportionality within Illinois's Invest in Kids Program
    - 85.2 percent of school-age children live within a 15-minute drive of a participating private school, with more than nine in 10 of income-eligible families a 30-minute or less drive from an Invest in Kids school
    - Perhaps due to a lack of market incentives, many of the families who live the furthest from a participating private school reside in remote rural areas
- Such geographic disproportionality can be both augmented and diminutized by education market factors

[i] Rina Arum, Adam Gamoran, and Yossi Shavit (2007), More Inclusion than Diversion: Expansion, Differentiation, and Market Structure in Higher Education, in Yossi Shavit, Rina Arum, and Adam Gamoran (Eds.), *Stratification in Higher Education: A Comparative Study* (1–35), Stanford University Press

- Despite not containing a majority of Illinois students, a majority (51.2 percent) of participating Invest in Kids private schools are concentrated in Chicago–Cook County's Region 1, which could draw students from other regions
- Further research may yield insight into how market forces affect geographic disproportionality of geographically delineated education programs such as Illinois's Invest in Kids tax-credit scholarship

Introduction

This study examines the first year of participation in Illinois's tax-credit scholarship program, during the 2018–19 academic year, and looks at equitable access to the participating schools through the lens of geospatial analysis. The study seeks to answer: How does the statutorily required geographic distribution of tax credits distributed compare to the geographic distribution of students and schools participating in Illinois's school choice program in its first year? Which groups or regions do not have reasonable access to the private schools participating in Illinois's school choice program?

In examining participation and the scheme through which funds were geographically apportioned, this study sheds light on how school choice programs can be created to disincentivize market saturation in a single area or multiple areas of a state, thereby reducing potential for educational access inequality.

Theoretical Perspectives

Lack of reasonable access for individuals in communities has been previously studied within the context of food and grocery retailers.[1] Within the context of K-12 school choice, others have pioneered using Census and school location data to map access to intra-district public and private schools, with the differentiation of access being seen when comparing locale types.[2] Within urban settings, commute times to schools via public transit have been analyzed to measure access.[3] Although access to services generally can be broken down into five different dimensions, including non-spatial dimensions such as affordability, accommodation, and acceptability, the focus of this paper is on those deemed spatial dimensions of access—availability and accessibility.[4] Many have written about the impact that school choice can have on the market of education, with some advocating for market-based school choice policies as a means of reducing inequality in education.[5] However, not much has been written about the potential implications of saturating a market through the means of school choice or what happens when a school choice program is required to have credits and/or scholarships awarded through a very specific geographic segmentation.

Background

In 2017, Illinois enacted a tax-credit scholarship program through the Invest in Kids Act and became the 18th state to have such a program.[6] Two years after its enactment, with its first year of operating concluding in June 2019, the Invest in Kids program set high participatory and fundraising marks when compared to existing private school choice programs. At $61.5 million raised in 2018, Illinois's Invest in Kids Program eclipsed Florida's Tax Credit Scholarship Program as the tax-credit scholarship to raise the most funds during its first year of operation. With 7,718 scholarship students enrolled during the 2018–19 school year, Invest in Kids had the second-highest enrollment for the first year of a tax-credit scholarship program behind Florida's program, which launched in 2001.[7]

Such figures are amplified when considering the various challenges faced by the program—both within its legislative design as well as during its implementation. During its implementation period the program's largest SGO experienced technical difficulties that caused its application to crash because of the large volume of interested families. Some 24,000 families were unable to submit applications before the application returned online.[8] Despite this seemingly high interest, Illinois's newly elected governor in 2019 proposed to end the five-year pilot program early.[9] The program continued to face legislative uncertainty in the following school year, which may have led to a dampening of scholarship donations.[10]

The program raises funds for private school scholarships by offering 75 percent tax-credits to business and individuals who donate to scholarship-granting organizations (SGOs), capped at $1 million per donor and $100 million total ($75 million of which are tax credits).[11] SGOs award scholarships to qualifying students, who were eligible to receive scholarships in 2018–19 if their family income did not exceed 300 percent of the federal poverty level ($75,300 for a family of four in 2018–19).[12] Once they've entered the program, students retain eligibility as long as their family income does not exceed 400 percent of the federal poverty level ($103,000 for a family of four in 2019–20).[13]

This 75 percent credit value is less than the credit value of 13 tax-credit scholarship programs, with many programs offering dollar-for-dollar credits to donors.[14] Fundraising for this and similar programs may also have been influenced by uncertainty in 2018 regarding the updated federal tax code as a result of the 2017 Tax Cuts and Jobs Act.[15]

A design feature that further distinguishes the Invest in Kids program is its geographic segmentation of the state. In order to facilitate a diverse array of participating students and schools, the Illinois legislature authorized the Illinois Department of Education to divide the state into five multi-county regions that coincide with the state's five appellate court judicial districts .[16] The available credits were then proportioned to align with the population of non-public schooling students living in these regions, so that theoretically scholarships would be distributed proportionally where the state's students resided.[17] Other programs apportion scholarships and vouchers via geographic constraints—Wisconsin's statewide voucher, for instance, uses a school district percentage cap.[18] But this is the first private school choice program that attempts to apportion scholarships via multi-county zones.

Methods and Data Sources

The study uses first-year participation data from the Illinois Department of Revenue, school information from the Illinois State Board of Education, demographic data from American Community Survey 2013–2017 estimates, drive-time data from HERE Traffic Analytics via Maptitude, and locale boundaries from the National Center for Education Statistics (NCES) Education Demographic and Geographic Estimates (EDGE) program to answer the following research questions: How does the statutorily required geographic distribution of tax credits distributed compare to the geographic distribution of students and schools participating in Illinois's school choice program in its first year? Which groups or regions do not have reasonable access to the private schools participating in Illinois's school choice program? Counties within each Invest in Kids region were procured from the Illinois Department of Revenue and then grouped by region in Maptitude, a geographic information system (GIS) software program that was used to geospatially integrate the above data while also calculating average drive times both to and from participating private schools. These calculations were then used to determine the proportion of school-aged children in each Invest in Kids Region a certain range of minutes away from a participating school, which along with detailing which regions are underrepresented and overrepresented in program participation compared to these proportions represent our proxies for spatial access.

Results

In the first year of Illinois's tax-credit scholarship program, 51.22 percent of credits were allocated to Region 1 – Cook County, including Chicago. However, 38.53 percent of school-age children in Illinois live in Region 1. That is much less than the 75.22 percent of students and 54.71 percent of schools participating in the first year of the state's tax-credit scholarship (TCS) program located in Cook County. This comparative proportional overrepresentation of TCS students in Region 1 is most likely contributing to the other regions, conversely, experiencing an underrepresentation of TCS students when compared to the proportion of school-age children living in them (see Table 1 and Figure 1).

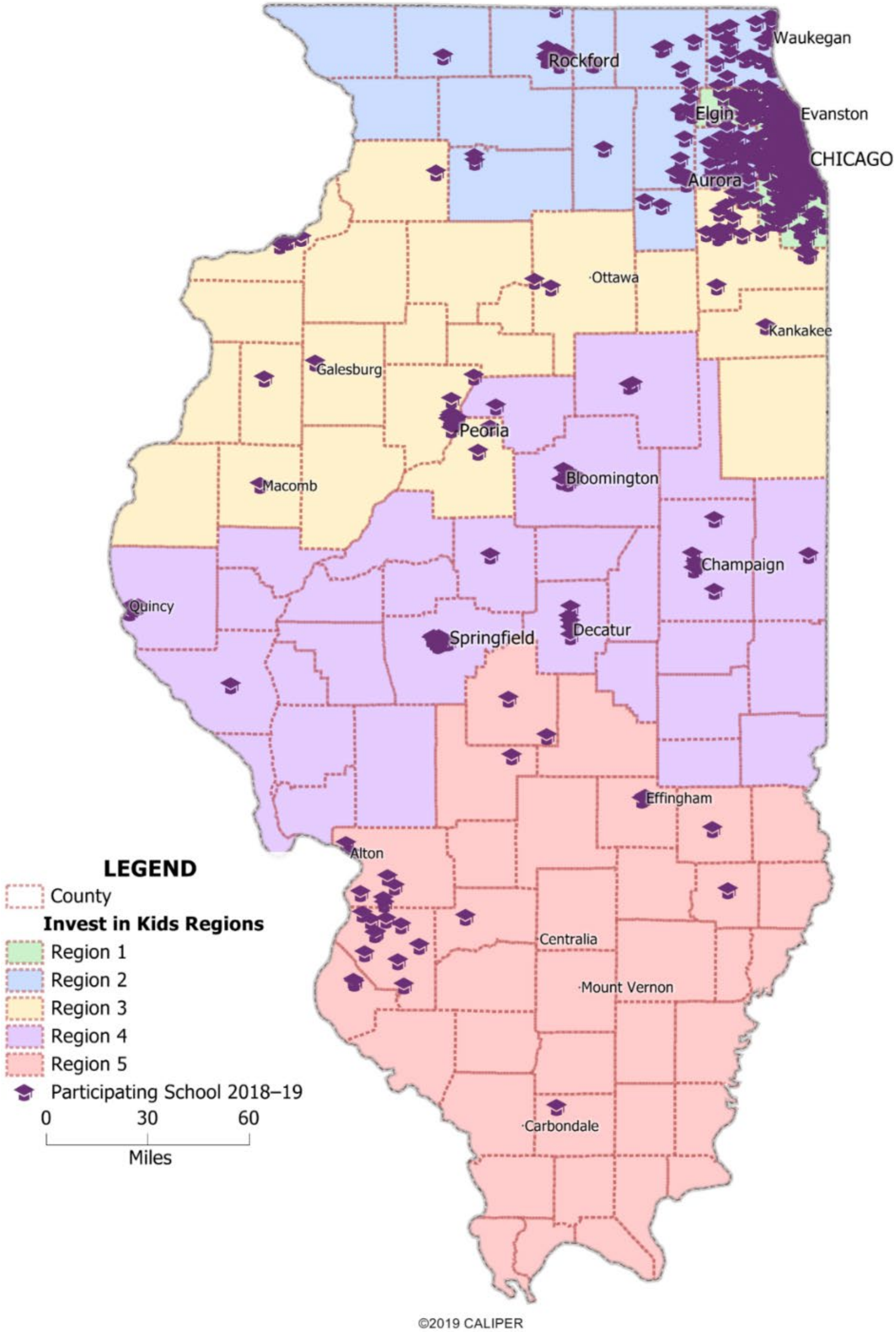
Table 1. Regional Breakouts of Tax-Credit Scholarship (TCS) Credits, Students, Schools, and American Community Survey Estimates

The breakout of credits does not align with the breakout of TCS students or the school-aged population.

	Region 1	Region 2	Region 3	Region 4	Region 5
2018 Credits	0.5122	0.2309	0.0997	0.0750	0.0822
TCS Students	0.7522	0.1319	0.0385	0.0408	0.0365
TCS Schools	0.5471	0.2092	0.0874	0.0851	0.0713
Age 5 to 19	0.3853	0.2710	0.1471	0.1013	0.0953
Family Income <$50K	0.4208	0.2010	0.1387	0.1124	0.1271
Family Income <$75K	0.3954	0.2171	0.1473	0.1144	0.1259

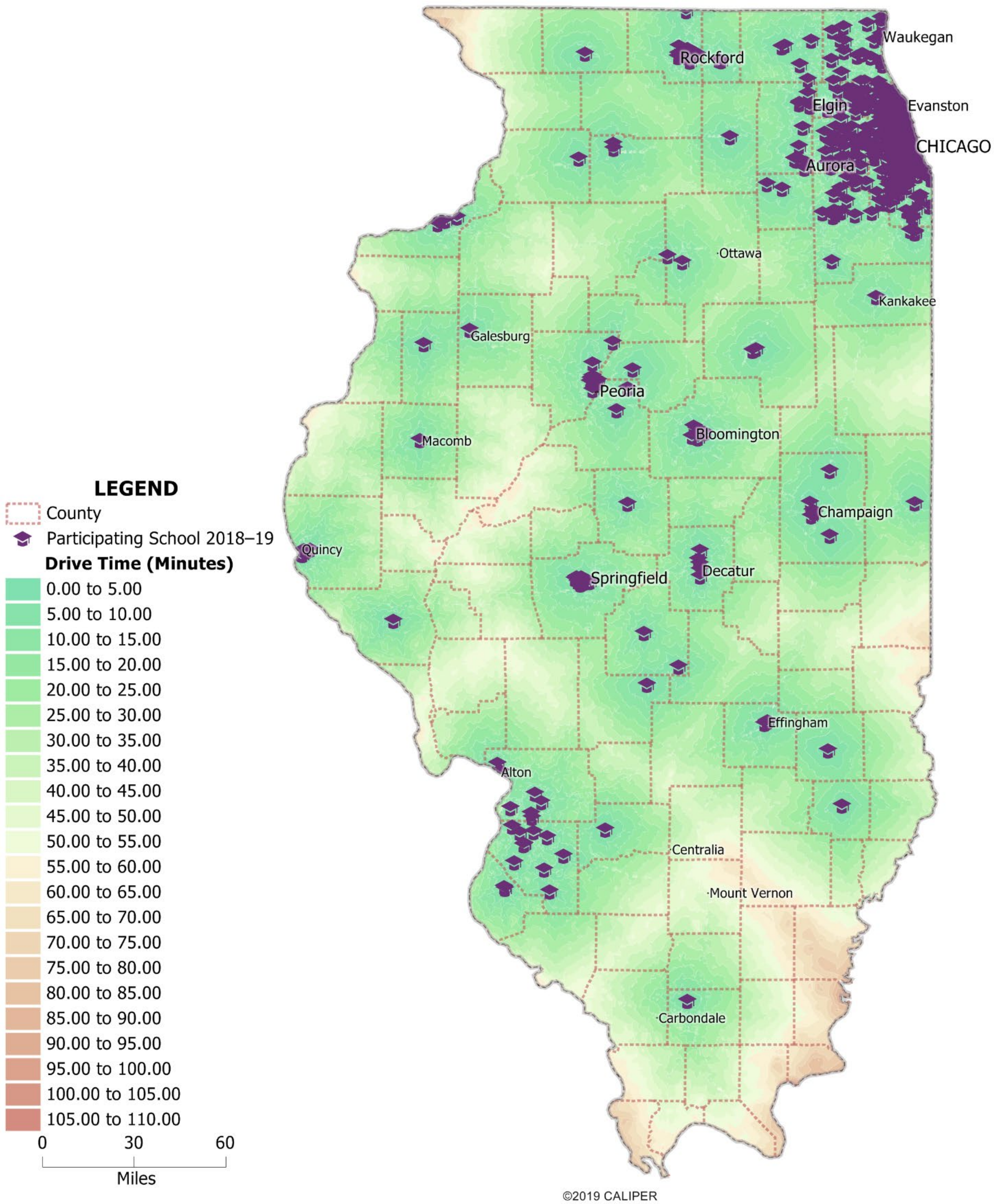
Figure 1. Invest in Kids Regions with 2018–19 Participating Schools

The participating schools are overly concentrated in Region 1 (Chicago–Cook County).



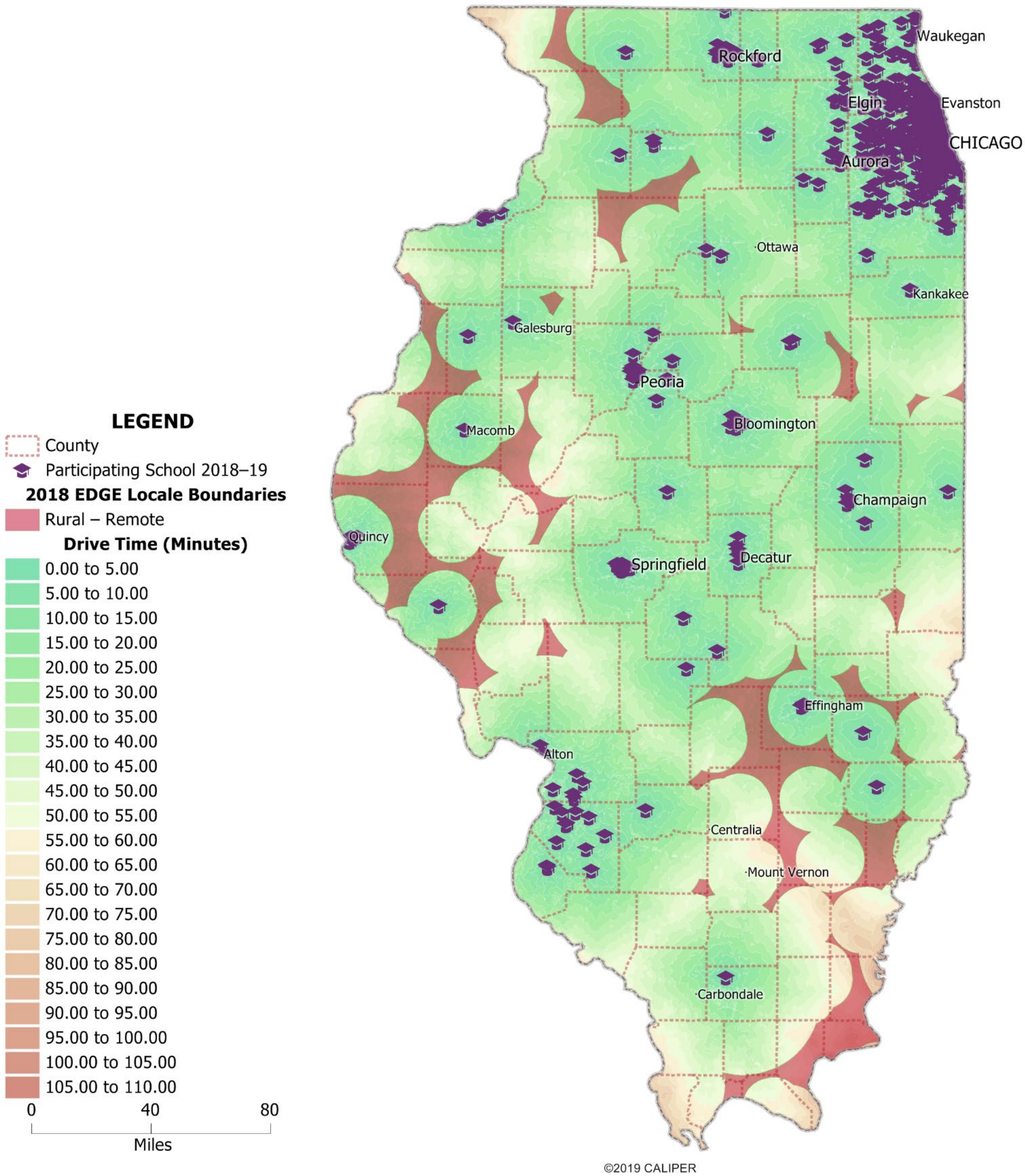
Overall, 85.20 percent of school-age children live less than a 15-minute drive from the nearest school participating in the first year of the TCS program, while 94.33 percent live less than a 30-minute drive (see Figure 2). Additionally, more than nine out of ten families eligible who are income-eligible for Illinois's tax-credit scholarship program live less than a 30-minute drive from the nearest school that participated in 2018–19.

Figure 2. Drive Times from Invest in Kids 2018–19 Participating Schools
Region 5 has the longest drive times to participating private schools.



Although it is an imperfect match, it appears that many of the students and families who live farthest from a 2018–19 Invest in Kids participating school reside in remote rural areas (see Figure 3).

Figure 3. Drive Times from Invest in Kids 2018–19 Participating Schools with 2018 Education Demographic and Geographic Estimates (EDGE) Rural – Remote Locales in Illinois
Students in remote rural areas live farthest from participating schools.



Conclusion

The geographic segmentation of Illinois's tax-credit scholarship program is unlike any seen in any other single statewide private school choice program. The apportionment of credits through regions mirroring state appellate courts districts is based on the percentage of students attending private school in said regions. However, the percentage of all school-age children and families who are income-eligible for Illinois's school choice program are not distributed within geographically segmented regions the same as students attending private school.

Although it may not have been the legislative intent behind the program, allocating credits by region instead of allowing them to be claimed on a first-come-first-served basis likely disincentivized inequality as it relates to accessing scholarships for those regions outside Chicago–Cook County (Region 1). Such educational access inequality may have arisen through a program without legislatively designed geographic segmentation exposed to greater free market forces, especially when considering the outsized population and economic pull of Chicago–Cook County. After all, market expansion like that being incentivized within the state's private schooling sector through the distribution of scholarship dollars is not associated with inequality at the geographic level where it occurs unless saturation is approached.[19]

The findings from this study indicate that there is a geographic disproportionality when comparing the regional distribution of tax credits to the regional distribution of students, schools, and families. However, this disproportionality will deter any inequality due to market saturation. Further research may yield insight into how market forces affect geographic disproportionality of geographically delineated education programs such as Illinois's Invest in Kids Tax-Credit Scholarship.

Notes

[1] Steven Cummins and Sally Macintyre (1999), The Location of Food Stores in Urban Areas: A Case Study in Glasgow, *British Food Journal*, *101*(7), pp. 545–553, https://dx.doi.org/10.1108/00070709910279027

[2] Kristin Blagg and Matthew M. Chingos (2017), *Who Could Benefit from School Choice? Mapping Access to Public and Private Schools*, Evidence Speaks Reports, *2*(12), Economic Studies at Brookings, retrieved from Brookings Institution website: https://www.brookings.edu/wp-content/uploads/2017/03/es_20170330_chingos_evidence_speaks.pdf

[3] Kristin Blagg, Matthew M. Chingos, Sean P. Corcoran, Sarah A. Cordes, Joshua Cowen, Patrick Denice, Betheny Gross, Jane Arnold Lincove, Carolyn Sattin-Bajaj, Amy Ellen Schwartz, and Jon Valant (2018), *The Road to School: How Far Students Travel to School in the Choice-Rich Cities of Denver, Detroit, New Orleans, New York City, and Washington, DC*, Urban Institute Student Transportation Working Group, retrieved from https://www.urban.org/sites/default/files/publication/97151/the_road_to_school_4.pdf

[4] Roy Penchansky and J. William Thomas (1981), The Concept of Access: Definition and Relationship to Consumer Satisfaction, *Medical Care, 19*(2), pp. 127–40, https://www.jstor.org/stable/3764310; Ronald M. Andersen (1995), Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior*, *36*, pp. 1–10, https://www.jstor.org/stable/2137284; Paul A. Estabrooks, Rebecca E. Lee, and Nancy C. Gyurcsik (2003), Resources for Physical Activity Participation: Does Availability and Accessibility Differ by Neighborhood Socioeconomic Status? *Annals of Behavioral Medicine*, *25*, pp. 100–104, https://dx.doi.org/ 10.1207/S15324796ABM2502_05; Mark F. Guagliardo (2004), Spatial Accessibility of Primary Care: Concepts, Methods and Challenges, *International Journal of Health Geographics*, *3*(3), https://dx.doi.org/ 10.1186/1476-072X-3-3; Jin Lee (2016). Paying for School Choice: Availability Differences among Local Education Markets. *International Journal of Education Policy and Leadership*, *11*(5), https://dx.doi.org/10.22230/ijepl.2016v11n5a674

[5] Milton Friedman (1955), The Role of Government in Education, in Robert A. Solo (Ed.), *Economics and the Public Interest: Essays in Honor of Eugene Ewald Agger* (123–144), retrieved from http://la.utexas.edu/users/hcleaver/330T/350kPEEFriedmanRoleOfGovttable.pdf; John E. Chubb and Terry M. Moe (1990), *Politics, Markets, and America's Schools*, Brookings Institution Press

[6] Eric Zorn (2017, August 29), After the Rush Job to Use Public Money on Private Schools, Now We Wait, *Chicago Tribune*, retrieved from https://www.chicagotribune.com/columns/eric-zorn/ct-perspec-zorn-vouher-scholarship-illinois-0830-story.html

[7] EdChoice (2019), School Choice in America Dashboard [Web page], accessed April 23, 2019, retrieved from https://www.edchoice.org/school-choice/school-choice-in-america

[8] Associated Press (2018, February 1), Illinois Tax Credit Scholarships on Hold after Website Crashes, *Chicago Sun-Times*, retrieved from https://chicago.suntimes.com/2018/2/1/18340021/illinois-tax-credit-scholarships-on-hold-after-website-crashes

[9] WQAD (2019, February 21), Pritzker Proposes Closing Private School Scholarships Program, retrieved from https://wqad.com/2019/02/21/pritzker-proposes-closing-private-school-scholarships-program

[10] Josh Sanburn (2019, July 8), Illinois Governor Grants Reprieve of State's Popular Tax-Credit Scholarship, but Political Fight Puts Dent in Donations Even as Application Surge, *74 Million*, retrieved from https://www.the74million.org/article/illinois-governor-grants-reprieve-of-states-popular-tax-credit-scholarship-program-but-political-fight-puts-dent-in-donations-even-as-applications-surge

[11] 35 ILCS 40/10, retrieved from Illinois General Assembly website: http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=3820&ChapterID=8

[12] EdChoice (2019), *The ABCs of School Choice: The Comprehensive Guide to Every Private School Choice Program in America*, 2019 edition, retrieved from https://www.edchoice.org/wp-content/uploads/2019/01/The-ABCs-of-School-Choice-2019-Edition.pdf

[13] EdChoice (2020), *The ABCs of School Choice: The Comprehensive Guide to Every Private School Choice Program in America*, 2020 edition, retrieved from https://www.edchoice.org/wp-content/uploads/2020/01/2020-ABCs-of-School-Choice-WEB-OPTIMIZED-REVISED.pdf

[14] Government Accountability Office (2018), *Private School Choice: Requirements for Students and Donors Participating in State Tax Credit Scholarship Programs* (GAO-18-679), retrieved from https://www.gao.gov/assets/700/694551.pdf

[15] Ariana Prothero (2018, September 11), How a Proposed Tax Rule Could End Up Hurting School Vouchers, *Education Week,* retrieved from https://www.edweek.org/ew/articles/2018/09/12/how-a-proposed-tax-rule-could-end.html

[16] Illinois Department of Revenue, Contributor Tax Credit Information [Web page], accessed June 26, 2019, retrieved from https://www2.illinois.gov/rev/programs/InvestInKids/Contributor/Pages/default.aspx

[17] Because the apportionment is designated by donations rather than scholarships, students could theoretically use a scholarship in one zone while residing in another. However, most of the state's SGOs in 2018 served just one or two zones. See Illinois Department of Revenue, Approved Scholarship Granting Organizations [Web page], accessed June 26, 2019, retrieved from https://www2.illinois.gov/rev/programs/InvestInKids/SGO/Pages/ApprovedSGOs.aspx

[18] Wis. Stat. § 118.60, retrieved from Wisconsin State Legislature website: https://docs.legis.wisconsin.gov/statutes/statutes/118/60/2/be

[19] Rina Arum, Adam Gamoran, and Yossi Shavit (2007), More Inclusion than Diversion: Expansion, Differentiation, and Market Structure in Higher Education, in Yossi Shavit, Rina Arum, and Adam Gamoran (Eds.), *Stratification in Higher Education: A Comparative Study* (1–35), Stanford University Press

About the Authors

Andrew D. Catt is the director of state research and special projects for EdChoice. In that role, Drew conducts analyses on private educational choice programs, conducts surveys of private school leaders and parents of school-age children, and conducts geospatial analyses. Drew graduated from Vanderbilt University in 2008 with a bachelor's degree in Human and Organizational Development, specializing in Leadership and Organizational Effectiveness. During that time, he researched the effects of homeschooling on socialization. Drew received his Master of Public Affairs in Nonprofit Management at Indiana University's School of Public and Environmental Affairs in Indianapolis. He also received his Master of Arts in Philanthropic Studies through the Lilly Family School of Philanthropy. While in graduate school, Drew's research focused on teacher performance incentives and cross-sector collaboration. He recently received a Graduate Certificate in Geographic Information Science (GIS) from IUPUI. Drew is a native of central Indiana and currently resides in downtown Indianapolis with his wife Elizabeth and their son Theodore.

Michael Shaw is the research analyst for EdChoice. In that role, Mike supports quality control as the organization's data collector, verifies its research, and analyzes data and policy issues. Before joining EdChoice, Mike worked as a reporter for news organizations in Colorado, Virginia, and Missouri. He holds degrees in Economics and Journalism as well as a minor in Spanish from the University of Missouri. While there, Mike researched parochial school consolidation in the St. Louis area, of which he is a native.

Acknowledgments

We would like to thank Empower Illinois for forwarding us their publicly-requested report from the Illinois Governor's Office. We are grateful that the initial version of this paper was accepted for presentation at the 2020 AERA Annual Meeting.