

Hamline University

DigitalCommons@Hamline

School of Education and Leadership Student
Capstone Theses and Dissertations

School of Education and Leadership

Spring 2023

Exploring How School Choice Affects the Distribution of Educational Resources in Ramsey County Minnesota

Craig Wiltzius
Hamline University

Follow this and additional works at: https://digitalcommons.hamline.edu/hse_all



Part of the [Education Commons](#)

Recommended Citation

Wiltzius, Craig, "Exploring How School Choice Affects the Distribution of Educational Resources in Ramsey County Minnesota" (2023). *School of Education and Leadership Student Capstone Theses and Dissertations*. 4562.

https://digitalcommons.hamline.edu/hse_all/4562

This Thesis is brought to you for free and open access by the School of Education and Leadership at DigitalCommons@Hamline. It has been accepted for inclusion in School of Education and Leadership Student Capstone Theses and Dissertations by an authorized administrator of DigitalCommons@Hamline. For more information, please contact digitalcommons@hamline.edu.

Exploring How School Choice Affects the Distribution of Educational Resources in
Ramsey County Minnesota

By
Craig Wiltzius

A capstone submitted to fulfill part of the requirements of a degree in Masters of Arts in
Teaching.

Hamline University

St. Paul, MN

May 2023

Primary Advisor: Trish Harvey
Content reviewer: Maja Numainville
Peer Reviewer: Abbey Wiltzius

TABLE OF CONTENTS

CHAPTER ONE	4
Introduction	4
Introduction	4
Rationale	5
Personal Experience	12
Conclusion	13
CHAPTER TWO	15
Literature Review	15
Introduction	15
Origins of School Choice	16
Choice in Minnesota Courts	18
School Choice and Competition	19
Choice and Segregation	21
Sorting and Stratification	23
Choice that Desegregates	25
Controlled School Choice	26
Socioeconomic Status and Educational Attainment	27
Limitations Within the Literature	28
Conclusion	29
CHAPTER THREE	30
Methods	30
Introduction	30
Paradigm	30
Setting	31
Method	34
Conclusion	36
CHAPTER FOUR	37
Results	37
Graphs and Data	37
Analysis	41
CHAPTER FIVE	42
Conclusion	42
Major Learnings	42
Limitations	43
Policy Recommendations	45
Further Research	46
Growth of Author	48

Informing the Public	49
Final Conclusion	49
REFERENCES	51
Appendix	61

CHAPTER ONE

Introduction

This paper examines how school choice mechanisms (i.e. open enrollment and charter schools) affect how resources are distributed in Minnesota's school system. The guiding principle behind this research is that students carry with them a basket of resources. These resources include things like funding, parental engagement, individual student characteristics, and socio-economic status of the family. School choice changes the distribution of students and therefore changes the distribution of resources. This paper looks at resources distribution through a lens that values equity and hopes to aid in solving Minnesota's achievement gap. Although there are many resources that affect student outcomes, socio-economic status is of particular importance. Therefore, this paper zeros in on one metric of socio-economic status (free and reduced lunch) in one place (Ramsey County, Minnesota) and asks the question, *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?*

Introduction

I have always been a student of the social sciences. Mesmerized by the stories and thrilled by the action, the human experience has always piqued my interest. As a child I studied maps, challenging myself to memorize every country in the world. While my friends played video games, I rewatched Ken Burns Civil War over and over again. In high school, I could have finished a semester early. Instead, I loaded up on every history elective available. I took every subdiscipline from geography to psychology, and every

era of history from ancient world history to the history of the African American experience. The perspective that resonated most with me was the quantitative study of decision-making, or economics. People often associate the word economics with money; however, at its core, economics is not just about money. Rather, it is fundamentally an attempt to explain human consumption, production, and decision-making. Economics postulates that we live in a world with unlimited wants and limited resources, and then, through a myriad of graphs and models, tries to explain why people make the decisions that they make and why resources are allocated in the way that they are. In its simplest form, economics is about opportunity cost. For example, when a school or district decides to spend three hours a day on reading instruction, that comes at a cost to other subject areas such as art, science, or social studies. When students zone out five minutes into a lesson, a teacher is experiencing a diminishing return on their time. When that lesson reaches the point where students are misbehaving, the return has diminished to the point of negative returns. When researchers and policymakers try to decide what class, school, or district size makes the most sense, they are exploring the concept of economies of scale.

Rationale

It might not be intuitive to think about education as a marketplace, but we are remiss not to use such an enlightening perspective on such a precious institution. Schools are, after all, a place where ideas are exchanged, knowledge is produced, and a significant amount of resources are consumed. This paper hopes to examine how school choice affects the distribution of resources within Minnesota's education system. My hypothesis is that Minnesota's school choice policies are not an equitable distribution mechanism

and that their adoption has exacerbated Minnesota's achievement gap. A 2019 report by the Federal Reserve Bank of Minneapolis entitled “A StateWide Crisis: Minnesota’s Achievement Gaps,” found that while Minnesota’s public schools perform well overall, Minnesota's schools produced some of the widest achievement gaps in the nation in terms of race and socioeconomic status. In 2018, 57% of all of Minnesota’s students were proficient in math on the Minnesota Comprehensive Assessment (MCA) test. Of these students, a full 65% of white students were proficient while only 29% of black students were proficient and 36% of free and reduced lunch-eligible students met proficiency. The report highlights similar gaps across a variety of other metrics as well (Grunewald & Nath, 2019).

Although pointing to school choice as a causal factor in the achievement gap may seem like an attack on school choice, that is not my intent. Much like an English teacher's criticisms of a student's first draft are intended to aid in the composition of a stronger paper, I seek to shed light on the effects of school choice so that it can be revised into a stronger educational model. Specifically, a model that more effectively combats the achievement gap.

When my wife and I first brought our family to Minneapolis, we moved into a small apartment in the Bryn Mawr neighborhood, a gentrified pocket just west of downtown. As is often the case in apartments, remnants are left from one occupant to the next. Amongst those remnants, I discovered a book by Frank Donovan and Cushing Wright entitled, *First Through a Century 1853 - 1953 A History of the First National Bank of Saint Paul*. The First National Bank of St. Paul is known today as U.S. Bancorp and according to the federal reserve, it is now the fifth largest bank in the country.

Although I already had a degree in economics I had not taken any courses specifically on the topic of money and banking. Until reading this book, I had not realized how unstable America's banking system was prior to contemporary regulatory frameworks. Bank panic after bank panic eventually led to the creation of the Federal Reserve and when that was not enough, the Federal Deposit Insurance Corporation or FDIC was created. Although bank failures and panics still happen, our financial system has come a long way. In March 2023, Silicon Valley Bank ran out of liquid assets and was placed into receivership by federal regulators. Ordinarily, the FDIC would only insure deposits up to \$250,000; however, in an attempt to prevent further bank runs and systemic risks to our economy, the FDIC insured every deposit at Silicon Valley Bank regardless of size. While prognosticators and economists may fret about moral hazard, I would argue that the government is making a values-driven choice. Specifically, valuing the benefits of stability above the benefits of the free market. Having institutions and regulations that stabilize our financial system limits some of the power of the free market, yet it also affords the United States relative financial and economic stability.

When it comes to education, leadership appears to value equity. The Hamline School of Education Conceptual Framework goes as far as to explicitly state that “schools should exist to promote social equity.” Although my knowledge is by no means exhaustive, my education and understanding of the human experience tells me that free markets have a tendency to create inequity and as such, achievement gaps are the expected result of school choice. This does not mean that equity cannot be achieved in a free market system. It means that a market system would need mechanisms that guide it

toward equitable outcomes in much the same way that our financial system needs regulatory guide rails to achieve stability.

The idea of school choice comes from one of the most influential economists of the 20th century, Milton Friedman. In his article "The Role of Government in Education," Friedman proposes a voucher system for school choice to foster competition and provide more options to students. In his words, "Government would serve its proper function of improving the operation of the invisible hand without substituting the dead hand of bureaucracy" (Friedman, 1955, p.14). Broadly, Milton Friedman's ideas on everything from education to monetary policy revolve around reducing barriers to entry to create a more efficient market. Milton Friedman's ideas are classically libertarian and are generally categorized as market liberalizations. For the purposes of this paper, market liberalizations are defined as policies that eliminate or reduce barriers to the market.

The libertarian ideal is one of equality and not one of equity. Equality and equity are two very different ideals. Equality is about everyone having an equal opportunity. Equity is about everyone getting what they need. As different as equity and equality are, they share the value of fairness. Thomas Jefferson, one of the original libertarian thinkers and author of the Declaration of Independence, in an attempt to achieve a more equal world wrote that, "all men are created equal" (Jefferson, 1776). As enlightening as this statement may have been against the backdrop of 18th century monarchies, it has become, in the parlance of our youth, cringe worthy. Perhaps if Jefferson had written that all people are created equal and truly meant it, America would be a more equal place today. America's history is unjust, unfair, and unequal. Equity seeks fairness by

attempting to compensate for inequalities. If we want a more fair and equal world we need to employ the tools of equity.

It has been nearly 70 years since *Brown v Board of Education* and yet America's schools are still highly segregated by race and socioeconomic status. Emma Garcia, in an article for the *Economic Policy Review* entitled, "Schools are Still Segregated and Black Children are Paying the Price," analyzed data from the Center for Education Statistics and found that while 31.3% of white students attend high poverty schools, a full 72.4% of black students attend high poverty schools (Garcia, 2020).

School choice eliminates some of the barriers that were once imposed by a strictly neighborhood model of student distribution and thus provides us with a system in which we can employ innovative and creative solutions to achieve a more equitable world. The 1971 Supreme Court decision *Swann v. Charlotte-Mecklenburg Board of Education* led to race-integration busing. The ruling was an attempt to address de facto segregation that was still persistent in America's education system nearly two decades after *Brown v. Board*. Race-integration busing within a neighborhood school system is a command and control, or socialist mechanism. Ultimately, this unpopular and unsuccessful system was phased out.

In my view, choice opens up a world of more creative and sophisticated ideas from which we could achieve more integration and equity in our schools. Pulitzer Prize winning authors Durant and Durant (1968), in their landmark synthesis of human history, *The Lessons of History*, begin their chapter on Socialism and History with the line, "The struggle of socialism against capitalism is part of the historic rhythm in the concentration and dispersion of wealth," and after many examples of the intermingling of the two

economic systems”, end with, “The fear of capitalism has compelled socialism to widen freedom, and the fear of socialism has compelled capitalism to increase equality. East is West and West is East, and soon the twain will meet” (pp. 58, 67). Philosophies need their counterparts in order to compensate for their weaknesses and thrive.

As a state, country, and world, we have made a great foray into the free market. In 1978, the United States Congress passed the Airline Deregulation Act. Prior to the passage of this law, the federal government set prices for airplane travel. The cover of the August 14th issue of Time magazine read “New Era in the Air: Cheap Fares, Crowded Flights,” with the image of a sardine can full of people with wings as its cover art (Time, 1978). This satirical prediction rings true to anyone who has ridden on Spirit Airlines. In 1980, the Depository Institutions Deregulation and Monetary Control Act was passed, eliminating price controls on yet another industry (Federal Reserve Bank of Chicago, 1980).

Reducing regulation and eliminating price controls were just the beginning of market liberalizations. In 1992, twelve European nations signed the Maastricht Treaty creating what is today known as the European Union, which among other things, creates a free trade zone and common currency for its members (Alesina et al., 2005). In 1994, Mexico, Canada, and the United States signed a trilateral trade bloc known as the North American Free Trade Agreement (Mankiw, 2015). Within education, the first American charter school was created in 1992 in St. Paul, Minnesota.

While I have lived the majority of my life with these neo-liberal economic policies in place, it is important to remember the historical context within which school choice lives. Chiefly, that only a generation ago, the US Federal Government set prices

for airline tickets and bank rates, global trade was but a speck of what it is today and most students had little choice but to attend a neighborhood school. We have, and are, traversing a massive shift in market policy. From NAFTA to school choice, the paradigm from which resources are distributed has shifted.

Consumers are generally one of the primary beneficiaries of market liberalizations. The benefits can be seen in price, as well as in a wealth of options. The benefit to the consumer of education in Minnesota can most notably be seen in the wealth of options that families have to educate their children within the public school system. Prior to school choice, one would not have been able to send their children to a public school whose curriculum is taught almost entirely in Spanish, let alone French or Mandarin. And language immersion schools are not the only new option to Minnesota's students; STEM and Arts based specializations have also erupted onto Minnesota's educational scene (Saint Paul Public Schools, n.d.). Options have also been expanded for disenfranchised students, as high school charters often function as credit recovery or alternative schools. Reaching these students is important and this benefit should not be overlooked.

And yet, while choice gives consumers a chance to have agency in determining the best product, people do not always choose a school based solely on the best academic outcomes for their children. Location and availability of transportation continue to be barriers in the marketplace (Koedel et al., 2009). In addition, the phenomenon of self segregation appears to be a factor in why many families choose the schools they choose (Karsten et al., 2003). Humans, by our nature, are social animals that tend to group into

tribes or nations. Yuval Noah Harari (2015), in his distillation of the human experience, *Sapiens: A Brief History of Human Kind*, stated,

Evolution has made homosapians, like other social mammals, a xenophobic creature. Sapiens instinctively divide humanity into two parts, ‘we’ and ‘they’. We are people like you and me, who share our language, religion and customs. We are all responsible for each other but not responsible for them. We were always distinct from them, and owe them nothing. We don’t want to see any of them in our territory, and we don’t care an iota what happens in their territory. (pp. 195-196)

Segregation is problematic in and of itself, but it becomes even more problematic when amplified by the economic disparities between the dominant white culture and most other minority groups. The correlation between race and socioeconomic status means that racial sorting within the education system has the potential to change the way many other resources are distributed within this system as well.

Personal Experience

I am a straight, white man with educated parents and inherited wealth. My wife and I have used the resources given to us to take full advantage of Minnesota’s choice framework, enrolling our children in a coveted immersion magnet, enhancing their education and future prospects. Although it may be arrogant to think that the presence of my children benefits the rest of the class, it is a question worth asking. Afterall, the presence of this magnet has changed the make-up of every other school in the district. Students with their bags of resources, from per-pupil funding to parent engagement, shift from one school to another. Not only that, but staff resources are shifted to immersion

schools. This makes me think that this redistribution is a factor in why Minnesota's achievement gap is one of the widest in the nation. I think it is plausible that Minnesota's early adoption of school choice policies pushed Minnesota to the lead position in inequity as well. I want people to ask the same question I am asking: *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools*

I am not writing this thesis for personal or professional gain or out of pure curiosity. I am writing this thesis for the same reason I have always chosen to work in under-resourced schools and devoted my energy and talents to underserved populations. I am writing this paper because achieving racial equity is the challenge of our time and may in fact be the challenge of all time. I chose this question because I believe we can and should do better and because I want this world to be a better place for myself, my children, and my children's children. I hope that in some way, however small, this paper makes a difference. That it can lead to better policy, better schools and a better world for all inhabitants.

Conclusion

The literature review in Chapter 2 examines the history of school choice in Minnesota, along with legal challenges to Minnesota's current institutional model. The benefits of competition in an educational marketplace are then reviewed, as competition is a primary intellectual rationale for free market systems. How school choice sorts students is looked at next. Finally, the importance of socioeconomic status to educational outcomes is outlined. Chapter 3 explains the model I used to study the distribution of

socioeconomic status in Ramsey County, Minnesota and Chapter 4 looks at the results of the study. Chapter 5 then draws conclusions from the results, makes policy recommendations and explores the growth of the author.

The purpose of this chapter has been to explore my thinking about school choice policy, to place school choice into the philosophical context of libertarian thinking and to offer a historical context about free market policies. My high school world history teacher often said, “Nothing happens in a vacuum.” The way we distribute resources in our education system matters. The way students are distributed directly affects resource distributions in our education system. Minnesota’s school choice policies affect how our students, and therefore educational resources, are distributed. This distribution model needs to be examined for its effect on equity, especially in light of Minnesota's achievement gaps.

CHAPTER TWO

Literature Review

Introduction

The purpose of this paper is to evaluate school choice and explore how it could be used to create a more equitable public school system in Minnesota. While some individual liberties are enabled by school choice, this paper only seeks to look at how school choice could be used to create macro benefits across all groups of students.

Asking How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?

both aids in the understanding of the effects current educational structures create on equity and enables policy makers to mold the system into one that aligns with the aforementioned value of equity in our education system.

This chapter begins by chronicling the intellectual origins, adoption and court proceedings of school choice in Minnesota. Starting with the ideas of Milton Friedman that inspired the school choice movement, this chapter will go on to discuss the passing of four school choice laws as well as the formation of the nation's first charter school. Finally, this chapter will outline two Minnesota court cases involving school choice: *Minneapolis Branch of the NAACP v. State* and *Cruz-Guzman v. State*.

The next part of the literature review evaluates the market forces unleashed by school choice and their effects, including segregation, sorting and competition. The picture of how all of these forces affect educational outcomes will be considered, thereafter. Finally, locales that employ controlled choice are evaluated, as many school

districts within the nation employ choice systems designed to create balance in terms of student ability, racial composition and socioeconomic status.

The overarching goal of this paper is to evaluate Minnesota's school choice policies, consider how choice contributes to inequality in Minnesota schools and invite deliberation about how Minnesota's choice system could be modified to combat inequality in our schools. Minnesota choice policies are largely unintentional in that they do not have mechanisms that seek to create specific outcomes. This suggests that without direction, the forces of the free market simply create the outcomes society is looking for. Yet, Minnesota has one of the largest achievement gaps in the country. As such, it would behoove the state to critically examine the effect of choice and adopt policies that deliberately work to reduce this gap. The critical questions Minnesota should consider are, does the current approach work? and if not, what can be changed or improved upon to create equitable outcomes?

Origins of School Choice

Choice frameworks in education were originally proposed by economist Milton Friedman in his 1955 essay, "The Role of Government in Education." Friedman was an advocate for market-based solutions to solve society's problems, often advocating for the removal of barriers that inhibit market forces. Friedman proposed ideas like eliminating licensure requirements for medical professionals, establishing an all-volunteer army (rather than the draft-based system that was implemented during times of war) and school choice (as cited in Landsburg, 2019). The National Commission on Excellence in Education's 1983 landmark report, "A Nation at Risk," brought a sense of urgency to education reform. Friedman, whose ideas had lain dormant for years, became an advisor

to the Reagan White House and there was a new push for market liberalizations (Ebenstein, 2009).

Minnesota led the way in the movement for school choice (*School choice*, 2021). Minnesota passed the first open enrollment program in 1987 and opened the first charter school in 1991 (Wong & Langevin, 2007). The expansion of charter schools continued in the years that followed. Minnesota now has 168 charter schools (*Charter schools*, 2021). Since “A Nation at Risk” was published, Minnesota passed four laws aimed at increasing school choice (Nathan & Boyd, 2003). Nathan and Boyd summarized the four open enrollment laws in their 2003 article, *Lessons About School Choice from Minnesota: Promise and Challenges*. According to this article, the first law, *Postsecondary Options*, was passed in 1985 and offers state funds to high school juniors and seniors to attend college or university. Per Nathan and Boyd (2003), *Second Chance Options* was passed in 1987 and gives students ages 12-21 who have not succeeded in traditional school settings the option to attend alternative schools. In 1988, *Open Enrollment* was passed, permitting students in grades K-12 to attend schools outside of their home district (Nathan & Boyd, 2003). The most recent legislation aimed at increasing school choice, *Charter Schools*, was passed in 1991. According to Nathan and Boyd (2003), this gives educators the opportunity to create new schools outside the control of traditional school districts. From this legislation came the creation of the nation’s first charter school, A Movement Grows City Academy, located in St. Paul, Minnesota.

As an early adopter of school choice, Minnesota, and, more specifically, Ramsey County, hold a vanguard position in the history of the American school choice movement. Not only does St. Paul, Minnesota have symbolic importance, it has had a

relatively long time for school choice policies to affect distributions of students making it a useful place of study.

Choice in Minnesota Courts

Two important court cases have been brought against the state of Minnesota related to Minnesota's current school institutional framework, including school choice provisions. The Minneapolis Branch of the NAACP v. State of Minnesota and Cruz-Guzman v. State of Minnesota both alleged that the state of Minnesota violated the state's constitution, specifically Article XIII, which outlines that the legislature, "...must establish a general and uniform system of public schools" (Minn. Const. art. XIII, sec 1). Both cases cited open enrollment and charter schools as factors in the segregation of public schools in Minnesota (Richie, 2020).

In 1995, the Minneapolis Branch of the NAACP v. State was brought before the courts. In 2000, the lawsuit resulted in a settlement that created the "The Choice is Yours" program. This program provided preference and busing to students from Minneapolis Public Schools who receive free and reduced lunch to attend schools in the surrounding suburbs. In the first year of the program, 546 students utilized "The Choice is Yours" to attend suburban schools, and 533 students utilized the program in the second year (Palmer, 2003). Although the case led to the creation of a program intended to increase access to quality education opportunities, "The Choice is Yours" served a relatively small number of students, as according to the National Center for Education Statistics, Minneapolis Public Schools enrolled 46,037 students in the 2002 -2003 school year (Sable & Hoffman, 2005). As such, "The Choice is Yours" was eventually phased out.

Cruz-Guzman v. State of Minnesota was filed in 2015. This class action lawsuit was filed against the state of Minnesota alleging that segregation in Minneapolis and Saint Paul public schools violates the previously mentioned Article XIII of the Minnesota constitution. On September 26, 2022, the Minnesota Court of Appeals found that segregation in Minnesota's schools is caused by *de facto* segregation not *de jure* segregation, essentially ruling that because the state had not intentionally created an unbalanced system, the legislature was not in violation of its constitutional duties.

The plaintiffs demonstrate that Minneapolis and Saint Paul Public Schools have significant levels of racial and socioeconomic segregation. In addition, this segregation has led to lower levels of academic achievement (Richie, 2020). The plaintiffs allege that St. Paul and Minneapolis schools misused funds appropriated for the purpose of desegregation and instead created segregation through school boundaries. Most relevant to this research, the plaintiffs allege that open enrollment policies and charter schools have led to segregation (Richie, 2020).

School Choice and Competition

Advocates of school choice point to competition as a rationale for utilizing market forces in education. Competition is an important pillar in the intellectual justification for school choice. The Brookings Institute has even created a choice and competition index to promote awareness of the competitive effects of school choice. Minnesota's only district in the index is Minneapolis Public Schools and it is ranked 19, with an overall grade of a C+ (Whitehurst & Klein, 2015).

Competition as a market force has the potential to change the dynamic of the zero-sum nature of simply moving students and resources around. Hoxby (2003)

examined the effects of Milwaukee's voucher system, as well as the charter school systems in Arizona and Michigan, against the performance of traditional public schools. She found that the presence of competition had a positive effect on student achievement. The adoption of charter schools and the resulting competition they create with traditional public schools also correlated with strong academic gains in North Carolina (Holmes et al., 2003). However, Bifulco and Ladd (2004) examined the competitive effects of charter schools in North Carolina and found that, "... charter schools appear to have no statistically significant effects on the achievement of the traditional public school students in North Carolina" (p. 30).

A review of the meta analysis on the effects of competition brought on by school choice found only a small benefit (Jabbar et al., 2022; Zimmer et al., 2009). Competition does not seem to have a drastic effect on educational outcomes, but on-net, does appear to have some positive effect on student outcomes.

The design of school choice policies may be part of the reason for different findings amongst researchers. An evaluation of Boston's Top Trading Cycle (TTC) mechanism for awarding students seats in a given school, shows that some schools are disincentivized to market themselves in a positive light as it may attract underperforming students (Hatfield et al., 2011). How a market's design creates incentives is an important consideration when creating an educational marketplace. The seventh edition of *Principles of Macroeconomics* stated, "When policymakers fail to consider how their policies affect incentives, they often end up with unintended consequences" (Mankiw, 2015, p. 7).

Competition is a primary rationale for a free market (Mankiw, 2015). It is important to examine this force in the educational marketplace in order to determine if competition is creating better educational outcomes and, if so, how the force of competition can be harnessed to create a more equitable educational system.

Choice and Segregation

One of the first charter school proposals authored by the Citizens League entitled, “Charter Schools = Choices for Educators + Quality for all Students,” promoted charter schools as a vehicle for desegregation (Rollwagen & McLellan, 1988). Prior to school choice, relocating to a different school required moving to a new neighborhood, which is a relatively high barrier and one that only well resourced families were able to overcome (Johnson, 2008; Richards & Stroub, 2020). It makes sense then, that allowing families to choose their school would have the potential to redistribute students into a more racially integrated school system. Rollwagen and McLellan (1988) suggested that school choice did change the racial distribution of school systems; however, rather than having an integrative effect, school choice led to an increase in racial segregation. Bifulco and Ladd (2007) found that charter schools in North Carolina increase racial segregation and widen the achievement gap.

There is a growing body of research resulting in consensus that choice systems lead to increased racial segregation (Oh & Sohn, 2021; Rotberg, 2014; Saporito, 2003; Söderström & Uusitalo, 2010; Stein, 2015). Coughlan (2018) pointed out that while cities are becoming more racially integrated, schools are becoming more racially segregated. Frankenberg, in her 2011 article, “Charter Schools: A Civil Rights Mirage?”, asserted:

[There is] substantial over-representation of black students in charter schools.

Simply put, the percentage of black students in charter schools is twice as high as in regular public schools. Nearly one in three students in charter schools is black.

(p. 102)

The phenomenon of choice leading to increased segregation is not limited to American schools. Research has found that choice leads to segregation in the Netherlands, Chile, and Sweden as well (Elacqua, 2012; Yang, & Gustafsson, 2016; Karsten et al., 2003).

In Minnesota, the link between choice schools and racial segregation is overwhelming and alarming (Institute on Metropolitan Opportunity, 2017). While Minnesota was a leader in the school choice movement across the US, it is now a national leader in the achievement gap (Federal Reserve Bank of Minneapolis, 2019). In 2017, the Institute on Metropolitan Opportunity at the University of Minnesota Law School put out a report examining the impact of Minnesota's charter-rich education system and its impact on racial integration/segregation. According to this report:

Many [charter] schools are true single-race schools. Some explicitly target and recruit students from particular racial or "cultural" groups. These schools are built around the idea of making segregated education work....In short, charter schools are at the vanguard of Minnesota educational segregation. (p. 3)

Not only have Minnesota's charter schools been a segregating force, Minnesota's open enrollment plan has led to a significant amount of segregation as well (Institute on Metropolitan Opportunity, 2013). A 2013 report on open enrollment by the Institute on Metropolitan Opportunity at the University of Minnesota Law School stated:

While there were many racially integrative flows of students between districts, overall [open enrollment] increased segregation in the region, with the segregative trend growing stronger over time. In 2009-2010, 36 percent of [open enrollment] moves were segregative, 24 percent were integrative, and the rest race-neutral. The percentage of segregative moves grew significantly during the decade from 23 percent to 36 percent, a change due almost entirely to a large increase among white open enrollees. (p. 1)

While much of the research to date has focused on racial segregation in choice systems, choice systems do not just sort on racial lines. Even though charter schools tend to recruit minority and disenfranchised populations (Institute on Metropolitan Opportunity, 2017) there is evidence of economic sorting in this process, as charter school families tend to be better resourced than their racial demographic as a whole (Carnoy et al., 2005).

The research indicates that school choice has a segregating effect. This is significant for the racial composition of schools and classrooms. Additionally, it provides insight into the forces at work within the educational marketplace. Race being a factor in how families choose, and where students ultimately attend school, therefore makes race a factor in how resources are distributed.

Sorting and Stratification

A market-based system has the potential to redistribute students and the resources that follow them along many lines. In recent years, additional research has emerged around sorting and stratification specific to socio-economic status, ability status, and parental level of education. In Colorado's charter school system, students with disabilities

are underrepresented in charter schools (Howe & Welner, 2002). In addition, a 2000 report by the Department of Education found that charter schools across the nation enrolled 3 percent fewer students with IEPs. The report found significant variation by state, with Florida's charter schools enrolling 10 percent *more* students with IEPs while New Jersey had 10 percent *fewer* (U.S Department of Education, 2000). Urquiola's (2005) research on the sorting effects of inter-district transfers found sorting based on parental education levels. While his findings were not as substantive when compared to what the research has found on racial sorting, his findings were statistically significant. Several studies find that economically advantaged students were more likely to open enroll than their less advantaged peers (Holme & Richards, 2009; Lavery & Carlson, 2015). In terms of ability-sorting, Leonard's analysis of high school choice in Ontario, Canada found that although higher ability students were more likely to choose different schools, the overall effect on ability-sorting was insignificant (Leonard, 2015). Both Leonard's (2015) and Urquiola's (2005) findings follow a trend in the research on sorting outside the realm of racial segregation in that while sorting appears and is often statistically significant, it is often at low levels (Carlson, 2014).

When examining school choice as a mechanism for distributing resources it is important to understand, or at least recognize, all of the forces acting within a marketplace. Ability, socioeconomic status, and parental education level are all factors that are considered in relation to student achievement. In a market-based system they are also factors in how resources are distributed.

Choice that Desegregates

If we know and understand barriers in a marketplace and how they affect the distribution of students, we can better implement policies that lead to desired outcomes. Given that many of these barriers are relatively low, in many cases, the mechanisms to create a more equitable choice framework would not necessarily be costly or disruptive. Sattin-Bajaj (2017) showed that the information guidance counselors provided to students about high school choice had a profound effect on where students ultimately chose to go.

In San Diego, the greatest impact on desegregation efforts has come from a program that lowers transportation barriers (Koedel et al., 2009). A comprehensive National Education Association study noted that of the many attempts at racial integration in education, choice systems with mechanisms that promote racial diversity had the most potential. Linn and Welner (2007) wrote:

School choice generally, and magnet schools in particular, also have some potential to reduce racial isolation. However, school choice has the potential to increase segregation as well. The key for realizing the potential of these policies to achieve racial diversity to any significant degree is the inclusion of enrollment constraints, such as race-conscious policies, as part of the school choice policy. (p.

42)

It would appear that when there is a deliberate effort to lower barriers for minority students, desegregation can occur within a choice system. Additionally, without mechanisms that promote diversity in place, desegregation does not happen.

Controlled School Choice

Many school districts from across the country use some form of controlled choice in order to accommodate parental preferences, as well as achieve racially and socioeconomically balanced schools. New York City's Educational Option schools use academic metrics for distributing students. In this system, students are selected based on a 16-16-68 formula, wherein 16 percent of a given class will have tested as high scoring students, 16 percent will have tested as low scoring students, and the remaining 68 percent will have tested in the average range on an English proficiency exam (Abdulkadiroğlu et al., 2005).

In Wake County, North Carolina, the school choice system integrates its schools based on socioeconomic status. The Wake County School District has set a threshold that no more than 40% of students at a given school will be low income. After implementing this system, Wake County experienced significant academic gains among all student demographics, although it should be noted that the entire state of North Carolina saw similar gains (Ciolli, 2011). Williams and Houck (2013) compared Wake County schools to neighboring district Charlotte-Mecklenburg. Charlotte-Mecklenburg schools employed a system using neighborhood and magnet schools without the controls that Wake County used. Wake County had significantly more integrated schools throughout the course of the study. Wake County also outperformed Charlotte-Mecklenburg on a variety of academic outcomes (Williams & Houck, 2013),

Construction of a marketplace matters. The research has demonstrated that race, socio-economic status, parental engagement and ability affect how resources are distributed. The way these forces act does not always promote equitable outcomes.

Building mechanisms within a choice model that promote equitable outcomes has the potential to create a choice framework that more aligns with the value of equity. Moe (2008) asserted, “With the right structures, the problems sometimes associated with choice can be minimized or reversed. And the power of markets, which is not always and everywhere a good thing, can be harnessed for the promotion of important social values” (p. 558).

Socioeconomic Status and Educational Attainment

The Civil Rights Act of 1964 mandated that the National Center for Education Statistics conduct a report on the status of minority achievement in America's public schools. This resulted in James Coleman's landmark study entitled, *Equality of Educational Opportunity*, also known as the Coleman Report. Coleman's work found a strong correlation between socioeconomic status and educational outcomes. In addition, the study found that the racial and socioeconomic makeup of both the classroom and the school as a whole has a strong effect on education outcomes. Coleman found that this effect is even more pronounced for minority students (Coleman, 1966). Two more quintessential meta analyses were conducted in the decades following the Coleman report: White's 1982 study, *The Relationship Between Socioeconomic Status and Academic Achievement* and Sirin's meta analysis, *Socioeconomic Status and Academic Achievement, a Meta Analytic Review of the Research*. While both studies found high correlations between socioeconomic status and academic achievement they also found that the correlation had shrunk over time (Sirin, 2005; White, 1982).

Reardon's (2013) study on the widening income achievement gap found that on a national level, the income achievement gap has grown significantly wider while the racial

achievement gap has shrunk. Sirin's 2005 meta review of the research on socioeconomic status (SES) found that while SES was still predictive of educational outcome, the correlation between SES and educational achievement shrank in the 1990's relative to previous decades.

Not only does the SES of a student affect their own educational outcomes, multiple studies have found that the socioeconomic makeup of a classroom affects the educational outcomes of all the students in the classroom (Caldas & Bankston, 1997; Perry & McConney, 2010; Van Ewijk & Slegers, 2010). Furthermore, Langenkamp and Carbonaro (2018) found that even after students have transitioned to a setting with higher socioeconomic status peers, students experience what they "legacy effects," meaning that the lower academic achievement stays with students over time.

Socioeconomic status matters to student achievement. It therefore matters how SES is distributed in a given geography. If Minnesota is to have a more equitable school system it might be beneficial to examine and control the way SES is distributed within its educational institutions.

Limitations Within the Literature

School choice is a heavily researched topic. It is, after all, relatively new and subsequently provides many topics to research. Although my own review of the literature is not exhaustive, I found very little peer-reviewed literature on school choice in Minnesota. It is hard to say how significant this is to the overall academic pursuit of knowledge, but it is significant to my research question. It is even more significant to Minnesota's policy makers. Understanding how Minnesota's current educational

framework is distributing resources is a critical step in creating a system that equitably distributes resources.

Conclusion

Choice appears to have some significant effects on segregation and socioeconomic sorting. Although only a handful of studies directly tie school choice to the achievement gap, there is ample evidence in the literature that choice systems that are not deliberate in their attempts to desegregate, exacerbate educational inequalities. If Minnesota, a state with long history of racial justice (Orfield & Luce, 2014) and a leader in choice-based educational reforms, were to once again take the lead in transforming education and implement choice programs that deliberately promoted racial and socio-economic diversity, it would first be important to understand the role that school choice plays in how resources are distributed in Minnesota's education system.

CHAPTER THREE

Methods

Introduction

In the previous chapter I explored the history of school choice, the effects of competition in the educational marketplace, the sorting and segregation linked to school choice and the importance of socioeconomic status to educational outcomes. This chapter explains the model I used to help answer the question: *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?* I am exploring this distribution in order to observe how the schools that were created in response to Minnesota's school choice policies (charter and magnet schools) affect how Minnesota's educational resources are distributed. Although there are many educational resources in which the distribution is potentially altered by school choice policies, this study will limit its focus to the socio-economic status (SES) of student families. SES is an important determinant in education outcomes, and free and reduced lunch (FRL) is a ubiquitous metric for SES. Additionally, the National Center for Education Statistics uniformly collects information on FRL status for every public school student, making the distribution of FRL status a good place to start modeling resource distribution in public schools. The 2019/2020 school year was chosen for my research as it was the most current and only year available in the National Center for Education Statistics Open Edge database at the time data was exported.

Paradigm

I am approaching this question from a critical paradigm as my research seeks to encourage social change. My hope is that this research leads to policies that create a more equitable school system and better educational outcome for all students. Not everything about the human experience is discoverable. Some pieces of the puzzle will need to be filled in with assumptions, or left to ambiguity. However, through inquiry we can see enough of the puzzle to determine relationships between the structure of social institutions and social phenomena, and by examining these relationships we can create a more equitable world. All methods of inquiry are important to creating a more complete view of a social phenomena and to producing better policy. This study aims to determine how a specific resource (SES of families) is being distributed in public schools within Ramsey County, Minnesota.

I am using quantitative tools to aid in the understanding of resource distributions. If I were trying to determine why families make the choices they do, using qualitative case studies and interviews might be a better way of determining the motives of families. Why families decide to leave a given school or choose to attend a certain school is a crucial consideration for establishing policy that might create more equality within Minnesota's public schools. However, it is logical to first determine how resources are distributed within a given institutional framework (i.e. school choice) before attempting to determine why school choice might produce a given outcome. Thus, my goal is to determine what is happening with resources in Ramsey County under its current school choice model. It is my belief that the simplicity of quantitative analysis is the lens that provides the most clarity in exploring this question.

Setting

I have selected Ramsey County Public Schools for the location of my research. Ramsey County is the location of the nation's first public charter school, making it not only a symbolic choice, but a practical one in that it has experienced the effects of school choice the longest. In addition, Ramsey County is primarily urban and suburban, as opposed to its neighboring Hennepin County, which is geographically larger and has comparatively more variation with regard to urban, exurban, and rural parts. This is an important consideration as wealthy, exurban communities in Hennepin County like Medina and St. Bonifacius may skew data and misrepresent what is happening in the urban center of Minneapolis and its surrounding suburbs like Robbinsdale and Brooklyn Park.

A total of 201 schools in Ramsey County are analyzed for the 2019/2020 school year; 63 charter, 28 magnet, and 110 neighborhood schools. Although the Covid-19 pandemic impacted much of the 2019/2020 school year, Covid-19 would not have impacted school enrollment at the beginning of the school year as the first cases were not known until well into the school year.

The three categories of schools in this study—neighborhood, charter, and magnet—are all public schools and receive their funding from public sources (i.e local, state and federal tax dollars). Although they are all public schools and do not charge tuition, they all have unique characteristics in the way they operate and enroll students.

Neighborhood schools are operated by a school district and serve a set geographic area or neighborhood that is defined by a school district. The boundaries for a

given neighborhood school can normally be found on a district's website. St. Paul Public Schools posts their boundaries at https://www.spps.org/map_of_school_locations.

Magnet schools are specialized schools that operate as part of a school district. Geographically, they differ from neighborhood schools in that they pull students from an entire district rather than one neighborhood. Generally, charter schools have an area of specialization. For example, Washington Technology Magnet, part of the Saint Paul Public School District, states on their website:

Our magnet focus is BioSMART; an acronym for Biological Science, Math, Academic Rigor, and Technology. BioSMART at Washington is two pathways offering signature courses in biomedical and engineering. As a technology magnet school, we prepare students for the high-tech, high-demand careers of the future.

(St. Paul Public Schools, 2023)

This is just one example of a charter schools specialization. Saint Paul Public School district's website lists Arts, Language and Montessori-themed charter schools as well (St. Paul Public Schools, 2023). Charter schools are tuition-free public schools that operate independent of a school district. The Minnesota Department of Education's website describes them as: "...independent public schools of choice for parents and students" (Charter Schools, 2023).

Oversight for charter schools in Minnesota is provided by an authorizer.

According to the Minnesota Department of Education:

Authorizers can be school boards or intermediate school district school boards, other education districts, charitable organizations, institutions of higher education, nonprofit corporations... An authorizer: Provides oversight of charter schools in

the areas of academic, operational, and financial performance; Evaluates the academic, operational, and financial performance of charter schools in its portfolio; Determines the terms for charter school contract renewals; and, Reviews proposed changes to charter schools in its portfolio, such as site and grade expansions (including early learning programs), site changes (if applicable), and more (Charter Schools, 2023).

Because charter schools are not part of a school district they have more autonomy and flexibility. Additionally, they provide more choices to students and families.

Method

This study will use multiple statistical representations including mean, standard deviation, class or range bins and histograms. These representations will be used to analyze how school-choice mechanisms affect the distribution of SES among student populations within the public schools of Ramsey County, Minnesota.

Free and reduced lunch (FRL) is the metric with which socio-economic status will be analyzed. Students qualify for FRL by living in a household with an income less than 185% of the national poverty level (Sinclair & Chen, 2020). According to the Minnesota Department of Public Health, “A family of two adults and two children was below the poverty threshold if their annual household income was less than \$25,926, according to the U.S. Census Bureau's 2019 threshold (Minnesota Department of Health, 2023). For reference, 185% of \$25,926 is \$47,963. The data is taken from the National Center of Educational Statistics (NCES), using their EDGE Open Data Tool Public School Characteristics 2019/2020 (EDGE Home Page, n.d). The EDGE Open Data Tool was selected as the survey contains information on FRL in addition to denoting if a

school is a charter, neighborhood or magnet. Classifying schools in this way allows for queries that search and pull according to school type.

EDGE Open Data allows for searching and filtering data. The following filter queries are used to produce the table seen in Appendix 1A: Minnesota State, Ramsey County, and School Size of a minimum of 10 students with no maximum. Two-hundred and one schools within Ramsey County are analyzed in the study. Total students (TS) and total free and reduced lunch (TFLR) data points are isolated and analyzed in Appendix 2-A. The formula TFLR/TS is used to find the percentage of students who qualify for FRL in each school. From there, a pivot table is used to place schools in 10-percentage point range bins (e.g. 0-10% TFLR, 10%-20% TFLR etc.). Grouping the data into range bins (RB's) is done in order to condense the data for better analysis of frequency distribution (Weiss, 2002, p. 46). The RB's are represented graphically in a histogram to illuminate distribution differences between school classifications. RB's will show the number of schools that fall into each range within each school category. From there, the percentage of schools that fall within a given range relative to the total number of schools within each school category will be found using the formula, RB/TS. The top and bottom 30% of each school class is then found for comparison. These comparisons will illustrate how different school types affect the distribution of SES.

The standard deviation of each data set is also computed using the formula

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{N - 1}}$$

. SD is the standard deviation. N represents the number of samples; in this case, the number of schools in each school type. X represents

the FLR percentage of each school. \bar{X} represents the mean FRL in each data set.

Standard deviation measures variation in the distribution of a data set as it measures how far on average each data point is from the mean (Weiss, 2002, p. 101). Therefore, small standard deviations represent more condensed data sets and larger standard deviations signify a more spread out data set. Using a combination of standard deviation and mean, one can numerically see if and where data points are concentrated within a range.

A combination of the aforementioned statistics tools should aid in the understanding of how school choice mechanisms affect the distribution of SES.

Conclusion

The methods, descriptions and viewpoints described in this chapter are intended to help answer the question *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County's public schools and what effect does that change in resource distribution have on equity in Minnesota schools*. Through qualitative analysis, the model described will show how student SES is distributed among charter, magnet and neighborhood schools. The analysis aims to aid in the creation of a more just and equitable world.

CHAPTER FOUR

Results

This chapter reviews the findings of the socio-economic distribution model. Which graphs the distribution of free and reduced lunch (FRL) within magnet, charter and neighborhood schools in Ramsey County (MN). A distribution graph of each school type is shown as well as an overview of what each graph shows. This includes significant findings from each data set. The statistical values of mean, median and standard deviation are analyzed within each school type and compared to the other school types. Lastly, possible reasons for the distribution difference between school types is discussed. This information helps answer the question *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?*

Graphs and Data

Data was collected from the National Center of Educational Statistics's EDGE Open Data Tool. A total of 201 schools in Ramsey County were analyzed; 63 charter, 28 magnet, and 110 neighborhood schools. The following graphs (see Figures 1-3) show the number of schools represented in each FRL concentration range. Columns capture the number of schools that have a percentage of the student population receiving FRL that falls within the given range. For example, the first column on the charter school graph shows that there are 2 charter schools in Ramsey County with 0 -10% of their students receiving FRL. The second column from the right shows that there are 14 charter schools with 80% - 90% of their students receiving FRL.

Figure 1.

Graph 1: FLR distribution in Charter schools, 2019/2020

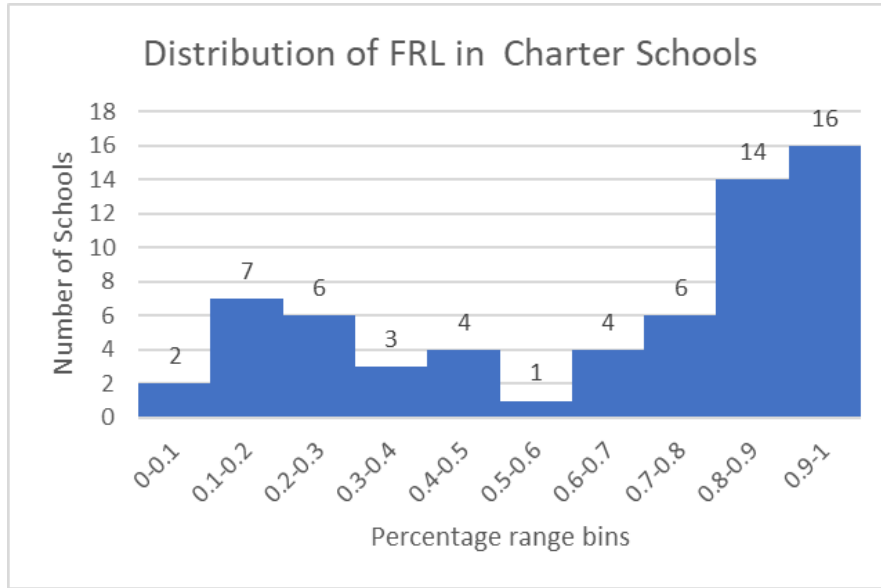


Figure 2.

Graph 2 FLR distribution in Magnet schools, 2019/2020

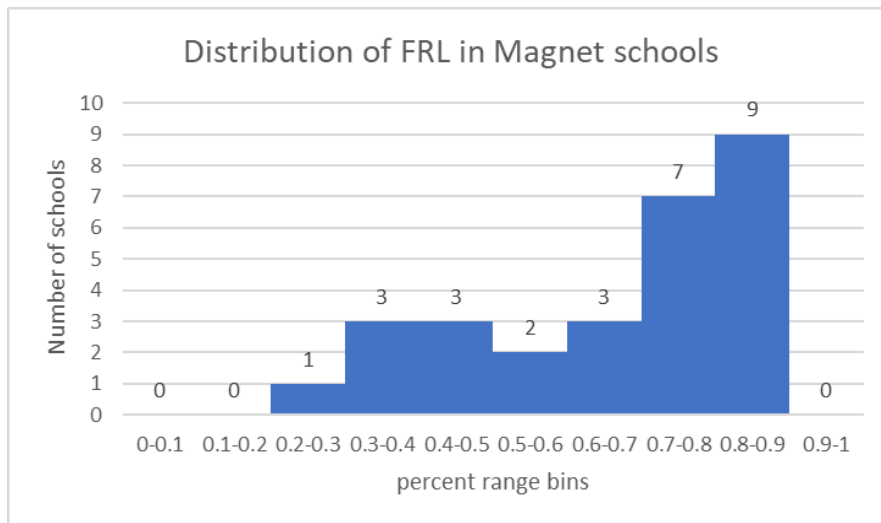
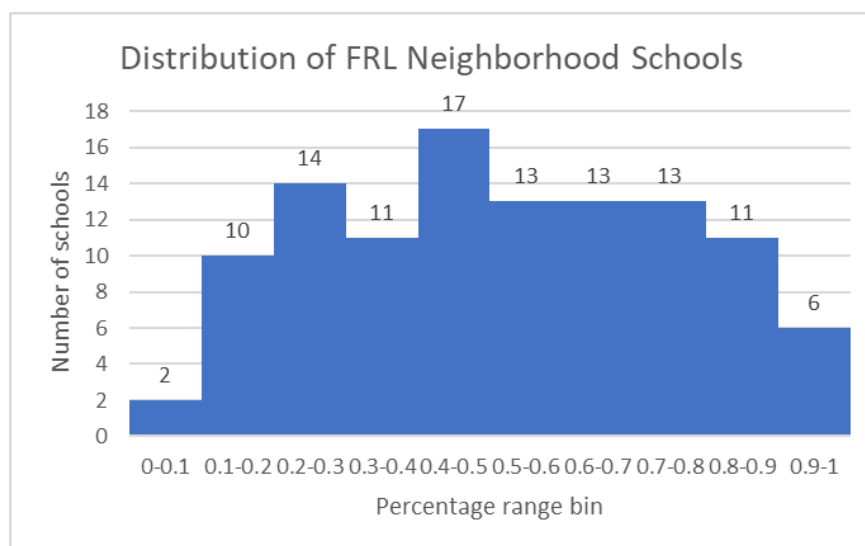


Figure 3.***Graph 3: FLR Distribution in Neighborhood Schools, 2019/2020***

Each school type has a unique distribution. The graphs for charter and magnet schools have a similar shape (both skewed to the right), signifying a greater number of schools with high FRL. The major difference between these two distributions is that magnet schools have a much tighter range, with 0 schools in the 0.0-0.1, 0.1-0.2, or 0.9-1 bins. In addition, charter schools have a small but significant bump in between 0.1 and 0.3. The graph for neighborhood schools is plateau shaped and stands in contrast to both charter and magnet schools, showing a much different distribution. The distribution for neighborhood schools is more even, with a drop off at each end of the range and slight bumps at both the 0.2-0.3 range and 0.4-0.5 range.

The mean for each school type are as follows: charter 63%, magnet 67%, and neighborhood 52%. Medians are: charter 78%, magnet 75%, and neighborhood 51%.

Standard deviations are: charter 0.312, magnet 0.194, and neighborhood 0.243. These numbers are consistent with the graphical representation. They show that charter and magnet schools are skewed toward more FLR, with magnets having a tighter range, as shown by the lower standard deviation. Charter and magnet schools also have medians that are 15 and 8 percent higher, respectively, than their means. This aligns with the spike seen in each of their graphs, whereas the mean and median of neighborhood schools is within 1 percentage point.

Of the 63 charter schools, 36 schools (57%) have 70% or more FRL and 15 schools (24%) have 30% or less FLR. In total, 81% of charter schools in Ramsey County fall in either the top or bottom 30% of the range. Of the 28 magnet schools in the study, 16 schools (57%) have 70% or more FRL and 1 school (4%) has 30% or less FRL. In total, 61% of the magnet schools in Ramsey County fall in either the top or bottom 30% or the range. Of the 110 neighborhood schools, 30 schools (27%) have 70% or higher FLR and 26 schools (24%) have 30% or less FRL. In total, 61% of neighborhood schools fall into either the top or bottom 30%.

The research found a clear difference in the concentration of FRL-eligible students between the 3 school types that were analyzed. The most stark contrast is between neighborhood schools and charter schools, where the two charts are a near inverse of each other. While neighborhood schools have a relatively even distribution that falls off on the tails, charter schools spike on the ends of the chart, with a large number of schools having a high concentration of FRL-eligible students. Although magnet schools are skewed to the right and have a similar shape to charter schools, the tails on magnet schools are all at zero.

Analysis

The data shows high concentrations of low socio-economic status (SES), as measured by FRL, in Ramsey County's charter schools, and to a lesser extent, magnet schools. "Creaming," or "skim creaming," is a phenomenon in which certain groups of students are pulled away or skimmed from neighborhood schools (Altonji et al., 2015). The data suggests that charter and magnet schools are creaming off low SES from neighborhood schools. This finding supports my hypothesis that school choice is not an equitable distribution mechanism. In addition, it aligns with the fundamental economic theory that the market is a mechanism of division (Smith, 1776). Adam Smith argued that division allows for specialization and increases productivity. Smith utilized a pin factory to illustrate division of labor and make the case that specialization contributes to enhanced productivity. However, educating students and Smith's production of pins are fundamentally different; division is valuable when you are making "pins" but is detrimental when you are forming a classroom. Research shows that diverse classrooms benefit all students (Schwarzenhal et al., 2019). Thus, if we are to deploy the free market in education, the forces that lead to division need to be recognized and mitigated.

In the final chapter of this capstone, I analyze the major learnings of the research, discuss the limitations of the study, put forth ideas for policy change and identify areas for further research. Finally, I will reflect on my academic growth through the research and thesis-writing process.

CHAPTER FIVE

Conclusion

The final chapter of my capstone one again summarizes the research findings and addresses the limitations of the study in answering the question, *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?* Policy recommendations are offered, as well as possibilities for further research. Lastly, the author's personal growth will be reflected upon.

Major Learnings

Professionally, I have always served under-resourced populations and worked in public schools with free and reduced lunch (FRL) populations at or near 100%. I have seen school choice policies enable the flight of higher socioeconomic status (SES) families from the schools I have worked at. Personally, my wife and I have utilized school choice to send our children to a coveted magnet school. Comparing the demographic profile of the school we sent our children to with the rest of the schools in the district, it was apparent that this magnet school was skimming higher SES families from the rest of the district. What I have seen, both personally and professionally, aligns with my understanding of what happens in a free market system.

I expected my research data to show that certain schools, most likely magnets, skimmed high SES students away from neighborhood schools, leaving them worse off. Although the 15 charter schools with 30% or fewer FRL populations indicate that this may be happening to some extent, the more salient finding is that in Ramsey County, low

SES students are concentrated in charter and magnet schools. The most surprising finding to me was how bell-like the distribution was for neighborhood schools in Ramsey County as I was expecting to find an uneven distribution across all school types. This finding suggests that either Ramsey County neighborhoods have fairly stratified SES, or, possibly, that the other school types are pulling away low SES students.

There is an ample amount of research resulting in consensus that choice systems lead to increased racial segregation (Rotberg, 2014; Saporito, 2003; Söderström & Uusitalo, 2010; Stein, 2015). While not specifically considering race as a variable, my study builds on the idea that choice systems lead to an inequitable distribution of students. My hypothesis was that economically advantaged students were more likely to participate in the choice marketplace. This phenomenon is supported by several studies (Holme & Richards, 2009; Lavery & Carlson, 2015). It appears that in Ramsey County, however, that *less* economically advantaged students are more likely to participate in the choice marketplace as evidenced by the concentrated distributions of low SES, which can be seen in Figures 1 and 2.

Limitations

FRL is not a perfect proxy for SES. This study uses it because the data is publicly available and collected with relative uniformity. There is only one year of data available through NCES: 2019-2020. This is limiting in that it does not allow for time-series comparison in which “noise” in the data would be smoothed out. In addition, intra- and inter-district open enrollment is not accounted for. Magnet schools could be viewed as a proxy for open enrollment, as students in magnet schools are openly enrolled; however,

this does not account for all open enrollment, or the way in which open enrollment affects the distribution of SES within neighborhood schools.

While the study does shed some light on how choice is affecting the distribution of SES in Ramsey County, Minnesota, the study is limited in its lack of comparison data. Using the model to compare geography, or looking at Ramsey County through time, would have offered a more comprehensive picture of how choice has been affecting the distribution of SES.

As this study aims to affect policy, attempts were made to interview a member of the Minnesota legislature about the findings of my study. Unfortunately, I was unable to get an interview or comment. Several factors impacted this outcome, the primary factor being that Minnesota's legislature was in session while I was reaching out, and staffers and legislators are busy while in session. The one staffer I was able to speak with over the phone cited being in session as a factor in the likelihood of getting a response.

Another factor was that my representatives are not serving on an educational committee. The one staff member I was able to speak with who worked for my house representative put me in contact with a person on the chair of the education finance committee's staff, but despite reaching out to them, I did not receive any follow-up.

I would encourage future researchers who are conducting voluntary interviews with adult participants, as I was, to write their Institutional Review Board (IRB) applications with a wide scope. My advisor and I discussed several options for who to seek comment from. I ultimately decided on a legislator who sat on an educational committee. As I was not working with vulnerable populations and participation was voluntary, it is likely I could have written my IRB to be less restrictive and still gotten

approval. Doing so would have allowed me to seek a response from a greater range of policymakers including members of the executive branch or someone from the Minnesota Association of Charter Schools.

Policy Recommendations

One way to look at a market system is to view it as a blank canvas on which mechanisms can be placed to achieve desired results. A true laissez faire system really only exists in the philosophical realm, which is why mechanisms are typically put in place to shape certain outcomes. The market for education is no different and adopting a market, or choice, system should not be done without structures that push the invisible hand of the market to deliver desired outcomes. This is particularly true if not all consumers are making a decision based solely on school quality and performance.

If consumers are not always choosing schools based on academic quality and outcomes, the potential exists for the educational marketplace to produce a result other than better schools. One of the findings in the literature review was that school choice was linked to increased racial segregation. My study also found significant concentrations of low socio-economic status students in magnet and charter schools. If consumers are choosing to group themselves along racial and economic lines it is a problem for the makeup of classrooms and suggests that regulations are necessary in order to produce a better outcome. Implementing regulations to reduce negative outcomes for consumers is not novel. Regulators often need to step in and protect consumers from themselves. An example of this is regulation around tobacco. Warning labels, advertising restrictions, minimum age requirements, and additional taxes all deter the consumption of tobacco for the public good. Similarly, education may need guardrails that prevent consumers from

creating homogeneous schools and classrooms, which have the potential to exacerbate achievement gaps.

Open enrollment policies in Ramsey County are contributing to an inequitable distribution of SES within public schools. Research shows that the socio-economic profile of a school matters to educational outcomes (Caldas & Bankston, 1997; Perry & McConney, 2010; Van Ewijk & Slegers 2010). This does not mean that choice should be abolished or that charter schools cannot deliver better educational outcomes. It *does* mean that the current framework needs to be evaluated and mechanisms need to be put in place that incentivize more equitable and diverse schools.

As referenced earlier, when Federal Deposit Insurance Corporation (FDIC)-insured banks fail, they are taken over by the federal government and placed into receivership. The bank's assets are then sold off in pieces. The state of Louisiana has a similar program for its schools in which under performing schools are taken over by the state (Welsh, 2019). While federal regulators will prevent bank failures to avert systemic risk, they also try to allow for failure. One of the fundamental ideas of the FDIC is that banks can fail while depositors are protected. In my opinion, failure is one of the most important outcomes of a market system, especially one with a looser regulatory framework. Charter schools offer freedom from the bureaucracy of a school district, but without accountability for specific outcomes, they have the potential to fail students and widen the achievement gap. I think that setting limits for the percentage of FRL-eligible students allowed in a given institution and enforcing it with a receivership-style closure would make charter schools stronger.

State intervention is one policy option. Another option would be for charter schools to change on their own accord. The distribution of FLR students in Ramsey Counties charter schools is a vulnerability to the charter school system. A vulnerability that opens charter schools up to attack and further regulation.

Programs like The Choice is Yours (Palmer, 2003) illustrate a desire for school choice to allow for the exodus of students from the inner city. I think it could be beneficial to view school choice through the paradigm of how we can use school choice to bring students and resources into the city. One policy option is to incentivize students to come into the city. This could be done independent of state intervention. For example, local universities could offer scholarships to students who attend schools that need additional resources. A program like this could be structured in a way that minimizes the financial burden to participating universities by requiring students to exhaust all other financial aid, like Pell grants, before taking advantage of the scholarship.

Further Research

There are many avenues for further research in answering the question *How do Minnesota's school choice mechanisms affect the distribution of student socio-economic status in Ramsey County Minnesota's public schools and what effect does that change in resource distribution have on equity in Minnesota schools?* When looking specifically at Ramsey County, the dimension of time could be illuminating. This is particularly true in Ramsey County where school choice has been present for a relatively long period of time. Although finding old data could be difficult, inputting data from the National Center for Education Statistics as it becomes available would be relatively simple. Doing a running model could show how the Covid-19 pandemic affected charter and magnet

school enrollment. In addition, the effects of any potential policy changes could be documented and analyzed.

Another area of potential study would be geography. Ramsey County was chosen in part because it is relatively uniform in terms of being mostly urban. School choice may have different effects in suburban and rural parts of Minnesota. In addition, other states with different school choice mechanisms could be examined and compared.

Looking at how school choice affects the distribution of other resources, like teacher skill and experience, for example, could also be an interesting area of further research. There is some research currently available on teacher experience distributions; however, examining this resource specific to how the presence of magnet and charter schools affects the distribution of qualified teachers merits further investigation. For example, the presence of a language immersion school has the potential to skim dual language teachers away from neighborhood schools. This may also be occurring with STEM and Arts based schools as well.

Originally, I had planned to research how school choice affected the distribution of parental engagement. My hypothesis was that engaged parents were more likely to participate in education markets, choosing magnets or charter schools. If true, this could be another potential way that school choice skims resources and would thus be another valuable area of future inquiry.

Growth of Author

For me, this paper is the culmination of my academic career. As with all journeys, they begin well before they end. In fourth grade, I was tested and given an LD or learning disabled label. Although not recognized or even understood at the time, I was severely

dyslexic. While I have never seen the results of my personal intellectual testing, all three of my children are diagnosed with dyslexia, and if their scores are any indication of the way my mind works, there is somewhere between a 30 and 40 point difference between my verbal IQ and my literacy scores. Although it has not been an easy journey, I consider myself highly literate and will soon have a masters degree to prove it.

Writing has always been a challenge for me. It took me 7 attempts to pass the writing portion of my teacher licensure exams. As an undergrad, I failed English Comp 101 and nearly dropped out of college all together. At that time, I really did not understand my own dyslexia. Even though I had been labeled in elementary school, I shed that label in middle school and was able to mask my shortcomings in literacy with my other strengths. From time to time, like in English Composition or when faced with a writing exam that does not have spell check, like state licensure exams, a dyslexic like me is put in a position in which it is difficult to mask weakness. This paper has been that for me. What I have leaned into as a writer throughout my academic career is my voice. A research thesis largely asks the writer to strip out voice and back up every claim with the ideas of someone else. Because of this, it has been a challenge to write this paper. This is the last collegiate hill I will cimb. It will be the end of my academic career. Writing research papers with dyslexia is like biking with a flat tire. One can do it, it is possible; however, it requires far too much energy to make it worthwhile.

This process has been difficult, not just because the requirements test my weakness, but because having it as an independent study robbed me of my greatest academic strength—classroom participation and engagement. I love the classroom. I am a highly engaged student who often needs to exercise restraint in classroom participation in

order to not crowd other voices out. My high engagement also makes the classroom a place where I soak up information. This is the third course in my college career that I have taken as an independent study and I am just now realizing how important the classroom is to my own learning. Perhaps not coincidentally, this realization speaks to the importance of the make-up of a classroom. How students are distributed effects that make-up.

Informing the Public

Informing policy and pushing for social justice are important motivations for my thesis. Sharing my research findings is important to achieving this end. As such, I will invite friends, colleagues and family members to read this study. In addition, it will be shared on Hamline University's Digital Commons.

Final Conclusion

Using the forces of the free market to better our educational system is a sound idea. Markets have a lot of power. Nearly every economics teacher I have ever had has compared the market to a car going down a highway. Vehicles have an immense amount of productive power and have transformed the way we live; however, vehicles also need brakes, a steering wheel, seatbelts, headlights, and airbags in order to control this power and limit the damage in the event of an accident. Minnesota's school choice framework needs to be updated. It needs mechanisms to make it a more equitable system. Equity is not merely an issue of social justice, it is an issue of economic growth and efficiency. The role of education is to unleash the potential of our youth, youth that ultimately become the human resources that drive our economy. Failing to unleash the full potential of our human capital is inefficient, wasteful and detrimental to the engines of our economy.

REFERENCES

- Abdulkadiroğlu, A., Pathak, P. A., Roth, A. E., & Sönmez, T. (2005). The Boston public school match. *American Economic Review*, *95*(2), 368-371.
- Alesina, A., Angeloni, I., & Schuknecht, L. (2005). What does the European Union do? *Public Choice*, *123*(3-4), 275-319.
- Altonji, J. G., Huang, C.-I., & Taber, C. R. (2015). Estimating the cream skimming effect of school choice. *Journal of Political Economy*, *123*(2), 266–324.
<https://doi.org/10.1086/679497>
- Bifulco, R., & Ladd, H.F. (2004). The Impacts of Charter Schools on Student Achievement: Evidence from North Carolina. Working Papers Series. SAN04-01. *Terry Sanford Institute of Public Policy*.
- Bifulco, R., & Ladd H.F. (2007). School choice, racial segregation, and test-score gaps: Evidence from North Carolina’s charter school program. *Journal of Policy Analysis and Management* *26*, 31–56.
- Caldas, S. J., & Bankston, C. (1997). Effect of school population socioeconomic status on individual academic achievement. *The Journal of Educational Research*, *90*(5), 269–277. <https://doi.org/10.1080/00220671.1997.10544583>
- Carlson, D. (2014). School choice and educational stratification. *Policy Studies Journal*, *42*(2), 269–304. <https://doi.org/10.1111/psj.12059>
- Carnoy, M., Jacobsen, R., Mishel, L., & Rothstein, R. (2005). The charter school dust-up. *Washington, DC: Economic Policy Institute*.

- Charter Schools. (n.d.). Education.mn.gov. Retrieved April 23, 2023, from <https://education.mn.gov/mde/fam/cs/>
- Ciolfi, A. (2011). Economic integration of schools: evaluating the Wake County experiment. In *U.Mass. Roundtable Symp. LJ* (Vol. 6, p. 57).
- Coleman, J. S. (1966). Equality of educational opportunity. *Integrated education*, 6(5), 19-28.
- Coughlan, R. W. (2018). Divergent trends in neighborhood and school segregation in the age of school choice. *Peabody Journal of Education*, 93(4), 349-366.
- Cruz-Guzman v. State, 892 N.W.2d 533 (Minn. Ct. App. 2017).
<https://casetext.com/case/cruz-guzman-v-state-1>
- Donovan, F. P., & Wright, C. F. (1954). *First through a century 1853-1953: A history of the First National Bank of Saint Paul*. The Webb Publishing Company.
- Durant, W., & Durant, A. (1968). *Lessons of history*. Simon & Schuster Paperback
- Ebenstein, L. (2009). *Milton Friedman: A Biography* (First ed.). St. Martin's Griffin.
- EDGE Home Page. (n.d.). National Center for Education Statistics. Retrieved March 11, 2022, from <https://nces.ed.gov/Programs/Edge/>
- Elacqua, G. (2012). The impact of school choice and public policy on segregation: Evidence from Chile. *International Journal of Educational Development*, 32(3), 444-453.
- Federal Reserve Bank of Minneapolis. (2019). *Executive brief - Statewide Crisis: Minnesota's education achievement gaps*.
<https://www.minneapolisfed.org/policy/education-achievement-gaps/executive-brief>

- Federal Reserve Bank of Chicago, Board of Governors of the Federal Reserve System (US), & Federal Reserve Bank of Cleveland. (1980). *Depository Institutions Deregulation and Monetary Control Act of 1980: A Summary*. Federal Reserve Bank of Chicago.
- Frankenberg, E. (2011). Charter schools: A civil rights mirage? *Kappa Delta Pi Record*, 47(3), 100-105
- Friedman, M. (1955). The role of government in education. In R. A. Solo (ed), *Economics and the Public Interest*, pp. 123-144. Rutgers University Press.
- García, E. (2020). Schools are still segregated, and Black children are paying a price. *Economic Policy Institute*. <https://files.eric.ed.gov/fulltext/ED603475.pdf>
- Grunewald, R., & Nath, A. (2019). *A statewide crisis: Minnesota's education achievement gaps*. A Statewide Crisis: Minnesota's Achievement Gaps. Retrieved on April 1, 2023, from <https://www.minneapolisfed.org/~media/assets/pages/education-achievement-gap/s/achievement-gaps-mn-report.pdf>
- Harari, Y. N. (2015). *Sapiens: A Brief History of Humankind*. Random House Uk. (Original work published 2011).
- Hatfield, J. W., Kojima, F., & Narita, Y. (2011). Promoting school competition through school choice: A market design approach. *Stanford: Stanford University Capital and Economic Opportunity Working Group Working Paper, 18*, 2011.
- Holme, J. J., & Richards, M. P. (2009). School choice and stratification in a regional context: examining the role of inter-district choice. *Peabody Journal of Education*, 84(2), 150–171. <https://doi.org/10.1080/01619560902810120>

- Holmes, G. M., DeSimone, J. S., & Rupp, N. G. (2003). Does school choice increase school quality? *National Bureau of Economic Research*.
https://www.nber.org/system/files/working_papers/w9683/w9683.pdf
- Howe, K. R., & Welner, K. G. (2002). School choice and the pressure to perform: déjà vu for children with disabilities? *Remedial & Special Education*, 23(4), 212–221.
<https://doi-org.ezproxy.hamline.edu/10.1177/07419325020230040401>
- Hoxby, C. M. (2003). School choice and school productivity. *The Economics of School Choice*, 287–342. <https://doi.org/10.7208/chicago/9780226355344.003.0009>
- Institute on Metropolitan Opportunity, University of Minnesota Law School. (2013, January). Open Enrollment and Racial Segregation.
<https://www.law.umn.edu/sites/law.umn.edu/files/metro-files//open-enrollment-and-racial-segregation-final.pdf>
- Institute on Metropolitan Opportunity, University of Minnesota Law School. (2017). The Minnesota School Choice Project Part 1: Segregation and performance.
https://www.law.umn.edu/sites/law.umn.edu/files/metro-files/imo-mscp-report-part-one-segregation-and-performance.pdf_0.pdf
- Jabbar, H., Fong, C. J., Germain, E., Li, D., Sanchez, J., Sun, W.-L., & Devall, M. (2022). The competitive effects of school choice on student achievement: A systematic review. *Educational Policy*, 36(2), 247–281.
<https://doi.org/10.1177/0895904819874756>
- Jefferson, T. (1776). The Declaration of Independence.

- Johnson, O. (2008). Ecology in educational theory: Thoughts on stratification, social mobility & proximal Capital. *Urban Rev*, 40, 227–246.
<https://doi-org.ezproxy.hamline.edu/10.1007/s11256-008-0084-z>
- Karsten, S., Ledoux, G., Roeleveld, J., Felix, C., & Elshof, D. (2003). School choice and ethnic segregation. *Educational policy*, 17(4), 452-477.
- Koedel, C., Betts, J. R., Rice, L. A., & Zau, A. C. (2009). The integrating and segregating effects of school choice. *Peabody Journal of Education*, 84:2, 110-129
- Langenkamp, A. G., & Carbonaro, W. (2018). How school socioeconomic status affects achievement growth across school transitions in early educational careers. *Sociology of Education*, 91(4), 358–378.
<https://doi.org/10.1177/0038040718802257>
- Landsburg, S. E. (2019). *The Essential Milton Friedman (Essential Scholars)*. The Fraser Institute.
- Lavery, L., & Carlson, D. (2015). Dynamic participation in interdistrict open enrollment. *Educational Policy*, 29(5), 746–779. <https://doi.org/10.1177/0895904813518103>
- Leonard, P. (2015). Choice of Ontario high schools and student sorting by ability. *Applied Economics*, 47(49), 5282–5302. <https://doi.org/10.1080/00036846.2015.1047087>
- Linn, R. L., & Welner, K. G. (2007). Race-conscious policies for assigning students to schools: Social science research and the Supreme Court cases. Washington, DC: National Academy of Education.
- Mankiw, N. G. (2015). The Efficient Markets Hypothesis. In *Principles of Macroeconomics*. Cengage Learning.

Minneapolis Branch of the NAACP v. State of Minnesota., No. 95-14800 (Minn. Dist. Ct. filed 1995).

Minn. Const. art. XIII, sec 1, online. Accessed on November 27, 2022.

Minnesota Department of Health. (2023). *People in poverty in Minnesota: MN DATA*

Access - MN Dept. of Health. MN Data. Retrieved April 8, 2023, from

https://data.web.health.state.mn.us/poverty_basic#:~:text=A%20family%20of%20two%20adults,U.S.%20Census%20Bureau's%202019%20threshold.

Moe, T. M. (2008). Beyond the free market: The structure of school choice. *BYU L. Rev.*, 557.

Nathan, J., & Boyd, W. L. (2003). Lessons about school choice from Minnesota: Promise and challenges. *Phi Delta Kappan*, 84(5), 350.

<https://doi-org.ezproxy.hamline.edu/10.1177/003172170308400506>

Oh, S. J., & Sohn, H. (2021). The impact of the school choice policy on student sorting: evidence from Seoul, South Korea. *Policy Studies*, 42(4), 415–436.

<https://doi-org.ezproxy.hamline.edu/10.1080/01442872.2019.1618807>

Orfield, M., & Luce, T. (2014). Charters, choice, and the constitution. *University of Chicago Legal Forum*: Vol. 2014: Iss. 1, Article 7. Available at:

<http://chicagounbound.uchicago.edu/uclf/vol2014/iss1/7>

Palmer, E. A. (2003). *The Choice is Yours After Two Years: An Evaluation*. ASPEN Associates.

Perry, L. B., & McConney, A. (2010). Does the SES of the school matter? An examination of socioeconomic status and student achievement using PISA 2003.

Teachers College Record, 112(4), 1137-1162.

- Reardon, S. F. (2013). The widening income achievement gap. *Educational leadership*, 70(8), 10-16.
- Richards, M. P., & Stroub, K. J. (2020). Metropolitan public school district segregation by race and income, 2000-2011. *Teachers College Record*, 122(5), 1–12.
- Richie, M. (2020). *Civil procedure: The Court stepping into education-Cruz-Guzman v. State, 916 n.w.2d 1 (Minn. 2018)*. Mitchell Hamline Open Access. Retrieved November 27, 2022, from <https://open.mitchellhamline.edu/mhlr/vol46/iss3/11/>
- Rollwagen, J., & McLellan, D. (1988). Chartered schools = choices for educators + quality for all students. *Citizens League*.
<https://citizensleague.org/wp-content/uploads/2017/07/PolicyReportEducationNov-1988.pdf>
- Rotberg, I. (2014). Charter schools and the risk of increased segregation. *The Phi Delta Kappan*, 95(5), 26-30. Retrieved August 29, 2021, from <http://www.jstor.org/stable/23611855>
- Sable, J. & Hoffman, L. (2005). Characteristics of the 100 largest public elementary and secondary. Retrieved April 22, 2023, from <https://nces.ed.gov/pubs2005/2005312.pdf>
- Saint Paul Public Schools / Homepage. (n.d.). Saint Paul Public Schools; Blackboard, Inc. Retrieved April 23, 2023, from <https://www.spps.org>
- Saporito, S. (2003). Private choices, public consequences: Magnet school choice and segregation by race and poverty. *Social Problems*, 50(2), 181-203.
<https://doi:10.1525/sp.2003.50.2.181>

- Sattin-Bajaj, J. (2017). Surviving at the street level: How counselors' implementation of school choice policy shapes students' high school destinations. *Sociology of Education*, 91(1), 46–71. <https://doi.org/10.1177/0038040717751443>
- Schwarzenthal, M., Schachner, M. K., Juang, L. P., & van de Vijver, F. J. (2019). Reaping the benefits of cultural diversity: Classroom cultural diversity climate and students' intercultural competence. *European Journal of Social Psychology*, 50(2), 323–346. <https://doi.org/10.1002/ejsp.2617>
- School choice. (2021). Retrieved on February 10, 2023 at https://education.mn.gov/MDE/dse/fsce/mod/choice/MDEDEV_005364
- Sinclair, B., & Chen, C. (2020, August 5). *Understanding School Lunch Eligibility in the Common Core of Data*. Institution of Education Sciences. <https://nces.ed.gov/blogs/nces/post/understanding-school-lunch-eligibility-in-the-common-core-of-data>
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of educational research*, 75(3), 417-453.
- Smith, A. (1776). *The Wealth of Nations*. Ixia Press.
- Söderström, M., & Uusitalo, R. (2010). School choice and segregation: Evidence from an admission reform. *The Scandinavian Journal of Economics*, 112(1), 55-76. Retrieved August 29, 2021, from <http://www.jstor.org/stable/40587796>
- Stein, M. (2015). Public school choice and racial sorting: An examination of charter schools in Indianapolis. *American Journal of Education*, 121(4), 597-627. <https://doi:10.1086/681920>
- Swann v. Charlotte-Mecklenburg Bd. of Educ., 402 U.S. 1 (1971)

- National Commission on Excellence in Education. (1983). *A nation at risk: the imperative for education reform*. United States Government Printing
- Time. (1978). The Time Magazine Vault. Time. Retrieved December 17, 2022, from <https://time.com/vault/year/1978/>
- Urquiola, M. (2005). Does school choice lead to sorting? Evidence from Tiebout variation. *The American Economic Review*, 95(4), 1310-1326. Retrieved September 6, 2021, from <http://www.jstor.org/stable/4132718>
- U.S. Department of Education. (2000). The state of charter schools 2000: Fourth-year report. Washington, DC: Author. Retrieved April 12, 2002, from <http://www.ed.gov/pubs/charter4thyear>
- Van Ewijk, R., & Slegers, P. (2010). The effect of peer socioeconomic status on student achievement: A meta-analysis. *Educational research review*, 5(2), 134-150.
- Welsh, R. O. (2019). Recovery, achievement, and opportunity: A comparative analysis of state takeover districts in Louisiana, Tennessee, and Georgia. *Urban Education*, 54(3), 311-338.
- Weiss, N. A. (2002). *Elementary Statistics* (5th ed., pp. 46; 101). Greg Tobin.
- Williams, S. M., & Houck, E. A. (2013). The life and death of desegregation policy in Wake County public school system and Charlotte-Mecklenburg schools. *Education and Urban Society*, 45(5), 571-588.
- White, K. R. (1982). The relation between socioeconomic status and academic achievement. *Psychological bulletin*, 91(3), 461.
- Whitehurst, G. J. R., & Klein, E. (2015). *The 2014 education choice and competition index*. Brookings. Retrieved April 22, 2023, from

<https://www.brookings.edu/interactives/the-2014-education-choice-and-competition-index/>

Wong, K., & Langevin, W. (2007). Policy expansion of school choice in the American states. *Peabody Journal of Education*, 82(2/3), 440-472.

<https://doi.org/10.2307/25594751>

Yang Hansen, & Gustafsson, J.-E. (2016). Causes of educational segregation in Sweden - school choice or residential segregation. *Educational Research and Evaluation*, 22(1-2), 23–44. <https://doi.org/10.1080/13803611.2016.1178589>

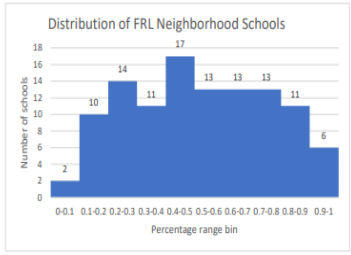
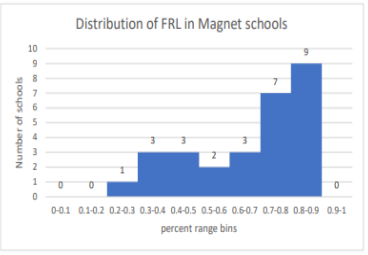
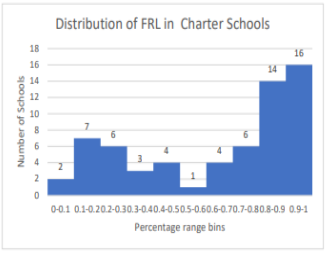
Zimmer, R., Gill, B., Booker, K., Lavertu, S., Sass, T. R., & Witte, J. (2009). Competitive Effects of Charter Schools on Student Achievement in Traditional Public Schools. In *Charter Schools in Eight States: Effects on Achievement, Attainment, Integration, and Competition* (pp. 77–82). RAND Corporation.

<http://www.jstor.org/stable/10.7249/mg869bmg-joy-wpf.12>

Appendix

Appendix 1-A

Data Comparison Table



Median	78%
Mean	63%
Standard deviation	0.312

Number of schools	63
Number of schools over 70% FRL	36
% of schools over 70% FRL	57%
Number of schools under 30% FRL	15
% of schools under 30% FRL	24%

Median	75%
Mean	67%
Standard Deviation	0.194

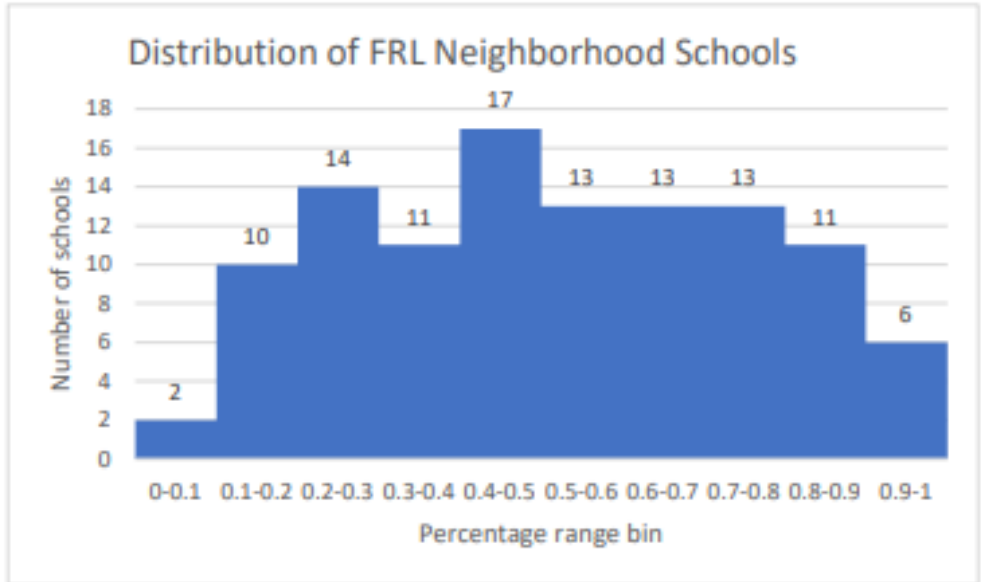
Number of schools	28
Number of schools with over 70% FRL	16
% of schools with over 70% FRL	57%
Number of schools with under 30% FRL	1
% of schools with under 30% FRL	4%

Median	51%
Mean	52%
Standard Deviation	0.243

Number of schools	110
Number of schools with over 70% FLR	30
% of schools with greater than 70% FRL	27%
Number of schools with less then 30% FRL	26
% of schools with less then 30% FRL	24%

Appendix 1-B

Neighborhood School Data Ramsey County MN



Median	51%
Mean	52%
Standard Deviation	0.243
Number of schools	110
Number of schools with over 70% FLR	30
% of schools with greater than 70% FRL	27%
Number of schools with less then 30% FRL	26
% of schools with less then 30% FRL	24%

SCH_NAME	TOTAL	TOTFR L	Percent FRL
WELS SOUTH	38	10	26%
Quora High School	98	53	54%
HARMONY LEARNING CENTER	45	42	93%
The Next Step	96	54	56%
BELLAIRE EDUCATION CENTER	57	35	61%
South Campus Education Center	63	24	38%
EAST VIEW ACADEMY	138	67	49%
WELS NORTH	30	7	23%
SPEECH PROGRAM - SP ED PROGRAM	34	3	9%
ECSE PROGRAM	107	23	21%
MOUNDS VIEW ALC	87	52	60%
EDGEWOOD MIDDLE SCHOOL	664	307	46%
BIRTH TO TWO ECSE	69	8	12%
BEL AIR ELEMENTARY	739	239	32%
CHIPPEWA MIDDLE SCHOOL	1142	143	13%
HIGHVIEW MIDDLE SCHOOL	843	322	38%
IRONDALE SENIOR HIGH	1782	714	40%
ISLAND LAKE ELEMENTARY	790	111	14%
MOUNDS VIEW SENIOR HIGH	1799	227	13%
Pinewood Elementary	553	284	51%
SUNNYSIDE ELEMENTARY	530	225	42%

Turtle Lake Elementary		1059		114		11%
Valentine Hills Elementary		694		297		43%
Career and Life Trans Prg Tin Lake		47		31		66%
MOUNDS VIEW BRIDGES PROGRAM		24		14		58%
EARLY CHILDHOOD SPECIAL EDUCATION		247		26		11%
CARVER ELEMENTARY		559		276		49%
COWERN ELEMENTARY		456		228		50%
JOHN GLENN MIDDLE		784		507		65%
NORTH SENIOR HIGH		1672		932		56%
RICHARDSON ELEMENTARY		506		337		67%
WEAVER ELEMENTARY		547		339		62%
WEBSTER ELEMENTARY		437		331		76%
Maplewood Middle School		716		436		61%
PARKVIEW CENTER SCHOOL		750		185		25%
ROSEVILLE AREA SENIOR HIGH		2337		956		41%
BRIMHALL ELEMENTARY		611		217		36%
CENTRAL PARK ELEMENTARY		420		296		70%
EDGERTON ELEMENTARY		484		348		72%

LITTLE CANADA ELEMENTARY		588		312		53%
WILLIAMS ELEMENTARY		437		155		35%
FALCON HEIGHTS ELEMENTARY		526		144		27%

ROSEVILLE AREA MIDDLE		968		450		46%
FAIRVIEW PROGRAM		123		52		42%
A. G. A. P. E. TEEN PARENT		67		64		96%
EXPO FOR EXCELLENCE ELEMENTARY SCH		633		226		36%
FOCUS BEYOND		253		135		53%
GORDON PARKS HIGH SCHOOL		144		102		71%
GUADALUPE ALTERNATIVE PROGRAMS		58		55		95%
BATTLE CREEK MIDDLE		750		591		79%
CENTRAL SENIOR HIGH		1867		827		44%
CHELSEA HEIGHTS ELEMENTARY		413		205		50%
CHEROKEE HEIGHTS ELEMENTARY SCHOOL		191		145		76%
COMO PARK ELEMENTARY		408		338		83%
DAYTONS BLUFF ELEMENTARY		300		262		87%
BRUCE F VENTO ELEMENTARY		486		417		86%
EASTERN HEIGHTS ELEMENTARY		314		256		82%
FROST LAKE ELEMENTARY SCHOOL		526		429		82%
GALTIER ELEMENTARY SCHOOL		204		143		70%
GROVELAND PARK ELEMENTARY		383		197		51%
HAMLIN ELEMENTARY SCHOOL		258		205		79%
HARDING SENIOR HIGH		1877		1410		75%

THE HEIGHTS COMMUNITY					
SCHOOL		418		293	70%
HIGHLAND PARK ELEMENTARY		364		245	67%
HIGHLAND PARK MIDDLE					
SCHOOL		841		392	47%
HIGHLAND PARK SENIOR HIGH		1307		574	44%
HIGHWOOD HILLS ELEMENTARY		261		241	92%
HUMBOLDT HIGH SCHOOL		1161		1025	88%
JOHNSON SENIOR HIGH		1243		981	79%
HORACE MANN SCHOOL		405		91	22%
MAXFIELD ELEMENTARY					
SCHOOL		295		258	87%
RAMSEY MIDDLE SCHOOL		593		353	60%
RANDOLPH HEIGHTS					
ELEMENTARY		447		132	30%
ST. ANTHONY PARK					
ELEMENTARY		555		182	33%
COMO PARK SENIOR HIGH		1158		719	62%
MURRAY MIDDLE SCHOOL		757		438	58%
BRIDGE VIEW SPECIAL					
EDUCATION		136		93	68%
LEAP HIGH SCHOOL		174		158	91%
ECSE INCLUSION		275		118	43%

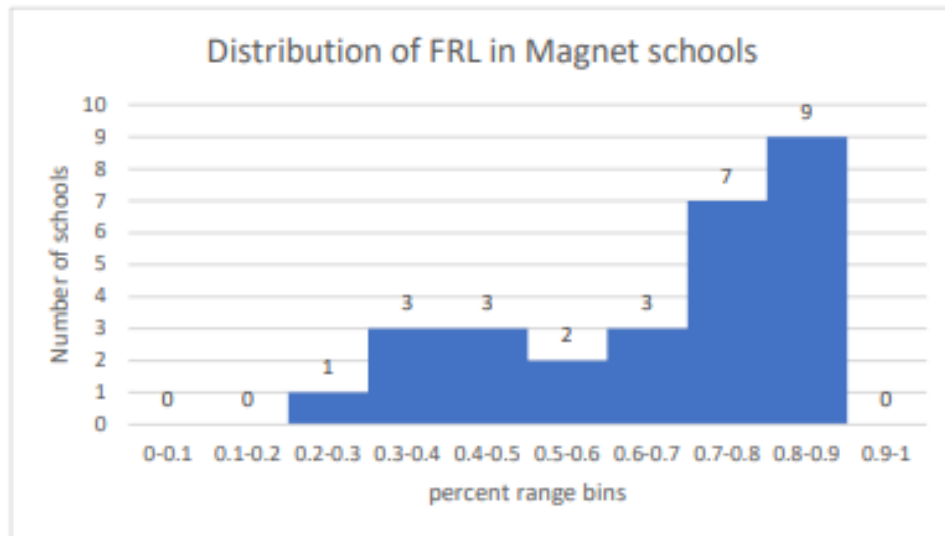
John A. Johnson Achievement Plus EI		317		270	85%
-------------------------------------	--	-----	--	-----	-----

JOURNEYS SECONDARY SCHOOL		66	63	95%
NORMANDY PARK EDUCATION CENTER		161	40	25%
SUNRISE PARK MIDDLE		843	325	39%
OTTER LAKE ELEMENTARY		577	95	16%
WHITE BEAR AREA LEARNING CENTER		126	54	43%
BIRCH LAKE ELEMENTARY		281	111	40%
CENTRAL MIDDLE		1179	241	20%
LAKEAIRES ELEMENTARY		395	122	31%
LINCOLN ELEMENTARY		470	67	14%
VADNAIS HEIGHTS ELEMENTARY		447	178	40%
WHITE BEAR NORTH CAMPUS SENIOR		1158	296	26%
WILLOW LANE ELEMENTARY		399	246	62%
WHITE BEAR SOUTH CAMPUS SENIOR		1178	241	20%
MATOSKA INTERNATIONAL		586	115	20%
WHITE BEAR LAKE DISTRICT CENTER		80	20	25%
FAIRVIEW ALTERNATIVE HIGH SCHOOL		81	59	73%
RIVEREAST PROGRAM		36	32	89%
EARLY EDUCATION - BIRTH TO THREE		388	172	44%

916 MAHTOMEDI ACADEMY		82		43		52%
HAZEL PARK PREPARATORY ACADEMY		513		456		89%
PARKWAY MONTESSORI/COMMUNITY MIDDLE		353		276		78%
PIKE LAKE KINDERGARTEN CENTER		666		288		43%
SNAIL LAKE KINDERGARTEN CENTER		348		31		9%
HARAMBEE ELEMENTARY SCHOOL		319		219		69%
ALC GATEWAY TO COLLEGE		169		114		67%
PrairieCare Maplewood		20		3		15%
Career and Life Transition Program		21		17		81%
Gladstone Voluntary Pre-K		50		11		22%
Beaver Lake Voluntary Pre-K		77		16		21%
Fairview School Readiness Plus		40		25		63%
Total		55644		26479		48%

Appendix 2-B

Magnet School Data Ramsey County MN



Median	75%
Mean	67%
Standard Deviation	0.194

Number of schools	28
-------------------	----

Number of schools with over 70% FRL	16
-------------------------------------	----

% of schools with over 70% FRL	57%
--------------------------------	-----

Number of schools with under 30% FRL	1
--------------------------------------	---

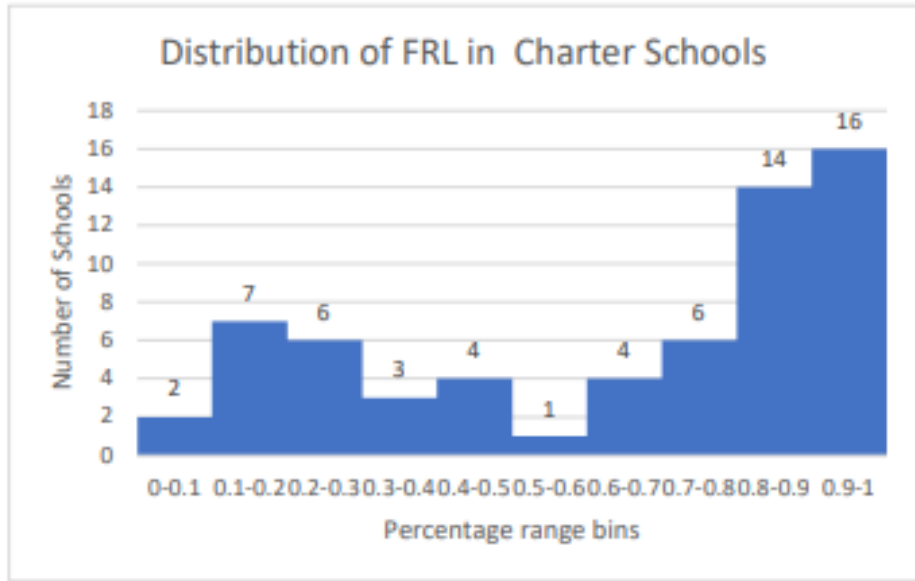
% of schools with under 30% FRL	4%
---------------------------------	----

SCH_NAME	TOTAL	TOTFR L	Percent FRL
ADAMS MAGNET ELEMENTARY	544	261	48%
FARNSWORTH AEROSPACE LOWER	468	375	80%
JJ HILL MONTESSORI	391	138	35%
NOKOMIS MONTESSORI NORTH CAMPUS	356	229	64%
BATTLE CREEK ELEMENTARY SCHOOL	473	347	73%
FARNSWORTH AEROSPACE UPPER	603	477	79%
CAPITOL HILL MAGNET/RONDO	1229	531	43%
JACKSON PREPARATORY ELEMENTARY	296	224	76%
MISSISSIPPI CREATIVE ARTS ELEM	571	503	88%
Global Arts Plus Upper	497	293	59%
PHALEN LAKE HMONG STUDIES MAGNET	608	502	83%
RIVERVIEW WEST SCHOOL OF EXCELLENCE	396	304	77%
OBAMA SERVICE LEARNING ELEMENTARY	350	299	85%
BENJAMIN E MAYS MAGNET	385	324	84%
AMERICAN INDIAN MAGNET SCHOOL	638	565	89%
PAUL & SHEILA WELLSTONE ELEMENTARY	526	428	81%

Global Arts Plus Lower		391		246		63%
FOUR SEASONS ELEMENTARY		422		335		79%
L'ETOILE DU NORD FRENCH IMMERSION U		280		91		33%
CROSSROADS MONTESSORI		231		167		72%
CROSSROADS SCIENCE PROGRAM		258		199		77%
WASHINGTON TECH SECONDARY MAGNET		2136		1823		85%
OPEN WORLD LEARNING SECONDARY		461		151		33%
SAINT PAUL MUSIC ACADEMY		598		523		87%
CREATIVE ARTS SECONDARY SCHOOL		425		277		65%
L'ETOILE DU NORD FRENCH IMMERSION L		165		67		41%
JIE MING MANDARIN IMMERSION ACADEMY		373		108		29%
NOKOMIS MONTESSORI SOUTH CAMPUS		252		136		54%
Total		14323		9923		69%

Appendix 3-B

Charter School Data for Ramsey County MN



Median	78%
Mean	63%
Standard deviation	0.312
Number of schools	63
Number of schools over 70% FRL	36
% of schools over 70% FRL	57%
Number of schools under 30% FRL	15
% of schools under 30% FRL	24%

SCH_NAME	TOTAL	TOTFR L	Percent FRL
Minnesota Connections Academy	2613	1287	49%
Hmong College Prep Academy MS	612	473	77%
LAURA JEFFREY ACADEMY CHARTER	81	31	38%
Minnesota Virtual Schools	371	135	36%
MINNESOTA ONLINE HIGH SCHOOL	201	29	14%
Midway Star Academy	240	237	99%
RONDO CAMPUS	113	108	96%
HMONG COLLEGE PREP ACADEMY HS	632	494	78%
Community of Peace Academy High Sch	245	217	89%
ST. PAUL CITY MIDDLE SCHOOL	156	153	98%
TWIN CITIES ACADEMY	620	376	61%
TWIN CITIES GERMAN IMMERSION CHRTR	584	51	9%
NOVA CLASSICAL ACADEMY LOWER SCHOOL	484	52	11%
GREAT RIVER SCHOOL	378	42	11%
ST PAUL CONSERVATORY PERFORMING ART	446	52	12%
URBAN ACADEMY CHARTER	408	406	100%

SCHOOL					
COMMUNITY SCHOOL OF EXCELLENCE		1333		1134	85%
METRO DEAF SCHOOL		109		66	61%
Community of Peace Academy Elem		281		231	82%
ACHIEVE LANGUAGE ACADEMY		462		382	83%
CYBER VILLAGE ACADEMY		219		57	26%
HIGHER GROUND ACADEMY		575		559	97%
ST. PAUL CITY PRIMARY SCHOOL		313		300	96%
JENNINGS EXPERIENTIAL HIGH SCHOOL		69		63	91%
LIFE PREP		266		207	78%
FACE TO FACE ACADEMY		90		76	84%
HIGH SCHOOL FOR RECORDING ARTS		329		275	84%
Academia Cesar Chavez Chtr School		568		425	75%
AFSA HIGH SCHOOL		221		68	31%
AVALON SCHOOL		179		40	22%
HOPE COMMUNITY ACADEMY		559		466	83%
CITY ACADEMY		117		106	91%
GLOBAL ACADEMY		445		372	84%
COLLEGE PREPARATORY ELEMENTARY		327		282	86%
NOVA CLASSICAL ACADEMY UPPER		538		58	11%

SCHOOL					
STEP ACADEMY CHARTER SCHOOL		375		235	63%
CORNERSTONE MONTESSORI ELEMENTARY		144		61	42%
HIGHER GROUND SECONDARY ACADEMY		405		397	98%
AVALON MIDDLE SCHOOL		73		18	25%