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Some Pennies are More Equal than Others: Inequitable School Facilities Investment in San Antonio, Texas

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Abstract: In Texas, local taxpayers fund the majority of educational facilities construction and maintenance costs, with local wealth influencing facilities outcomes. The traditional school districts that comprise the predominantly Latino and segregated San Antonio area vary considerably in property wealth as well as district capacity and expertise. We conducted an analysis of 12 San Antonio area school districts to address the questions: 1) To what extent do state and local investments vary by district? 2) How do district actions and constraints affect facilities quality and equitable investment? Methods include descriptive quantitative analysis of facilities investment data and qualitative interviews with school district leaders, staff, and school finance experts. Examining Texas school finance data demonstrated the variance in school district investments in educational facilities. Despite some districts with lower property wealth exerting higher levels of tax effort, they were able to raise less money per student for educational facilities through interest and sinking taxes. Interview findings revealed that several districts acknowledge lacking the capacity to maintain high-quality facilities for all students. Respondents frequently criticized current state policies and funding

for educational facilities as inadequate, inequitable, and inefficient and expressed a need for policy improvements in an era of increasing state disinvestment.

Keywords: Texas; 2015-2016; mixed methods; school finance; education policy; equity; school facilities

Algunos centavos son más iguales que otros: Inversión desigual en las escuelas de San Antonio, Texas

Resumen: En Texas, los contribuyentes locales financian la mayoría de los costos de construcción y mantenimiento de las instalaciones educativas, y la riqueza local influye en los resultados de las instalaciones. Los distritos escolares tradicionales que comprenden el área predominantemente latina y segregada de San Antonio varían considerablemente en la riqueza de las propiedades, así como en la capacidad y experiencia del distrito. Realizamos un análisis de 12 distritos escolares del área de San Antonio para abordar las preguntas: 1) ¿En qué medida varían las inversiones estatales y locales según el distrito? 2) ¿Cómo afectan las acciones y restricciones del distrito la calidad de las instalaciones y la inversión equitativa? Los métodos incluyen el análisis cuantitativo descriptivo de los datos de inversión de las instalaciones y las entrevistas cualitativas con los líderes del distrito escolar, el personal y los expertos en finanzas escolares. El examen de los datos financieros de las escuelas de Texas demostró la variación en las inversiones del distrito escolar en instalaciones educativas. A pesar de que algunos distritos con menor patrimonio inmobiliario ejercían niveles más altos de esfuerzo tributario, pudieron recaudar menos dinero por estudiante para instalaciones educativas a través de intereses e impuestos hundidos. Los hallazgos de la entrevista revelaron que varios distritos reconocen la falta de capacidad para mantener instalaciones de alta calidad para todos los estudiantes. Los encuestados con frecuencia criticaron las políticas estatales actuales y la financiación de las instalaciones educativas como inadecuadas, no equitativas e ineficientes y expresaron la necesidad de mejoras políticas en una era de creciente desinversión estatal.

Palabras-clave: Texas; 2015-2016; métodos mixtos; finanzas escolares política educativa; equidad; instalaciones escolares

Alguns centavos são mais iguais do que outros: Investimento desigual em escolas em San Antonio, Texas

Resumo: No Texas, os contribuintes locais financiam a maioria dos custos de construção e manutenção de instalações educacionais, com a riqueza local influenciando os resultados das instalações. Os distritos escolares tradicionais que compõem a área predominantemente latina e segregada de San Antonio variam consideravelmente em riqueza patrimonial, bem como em capacidade e expertise do distrito. Realizamos uma análise de 12 distritos escolares da área de San Antonio para abordar as questões: 1) Até que ponto os investimentos estaduais e locais variam de acordo com o distrito? 2) Como as ações e restrições do distrito afetam a qualidade das instalações e o investimento equitativo? Os métodos incluem análise quantitativa descritiva de dados de investimento em instalações e entrevistas qualitativas com líderes de distrito escolar, funcionários e especialistas em financiamento escolar. O exame dos dados das finanças escolares do Texas demonstrou a variação nos investimentos do distrito escolar em instalações educacionais. Apesar de alguns distritos com menor riqueza de propriedade exercerem níveis mais altos de esforço fiscal, eles conseguiram angariar menos dinheiro por aluno para instalações educacionais por meio de juros e impostos. Os resultados das entrevistas

revelaram que vários distritos reconhecem a falta de capacidade para manter instalações de alta qualidade para todos os alunos. Os entrevistados freqüentemente criticam as políticas estaduais atuais e o financiamento de instalações educacionais como inadequados, injustos e ineficientes, e expressaram a necessidade de melhorias nas políticas em uma era de crescente desinvestimento do Estado.

Palavras-chave: 2015-2016; métodos mistos; financiamento escolar; política educacional; capital próprio; instalações escolares

Introduction

The issue of inequitable educational facilities, even in close geographic proximity, is a longstanding problem that disproportionately impacts children of color from low-income families (Cárdenas, 1997; Filardo, Vincent, Sung, & Stein, 2006). While some states have reformed their school finance policies to include more equitable facilities investment (Sciarra, Bell, & Kenyon, 2006), the lack of national and state data and standards for educational facilities has resulted in school districts in many states constructing and maintaining school facilities with limited state investment or technical assistance (Filardo, 2016). As a result, school facilities outcomes—both the quality of educational facilities and the equity between inter-district facilities investment levels—in many states are determined by local property wealth (Arsen & Davis, 2006) as well as the ability of individual districts to navigate the facilities financing process (Rivera, 2016).

In 1995, the U.S. General Accountability Office conducted the last comprehensive national survey of the condition of K-12 educational facilities, and since then the research community has not agreed on specific methods to evaluate the quality of educational facilities (Arsen & Davis, 2006). One recent report from the 21st Century School Fund and the Center for Green Schools compared spending and investment data across all 50 states with best-practice standards for infrastructure investment and estimated that the nation is under-spending on school facilities by \$46 billion a year (Filardo, 2016), though the spending gaps varied considerably by state. In another project analyzing the quality of educational facilities, the 21st Century School Fund teamed up with Critical Exposure and Healthy Schools Campaign, creating the *Through Your Lens* contest, which empowered students to describe and display the condition of the country's public school buildings through photos and stories to raise awareness of facilities inequities and inspire policymakers to act. Project researchers concluded, “Many of the nation's children – particularly those in high-poverty and predominantly minority school districts – continue to attend school buildings that are unfit for teaching and learning” (Healthy Schools Campaign, 2010, p. 26).

Policy Context in Texas

Scholars have diligently and critically examined Texas' repeated attempts to address its school finance shortfalls, focusing in particular on the legacy of the United State Supreme Court's 1973 decision in *San Antonio Independent School District v. Rodriguez*, which “preserved local control of school finances by rejecting a challenge to the unequal distribution of property tax dollars among public school districts in Texas” (Ogletree & Robinson, 2015, p. ix). In 1968, Demetrio Rodriguez sued school officials in San Antonio Texas to “challenge the property-tax finance system that kept poor children in poor schools” (Irons, 1988, p. 281). Justice Powell's surprising decision denied “that education constituted a ‘fundamental right’ that was essential to effective citizenship” (Irons, 1988, p. 291), resulting in decades of state-based constitutional school finance cases, with varying and inequitable results between and within states (see Lukemeyer, 2003, and Ogletree & Robinson, 2015 for a more thorough legal analysis). Lukemeyer (2003) explained that the *Rodriguez* case

effectively ended the “first wave” school finance cases, which began in the 1960s, and “mainly involved claims that school-funding systems violated the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution” (p. 3).

Since the late-1980s, Texas’ subsequent rounds of school finance litigation have kept the issue of education funding in the public eye. In 2014, the *Texas Taxpayer & Student Fairness Coalition, et al. v. Michael Williams, et al.* district court decision found the finance system, implemented primarily through the Foundation School Program (FSP), to be inadequate and inefficient. Yet, the May 2016 Texas Supreme Court decision, *Morath v. Texas Taxpayer and Student Fairness Coalition*, assessing the Texas school finance system’s constitutionality for the seventh time, upheld the system, finding that it meets minimum constitutional requirements. Through inequitable facilities revenues and other FSP shortfalls were acknowledged in the decision, the court effectively left policy changes to the conservative Texas Legislature.

With regard to educational facilities, the existing research provides ample evidence for Texas policymakers. Researchers have analyzed variation in facilities investment by state, finding that the average state share of educational facilities costs is 18% (Filardo, 2016). However, the state of Texas provides only 9% of the costs of facilities, with local districts responsible for raising the vast majority of funds from their local tax base (Filardo, 2016). While Texas’ school finance system allows for *recapture* for operational funding, which is supposed to permit the state to collect and redistribute billions of dollars of local property wealth from high to low wealth districts, there is no such system for capital (facilities) funding. Therefore, spending on educational facilities in Texas is more dependent on local wealth than spending on operations.

School districts in Texas have the authority to issue bonds to fund the construction and renovation of public schools after obtaining a simple majority of voter support. Senate Bill 351 in 1991 established the “50-cent debt test,” and local Texas voters decide how many “pennies” they want to tax themselves to (up to 50 pennies per \$100 of property wealth), though not all pennies are equalized under the state’s facilities policies. The *interest and sinking* tax (I&S) is then set at a level that allows Texas school districts to pay the annual bond debt-service.

In the late 1990s, the Texas Legislature created two facilities finance programs, funded through a combination of state aid and local property taxes, to provide assistance under the Foundation School Program (FSP) “for the repayment of locally authorized debt issued for the construction of public school facilities” (Legislative Budget Board, 2016). The first of these programs, the Instructional Facilities Allotment (IFA), was created in 1997 and provides funding awards to applicant districts for bonded debt and some lease-purchase agreements, guaranteeing that school districts will be able to generate \$35 per penny of tax effort per student. School districts receiving the funding must raise their local share through a local property tax, with the state contributing the difference between what the district can raise and the \$35 guarantee, though limitations apply:

Award amounts per district per biennium are limited to the greater of \$250 per student or \$100,000. By statute, districts are ranked for the purpose of making awards, with district property wealth per student being the primary ranking criterion to ensure that funding is targeted toward property-poor school districts. However, statute also provides for ranking enhancements if a school district has a high rate of enrollment growth, has no outstanding debt, or has been denied an award in a prior funding cycle. (Legislative Budget Board, 2016, p. 1)

The second facilities program, the Existing Debt Allotment (EDA), created in 1999, also provides state support for bond debt service costs, though this program does not require school districts to apply. The Legislative Budget Board (2014) explained the program's limitations:

Annual EDA entitlement per school district is limited to a guaranteed yield of \$35.00 per penny per student for the lesser of three rates: the district's effective rate needed to service eligible debt, the district's effective interest and sinking rate for the second year of the prior biennium, or \$0.29 (p. 2).

Though the two programs were created to increase capital outlay and reduce property taxes, evidence revealed that capital outlay equity in the state decreased in the first few years of the programs (Plummer, 2006). Furthermore, the programs fund only districts below a certain property wealth threshold, and as property values in the state have increased over time, a smaller proportion of districts have qualified for state assistance (Legislative Budget Board, 2014). Due to the Legislature's failure to raise the facilities equalization cap over time, the state's share of facilities funding has decreased from 30% in 1999 to less than 10% (Equity Center, 2015).

Unfortunately, the funds school districts in Texas can raise based on the level at which district taxpayers decide to tax themselves is inequitable by design. Property-poor districts taxing themselves at relatively high rates can raise less money than property wealthy districts exerting fewer pennies of tax effort. This study examines the effects of Texas' educational facilities policies on school districts in San Antonio, Texas, a city known for its connection to school finance litigation. Specifically, the following research questions guide our study: 1) To what extent do state and local investments vary by district in San Antonio? and 2) How do district actions and constraints affect facilities quality and equitable investment?

Research on the Effects of Facilities on Educational Outcomes

A recurring line of research takes up the foundational questions of whether school facilities affect student outcomes like achievements, and thus, whether they warrant significant investment (Bowers & Urick, 2011; Cellini, Ferreira, & Rothstein, 2010; Oakes, 2004; Uline, 1997; Uline, Wolsey, Tschannen-Moran, & Lin, 2010). Davis (2015) noted that the most emphasized dependent variable is student test scores, though "researchers have also looked at the wider macro-social impact of high-quality school facilities on housing prices (Cellini, Ferreira, & Rothstein, 2010) and voters' support for schools" (p. 6). Scholars have also looked at the impact of facilities spending on the overall cost of education (Gronberg, Jansen, & Taylor, 2011).

Issues with methods and facilities data. Traditionally, economists of education have utilized education "production function" methods, to evaluate the impacts of inputs like facilities on educational outcomes, though these methods are problematic given that researchers have not settled on a standard way of measuring facilities quality (Gronberg, Jansen, & Taylor, 2011). Consequently, the literature is crowded with studies that regress a few characteristics of a school's physical environment on students' outcomes represented by achievement scores (see Tanner, 2009 as an example). Scholars have attempted to substitute a number of estimates for capital quality, such as an overall principal assessment of building condition (Earthman & Lemasters, 2009). These measures are problematic. Principals are not facilities experts nor can the age of a facility, for example, take into account the variation in quality of construction over different periods of time (Schneider, 2002). Hence, all research on educational facilities is "plagued by problems of measurement and data availability" (Davis, 2015, p. 5). In addition to problems measuring inputs, there are also data problems with dependent variables. With regard to student test scores, scholars have repeatedly noted data limitations (Bowers, Metzger, & Militello, 2010; Davis, 2015).

Some scholars have advocated taking human and social capital, as well as educational purposes, into account when analyzing whether facilities impact educational outcomes. Crampton (2009) argued for building on quantitative research rooted in a unified theoretical framework including investments in not only physical capital (buildings) but also human and social capital. Utilizing canonical analysis, a multivariate statistical approach using multiple independent and dependent variables, and drawing upon data from the US Census Bureau, US Department of Education's National Assessment of Educational Progress test score data, and the US Department of Education's Common Core of Data, Crampton (2009) found:

Spending on school infrastructure does matter when it comes to student achievement. However, the results of this study indicate that the impact of these investments is maximized when they are made in tandem...Prudent investment in education to maximize students' academic success is a balancing act including all three forms of capital, as opposed to a zero sum game where greater investment in one form of capital comes at the expense of another. (p. 318)

Roberts (2009) contrasted conventional measures of school facilities, which use an engineering "property management" perspective; with an educational perspective, which takes the educational purposes of schools into account, and found that when engineering measures were used, there was little evidence of a connection to learning outcomes. However, when educators assess school facilities in terms of educational functions, a connection to learning outcomes is apparent (Roberts, 2009, p. 368). Overall, the answer to the question of whether money matters has depended on the scholar's conceptual framework, methods, and their dependent variable of interest (Roberts, 2009). This review finds that a growing body of research provides evidence of a link between school building quality and student outcomes, though this impact is mixed, difficult to measure, and is often mediated by many factors and influenced by local context. Much of this work is still in its nascent stages despite decades of study.

Aggregating facilities research. Another line of research on facilities includes literature reviews and meta-analyses attempting to aggregate research findings to help define whether school facilities matter and, if so, what aspects of facilities most impact educational outcomes. International governmental entities attempting to inform their country's infrastructure policies have conducted or commissioned some of the most comprehensive of these reviews. These reports are useful in that they differentiate between resolved facilities issues and open empirical questions. For example, the Center for Learning and Teaching at the University of Newcastle's 2005 report explained "there is strong, consistent evidence for the effect of basic physical variables (air quality, temperature, noise) on learning. Once minimal standards are attained, evidence of the effect of changing basic physical variables is less significant" (Higgins, Hall, Wall, Woolner, & McCaughey, 2005, p. 10).

A review published by the Education Policy and Research Division of Australia's Department of Education and Early Childhood Development found that educational practices were largely ignored and that "Claims in the literature about the possible effects of various aspects of learning spaces on student learning are often not substantiated empirically" (Blackmore, Bateman, Loughlin, O'Mara, & Aranda, 2011, p. 6). Schneider (2002) explored the variation in the quality of research on educational facilities, noting that "Much of it is case-based and verges on the anecdotal, and many literature reviews use simple counts of articles, or they present undocumented summaries of findings" (p. 17). Schneider's review points to the importance of attention to detail when analyzing aspects of educational facilities. For example, he drew attention to the counterintuitive notion that older facilities are on the whole lower quality or in need of repair and renovation, noting that older facilities often benefited from higher quality construction.

Mediating factors. There is a significant body of work that attempts to find effects of school facilities on student outcomes through mediating factors (Earthman & Lemasters, 2009; Higgins et al., 2005; Horng, 2009; Plank, Bradshaw, & Young, 2009; Uline & Tschannen-Moran, 2008). Weinstein began studying effects of space on “nonachievement behaviors and attitudes” outcomes in 1979. As Higgins et al. (2005) explained, “The causal chain between environmental change and changes in students’ attitudes, behaviours and achievements is a fairly complex one” (Higgins et al., 2005, p. 6). Uline and Tschannen-Moran (2008) explored school climate as a link between school building quality and student achievement. Their study surveyed teachers from 80 middle schools in Virginia using bivariate correlational analysis to explore the relationships between the quality of facilities, resource support, school climate, student SES, and student achievement and well as multiple regression to test school climate as a mediating variable between the quality of school facilities and educational achievement. They found a link between quality of school facilities and educational achievement in English and math as well as a positive relationship between facilities and three school climate variables (p. 55). They also found that school climate did indeed mediate the relationship between teachers’ perceptions of quality of school facilities and student achievement (p. 66). Later work by Uline, Wolsey, Tschannen-Moran, and Lin (2010) used a mixed-methods triangulation design and confirmed earlier findings that there were moderate to strong relationships between the quality of facilities and school climate.

Scholars have also examined relationships between physical disorder (e.g., broken windows and poor building conditions), fear, collective efficacy, and social disorder in schools (Plank, Bradshaw, & Young, 2009). Plank, Bradshaw, and Young (2009) used path analysis to evaluate survey data from 33 public middle schools and found a “direct association between physical disorder and social disorder even when prior levels of collective efficacy are controlled—a finding consistent with traditional broken-windows theories” (p. 227), pointing to the need for ongoing maintenance in schools. A commonly researched mediating factor between the school building and academic outcomes is teacher health and productivity, with teacher attitudes, perceptions, feelings, and morale used as dependent variables (Earthman & Lemasters, 2009, p. 324; Horng, 2009). In their study comparing teachers’ attitudes at 22 high schools—11 whose principals rated the schools in satisfactory condition and 11 unsatisfactory—Earthman and Lemasters (2009) found that “Teachers in satisfactory buildings also have more positive attitudes about their classrooms and how that space influences them and their students” (p. 333). Buckley, Schneider, and Shang (2005) have linked poor building conditions to lowered teacher attendance, while Duran-Narucki (2008) found a similar pattern with student attendance.

Researchers have attempted to understand what factors, including student demographics, pay, and working conditions, encourage teachers to leave or remain in their current positions. Regression analyses have indicated the “effect of student characteristics on teacher turnover is significantly reduced when district salary levels and teachers’ ratings of working conditions—including class sizes, facilities, and availability of textbooks—are taken into account” (Horng, 2009, p. 694). Another recent study of the Los Angeles Unified School District’s \$27 billion construction program found that teachers were enthusiastic about new facilities conditions (Fuller et al., 2009, p. 344). Though equity considerations are not at the fore of much of this literature, these findings have important equity implications given that low-income students and students of color disproportionately attend low-quality facilities. The next section more fully reviews these connections.

Research Comparing State Facilities Policies

Despite the unresolved empirical questions regarding the extent to which facilities, and which aspects of facilities, in particular, impact various educational outcomes, research on facilities policies often takes the positive impact of facilities on educational outcomes as a given. “Indeed, state policies for infrastructure funding are predicated on its central role in educational production” (Gronberg, Jansen, & Taylor, 2011, p. 194). The research comparing school facilities policies is primarily conducted by policy organizations including university research centers, national think tanks, and other local, independent research organizations.

Comparative facilities policy research is practical given that educational facilities policies vary widely by state. As a result, school facilities from state to state vary considerably. The 21st Century School Fund, an organization that attempts to build public will to improve public school facilities, produces reports highlighting differences in state facilities policies. One of their most comprehensive analyses to date used U.S. Census data from 2005-2008 to examine how much capital outlay each state expended on educational facilities. Through surveying each state to separate expenditures by local versus state sources, they found that while some states contribute over 50% of the cost of educational facilities, eleven states contribute 0% (Filardo, 2010).

Other recent work has also looked at the impacts of facilities policies across all 50 states, with some attempting to understand the extent to which state policies impact the overall costs of educational facilities (Vincent & Monkkonen, 2010). Duncombe and Wang (2009) used data from the National Center for Educational Statistics (NCES) Common Core of Data School District Finance Survey, providing summaries of various types of state school building-aid programs. The authors found that almost all states limit the overall level of state funding for school facilities, and most states require voter approval for capital projects, and 27 of the 38 states with building aid require state project approval (Duncombe & Wang, 2009, p. 332). Most importantly, they argued that state policies affecting building-aid formula affected the level of inequality in capital investments.

Other research looks at one or two states in depth. For example, Davis (2015) took advantage of policy changes at the state and federal levels to compare a state-run facilities program to a federal facilities program. He found that Ohio does “appear to have a more equitable distribution of capital facilities” than Michigan, a state with weak state support for school construction (p. 3). Similar to the literature reviews of the impacts of school facilities on educational outcomes, the literature comparing facilities policies critiques the data limitations and variations in research quality. The literature finds that variations in facilities policies impact facilities outcomes, which arguably impact educational outcomes.

Research on state taxes for educational facilities. Taxation and financing mechanisms for educational facilities vary by state political and policy preferences as well. Many states, including Texas, rely primarily on local general obligation bonds. Frustratingly for school administrators, the empirical research is divided on what factors are associated with facilities bond passage, and past research tended to indicate that few factors affecting bond passage were under the influence of administrators (Bowers & Lee, 2013; Piele & Hall, 1973). However, more recent research has centered on bond characteristics, as opposed to voter characteristics, when trying to study determinants of bond passage. The primary characteristics studied include: “refloats, amount of the bond, bond wording, day of the year, voter turnout, and ballot number” (Bowers & Lee, 2013, p. 7). Bowers and Lee (2013) considered the history of voter support, noting in their review of research that tax burden was positively related to a school district’s likelihood of passing another bond,

indicating that communities that have already exhibited a willingness to tax themselves to fund public school infrastructure are more likely to continue doing so.

While school districts hoping to raise funds for facilities are limited by state policies and funding programs, recent research has begun to identify factors associated with facilities investment that districts can influence, such as bond campaign expenditures (Ingle, Johnson, Ryan Givens, & Rampelt, 2013), and refloats, amount of the bond, bond wording, day of the year, voter turnout, and ballot number (Bowers & Chen, 2015; Bowers & Lee, 2013). Researchers have also identified the sequence of decisions school district officials make in the facilities bond issuing process (Harris & Munley, 2002) and strategies that school board members working to pass bonds can follow (Milder, 2011; Stover, 2012). These studies reveal that, in order to obtain facilities funding, school districts deal with politically, socially, and economically charged and complex issues, including tax policies, state spending debates, and public elections.

Overall, the literature includes important discussions and findings. However, scholars have yet to adequately examine the effects of facilities policies on individual school districts and how school district leaders and facilities staff implement state policies. In addition, much of the work is written with a non-critical lens, obscuring the effects of fiscal policies on marginalized communities. To address these gaps, this study examines the effects of facilities policies on individual districts' investments in educational facilities as well as how districts' actions and constraints within the policy system affect school facilities investments.

Research Objectives

While the extant literature has yielded important discussions and findings for researchers and practitioners, it has not fully explored the effects of facilities policy implementation at the local level. Burch (2009) explained how the first layer of policies, *mandates*, establish the rules, “but the regulations, guidance, and budgets will bring the game into being” and “are important windows on the current ideologies used to stabilize public policy” (p. 7). Critical policy analysis critiques the differential effects of policies for various segments of the population and is attuned to how policies impact communities differently, with regard to wealth, location, and race. To understand facilities funding policies, it is necessary to look beyond the text of the legislation and evaluate how the policies are implemented at the school district level. As yet, critical policy scholars have not sufficiently applied their lens to the particulars of facilities finance policies.

Although several studies have taken up facilities inequities across state lines (Filardo, 2016), facilities policy variation between states (Duncombe & Wang, 2009; Vincent & Monkkonen, 2010), and the actions of local school district leaders (Harris & Munley, 2002; Milder, 2011; Stover, 2012), in this study, we examine variation in facilities policy implementation in several districts even in close geographic proximity in the City of San Antonio, Texas.

Research Methodology

Data Collection

For this research, we utilized a mixed-methods approach, including quantitative analysis of school finance data and qualitative interviews from 12 San Antonio area school districts. We obtained the Texas Education Agency school finance dataset for the 2015-2016 school year, with permission, when one of the authors was a fellow at the Intercultural Development Research Association (IDRA), a local nonprofit that advocates for Texas children and equitable school finance, among other issues. IDRA researchers requested this dataset, which includes property

values, student enrollment, district tax rates, state aid for facilities, and local facilities revenue, from TEA as it was utilized in 2014 in the *Texas Taxpayer & Student Fairness Coalition, et al. v. Michael Williams, et al.*, leading up to the May 2016 Texas Supreme Court outcome.

Interview data were collected between December 2016-February 2017 and included interviews with 11 San Antonio area school district leaders and staff, representing eight school districts throughout the city. Interviews ranged in length between 30 – 60 minutes. Initially, sampling was purposive and reputational (Miles, Huberman, & Saldaña, 2014). We visited each school district's website and sent emails to individuals working with facilities, maintenance, or finance. Position titles varied by district. We then scheduled interviews when possible, and we followed up with two reminder emails and phone calls if we did not receive a response. We also engaged in snowball sampling, asking respondents if they could recommend other experts (Small, 2009). We used a semi-structured, non-scheduled interview protocol and probed for more information when participants mentioned topics that were relevant (Patton, 1990; Spradley, 1979; Weiss, 1994). Because we interviewed people in various roles, it was not possible to collect the same information from each respondent, nor was it possible for the answers to be comparable and classifiable, though interviewing allowed us to check our own interpretations of the data with respondents (Richardson, Dohrenwend, & Klein, 1965). All interviews were audio-recorded and transcribed.

Data Analysis

For the quantitative component of the study, addressing the first research question, *To what extent do state and local investments vary by district?*, we calculated state and local investment per penny of tax effort per student and analyzed investment as it relates to property wealth per student. We then created a few visual displays to help us further interrogate the data and push our understanding.

To address the second research question, *How do district actions and constraints affect facilities quality and equitable investment?*, all interview transcripts were coded in Dedoose beginning with a provisional “start list” of deductive codes from the literature (Miles & Huberman, 1994, p. 58) and then with inductive codes that emerged from the data (Coffey & Atkinson, 1996). (See Table 1.) Throughout the analysis process, we used tactics to verify findings. For example, after adding the new codes, we recoded transcripts through the process of *extension* (Miles & Huberman, 1994), paying attention to exceptions and surprises, which provided an opportunity to revise hunches (Coffey & Atkinson, 1996; Miles & Huberman, 1994). We wrote memos to identify patterns and supplement field notes, which, along with data displays, allowed us to begin triangulating the data across sources (Miles, Huberman & Saldaña, 2014). As patterns emerged, we copied and pasted coded segments of text into relevant themes in, which allowed us to verify and expand our understanding of the data. The methods came together to focus on the implementation and outcomes of school finance policies with an emphasis on quality, equity of investment levels, and school district actions and constraints.¹

¹ Authors obtained IRB approval.

Table 1
Qualitative Codes and Code Descriptions

Code	Code Descriptions
<u>Deductive Codes</u>	
Affected by other schools	Respondent talks about how public school facilities are affected by the existence of local private or charter schools
Private school	Respondent talks about students leaving for private schools
Bond campaign/bond sales	Respondent talks about the bond campaign or bonds in progress
Capacity	Respondent mentions staff or district capacity to provide facilities resources
Change over time	Respondent talks about facilities changes over time
Demographics	Respondent talks about the demographics of the district
Fast growth	Respondent talks about how the district is growing quickly or issues affecting fast growth districts
Slow or no growth or decline	Respondent talks about how the district is not growing or not growing very quickly
Socioeconomic	Respondent talks about socioeconomic status of students/families/community
Effects of state policies	Respondent talks about the effects of state policies on school facilities
Facilities planning process	Respondent talks about the school district's facilities planning process
Inequity/equity in funding or quality	Respondent talks about inequity in facilities funding or quality
Interdistrict equity (between districts)	Respondent talks about the differences between school quality in different districts
Intradistrict equity (in one district)	Respondent talks about the differences between school quality in their district
Learning needs	Respondent talks about the learning needs of the district
Legislature	Respondent talks about the legislature
Policy solutions	Respondent talks about policies that would make funding more equitable
Private actors	Respondent talks about private actors involved in school facilities decisions
Quality	Respondent talks about the quality of the district's schools
Race/ethnicity	Respondent talks about race/ethnicity
Safety	Respondent talks about safety
State dis/investment	Respondent talks about state disinvestment or the investment the state makes in facilities
Tax base	Respondent talks about the tax base of the district
<u>Inductive Codes</u>	
Unfunded mandate	Respondent talks about policies as unfunded mandates
Frustration	Respondent mentions being frustrated by current circumstances
Voters	Respondent talks about voters or voter support
Strengths of state or local program	Respondent talks about the strengths of state or local program
Weaknesses/Barriers of state or local program	Respondent talks about the weaknesses of state or local program

Texas School Finance Data Findings

The 12 traditional² school districts that comprise the predominantly Latino and segregated San Antonio area vary considerably in property wealth. Table 2 displays basic district demographic information, including the number of schools, number of students, and the percentage of students who are economically disadvantaged, highlighting the disparities in school district size and population that can occur within the same local community. While three of the school districts studied have fewer than ten schools, another district maintains 99 schools and yet another has 114 schools. Ten of the 12 San Antonio area school districts have economically disadvantaged student populations greater than 50%. One district, Alamo Heights, is an outlier with less than 21% of its population falling in this category. This district can be contrasted with the Edgewood School District, whose economically disadvantaged percentage falls on the higher end of the spectrum, at 94%. The average percentage of students who are economically disadvantaged of the 12 San Antonio districts we studied is 64.2%.

Table 2
District Descriptives

District name	Number of schools	Number of students	Economically disadvantaged percentage
Alamo Heights	5	4,760	21%
East Central	15	9,811	64%
Harlandale	31	15,270	88%
Judson	30	23,292	63%
Northeast	75	67,757	45%
Northside	114	102,950	51%
San Antonio	99	53,701	92%
Somerset	8	3,932	80%
South San Antonio	19	9,953	93%
Southside	8	5,332	78%
Southwest	17	13,479	83%
Edgewood	19	11,726	94%
Average	37	26,830	64.2%

Figure 1 displays student ethnicity by school district. San Antonio is a predominantly Latino city. According to the Texas Education Agency, over 79% of its student population is Latino, 14% is White, 5% is African-American, and 3% are other ethnicities. Six of the 12 school districts represented in this study are comprised of student populations that are over 75% Latino.

² San Antonio's three military school districts are excluded as they are governed by different facilities funding policies.

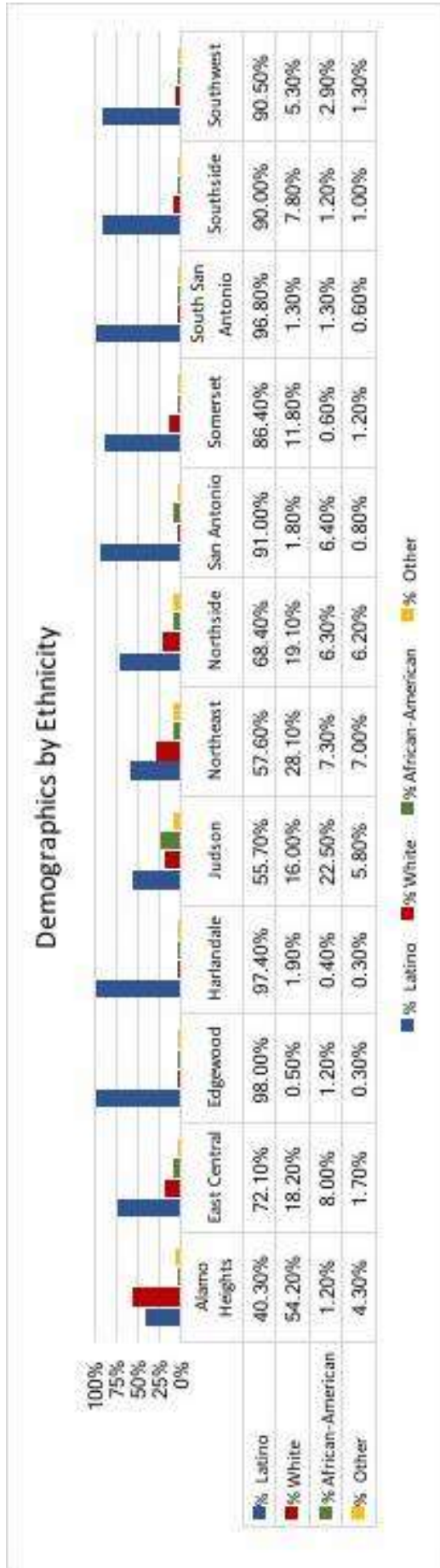


Figure 1. Student ethnicity by district

Analysis of TEA school district taxation data indicates that school district property wealth—as well as district actions and constraints—affect facilities quality and equitable investment. Greater school district tax effort does not ensure higher total facilities investment. For example, Southwest Independent School District (ISD) exerted 43 pennies of tax effort and generated approximately \$35 in state and local revenue per penny per student, resulting in \$1,489 of facilities investment per student. Meanwhile, Alamo Heights ISD exerted 15 pennies of tax effort and generated approximately \$119 per penny per student, resulting in \$1,732 of facilities investment per student. (see Table 3). Interestingly, the school district with the greatest property wealth per student and two of the districts with some of the lowest property wealth levels per student show the lowest school district tax effort.

Analysis of data further reveals that comparably sized school districts do not necessarily receive the same level of state funding for facilities. For example, Edgewood ISD and Harlandale ISD are similar in regard to the total number of students and the total property wealth per student, yet there is a significant difference in their facilities investments. Whereas Edgewood ISD exerts 19 pennies of tax effort and receives \$495 in State facilities aid per student, Harlandale ISD exerts 36 pennies of tax effort and receives \$827 in state facilities aid per student.

Despite significant variation in pennies of tax effort, the total investment per penny of tax effort per student for nine of the 12 districts falls between \$32-\$39. Somerset (at \$54) and North East (at \$48) each had higher total investments per penny per student, though their pennies of tax effort were dissimilar at 11 pennies and 40 pennies respectively. The most obvious outlier is Alamo Heights, whose total investment per penny of tax effort per student, at \$119, is more than three times the total investment of nine of the 12 districts we studied. The next section, examining qualitative interview findings, explores these disparities further.

Table 3
School District Facilities Investment

Independent School District Name (ISD)	Pennies of Tax Effort	Property Wealth Per Student	Local Facilities Investment Per Student	State Facilities Aid Per Student	Total Facilities Investment Per Student	Total Investment Per Penny of Tax Effort Per Student
A. Somerset	0.11	\$100,008	\$114	\$472	\$586	\$54
B. Alamo Heights	0.15	\$1,180,778	\$1,712	\$20	\$1,732	\$119
C. Edgewood	0.19	\$86,527	\$177	\$495	\$672	\$35
D. Southside	0.22	\$229,551	\$522	\$321	\$843	\$39
E. East Central	0.24	\$275,837	\$643	\$180	\$823	\$35
F. Northside	0.34	\$385,970	\$1,296	\$15	\$1,310	\$39
G. San Antonio	0.34	\$258,983	\$902	\$328	\$1,230	\$36
H. Harlandale	0.36	\$78,399	\$303	\$827	\$1,130	\$32
I. Judson	0.39	\$302,721	\$1,186	\$189	\$1,375	\$36
J. North East	0.40	\$470,960	\$1,908	\$26	\$1,934	\$48
K. South San Antonio	0.41	\$142,706	\$606	\$778	\$1,384	\$34
L. Southwest	0.43	\$156,153	\$819	\$670	\$1,489	\$35

While state facilities aid disproportionately funds districts with lower property wealth per student, the funding formula is insufficient to make up for the constrained ability of some local districts to raise money through local property taxes. This analysis is shown visually in the two figures below. Figure 2 displays the extent to which a district with greater property wealth per student can rise above other districts with similar tax effort in total facilities investment per student. The bubbles in this graph show the districts by pennies of tax effort. The size of the bubbles represents property wealth per student (including state aid dollars), and the districts with more property wealth per student literally rise above the other districts in terms of how much money they can invest in educational facilities. Letters in each bubble refer back to the corresponding school districts in Table 3. When state and local facilities investment per student and district tax rates are directly compared, the disparities between the 12 school districts in San Antonio become quite clear (see Figure 3).

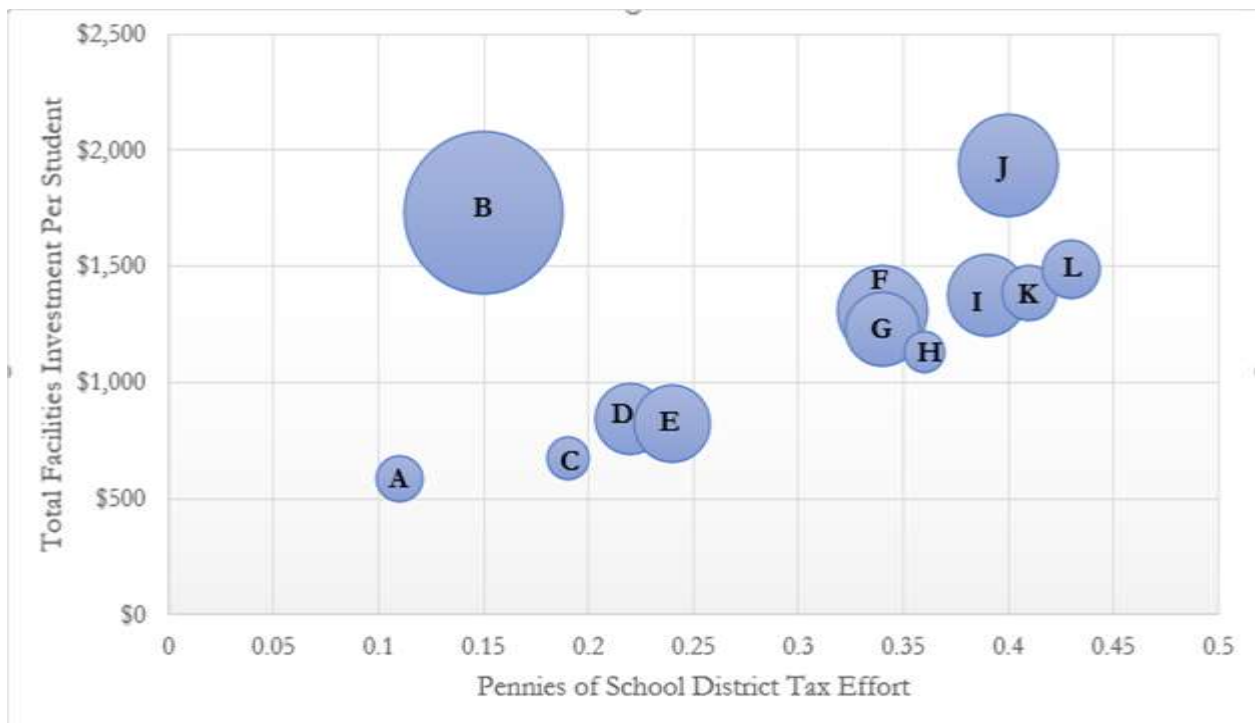


Figure 2. Total facilities investment per student by tax effort and property wealth per student

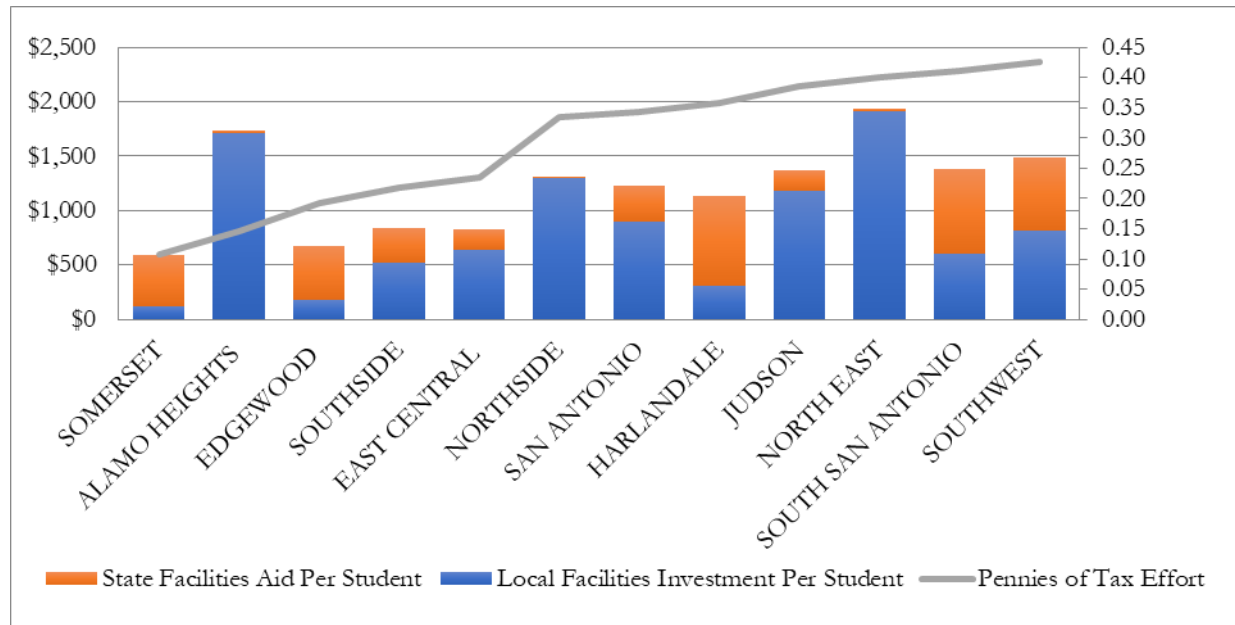


Figure 3. State and local facilities investment per student and district tax rates

Interview Findings

State Disinvestment Over Time

Respondents from a few districts interviewed for this study expressed gratitude to the state for providing support for educational facilities, either currently or in the past. A staffer in a medium-sized, economically disadvantaged district with over 90% Latino students acknowledged that state support provides much-needed assistance, saying, “Granted the bonds are helped along by the fact that we are at an economic disadvantage so the state picks up portions of that bond so it makes it a little bit easier for us to pass than some of the other districts.” However, the majority of respondents were critical of the inadequate level of state investment. Since the State of Texas implemented the IFA and EDA programs in the late 1990s, the State of Texas’ funding for educational facilities has not kept up with inflation. In general, respondents pointed to a decline in state funding over time. A staff member of a small, economically disadvantaged, almost entirely Latino district put it well:

There’s a formula that the state uses where you can only get so much. There’s two revenues. You’ve got your local tax revenue and then you have your state revenue... And if you collect more on the local side from the taxes, then that lowers your state revenue... If you collect less on your tax revenue, then the state aid goes up... This came into play, I think, in 2006 or so... But there was some of the growing cities and towns that were getting a lot of money in comparison to towns that are like, there is no growth and they were barely surviving because they don’t collect enough property tax. The state came and said, “Hey, you know, we’re gonna put a cap and we’ll compensate you with state aid.” Well, that was great in the first couple of years, but then that budget started shrinking and now we’re not getting that aid that we were supposed to get.

Another criticism is that the IFA and EDA programs now support fewer districts than they did in the past. According to a former district leader from a district that used to receive state support, but no longer does, “There was a time where because of our property, where for students, especially in some of those faster-growing years, that we were getting EDA assistance from the state and it was quite helpful to the tune of tens of millions of dollars a year on the I&S side of our tax rate. That has long since gone away and so we really get no direct assistance from the state and haven’t for years with regards to facilities funding.” The former leader explained that while the district does receive state support, “we were able to keep our tax rate basically the same, around 28, 29 cents per 100 dollars of valuation. Then the property value in [the district] grew such that we did not qualify for EDA funding anymore. And so when that happened, we did not get any money from the state, and so our tax rate actually increased up to probably about 34, 35 cents over that time period.” This led members of the district to worry that support for subsequent bonds would decrease, though district voters have, to this point, supported bonds despite the lack of state funding.

Overall, respondents described state allocations into the two primary funding programs (EDA and IFA) as erratic and unreliable from year to year. According to one school board member of a very large, middle class, suburban, fast-growth district, the state’s Instructional Facilities Allotment (IFA) program was unreliable. She explained, “IFA was, you’re at the mercy of the legislature, and so there were years where there was no IFA money... So that is not something that school districts have ever been able to count on. You know, sometimes there is IFA money, and sometimes there isn’t.” Many district representatives spoke about feeling like they were in a “fight” or “struggle” to get enough funding. A district representative in a large, economically disadvantaged district with over 90% Latino students expressed:

I think it would be helpful if some of the state funding, either through a state bond, to bring all the state facilities to a minimum level, would be beneficial for the state as a whole and for the school districts who have been trying to catch up with everybody else. So the funding mechanism for facility improvements that get us to no less than a certain acceptable minimum is important, instead of what we have right now. I mean, every school district struggles on their own to get funding.

Simply put, the inadequacy of state investment leaves some districts struggling to provide not only high-quality facilities, but also everyday expenses. As one board member at a medium-sized, economically disadvantaged, almost entirely Latino district put it, “As far as educational facilities, the only barrier we’d come across is [having] enough funds to cover our main expenses on a daily basis.” A staffer in a second medium-sized, economically disadvantaged district with over 90% Latino students complained that the state expects schools to do too much with too little support, saying, “they’re kind of putting it on the schools, that we have the money, we just need to figure out how to make it work. But I don’t think there’s enough funding there from the state for certain things.”

Even districts in higher wealth, middle-income communities are struggling with budget cuts on the M&O side, which affect districts’ capacities to fund ongoing maintenance. As a staffer at a large, middle class, suburban, recently fast-growth district described, “I talk about it from the standpoint of a maintenance owner of facilities, okay? Because, since 2011, when they changed the formula funding for school districts, [this district] has lost over \$125 million dollars. Over those years, okay, so what happens is that money, now we have less money, but that doesn’t mean that we’re going to reduce the programs or what we offer our students. Okay? We’re still gonna maintain that high level of academic excellence that we have in this district. But something’s gotta give.” He went on to describe that it is difficult for facilities needs to compete with teachers’ salaries and other budget items that are viewed as more closely linked with teaching and learning.

Some district officials also expressed frustration with the state for issuing unfunded mandates, referring to them as unexpected obstacles of grave concern. For example, one facilities director discussed the state's recent unfunded mandates regarding cameras and restrooms:

But how do you fund all of this equipment and then the hours and the manpower and the cabling to put cameras in all these special ed classrooms and where do you find that money? We already had our budget turned in. It was approved in June by the board, and then the state comes back and says in August, "Hey, y'all need to put all these cameras in the special ed classrooms." And then in November, they came back and said, "Y'all need to start converting some restrooms into unisex restrooms." So those are things that, well, there's no money behind it, but you want us to do it. Those are tough ones.

When districts are already struggling with inadequate funding levels, unfunded mandates add insult to injury.

Pressure on Local Taxpayers, Not the State

While Interest and Sinking (I&S) taxes are collected to repay bond debt that covers facilities construction and major renovations, districts use Maintenance and Operations (M&O) taxes, which come from a combination of state and local sources, to fund the ongoing upkeep of facilities, including custodial services and repairs. Therefore, both types of taxes affect districts' abilities to maintain high-quality educational facilities. The result of state disinvestment on both M&O funding and I&S state aid is increasing pressure on local taxpayers. Respondents for this study agreed that the state's school finance system puts the majority of the burden for funding educational facilities on local property owners. A staffer in a large, middle class, suburban, recently fast-growth district explained:

One of the issues that we have is the entire burden for facilities is placed on the local taxpayer, okay? And I think that's just, that's so important that people have to realize and understand it that the local taxpayer is the one who bears the brunt of all of the prosperity that's going on in this state. You know, the state of Texas is out there promoting business. "Come to Texas, come, you know, we're such a business-friendly climate. No state income tax." I mean, Texas is the place you want to be. Well, then that trickles down to the brunt of the local taxpayer in the school districts trying to fund, and we have to go out and, at the mercy of our taxpayers, to pass that bond so we can have the money to build schools.

Another district leader in a very large, middle class, suburban, fast-growth district described that they worry voters will stop passing bonds at some point, given that the district repeatedly goes back to the local taxpayers, every few years, asking for more money for educational facilities. He reported, "There is real pressure on the property homeowners. Homeowners feel property tax bills in Texas perhaps more than you do just about anywhere. And so anytime you go out for a bond referendum, you're saying to people, potentially your property taxes, which you already feel like are high, could go up. And so obviously, that takes some significant explanation of what are we as a community getting for these dollars? So there's both a state issue and a local issue."

State funding is also not consistent from year to year. If property wealth in a district increases, then the state reduces the amount of money it provides. As one staff member in a medium-sized, economically disadvantaged district with over 90% Latino students explained, "we're totally dependent on rooftops as far as tax funding because we don't have a whole lot of

business... We're in that poor range and the state gives us funding or helps out with [facilities funding]. But as we gain, like because [corporate factory] came on the books, we get money from [corporate factory], but our state funding is down so it really is just a wash."

In fact, the State of Texas has benefited from rising property values in recent years. A school board member explained that while their district used to benefit from the state's IFA program, rises in property wealth now disqualifies them from receiving state aid. The board member explained:

When our property values increase, that means that the state gives us less money the next year. So we're able to benefit from that the first year. The next year, the state pulls back. So are we getting any more money from increased property values? No. We're not getting any more money. We're getting less money from the state. So more and more of the support for education has come from local funds versus state funds. And those that are sending money back, it's not coming back to the school districts. They're using it to help with the gap in the franchise tax.

One former district leader explained that it "isn't fair that the state reduced its responsibility to fund education when, and really let property value increases in districts and local residents who pay the taxes on those property values to really fund increases for the funding of education. I think that is wrong, I think the state of Texas totally abdicated its responsibility as far as funding. And that's on the M&O side." Inadequate maintenance and operations funding affects districts' abilities to maintain their educational facilities over time.

Inequitable Tax Bases Lead to Inequitable Tax Rates

Given the emphasis on local funding for facilities through local property taxes, disparate tax bases affect individual district tax rates. While some school districts benefit from rising property values or the presence of businesses, other districts that have slower growth, are already built out, or otherwise, have lower property wealth must tax themselves at higher rates to raise the same amount of money per student. In a school district located downtown, the staffer acknowledged, "the downtown businesses are really paying a big chunk of the bill." Another staffer in a medium-sized, economically disadvantaged district with over 90% Latino students compared their district's tax base to others, saying "as far as like the other districts in our area, they have HEB's and Walmart's and businesses and stuff. We don't. We finally got our first Walmart. This was the first grocery store in, actually built in our district was last year." Another facilities staffer in a small, economically disadvantaged, almost entirely Latino district explained:

It seems that our budget is shrinking every year... The fact that we're locked in, we're not growing. If anything, we're losing some of our kids. So our enrollment, ADA, is not helping. And then as far as new properties being built, we don't have any neighborhoods... So we're not getting additional new funds, but we're just getting the same funds as that they're assessed at a higher rate. You know, and so as far as any more money, no we're not getting money. We're losing more money. Like we're working with a budget that worked in 2010 and here we are in 2016 or 2017. It's not keeping up with inflation.

While most districts must increase their tax rates when they pass a bond in order to cover the debt service, districts with rapidly increasing tax bases can pass bonds with no tax increase as one district staffer explained, "Because we have the tax base and the revenue to meet our obligation and so we've actually been able to reduce our tax rate. The [several hundred million] dollar bond—we passed that with no additional tax increase." Therefore, that school district was able to make

significant improvements to its school facilities with no tax increase while other districts with anemic tax bases struggle to convince their voters to support repetitive tax increases for school facilities.

Furthermore, another district staffer in a medium-sized, economically disadvantaged, almost entirely Latino district described how their district is “restricted and limited to issue bonds that would qualify under either the Instructional Facilities Allotment, the IFA, and/or the Existing Debt Allotment, the EDA program” because they do not have the tax base to raise enough money without state support. The staffer acknowledged that “While both of these programs are [the] state’s efforts to equalize facilities funding, even the disparity between property values of LEAs, the district is confined to appropriation under the IFA program and the tax effort in the second year of a [bond program] of the district to determine the amount of state support you will receive to fund the district’s annual debt under the EDA program. Other LEAs have a richer tax base that allows them to determine the size of their bonds based on their property values and do not need to rely on either program or very little reliance.” In short, while some districts have the flexibility to determine the size of their bonds based on the needs of their facilities, others are limited by what the state can help provide.

Due to fluctuations in state funding and the practice of raising local tax dollars through local bond sales, some districts have learned not to rely on the state. As a staffer in one large, central, economically disadvantaged district with over 90% Latino students reported:

Because of the racial segregations and all that, but you know, it would be a possibility for what I would like to see, I don’t see it likely in the short term. But we’ll go on. We don’t sit and wait for the state. In fact, one of the ways we sell our taxpayers to help us pass the bond, if you’re waiting on the state to do those things, it will never happen.

While the state provides state aid for educational facilities through the IFA and EDA programs for the lowest property wealth districts, school districts must first pass a local bond. A facilities staffer in a large, economically disadvantaged district with over 90% Latino students expressed:

The school district has to really work hard to pass a bond. I mean, [the state will] only give you the money if the taxpayers are willing to put a big share of the cost and they can subsidize you in making payments on the debt. So, you know, it’s a school district, so like why, if we’re expected to meet certain standards, why are you putting the full responsibility on us? Sometimes it’s kind of hard, you know, passing a bond because you’re increasing the tax rates of the local taxpayers. So yeah, there’s this disparity and some school districts, their taxpayers are having to pay big property bills and some don’t, depending on how rich the property is for that area. I mean, it’s all based on property values. So, there is really a big inequity.

In short, taxpayers in property-poor areas benefit from higher state support, but those taxpayers must pay higher rates to raise the same amount of money per student. However, it is not only property-poor districts that feel for their local taxpayers. Property-wealthy districts’ taxpayers bear the full burden of paying the debt service on facilities bonds because they receive little or no state support. A staff member in a large, middle class, suburban, recently fast-growth district described their situation the following way:

So that is where we’re at, as compared to, you know, say [two property-poor districts], where it’s probably flipped, you know, 70% of their funding comes directly from the state and, you know, only ten or 20% comes from their local property taxpayers. So, you know, the state, of course, does not provide us funding for

facilities. That is a burden that is put on the local taxpayers. And if you're a fast growth district, which we have many [in the state], those taxpayers bear the brunt of the growth that's happening in Texas...we've slowed down because we're almost built out...Over the last many years, any funding that we get for facilities, of course, has come from our local taxpayers.

Inequitable Tax Bases Lead to Facilities Inequities

Respondents from each of the districts participating in this study indicated that their facilities departments work diligently to maintain their educational facilities to the highest possible standards. A common theme was the pride that districts take in maintaining their school facilities for their students and communities. A staffer in a small, rural, middle class, majority Latino district described how the district works to maintain the quality of all of their district's schools saying:

You know, I think that they're very good, as far as you know, the condition of them. I know some of our older schools, which we are focusing on...I mean, we've done other upgrades to the campuses and tried to spread that to all of the campuses, and I think that's one of the things that the taxpayers see is that there's not just a focus in one area or one school. It's meant to be spread so that all of the district can get a benefit from the taxpayer bond monies.

Another staffer in a medium-sized, economically disadvantaged, almost entirely Latino district stated proudly that:

The district has done a really good job of having long-term goals on how to get those things done. All our middle schools, all our secondaries, including the high schools, have comprehensive renovations. We gutted hallways and facelifts and so modernized all secondary schools. So I think if you compare our buildings with anyone else's in the district and they'll be really, really comparable and of better quality than some other districts.

This achievement is notable given the district's relatively low property wealth.

However, the fact remains that funding for educational facilities amongst the districts in San Antonio is vastly inequitable. At one end of the spectrum, a board member discussed their plans to increase the size of a school's auditorium, saying:

So we are going to go ahead and put in a brand new auditorium with a fly loft and an orchestra pit. So that's how we take care of our campuses... we're always conscious about, you know, some people will say, "Oh my God, it looks like the Taj Mahal," or you know, whatever. But you build it with quality materials with the idea that it's gonna last.

On the other end of the spectrum, some districts struggle to keep air conditioners in working order. A facilities staff member in a small, economically disadvantaged, almost entirely Latino district described:

There's some work that needs to be done, such as painting, such as replacing A/C, maintaining our roofs. And technically, overall, better lighting, better halls, and so forth. Because these buildings were built back, you know, some of them go back into the 1940s and 1950s...We're not getting any worse, but we're not getting any better. We're just maintaining. So instead of being proactive [about our buildings,] we're more reacting.

Another staffer at a large, economically disadvantaged district with over 90% Latino students described their facilities as:

Less than average at this point, compared to the suburban school districts...Mostly because they are older facilities and, you know, we have a really strong maintenance program to keep them functional, but I wouldn't say they're as good as some of the newer facilities that have been built over the past... basically of every bond, we've picked our worst condition facilities and so we're really only gonna either renovate or replace.

Many other respondents also referred to the age of school facilities, agreeing that school districts in San Antonio vary significantly in the age of their facilities. As a staffer in a large, older, economically disadvantaged district with over 90% Latino students described:

I'd like to see policies that provide equity in school funding, at least in facilities, in the short term, because we're, you know, I feel that we still need like two bonds, and by the time we get there, we're feeling like we're gonna start all over again. You know? The ones that we fixed through the 1997 bond program are ready to be fixed again. One challenge we face here, in particular, we have a lot of historic facilities. They're beautiful facilities, but they're very expensive to maintain and operate, and we don't get any support, and we can't replace them. Because they're historic. So we really have to keep, spend a lot of money on them, and we don't get any support from the city or from the state having to spend that extra money. And you would think there should be at least some kind of funding mechanism to support that. But they make the property owners responsible for that 100% and, you know when it comes to a public entity like us, it's just like we're facing a big challenge.

While many respondents indicated that they were not familiar enough with other districts' facilities to speak to interdistrict inequity across the city, several respondents offered incisive comparisons. A district staffer in a medium-sized, economically disadvantaged, almost entirely Latino district was proud of the quality of his district's schools, though he acknowledged:

If you match the same kind of property wealth that [our district] has and compare them to the neighboring schools that we have, I think our buildings are, and I might be biased, but I think they're better than those districts. But then if you start comparing us to [two wealthier districts] then you're not really matching the same apples for apples in comparison to, you know, you walk into a [wealthier, suburban] High School and they'll have marble floors and...the money they spend on their buildings compared to the money we spend, they spend a lot more money in their construction than we do. But I think our buildings match up with any of them.

A staffer in a large, middle class, suburban, recently fast-growth district related:

We've been very blessed over the last 25 years of passing school bonds to build new schools, to upgrade new schools, remodel older schools... I've had the opportunity to visit other districts in other states and other districts in Texas, and our facilities are just quality. We build them to last...They're not only aesthetically pleasing, but I think they are well-designed to, you know, to meet the needs of our students.

However, the staffer then acknowledged that “not every district can do that,” depending on the growth of their tax bases. Perhaps the most insightful and honest comment came from a staffer in a small, economically disadvantaged, almost entirely Latino district who spoke about the socioeconomic segregation in the city of San Antonio, comparing school facilities resources to other public resources:

It’s usually the nicer part of the town that gets the nicer roads. You know, so here we are in San Antonio, we’re the older part of San Antonio, and we’re south side, you know, so not a lot of emphasis is put on our area. You know? We don’t see people coming in here and saying, “We’re gonna open up a new mall.” We’re not gonna open up a new apartment complex. You know, they’re going out into the newer north side, you know. Uptown, you know, that’s where most of the money’s going...they see us as the ghetto, they see us as the poor part of San Antonio.

A school leader of a very large, middle class, suburban, fast-growth district compared the inequity amongst educational facilities in San Antonio to inequities between facilities in districts in other cities around the state:

It’s going to vary massively and that, I would say that that is likely true if you looked at the Houston, or the Dallas, or the Austin areas as well and the reason is that each, as you said, each district even if they’re literally next door to each other has a completely different funding situation. Some of those districts get state facility funding. Others do not. Some have a maintenance and operations budget that is big enough that they can afford to do some large-scale maintenance out of their operations budget. Others do not. School building age varies hugely across the city. You know, with areas like [older district] having literally 100-plus-year-old buildings, and again we have some that literally opened in August, you know you can still smell the fresh paint. So, so kind of the way that some of that is just controlled by the way San Antonio developed historically, you know started as a very tightly centered you know downtown and you know, area, and then blossomed out, especially to the north so quickly after World War II. So some of it’s a function of that, but you know the quality of facility would vary hugely. You know, I’ve been in some [older district] schools that are...just a place where I wouldn’t have my own child, my son go to school, just abysmal. You know, no access to technology, no wireless, you know, mold, visible, I mean, just you know, really problematic. It’s clearly a distraction to the learning environment for kids and you know, they’re doing, they’re all doing what they can. They’re doing what they feel like they can afford, they’re prioritizing their dollars you know, the way they think they should. But yeah, there are facilities in San Antonio that we would, we would never allow and yet even within our own system, the variance is very large.

These excerpts reveal how a history of racial and socioeconomic segregation in San Antonio, combined with state disinvestment, have resulted in an inequitable school system.

The Frustrating Political Reality in Texas

With regard to policy solutions, all respondents agreed that the state needs to play a more active role in funding for facilities. One former district leader’s comments were reflective of most respondents’ policy proposals:

Well, the first thing they could do, they could write a formula that would fund the M&O side equitably. You know, it's still not right that [wealthier district] has, at one time, and it may not be that way now, but it's probably pretty close. They had \$800 dollars more per classroom than [middle class district]. [Wealthier district] had \$400 dollars more than [lower wealth district]. Now, that's just not right. And they need to come in and they need to basically rewrite that formula. And I'm not saying equal dollars per child. Because you need weighted, you know enough about school finance, you can weight students to cover that. But they need to make the system much more equitable than what it is, and that's one of the challenges that we made in that lawsuit, and Judge Dietz agreed with us. He said there's no equity in the system. And then he said there's no adequacy in the system. So that needs to take place first. The other part, and when you go to facilities funding, what needs to take place there is the legislature needs to continue or increase IFA funding, but they also need to help... your fast growth districts because they're the ones having to build facilities so fast that it really can jack that tax rate up if you don't have some EDA funding or some kind of funding from the state.

However, one respondent was quick to point out that the state should provide more funding, but not take over facilities operations, saying "There's things like that that the state can probably get too involved in." Respondents also expressed little hope that the Texas Legislature would take any steps in the near future to increase funding for educational facilities. School district representatives interviewed for this study were disheartened by the Supreme Court's 2016 decision to uphold the state's education funding bill, passed in 2006. A former district leader described the school funding system as:

Really broken...[in] 2006, one of the things they did, as property values increase in your school district, the school district gets more money. But that amount of increase in money then is deducted from the amount of state money you receive. So who is benefiting from the growth in property values in a district? It's the state of Texas...if [the Texas Supreme Court] would have declared it unconstitutional, then they would have been going against the people in the leadership or the Republicans in the legislature, and they would have had to address it, so I think it was a total copout on the part of the, a political copout on the part of the Supreme Court.

Another district leader from a very large, middle class, suburban, fast-growth district expanded on the budgetary constraints across the state Texas, describing Texas as:

A low service state and folks take pride in that here...the conversation that you see happening right now in the Texas legislature facing a very tight budget and a huge set of needs of which public ed is just one...And that's just the political reality in Texas right now. There is just no political will to generate additional revenue, even if you looked at, outside of taxes and you looked at, fees, or other sources of revenue...Texas is just you know, as red as it can be and doesn't look to be changing on that front any time soon.

For some, politics and politicians were to blame. A district staffer in a very small, wealthy, majority-white district explained, "The Texas legislature is predominantly Republican and leans further to the right, way to the right, than to the middle and that's what's causing the issues right now." A former school district leader of a very large, middle class, suburban, fast-growth district concurred, saying:

So my general comment about what the the State of Texas, with the leadership that we've had since I've really been involved in it deeply, has not had the political savviness or fortitude, however you want to say it, to really step forward and say, We've got to properly fund education in this state. Properly fund M&O side, properly fund and at least give some help on the I&S side. So that is totally my feeling about funding, and I think the legislature of Texas has demonstrated their unwillingness to do what's needed to really fund public education in this state.

Others believed that the system is set up to pit districts against one another. A district leader from a very large, middle class, suburban, fast-growth district explained:

So the reality of that is that, because of the way the school funding generally, not just facilities but school funding generally...it's been built as one band-aid on top of another on top of another, and the squeakiest wheel got the band-aid. So you've got this massively inequitable, diverse, complex, arcane system...How do you get to equity in a state that doesn't want to spend one penny more than they're spending now?... So because we've set up the zero-sum game, getting at equity is real, it's, even amongst educators who generally believe in the notion of equity, it's a really, really tough conversation.

Overall, respondents agreed that the system is not set up to help school districts provide equitable educational facilities.

Discussion and Policy Recommendations

Though this study looked specifically at one city's school districts in one state, findings from this research are in many ways generalizable to the majority of other states that, similarly to the State of Texas, fund their facilities primarily through local property taxes. As Filardo (2016) described: "Because the vast majority of capital construction is funded by local taxpayers, the ability of school districts to pay for major facilities renewals or new construction is tied to the wealth of the community. That reality embeds inequity into a state's school facility conditions, except in the small number of states that have reformed their educational facilities finance policies and practices" (p. 6). For states, like Texas, that have *not* reformed their facilities policies, this study highlights two important policy implications.

First, as Burch (2009) indicated, policies are layered, and in the case of San Antonio's school facilities, there is a mismatch between the State's stated policy intentions (to promote equitable facilities) and how policies are implemented at the local level. Over a decade ago, Plummer (2006) found that the equity of school facilities spending actually decreased after the state implemented its new facilities spending programs, in 1997 and 1999, indicating that the mere existence of state facilities funding programs does not necessarily improve equity. With regard to the first research question, *To what extent do state and local investments vary by district in San Antonio?*, quantitative findings from this study confirm that these inequities continue, displaying the variance in school district investments and their outcomes in educational facilities even in school districts in close geographic proximity. Results clearly show that despite some districts in San Antonio with lower property wealth exerting higher levels of tax effort, they were able to raise less money per student for educational facilities through interest and sinking taxes. While the State of Texas provides state aid on a sliding scale based on property wealth, the amount of aid does not make up for the

disproportionate taxing abilities of local school districts. These insufficiently funded policies have failed to reach their intended goals.

Again, Texas is not alone in this outcome. Lukemeyer's (2003) analysis of 20 state courts discussing whether spending for educational facilities was low because of an inadequate property tax base or voters' unwillingness to tax and spend on facilities found that "Thirteen of the twenty courts discussing this issue concluded that an inadequate property tax base was the primary cause of low spending. These courts tended to rely on evidence showing that, in their states, most property-poor districts taxed themselves at higher rates than did property-rich districts, but still raised lower amounts of revenue for education" (p. 193). Inequitable revenue for facilities is a persistent and pervasive issue that requires sufficient state policy intervention.

Second, interview findings reveal that Texas' facilities funding policies, specifically the EDA and IFA programs, are not nuanced enough to equitably address interdistrict variation. With regard to the second research question, *How do district actions and constraints affect facilities quality and equitable investment?*, this study found that the majority of district leaders and staff are familiar with and using the available taxation mechanisms and programs to obtain funding for their facilities. In short, their actions are not lacking; in fact, these leaders largely demonstrated strategic financial planning, and their actions and expertise maximized the potential funding for their district's facilities programs (Bowers & Chen, 2015; Bowers & Lee, 2013; Ingle, Johnson, Ryan Givens, & Rampelt, 2013; Milder, 2011; Stover, 2012). However, several San Antonio districts expressed lacking the staff capacity to maintain high-quality facilities for all students due to policy shortfalls that prevented them from equitably raising funds, relative to their more affluent neighboring districts.

Policy Recommendations

The failure of the most recent round of Texas school finance litigation to trigger a judicial mandate for policy reform forces advocates of school finance equity to turn their attention to the conservative Texas Legislature for action. Research has an important role to play in providing timely data and analysis that make funding inequities transparent and arm advocates with evidence to help these issues reach the forefront of major policy decisions and action. Respondents from this study frequently criticized current policies and funding for educational facilities as inadequate, inequitable, and inefficient and expressed a need for policy improvements in an era of increasing state disinvestment. The primary policy recommendation was for Texas policymakers to increase the state share for educational facilities, while at the same time better equalizing tax rates so that each penny of tax effort would result in substantially equal revenue. Formulas should be updated to adjust for inflation over time and across the state, and special attention should be paid to the continued issues having to do with fast growth school districts.

Finally, findings from this research suggest that Texas policymakers should address not only the school finance formulas, but also school district capacity fluctuations. This could be done by providing consistent technical assistance that is available to all school districts. Specifically, we recommend that Texas legislators learn from other states that have overhauled the way they fund educational facilities, including Massachusetts, New Jersey, Ohio, and Wyoming (Rivera, 2017).

Implications for Education Finance Literature and Conclusion

This study demonstrates, at the local level, how school facilities outcomes are determined not only by state school finance policies, but also by local school district actions, and to a greater extent, their constraints. Utilizing a mixed-methods approach helped to illuminate the extent of the inequitable state and local investments in educational facilities in the San Antonio area and point to

practitioner-informed policy recommendations to improve the equity of facilities funding. The practitioners we interviewed were experts on the nuances of policy implementation and should be included both in future research and in policymaking.

Areas for more in-depth research in the future include an examination of the history of racial and socioeconomic segregation in the City of San Antonio over time and the effects on educational facilities. Additionally, The Fast Growth Schools Coalition and other groups argue that a small percentage of fast-growth school districts have specific facilities needs and thus require targeted policy assistance. Therefore, future work should also examine the ways in which facilities needs vary by district growth rates. A third area to explore is the extent to which districts have the flexibility to use maintenance and operations funding to address facilities needs, rather than relying on bond dollars associated with interest costs. Finally, a further area of study should include photographic evidence of facilities quality. These images could potentially be used to display disparities and to serve as advocacy tools for more equitable funding.

Over time, policies weave together to create a complex policy environment with the ability to differentially impact disadvantaged segments of the population, influencing equity. Fortunately, policies can and do change, and making the consequences of policies transparent can aid policymakers in making policies more equitable.

References

- Arsen, D., & Davis, T. (2006). Taj Mahals or decaying shacks: Patterns in local school capital stock and unmet capital need. *Peabody Journal of Education, 81*(4), 1-22.
https://doi.org/10.1207/s15327930pje8104_1
- Blackmore, J., Bateman, D., Loughlin, J., O'Mara, J., & Aranda, G. (2011). *Research into the connection between built learning spaces and student outcomes*. Victoria, Australia: Department of Education and Early Childhood Development, Education Policy and Research Division.
- Bowers, A. J., Chen, J. (2015) Ask and ye shall receive? Automated text mining of Michigan capital facility finance bond election proposals to identify which topics are associated with bond passage and voter turnout. *Journal of Education Finance, 41*(2), 164-196.
- Bowers, A. J., & Lee, J. (2013). Carried or defeated? Examining the factors associated with passing school district bond elections in Texas, 1997-2009. *Educational Administration Quarterly, 49*(4), 1-36. <https://doi.org/10.1177/0013161X13486278>
- Bowers, A. J., Metzger, S. A., & Militello, M. (2010). Knowing the odds parameters that predict passing or failing school district bonds. *Educational Policy, 24*(2), 398-420.
<https://doi.org/10.1177/0895904808330169>
- Bowers, A. J., Urick, A. (2011). Does high school facility quality affect student achievement? A 2-Level hierarchical linear model. *Journal of Education Finance, 37*(1), 72-94.
- Buckley, J., Schneider, M., & Shang, Y. (2005). Fix it and they might stay: School facility quality and teacher retention in Washington, D.C. *Teachers College Record, 107*(5), 1107-1123.
<https://doi.org/10.1111/j.1467-9620.2005.00506.x>
- Burch, P. (2009). *Hidden markets: The new education privatization*. Routledge.
<https://doi.org/10.4324/9780203883945>
- Cárdenas, J. A. (1997). Texas school finance reform: An IDRA perspective. San Antonio, Texas: Intercultural Development Research Association.
- Cellini, S. R., Ferreira, F., & Rothstein, J. (2010). The value of school facility investments: Evidence from a dynamic regression discontinuity design. *The Quarterly Journal of Economics, 125*(1), 215-261. <https://doi.org/10.1162/qjec.2010.125.1.215>

- Coffey, A. J., & Atkinson, P. A. (1996). *Making sense of qualitative data: Complementary research strategies*. SAGE.
- Crampton, F. E. (2009). Spending on school infrastructure: Does money matter?. *Journal of Educational Administration*, 47(3), 305-322. <https://doi.org/10.1108/09578230910955755>
- Davis, T. E. (2015). State and federal policies for school facility construction: A comparison of Michigan and Ohio. *Educational Administration Quarterly*, 51(1), 3 -26. <https://doi.org/10.1177/0013161X13508773>
- Duncombe, W., & Wang, W. (2009). School facilities funding and capital-outlay distribution in the states. *Journal of Education Finance*, 34(3), 324-350.
- Duran-Narucki, V. (2008). School building condition, school attendance, and academic achievement in New York City public schools: A mediation model. *Journal of Environmental Psychology* 28(1), 278-286. <https://doi.org/10.1016/j.jenvp.2008.02.008>
- Earthman, G. I., & Lemasters, L. K. (2009). Teacher attitudes about classroom conditions. *Journal of Educational Administration*, 47(3), 323-335. <https://doi.org/10.1108/09578230910955764>
- Equity Center. (2015). Failed I&S funding. *In Depth: Understanding Texas school finance*, 5(4), 1, 10-15.
- Filardo, M. (2010). *State capital spending on PK-12 school facilities*. Washington, DC: 21st Century School Fund.
- Filardo, M. (2016). *State of our schools: America's K-12 facilities 2016*. Washington, D.C.: 21st Century School Fund.
- Filardo, M., Vincent, J. M., Sung, P., & Stein, T. (2006). *Growth and disparity: A decade of US public school construction*. Washington, D.C.: 21st Century School Fund.
- Fuller, B., Dauter, L., Hosek, A., Kirschenbaum, G., McKoy, D., Rigby, J., & Vincent, J. M. (2009). Building schools, rethinking quality? Early lessons from Los Angeles. *Journal of Educational Administration*, 47(3), 336-349. <https://doi.org/10.1108/09578230910955773>
- Gronberg, T. J., Jansen, D. W., & Taylor, L. L. (2011). The impact of facilities on the cost of education. *National Tax Journal*, 64(1), 193-218. <https://doi.org/10.17310/ntj.2011.1.08>
- Harris, M. H., & Munley, V. G. (2002). The sequence of decisions facing school district officials in the bond issuing process: A multistage model. *Journal Of Education Finance*, 28(1), 113-131.
- Healthy Schools Campaign. (2010). *Through your lens: Student and teacher views of school facilities across America*. Retrieved from Healthy Schools Campaign website <http://www.healthyschoolscampaign.org/getinvolved/action/yourlens/book-flip/>
- Higgins, S., Hall, E., Wall, K., Woolner, P., & McCaughey, C. (2005). *The impact of school environments: A literature review*. London, England: Design Council.
- Horng, E. L. (2009). Teacher tradeoffs: Disentangling teachers' preferences for working conditions and student demographics. *American Educational Research Journal*, 46(3), 690-717. <https://doi.org/10.3102/0002831208329599>
- Ingle, W. K., Johnson, P. A., Ryan Givens, M., & Rampelt, J. (2013). Campaign expenditures in school levy referenda and their relationship to voter approval: Evidence from Ohio, 2007-2010. *Leadership and Policy in Schools*, 12(1), 41-76. <https://doi.org/10.1080/15700763.2013.766347>
- Irons, P. (1988). The Courage of Their Convictions: 16 Americans Who Fought Their Way to the Supreme Court. *New York: Penguin Books*, 307, 309-10.
- Legislative Budget Board. (2014, August). *Foundation School Program funding for school facilities*, ID: 1371. Retrieved from Legislative Budget Board website: http://www.lbb.state.tx.us/Documents/Publications/Issue_Briefs/1371_FSP_Facilities.pdf

- Legislative Budget Board (2016, April). *Foundation School Program funding for school facilities*, ID: 3098. Austin: Texas. Retrieved from Legislative Budget Board website: http://www.lbb.state.tx.us/Documents/Publications/Issue_Briefs/3098_FSP_Facilities.pdf
- Lukemeyer, A. (2003). *Courts as Policymakers: School Finance Reform Litigation*. LFB Scholarly Publishing LLC.
- Milder, S. (2011). Targeting voters in a school bond election. *School Administrator*, 68(3), 38.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. (2nd ed.). Thousand Oaks: SAGE.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2013). *Qualitative data analysis: A methods sourcebook*. SAGE.
- Oakes, J. (2004). Investigating the claims in Williams v. State of California: An unconstitutional denial of education's basic tools? [Special issue]. *Teachers College Record*, 106(10), 1889-1906. <https://doi.org/10.1111/j.1467-9620.2004.00420.x>
- Ogletree, C. J., & Robinson, K.J. (Eds.). (2015). *The enduring legacy of Rodriguez: Creating new pathways to equal educational opportunity*. Cambridge, MA: Harvard Education Press.
- Patton, M. (1990). Qualitative interviewing. In *Evaluation and research methods*. Thousand Oaks: Sage.
- Piele, P. K., & Hall, J. S. (1973). *Budgets, bonds, and ballots: Voting behavior in school financial elections*. Lexington, MA: Lexington Books.
- Plank, S. B., Bradshaw, C. P., & Young, H. (2009). An application of “broken-windows” and related theories to the study of disorder, fear, and collective efficacy in schools. *American Journal of Education*, 115(2), 227-247. <https://doi.org/10.1086/595669>
- Plummer, E. (2006). The effects of state funding on property tax rates and school construction. *Economics of Education Review*, 25(5), 532-542. <https://doi.org/10.1016/j.econedurev.2005.04.002>
- Richardson, S. A., Dohrenwend, B. S., & Klein, D. (1965). *Interviewing: Its forms and functions*. New York: Basic Books.
- Rivera, M. D. (2016). *Inequity and privatization in school district facilities financing: A mixed methods study*. (Unpublished dissertation). University of California, Berkeley.
- Rivera, M. D. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, Texas: Intercultural Development Research Association.
- Roberts, L. W. (2009). Measuring school facility conditions: An illustration of the importance of purpose. *Journal of Educational Administration*, 47(3), 368-380. <https://doi.org/10.1108/09578230910955791>
- Sanders, R. M. (2009). Determinants of public support for education sales tax initiatives in Georgia. *Journal of Education Finance*, 34(3), 267-288.
- Schneider, M. (2002). *Do school facilities affect academic outcomes?* Washington, DC: U.S. Department of Education, Educational Resources Information Center, National Clearinghouse for Educational Facilities. Retrieved from NCEF website: <http://www.ncef.org/pubs/outcomes.pdf>
- Sciarra, D. G., Bell, K. L., & Kenyon, S. (2006). *Safe and adequate: Using litigation to address inadequate K-12 school facilities*. Education Law Center.
- Small, M. L. (2009). How many cases do I need? On science and the logic of case selection in field-based research. *Ethnography*, 10(1), 5-38. <https://doi.org/10.1177/1466138108099586>
- Spradley, J. P. (1979). *The ethnographic interview*. Fort Worth: Harcourt Brace Jovanovich College Publishers.
- Stover, D. (2012). Building a bond. *American School Board Journal*, 199(10), 12-15.

- Tanner, C. K. (2009). Effects of school design on student outcomes. *Journal of Educational Administration, 47*(3), 381-399. <https://doi.org/10.1108/09578230910955809>
- Uline, C. L. (1997). School architecture as a subject of inquiry. *Journal of School Leadership, 7*(2), 194-209.
- Uline, C., & Tschannen-Moran, M. (2008). The walls speak: The interplay of quality facilities, school climate, and student achievement. *Journal of Educational Administration, 46*(1), 55-73. <https://doi.org/10.1108/09578230810849817>
- Uline, C. L., Wolsey, T. D., Tschannen-Moran, M., & Lin, C. D. (2010). Improving the physical and social environment of school: A question of equity. *Journal of School Leadership, 20*(5), 597-632.
- Vincent, J. M., & Monkkonen, P. (2010). The impact of state regulations on the costs of public school construction. *Journal of Education Finance, 35*(4), 313-330. <https://doi.org/10.1353/jef.0.0020>
- Weinstein, C. S. (1979). The physical environment of the school: A review of the research. *Review of Educational Research, 49*(4), 577-610. <https://doi.org/10.3102/00346543049004577>

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