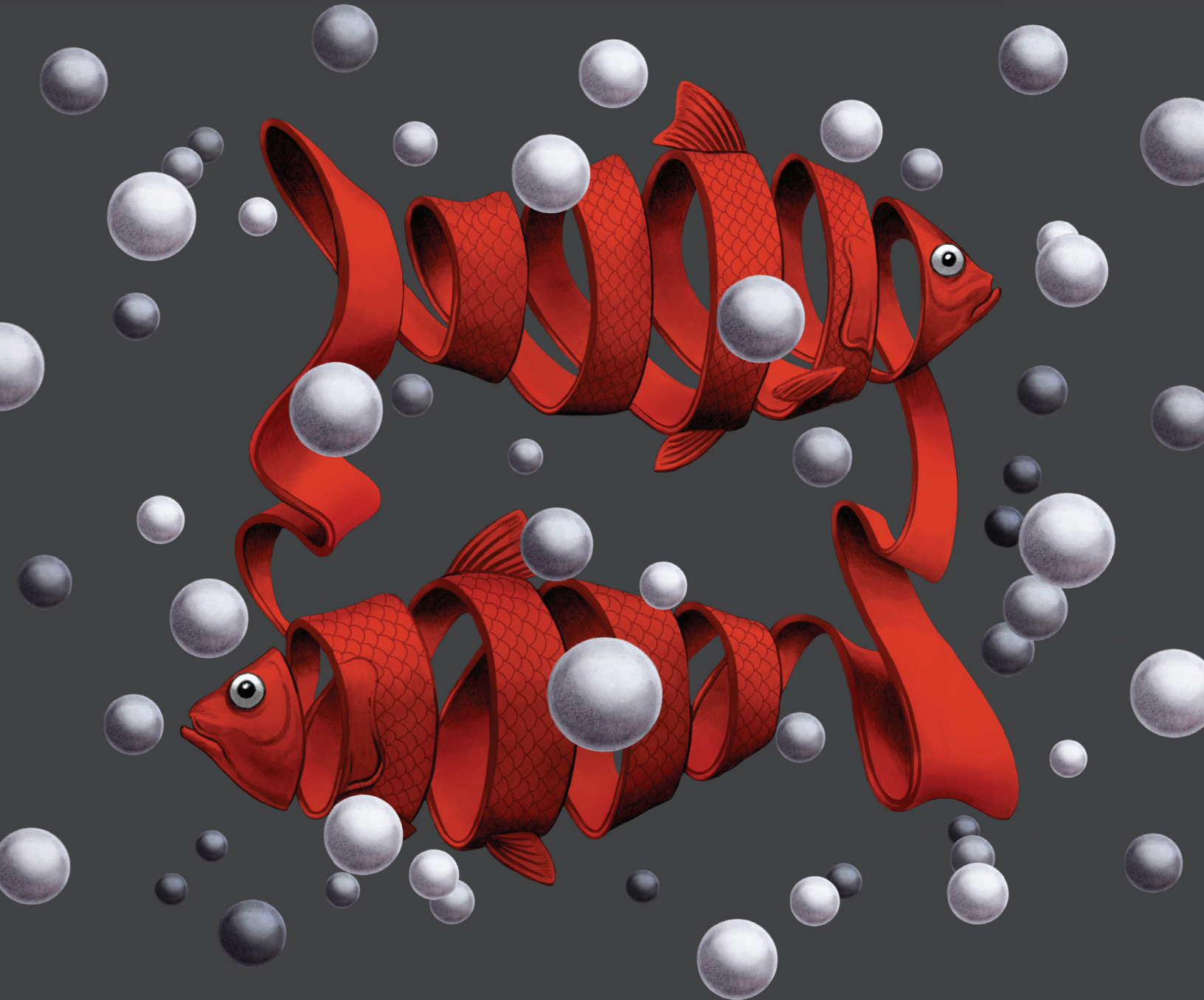


School Choice Regulations: Red Tape or Red Herring?

BY DAVID STUIT AND SY DOAN, BASIS POLICY RESEARCH

Foreword by Chester E. Finn, Jr. and Amber M. Winkler



CONTENTS

03 Executive Summary and Foreword

07 Acknowledgments

08 Introduction

08 Organization

09 Part I: Background

09 The National Landscape

11 Programs Included in This Study

11 What Is the Difference between Voucher Programs and Tax Credit Scholarship Programs?

12 Part II: Descriptive Analysis

12 Private School Participation Rates in Voucher Programs and Tax Credit Scholarship Programs

13 What Types of Regulations Apply to Participating Private Schools?

15 Which Programs Have the Most and Least Regulations?

19 Do Programs with More Regulations Have Lower School-Participation Rates?

20 Are Some Types of Private Schools More Sensitive to Regulation than Others?

22 Part III: Survey Results

22 About the Survey

23 Who Influences the Decision to Participate?

23 What Reasons Do Schools Give for Not Participating in Voucher Programs?

25 What Reasons Do Schools Give for Participating in Voucher Programs?

25 Which Regulations Are Most Important to Schools' Participation Decisions?

28 Are Non-participating Schools More Selective?

28 Are Non-participating Schools More Expensive?

30 What Regulatory Changes Would Entice Schools to Participate?

31 Part IV: Discussion

33 Appendix: Technical Information on the Descriptive Analysis

41 Endnotes

46 About the Authors

EXECUTIVE SUMMARY AND FOREWORD

Chester E. Finn, Jr. and Amber M. Winkler

Many proponents of private school choice—both the voucher and tax credit scholarship versions—take for granted that schools won’t participate (or shouldn’t participate) if government asks too much of them, regulates their practices, requires them to reveal closely held information and—above all—demands that they be publicly accountable for student achievement. A recent Friedman Foundation report, for example, bemoaned testing requirements that “may force all participating schools to move in the direction of a single, monopolistic curriculum and pedagogy...”¹ And analysts at the Cato Institute went so far as to send letters to Indiana private schools urging them not to participate in the state’s new voucher program, which it called a “strategic defeat” for school reform, in part because of its testing and transparency requirements.²

But is this assumption justified? It’s surely plausible on paper. Part of what’s distinctive and valuable—and often educationally effective—about private schools is their autonomy, their freedom to be different, their escape from the heavy regulatory regime that characterizes most of public education. Insofar as they cherish that autonomy, over-regulation by government might well deter them from participating in taxpayer-supported choice programs and thereby block children from benefiting from the education those private schools offer.

Were such school refusals to be widespread, the programs themselves could not serve many kids. Voucher and tax credit programs obviously cannot do much good if their putative beneficiaries—typically girls and boys from disadvantaged backgrounds and/or dreadful public schools—are unable to gain access to privately operated schools. If those schools shun the programs, there isn’t much point in creating or expanding such opportunities, at least not in relation to the current supply of private schools. (A separate issue, not addressed here, is whether additional pupil demand made possible by such programs will cause a “supply response,” namely the creation of new private schools.)

Private schools deciding whether to participate in a voucher or tax credit scholarship program must weigh

multiple factors: Do they have room for more pupils? Is their education program suited to the needs (and, often, the deficits) that voucher- and scholarship-bearing youngsters are apt to bring with them? Is the amount of the voucher or scholarship sufficient to offset the marginal cost of enrolling such a student? How will the school handle transportation? And what about political considerations that may be important to schools, including the responses of current pupils (and parents), of alumni/ae and donors, and of influential folks in their communities?

Yes, there’s much for school leaders to ponder in addition to whatever concern they may have with government rules and red tape. And policy makers shaping education-choice programs involving private schools must obviously do their best to anticipate the schools’ likely responses. Well-designed programs will naturally strive for sufficient school participation so that they can have the opportunity to accomplish their purpose.

But policy makers must also be responsible stewards of taxpayer dollars and do their best to ensure that such programs advance the public’s interest in securing a quality education for all children in safe, salubrious environments—all of which leads to some degree of regulation. And in the vast realm of regulation, perhaps the touchiest will turn out to be (or so we’ve been admonished by the critics and worry-warts mentioned above) the requirement that private schools administer state tests and be held publicly accountable for student achievement as measured by such tests.

Policy makers contemplating the creation, revision, or expansion of school-choice programs must therefore balance the impulse to regulate on behalf of the public interest against the need for enough private schools to participate so that the children for whom the programs are intended can, in reality, benefit from them.

But how to fix that balance? Is there some tipping point beyond which private schools will surely eschew the program? Are some regulations absolutely intolerable, others mildly repugnant, others bearable—even benign? Where is reality?

Fortunately, enough voucher and scholarship programs exist today that it's possible to answer these questions empirically—that is, to gauge the extent to which regulations (and other factors) actually deter private schools from participating. Mindful that regulations come in many forms and flavors, it's also possible to examine which *kinds* of regulation (if any) are particularly vexing to private schools and to investigate whether specific regulations are more troublesome to some segments of the diverse private school universe than to others. The results of such an analysis allow us to reality-test the broad cautions voiced by the Friedman Foundation, the Cato Institute, and others—in particular their warning that holding schools to account for student achievement (especially via conventional state testing programs) will surely cause them to turn their backs on such programs and thus leave needy children without good educational options at all.

We at the Thomas B. Fordham Institute have a long-standing interest in advancing quality school choices for kids who need them and a parallel interest in boosting educational achievement with the help of rigorous standards, assessments, and accountability systems. As an authorizer of charter schools in Ohio, we deal directly with the intersection of those twin policy goals. But we believe in private school choice, too—indeed, we believe in every kind of school choice that works for kids—and have previously mapped the touchy territory of accountability for “voucher schools” and advised policy makers on how to deal with these challenging trade-offs and balancing acts.³

So it was clearly time to probe more deeply into the realities of today's voucher (and tax credit scholarship) programs and determine how the private schools themselves view these issues of government regulation.

To conduct that investigation, we turned once again to Dr. David Stuit of Basis Policy Research who had previously done a fine piece of work for us (*Are Bad Schools Immortal?*, 2010). His analytic skills are superb, and his energy and diligence are unmatched. With financial assistance from the Walton Family Foundation, The Lynde and Harry Bradley Foundation, the Lovett and Ruth Peters Foundation, the Randolph Foundation, and the Thomas B. Fordham Foundation (our sister organization), we asked David and his colleague Sy Doan to examine closely thirteen extant voucher and tax credit scholarship programs (six of the former, seven of the latter) across eleven states. We asked them to describe the nature,

extent, and burdensomeness of their regulations and to determine how many private schools participate in them—and how many do not. We asked them also to survey private schools in communities served by four of the country's most prominent voucher programs (city-specific programs in Milwaukee and Cleveland, statewide programs in Ohio and Indiana) to ascertain how both participating and non-participating schools view those programs and their regulations and how heavily they weigh program requirements (and other constraints) when deciding whether to sign up for and accept the programs' students.⁴

In particular, we asked David and Sy to investigate this quartet of questions:

- › Do regulations and accountability requirements deter private schools from participating in choice programs?
- › How important are regulations and accountability requirements to private school participation compared to other factors, such as voucher amounts, etc.?
- › Are certain types of regulations and accountability requirements stronger deterrents than others?
- › Do certain types of private schools shy away from stronger regulations and accountability more than others?

❖ KEY FINDINGS

- 1) There is enormous variation in the nature and extent of the regulations associated with these thirteen programs. Stuit's “burden scores” (calculated on a scale from zero for “least regulated” to one hundred for “most regulated”) range from eight for Arizona's “individual” tax credit scholarship program to seventy-six for the current iteration of Milwaukee's long-running voucher program (like a ship burdened with barnacles, the Milwaukee program has accumulated more rules as it has grown older and larger).
- 2) As expected, there is a moderately negative correlation between regulatory burden and private school participation in choice programs. In other words, the more regulations, the less likely schools are to sign up for them. Participation rates in voucher programs ranged from 29 percent for the newly expanded Louisi-

ana Student Scholarships program to 94 percent for Cleveland’s Scholarship program.⁵

Analysts estimate that if a program were to change from being the least to the most regulated, private school participation rates would drop nine percentage points.

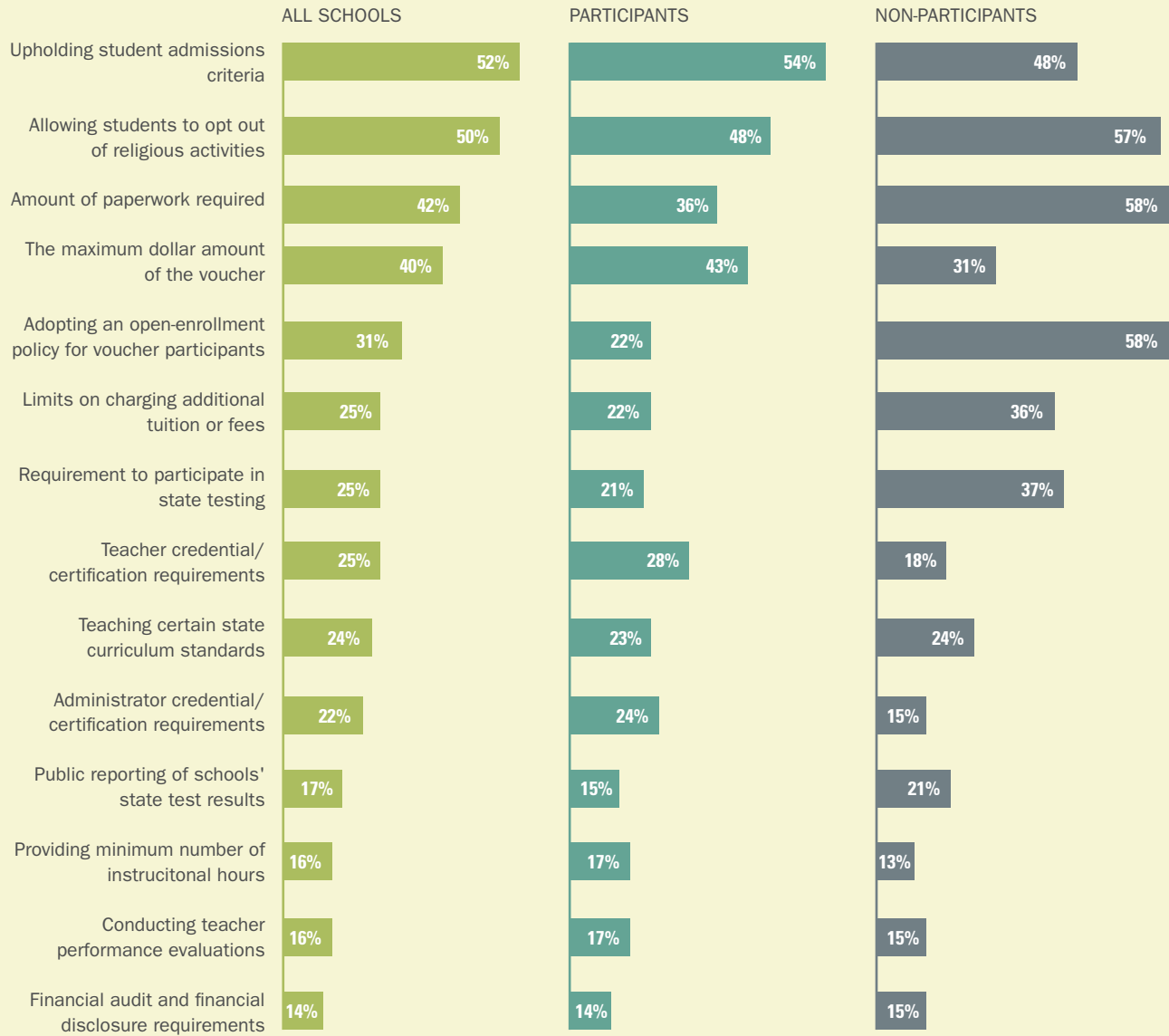
- 3) Yet “regulations” per se aren’t the schools’ foremost concern. Indeed, “not willing to comply” with program rules was cited by just 3 percent of non-participating schools as their single most important reason for avoiding the program. Instead, the most-cited reason was a lack of voucher-eligible families in the region.⁶
- 4) Within the sphere of program regulations, and contrary to the anti-testing assertions of Friedman and others, curricular constraints and testing issues ranked among the less-important considerations for private school leaders (see figure ES-1). Just a quarter of them listed the “requirement to participate in state testing” as “very” or “extremely” important to their decision (and only 17 percent said that about “public reporting of state test results”) versus half or more who were concerned about admissions (“upholding student admissions criteria”) and “allowing students to opt out of religious activities” (a rule found only in Milwaukee).
- 5) Catholic schools are least likely to have their decisions affected by regulation. Non-sectarian schools are more likely to forego participation when burdened with increased regulations—as are *small* schools, possibly because they have less space and administrative capacity to handle the paperwork associated with participation. (They may also be located in thinly-populated areas with few voucher-eligible children.)
- 6) Tax credit scholarship programs—because they are an indirect way of subsidizing private school attendance, using “taxpayer dollars” that never actually pass through the state treasury—are significantly less subject to additional regulations than voucher programs.
- 7) The reasons that most school principals gave *for* participating in the voucher program were the following: to expand their mission in the community (87 percent), “to help voucher eligible families already enrolled in their schools” (75 percent) and “to help needy children in the community” (72 percent).

❖ POLICY TAKEAWAYS

- Choice advocates and policy makers should bear in mind that in order to exist and operate in many states—and particularly to be “accredited” or “chartered” by those states (and thus perhaps become eligible for other forms of public aid)—private schools must already comply with various rules and regulations, which sometimes include testing requirements. That is to say, participation in a choice program will not be the first time that many schools’ freedoms of action are constrained by government demands.
- That does not, however, mean that policy makers should burden private schools (or anyone else, for that matter) with unnecessary regulation. They must seek the bare minimum that enables them to look taxpayers (and choice opponents) in the eye and say, “This program is in the public interest.” The kinds of regulation they should be wariest of are those that bear on student admissions and schools’ religious (and religious-education) practices. These types are significantly more likely to deter schools from taking part in the programs than are requirements pertaining to academic standards, testing, and public disclosure of achievement results.⁷ Reasonable folks, of course, can disagree about what constitutes “good” and “bad” regulation, but any that results in copious compliance-checking can deter would-be participants: nearly 60 percent of non-participating schools cited “amount of paperwork required” as key to their opt-out decision.
- Perhaps especially as “Common Core” standards take effect in states and new, improved assessments (aligned with those standards) come on line—and more so if colleges and employers begin taking those standards and test results seriously—private schools may become even more accepting of the obligation to embrace those academic standards (for core subjects) and the assessments that accompany them.
- In any case, regulation by government is not the greatest deterrent to private school participation in voucher and tax credit scholarship programs. More consequential concerns involve the design of the program itself: how many and which sorts of youngsters and families are eligible for it, how many of them live within striking distance of a given private school, how well is the program

Figure ES-1. Importance of different program requirements to schools' decisions regarding participation in voucher programs

Percent of schools indicating factor was "Very Important" or "Extremely Important" to their participation decision



Source: Survey results.

Note: The results in Figure ES-1 are based on responses from 241 private schools (179 participants and 62 non-participants). Figure ES-1 reports the percentage of respondents who indicate that each factor was either "very important" or "extremely important" to their decision. Separate figures are presented for all private schools (n=241), participants (n=179), and non-participants (n=62). The survey question was, "Below are some specific factors that might influence a school's decision to participate in a voucher program. To what extent were these factors important when your school was deciding whether or not to participate?"

publicized, how burdensome is it for families to qualify and apply, and how close to “adequacy” is the level of financial assistance that it makes available to students and the schools they attend?

- › Those considerations apply to tax credit scholarship programs as well as voucher programs, yet a clear takeaway from this research is that, to minimize regulatory burden and maximize school participation (not to mention sidestep “Blaine Amendment” type barriers in state constitutions), policy-makers ought to opt for the tax-credit approach. They should do so, however, mindful that in minimizing burden and maximizing participation they will also lose a measure of accountability. As Table 2 and Figure 4 make clear (pgs 12 and 15), tax-credit programs enjoy higher private-school participation rates—but almost all of them abjure testing mandates and public-reporting of student performance. (Florida’s tax-credit program and one of Arizona’s two programs are partial exceptions to that statement.)

Acknowledgments

Many people and organizations helped make this report possible. Our thanks go to the Walton Family Foundation, The Lynde and Harry Bradley Foundation, the Lovett and Ruth Peters Foundation, and the Randolph Foundation for their financial support, as well as to our sister organization, the Thomas B. Fordham Foundation.

Special thanks are due to lead analyst David Stuit, the founding partner of Basis Policy Research. We appreciate Dr. Stuit’s enthusiasm for and execution of rigorous and relevant ed-policy research. Similar appreciation goes to David’s co-author Sy Doan, a research associate with Basis who spent countless hours sifting through private school regulations and recruiting survey respondents. Patrick Wolf, the endowed chair for school choice in the Department of Education Reform at the University of Arkansas, served as an external advisor, providing technical and substantive feedback at critical junctures. We’re thankful, too, for the excellent research assistance provided by Claire Graves and Michael Ishimoto.

We are indebted to the 241 private school administrators who took the time out of their busy schedules to complete our survey and explain why they do or do not participate in voucher programs. We also owe thanks to the Wisconsin Department of Public Instruction and Indiana Department of Education for providing timely, detailed responses to our questions on their states’ respective voucher programs.

Finally, kudos to the Fordham team: Executive Vice President Michael Petrilli hatched the study idea and provided feedback on report drafts; Emmy Partin allowed us to tap her wealth of knowledge on the inner workings of Ohio’s voucher programs; Matt Richmond oversaw production; Michelle Giningier and Joe Portnoy managed dissemination; Pamela Tatz served as copyeditor; Alton Creative, Inc. served as layout designer; and Sam Whitehead created our fantastic M.C. Escher-inspired cover.

INTRODUCTION

Private school vouchers have experienced a revival of sorts over the past few years. They found a new audience in the Republican majorities that swept into office after the 2010 midterm elections. In 2011—the “Year of School Choice,” according to the *Wall Street Journal*—state lawmakers passed fifteen bills to create, expand, or restore programs that allow families to use publicly funded vouchers or tax credit scholarships to enroll in private schools.⁸ Notable among these were Indiana’s enactment of a statewide voucher program with broad income eligibility limits that reach the middle class, the renewal of the D.C. Opportunity Scholarship Program, and a four-fold increase in the number of vouchers available in Ohio’s statewide EdChoice Scholarship Program. More recently, Louisiana expanded the New Orleans voucher program to the rest of the state.⁹

The success of private school–choice programs hinges to a significant degree on a robust supply of high-quality private schools willing and able to enroll scholarship-eligible families. According to economic theory on school choice, the new demand for private schooling that is generated by vouchers will be met by two sources: new schools will emerge in the marketplace and existing schools will find ways to expand their enrollment.¹⁰ Yet empirical research on the supply side of the school-choice issue is scarce, and we know little about how the private school market is actually responding to voucher programs. As private school–choice programs expand to more communities and to higher income brackets, it becomes increasingly important to understand such factors.

This study examines how program regulations (including testing and accountability requirements) and other factors influence the participation of existing private schools. It consists of two components: A descriptive analysis of the regulations in relation to school participation rates in thirteen voucher and tax credit scholarship programs and a survey of private schools in five cities with prominent voucher programs.

❖ ORGANIZATION

The report is divided into four sections. The first provides some essential background, including a review of the origins of school choice in the U.S., an explanation of the difference between voucher and tax credit scholarship programs, and a look at the current national landscape of voucher and tax credit scholarship programs.

The second section is a descriptive analysis of the relationship between regulations and private school participation rates in thirteen choice programs (six voucher and seven tax credit scholarship programs) across ten states and the District of Columbia. Using data on close to 6,000 private schools from the Private School Universe Survey (PSS) and other sources, we estimate the participation rates of the programs, describe their regulations, examine the degree to which more regulation correlates with lower participation, and explore differences in how certain types of private schools respond to changes in regulatory burden.

The third section presents findings from a survey of 241 private schools in five cities with voucher programs (Cleveland, Milwaukee, Cincinnati, Dayton, and Indianapolis). The survey results shed light on the reasons behind schools’ decisions on whether or not to participate in the voucher programs. We pay particular attention to understanding the importance of regulations in such decisions, relative to other factors.

The final section summarizes the key findings from both components of the study and discusses implications for future policy and practice.

PART I: BACKGROUND

Milton Friedman introduced the modern-day concept of the school voucher more than fifty years ago. In his seminal 1955 essay titled the “The Role of Government in Education,” the Nobel Prize–winning economist proposed an education system based on portable vouchers that would allow families to enroll their children in the school of their choice—public or private. This, Friedman argued, would exert competitive pressure upon the education sector to improve continually the quality of education provided.¹¹

Friedman’s ideas were first put into practice in the U.S. in 1990, when Wisconsin passed legislation to create the nation’s first modern school-voucher program, the Milwaukee Parental Choice Program. The Supreme Court’s decision in the 2002 *Zelman v. Simmons-Harris* case—in which the country’s second voucher program, the Cleveland Scholarship and Tutoring program, was ruled constitutional—would help pave the legal road to future choice programs.

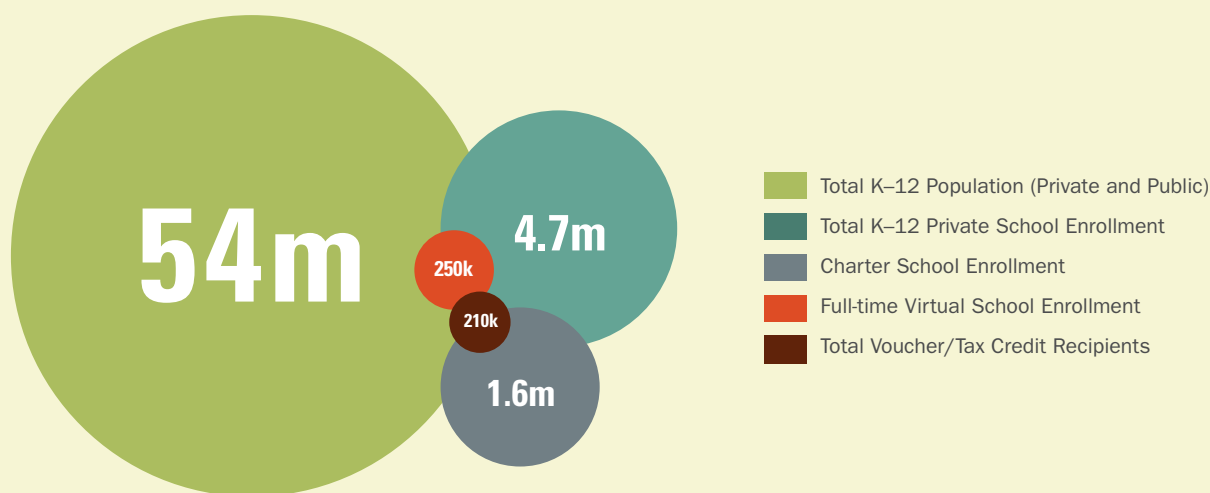
Even after that decision made clear that a properly designed voucher program could avoid running afoul

of the First Amendment’s “establishment clause,” risks remained under sundry state constitutions, particularly those incorporating “Blaine amendments” restricting or forbidding the expenditure of state dollars in instances of possible religious entanglement. Hence tax credit scholarship programs arose as more politically and legally viable alternatives.¹² Like vouchers, tax credit scholarship programs also use taxpayer dollars to provide scholarships for private school tuition, but they do so indirectly by providing tax credits to those who donate to non-profit Scholarship Granting Organizations (more below). Arizona legislators created the first such program in 1997.

❖ THE NATIONAL LANDSCAPE

In 2011–12, an estimated 210,000 students used vouchers or tax credit scholarships to attend private schools, accounting for 4.5 percent of private school enrollment in the U.S. and 0.4 percent of the total K–12 student population (see Figure 1).¹⁴ To put these figures into context, the number of voucher and tax

Figure 1. Private school voucher/scholarship recipients relative to total K–12 population



Source: The enrollment data were collected from the National Center for Education Statistics (NCES) Common Core of Data, NCES 2009–10 Private School Universe Survey (PSS), and the Center for Public Education.¹³ The total number of voucher and tax credit recipients was collected from *School Choice Now: The Year of School Choice: School Choice Yearbook 2011–12* by the Alliance for School Choice.

Note: Figure 1 reports student enrollment among different schooling options. The circles are included to illustrate relative enrollment size. All enrollment figures are from the 2009–10 school year, except for virtual school enrollment and voucher/tax credit recipients (2011–12).

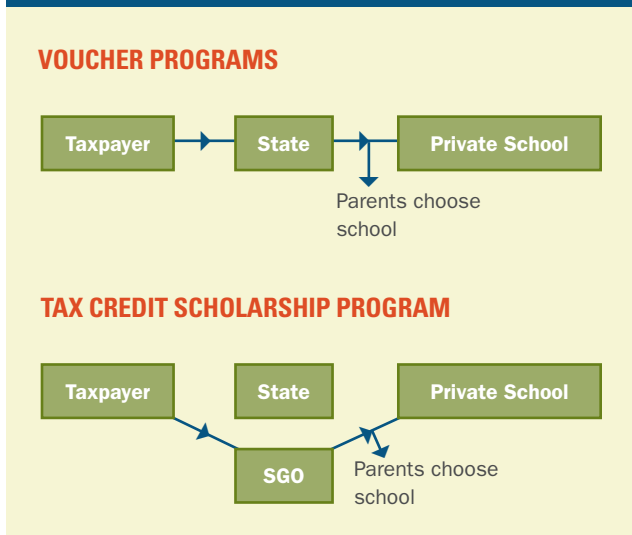
Table 1: Voucher and tuition tax-credit scholarship programs

JURISDICTION	NAME	TYPE	YEAR ENACTED	TARGET STUDENTS	# OF STUDENTS
D.C.	Opportunity Scholarship Program	Voucher	2004	Means-Tested	1,615
Indiana	Choice Scholarship Program*	Voucher	2011	Means-Tested	3,919
Louisiana	Student Scholarships for Educational Excellence Program	Voucher	2008	Failing School & Means-Tested	1,848
Ohio	Cleveland Scholarship and Tutoring Program*	Voucher	1995	Means-Tested	5,603
Ohio	EdChoice Scholarship Program*	Voucher	2005	Failing School	16,136
Wisconsin	Milwaukee Parental Choice Program*	Voucher	1990	Means-Tested	23,198
Wisconsin	Parental Private School Choice Program (Racine)	Voucher	2011	Means-Tested	228
Arizona	Individual School Tuition Organization Tax Credit	Tax Credit Scholarship	1997	None	25,343
Arizona	Corporate School Tuition Organization Tax Credit	Tax Credit Scholarship	2006	Means-Tested	4,578
Florida	Florida Tax Credit Scholarship Program	Tax Credit Scholarship	2001	Means-Tested	37,998
Georgia	Georgia Private School Tax Credit	Tax Credit Scholarship	2008	None	8,131
Indiana	Indiana School Scholarship Tax Credit Program	Tax Credit Scholarship	2009	Means-Tested	10,820
Iowa	School Tuition Organization Tax Credit Program	Tax Credit Scholarship	2006	Means-Tested	590
Pennsylvania	Educational Improvement Tax Credit Program	Tax Credit Scholarship	2001	Means-Tested	40,876
Rhode Island	Corporate Scholarship Tax Credit	Tax Credit Scholarship	2006	Means-Tested	341
Florida	John M. McKay Scholarship for Students with Disabilities Program	Voucher	1999	Special Education	22,861
Georgia	Georgia Special Needs Scholarship Program	Voucher	2007	Special Education	2965
Louisiana	School Choice Pilot Program for Certain Students with Exceptionalities	Voucher	2010	Special Education	186
Ohio	Autism Scholarship Program	Voucher	2003	Special Education	2236
Ohio	Jon Peterson Special Needs Scholarship Program	Voucher	2011	Special Education	N/A
Oklahoma	Lindsey Nicole Henry Scholarship for Students with Disabilities Program	Voucher	2010	Special Education	160
Utah	Carson Smith Special Needs Scholarship	Voucher	2005	Special Education	635
Arizona	Lexie's Law Scholarships	Tax Credit Scholarship	2009	Special Education	115

Source: Alliance for School Choice.

Note: Table 1 reports all choice programs listed in *School Choice Now: The Year of School Choice: School Choice Yearbook 2011–12* published by the Alliance for School Choice. Two choice programs listed in the 2011–12 School Choice Yearbook, Colorado's (Douglas County's) Choice Scholarship Program and Oklahoma's Equal Opportunity Education Scholarships, are not included in Table 1 because they were not operational during the 2011–12 school year. The number of students in the Ohio Autism Scholarship Program was not available. The shaded programs are included in the descriptive analysis. Programs with an asterisk are included in the survey analysis.

Figure 2. The flow of tax dollars to private schools in voucher programs and tax credit scholarship programs



credit scholarship recipients that year was equal to one-eighth of all charter school enrollees and comparable in size to another fledgling sector of the K–12 market: virtual public schools.

Table 1 displays the twenty-three voucher programs and tax credit scholarship programs that were active during the 2011–12 school year. Fourteen of these are voucher programs, while nine are tax credit scholarship programs. Eight programs are restricted to students with disabilities, while fifteen are open to the general K–12 population.¹⁵ All but two of the programs serving the general population use means testing or similar criteria to give disadvantaged families priority access to scholarships.¹⁶

❖ PROGRAMS INCLUDED IN THIS STUDY

The descriptive analysis and survey focused on subsets of the programs shown in Table 1. The descriptive analysis focused on the thirteen programs shaded in yellow in Table 1 (six voucher programs and seven tax credit scholarship programs). None of the thirteen programs were restricted to special education students. Data on private schools that offer the specific education services required to participate in special education programs were not available, so we focused on programs that are open to the general K–12 population. These thirteen programs span ten states and the District of Columbia, with Arizona and Ohio each containing two. The survey was administered to private schools located within the jurisdictions of the four voucher programs indicated by an asterisk in Table 1.

The sampling frame for the survey included all private schools in five cities (Dayton, Cincinnati, Cleveland, Milwaukee, and Indianapolis).

❖ WHAT IS THE DIFFERENCE BETWEEN VOUCHER PROGRAMS AND TAX CREDIT SCHOLARSHIP PROGRAMS?

Voucher programs and tax credit scholarship programs both use taxpayer dollars to provide private school scholarships to eligible students. The key difference lies in how money flows from taxpayers to private schools (see Figure 2). Vouchers are funded directly out of the state operating budget, using tax revenue that would otherwise go towards educating the voucher recipients in the public school system. In a typical voucher program, a qualifying family will seek out a private school that participates in the program. The school will verify the family’s eligibility and, if the student is accepted, will submit the necessary paperwork to the state on behalf of that family (with the parents’ endorsement). The state then disburses the voucher payment directly to the private school.

In the case of tax credit scholarship programs, the state grants individuals and/or corporations the option to donate to non-profit Scholarship Granting Organizations (SGOs) in exchange for credits against their state tax liability worth 50 to 100 percent of the amount donated.¹⁷ The SGOs partner with private schools and use those donated funds to provide scholarships to students. Unlike voucher programs, taxpayer monies received by private schools via tax credit scholarship programs never pass through state coffers—that is, the school and the state never engage directly in a monetary transaction. Tax credit dollars never actually enter into the state treasury.

The difference in how tax dollars flow to private schools has important implications with regards to how schools are regulated. As our analysis reveals, schools participating in tax credit programs are subject to fewer regulatory burdens and accountability pressures than those in voucher programs. In tax credit scholarship programs, the SGOs are the direct recipients of taxpayer money, but that money is not “government property” so to speak, because it never entered the state treasury.¹⁸ Hence, the fiduciary responsibility lies with the SGOs, who must ensure that private schools use the funds appropriately. In contrast, checks for voucher programs come directly from the state treasury, and the state has the fiduciary responsibility over how those funds are used. It is no surprise, then, that schools receiving funds directly from the state are subject to more government oversight.

PART II: DESCRIPTIVE ANALYSIS

We begin by comparing the school participation rates of thirteen programs during the 2011–12 school year.¹⁹ Then we describe the universe of regulations that could apply to participating schools and proceed to identify the programs subject to the most and least regulations using a newly developed measure of “regulatory burden.” Finally, using a cross section of data on private schools located within the jurisdictions of the thirteen programs, we examine the degree to which higher regulatory burden correlates with lower odds of participation and look for evidence that certain types of schools are more deterred by regulations than others.

❖ PRIVATE SCHOOL PARTICIPATION RATES IN VOUCHER PROGRAMS AND TAX CREDIT SCHOLARSHIP PROGRAMS

We calculate participation rates using school-level data from the National Center for Education Statistics’ (NCES) Private School Universe Survey (PSS) and state departments of education. The PSS provides a central source of information on the private schools located in the jurisdictions of the thirteen programs. We merged the 2009–10 PSS data (the most recent year

Table 2. Participation rates in voucher programs and tax credit scholarship programs

	ALL PRIVATE SCHOOLS		URBAN PRIVATE SCHOOLS	
	Total No.	Participation Rate	Total No.	Participation Rate
Voucher Programs				
D.C. Opportunity Scholarship	62	74%	61	76%
IN Choice Scholarship	676	35%	234	45%
LA Student Scholarships for Educational Excellence Program	445	29%	179	31%
OH Cleveland Scholarship and Tutoring Program	38	94%	36	100%
OH EdChoice Scholarship Program	839	39%	232	63%
WI Milwaukee Parental Choice Program	156	60%	121	74%
Total	2216	39%	863	55%
Tuition Tax Credit Scholarship Programs				
AZ Individual School Tuition Organization Tax Credit	286	83%	147	89%
AZ Corporate School Tuition Organization Tax Credit	286	51%	147	56%
FL Florida Tax Credit Scholarship Program	1630	62%	503	65%
GA Georgia Private School Tax Credit	657	46%	132	50%
IA School Tuition Organization Tax Credit Program	224	71%	234	72%
PA Educational Improvement Tax Credit Program	1198	56%	303	62%
RI Corporate Scholarship Tax Credit	95	54%	35	56%
Total	4376	59%	1501	64%
Overall	6592	52%	2364	61%

Source: The authors’ calculations using data from the NCES 2009–10 PSS and program-participation information collected from state departments of education

Note: The results in Table 2 were computed using PSS sampling weights. The sample was restricted to schools observed in 2009–10 PSS data and excluded schools identified by the PSS as special education schools, early childhood programs, or Amish schools. All of the programs’ participation rates fall within 5 percentage points of each other when calculated without weights. The last column reports results for the subset of schools (n=2024 unweighted, 2364 weighted) located in communities designated by the PSS as large, midsize, or small cities; an urban-centric community type is reported in PSS as “City”.

available) with a master list of schools that participated in the voucher or tax credit scholarship programs in 2011–12.²⁰ A school is designated as a “participant” if we found some type of official documentation indicating its *intent* to participate in 2011–12. This includes directories of participating schools from state or SGO websites and published lists of schools that submitted applications or “intent to apply” forms with their state. Schools need not enroll students to be labeled participants, they just need to signal their desire to participate.²¹ Our final dataset includes 5,863 private schools, which generalizes to 6,592 schools after applying the PSS sampling weights.²² (See Appendix for more detail on data and methods.)

Table 2 presents the 2011–12 participation rates for the thirteen programs. These reflect participation among schools in at least their 3rd year of operation (i.e., schools observed in the 2009–10 PSS). These are “raw” participation rates that do not reflect whether or not schools were eligible to participate or schools’ proximity to eligible voucher (scholarship) recipients. (Later in the report, we adjust the participation rates for these factors and others in order to provide a better apples-to-apples comparison.) In addition to reporting the participation rates for all schools, we also looked at the subset of schools located in urban areas, where demand from eligible families is greatest.

Overall, 52 percent of schools participated in their voucher or tax credit scholarship programs in 2011–12. Rates ranged from 94 percent in Cleveland’s voucher program to 29 percent in Louisiana’s newly expanded voucher program. Urban schools are slightly more likely to participate (61 percent), a result we expected due to the higher concentrations of eligible families in cities. Overall participation rates are significantly higher, on average, in tuition tax-credit scholarship programs than in voucher programs (59 versus 39 percent), but this difference is diminished when we limit our focus to urban schools (64 percent compared to 55 percent).

❖ WHAT TYPES OF REGULATIONS APPLY TO PARTICIPATING PRIVATE SCHOOLS?

Our primary objective is to understand the extent to which regulations explain why school participation rates are higher in some programs than others. In this section we describe the universe of regulations that apply to private schools in voucher and tax credit scholarship programs. These regulations can be categorized into the ten domains shown in Figure 3. We use this framework to develop a measure of “regulatory burden” based on the number of requirements in each of the ten domains.

Domain 1: Eligibility requirements

Eligibility requirements refer to the initial criteria that dictate which schools are eligible to apply for the program. Accreditation is the most significant of these requirements. Six of the thirteen programs require participating schools to be accredited (see Table 3).²³ Four programs—the two Ohio programs (state accreditation is referred to as “chartering” in Ohio), Iowa’s tax credit scholarship program, and Indiana’s statewide voucher program—require schools to earn accreditation (chartering) *prior* to participating. In Milwaukee, schools must be “pre-accredited” by an independent review board before they can participate and must then earn full accreditation within their first three-and-a-half years of participating.²⁴ Similarly, Georgia allows non-accredited schools to participate as long as the accreditation process is underway when they first enroll.

The two Ohio voucher programs and Iowa’s tax credit scholarship program require schools to earn accreditation (chartering) through the state. Iowa is unique insofar as it requires all private schools in the state to obtain state accreditation, so this hurdle is not specific to participants in the scholarship program.²⁵ Indiana’s

Figure 3. Ten domains of private-school regulation in voucher programs and tax credit scholarship programs



Table 3. Voucher programs and tax credit scholarship programs that require private schools to be accredited in order to participate

PROGRAM	REQUIREMENT FOR PARTICIPATION	ACCREDITING AGENCIES	TIME REQUIRED TO COMPLETE ACCREDITATION PROCESS
Cleveland Scholarship and Tutoring Program	Chartered (by state) at time of participation	State Agency	1 to 3 years
Georgia Tax Credit Scholarship Program	Accredited or in the process at time of participation	State-approved Agency	Differs by agency
Indiana Choice Scholarship Program	Accredited at time of participation	State Agency or State-approved Agency	Process can possibly be “fast-tracked” to be completed over summer.
Iowa Tax Credit Program	All private schools in Iowa must be state accredited.	State Agency	1 to 2 years
Ohio EdChoice Scholarship Program	Chartered at time of participation	State Agency	At least 2 years
Milwaukee Parental Choice Program	Pre-accreditation required at time of participation, accreditation within 3 ½ years	State-approved Agency	Differs by agency

Source: Program-regulation information collected from state departments of education (2011–12).

Note: This data is based on requirements for participation in 2011–12. The program offices of the Cleveland Scholarship and Tutoring Program and the Ohio EdChoice Scholarship Program refer to Table 2’s “accreditation” as “chartering.”

voucher program accepts accreditation from the state board or a state-approved national or regional accrediting body. Schools in Milwaukee and Georgia must earn accreditation from an independent regional or national accreditation agency.

In some states, accreditation provides an important stamp of legitimacy and enables private schools to tap into certain public school resources, such as busing or auxiliary provisions like textbooks, computer software, and therapists.²⁶ Accessing such benefits requires private schools to comply with regulations that are not expected of non-accredited schools, even if they do not participate in school-choice programs. For example, private schools seeking accreditation in Indiana and Ohio face additional testing requirements. Accredited Indiana schools are required to administer Indiana’s state standardized test, the ISTEP+, while Ohio’s chartered private schools must administer the Ohio Graduation Test.

Domain 2: Application requirements

Application requirements refer to the various requirements imposed on schools that are eligible to enroll in the program. These include application forms and fees, along with proofs of insurance and financial viability. Like eligibility requirements, application procedures

are another form of “entry control,” in that they screen schools out on the front end.

Domain 3: Curricular requirements

Certain choice programs require participating schools to adopt specific curriculum standards or provide instruction in particular subjects. These requirements range from providing instruction in core academic subjects to mandatory drug and alcohol-awareness courses.

Domain 4: Licensure and credentialing

This category includes regulations pertaining to staff credentialing or certification. Some programs do not require any certification, while others require either a bachelor’s degree or full certification for teachers and administrators.

Domain 5: Financial disclosure and reporting

These regulations include any requirements for participating schools to disclose financial information. Possible regulations include mandatory financial audits, submission of financial reports, and disclosure of both public and non-public fund expenditures.

Figure 4. Testing and accountability requirements of voucher programs and tax credit scholarship programs

IN Voucher	A	B	C	D	E	F	G	H	J	Greatest Requirements
OH Voucher	A	B	C	E	F	G	H	I		
Cleveland Voucher	A	B	C	E	F	G	H	I		
Milwaukee Voucher	A	B	C	E	F	G	H			
LA Voucher	A	B	C	E	G	H	J			
D.C. Voucher	A	E	C	F	G					
FL Tax Credit	A	E	F	G						
AZ Corp Tax Credit	A	E								

The following programs have no testing and accountability requirements: AZ Ind Tax Credit, GA Tax Credit, IA Tax Credit, PA Tax Credit, and RI Tax Credit

- A. Administer some form of standardized test in at least 1 grade
- B. Administer the *state* standardized test
- C. Administer test to voucher students in *all* tested grades
- D. Administer test to *non-voucher* students
- E. Report annual test scores to state
- F. Provide parents with test scores
- G. State reports test results at program level
- H. State reports test results of participating private schools
- I. State releases test results for student subgroups
- J. School receives accountability rating/grade from state

Source: The program-regulation information was collected from state departments of education.

Note: Figure 4 shows select testing and accountability requirements for the thirteen choice programs included in study. Each lettered red bar corresponds to one of ten testing and accountability requirements.

Domain 6: Student-admission guidelines

Student-admission guidelines include student-eligibility requirements (i.e., any means-testing or “failing-schools” requirements) and any regulation of schools’ admissions policies or procedures.

Domain 7: Tuition and fees restrictions

This category includes any restrictions on either the scholarship amount or a participating school’s charged tuition and fees. Rhode Island’s Corporate Scholarship Tax Credit program has the fewest tuition and fees restrictions and is the only choice program with no cap on the maximum scholarship amount.

Domain 8: Paperwork and reporting

Paperwork and reporting regulations include any requirements that schools process, maintain, and submit records to the state.

Domain 9: Oversight and enforcement

These regulations consist of any measures taken by the program office to oversee and enforce compliance with program regulations. Oversight measures imposed on private schools participating in tax credit scholarship programs are limited, because such oversight is directed primarily toward SGOs.

Domain 10: Testing and accountability requirements

Testing and accountability requirements refer to the ways in which programs monitor the academic results of participating schools and students and subsequently report those results to the public. The thirteen private school-choice programs included in our study displayed a range of testing and accountability measures (see Figure 4). Five, all tax credit scholarship programs, do not require schools to conduct any form of testing. Of the eight programs that do require testing, five require schools to administer the regular state assessments, while the other three give participating private schools the option to use a norm-referenced test. The Indiana Choice Scholarship Program has arguably the most stringent testing and accountability measures of all thirteen, and it is one of two programs with an annual performance-accountability rating system in place for participating schools (Louisiana’s voucher program is the other).²⁷

❖ WHICH PROGRAMS HAVE THE MOST AND LEAST REGULATIONS?

Before we can answer this question, we must briefly describe how we measured the amount of “regulatory burden” on schools in the thirteen programs. This measure is based on the number of requirements that apply to

Table 4. Regulatory burden scores of tax credit and voucher programs

	DOMAIN SCORES					
	School Eligibility Requirements	Program Application Procedures	Admissions & Enrollment Guidelines	Tuition Restrictions	Financial Reporting & Disclosure	Curriculum & Instruction Requirements
WI Milwaukee Parental Choice Program	67	100	75	75	100	33
IN Choice Scholarship Program	100	29	50	25	75	100
OH EdChoice Scholarship Program	100	43	63	50	50	33
Cleveland Scholarship and Tutoring Program	100	29	38	100	25	33
LA Student Scholarships for Educational Excellence Program	33	43	100	75	75	33
FL Florida Tax Credit Scholarship Program	33	71	50	25	50	0
D.C. Opportunity Scholarship Program	33	43	50	25	50	17
IA School Tuition Organization Tax Credit	100	0	13	25	0	50
PA Educational Improvement Tax Credit Program	33	0	13	25	0	67
RI Corporate Scholarship Tax Credit	33	0	13	0	0	33
AZ Corporate School Tuition Organization Tax Credit	0	0	25	25	0	17
GA Georgia Private School Tax Credit	33	0	13	25	0	17
AZ Individual School Tuition Organization Tax Credit	0	0	13	25	0	17

Table continues on next page ▶

*Ranking: 1 is the most regulated and 13 is the least regulated.

Source: Authors' calculations using program regulation information collected from state departments of education.

Notes. Voucher programs are shaded in white and tax credit scholarship programs are shaded in yellow. The results are based on the number of requirements that apply to schools participating in the program. Domain scores closer to one hundred indicate greater regulatory burden, while scores closer to zero indicate less regulatory burden. For domain scores, a value of one hundred indicates the program(s) with the most requirements in the domain, while a value of zero indicates the program had the lowest count. The overall score is the average of the ten domain scores.

Table 4. Regulatory burden scores of tax credit and voucher programs (cont'd)

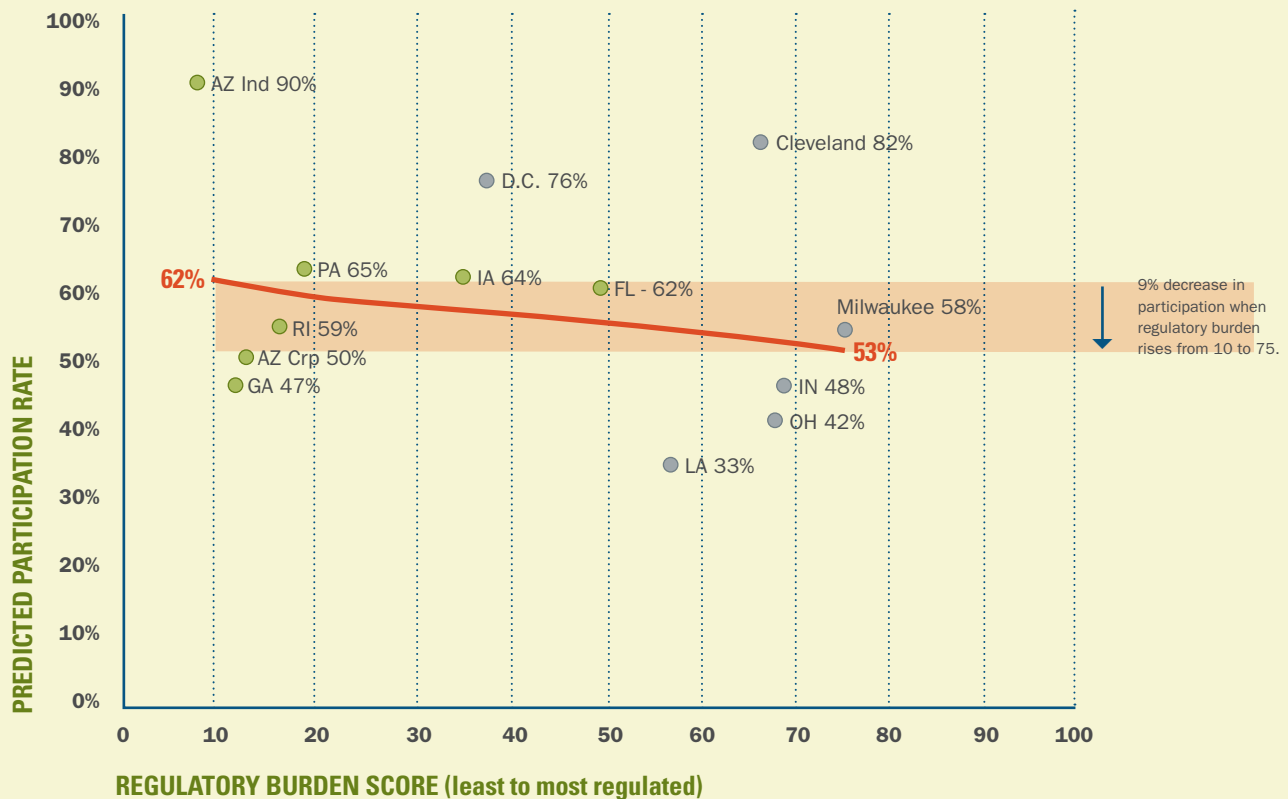
	DOMAIN SCORES					
	Paperwork & Reporting	Certification & Licensure Requirements	Testing & Accountability Requirements	Oversight & Enforcement	Overall Score	Ranking*
WI Milwaukee Parental Choice Program	100	40	92	75	76	1
IN Choice Scholarship Program	83	100	100	25	69	2
OH EdChoice Scholarship Program	67	80	92	100	68	3
Cleveland Scholarship and Tutoring Program	67	80	92	100	66	4
LA Student Scholarships for Educational Excellence Program	67	20	92	25	56	5
FL Florida Tax Credit Scholarship Program	67	40	50	100	49	6
D.C. Opportunity Scholarship Program	50	20	50	25	36	7
IA School Tuition Organization Tax Credit	50	60	25	25	35	8
PA Educational Improvement Tax Credit Program	33	20	0	0	19	9
RI Corporate Scholarship Tax Credit	42	40	0	0	16	10
AZ Corporate School Tuition Organization Tax Credit	25	20	33	0	15	11
GA Georgia Private School Tax Credit	25	0	8	0	12	12
AZ Individual School Tuition Organization Tax Credit	25	0	0	0	8	13

Table continued from previous page

schools within each of the ten domains. Constructing it required four basic steps. First, we reviewed the state statutes and operating guidelines of all thirteen choice programs and came up with an exhaustive checklist of seventy-one requirements that apply to schools in one or more of them (see Appendix). Second, we organized the requirements into the ten domains discussed earlier. Third, we counted the number of requirements that applied to each program within each domain and assigned scores between zero and one hundred in each domain such that the program with the most requirements in the domain received a score of one hundred, the program with the least requirements a score of zero, and the rest fell somewhere in between.²⁸ Finally, we determined the overall regulatory burden score for each program by taking the average of their ten domain scores.²⁹

This measure is more objective and reliable than the letter grades and rankings that are typically used to judge school-choice programs, but it is not without flaws.³⁰ One notable limitation is that it only accounts for the *number* of requirements listed in official documents, while a complete measure of regulatory burden would also factor in the *time* and *money* necessary to comply with the regulations (i.e., the burdensomeness of a given requirement). We cannot quantify these two aspects, so the validity of our measure rests on the assumption that programs with more regulation on paper will actually require more time and money on the part of schools. Research from other industries suggests that this is a reasonable assumption.³¹

Figure 5. Regulatory burden scores and private school participation rates of voucher programs and tax credit scholarship programs



Source: Authors' calculations using data from the 2009–10 PSS and program-regulation information collected from state departments of education.

Notes: Figure 5 plots the predicted participation rates of the thirteen programs against their regulatory burden scores. For example, the Milwaukee voucher program is shown at the intersection of its regulatory burden score of seventy-six and its adjusted participation rate of 58 percent. Green dots indicate tuition tax credit programs, grey dots indicate voucher programs. The predicted participation rates shown in Figure 5 are average predicted probabilities (fixed plus random components) obtained from a random effects logit model (see Appendix for details). Sample restricted to schools observed in 2009-10 PSS data, excluding schools identified by the PSS as special education schools, early childhood programs, or Amish schools. Unweighted sample includes 5,863 schools.

Programs' regulatory-burden scores are shown in Table 4, ranked from most to least regulated. What is immediately clear from Table 4 is that voucher programs place many more requirements on schools than do tax credit scholarship programs, pointing to a real difference between funding private school attendance via a non-government SGO rather than the state treasury.³² With the exception of Florida's Tax Credit Scholarship Program, which has similar requirements to those of the state's special-needs voucher program, the tax credit scholarship programs all have lower regulatory-burden scores than the voucher programs.³³

Most-regulated programs

The Milwaukee Parental Choice Program (MPCP), the nation's first voucher program, scored highest in regulatory burden. In addition to extensive compliance and financial reporting procedures, MPCP is set apart from the rest by two prominent requirements. First, it is the only one that regulates religious activities; participating schools must allow voucher recipients the opportunity to "opt out" of religious activities, a provision that was adopted when MPCP lifted its ban on religious-school participation in 1998.³⁴ Second, it requires schools to adopt open-enrollment policies, thereby preventing private schools from applying their preexisting admissions criteria to voucher students.

The Indiana Choice Scholarship Program ranked second in regulatory burden. It has the most requirements in four of the ten domains: school eligibility, certification and licensure, curriculum and instruction, and testing and accountability. Private schools in the Indiana Choice Scholarship Program receive annual performance grades. Additionally, Indiana's curriculum and instruction requirements, which include implementation of the state-wide elementary-level reading curriculum, are the most extensive of the thirteen programs.

Right behind Indiana's voucher program are the two Ohio voucher programs: the statewide EdChoice Scholarship Program and the Cleveland Scholarship and Tutoring Program. Both programs are heavy on front- and back-end requirements. To be eligible for participation, schools must complete the state's multi-year chartering process and adopt the same operating standards that are used for public schools.³⁵ Both programs require schools to administer the state assessments if they serve students in tested grades.³⁶ They also have strong oversight measures, including a designated compliance staff with authority to conduct unannounced site visits.

Least-regulated programs

Arizona's Individual Tax Credit Scholarship Program, the country's first such program, scored lowest on our measure of regulatory burden. This program does not require participating schools to do anything beyond what is required of all private schools operating in the state. Participating schools do not have to test students or disclose financial data to the state. Further, the program does not restrict access via means-testing or other student-eligibility criteria, so SGOs have full control over whom they award scholarships to.³⁷

Georgia's Tax Credit Scholarship for Private Schools places second. This program also does not require standardized testing and makes it explicitly illegal to publicly disclose information about schools beyond the total number and total dollar amount of tax credits used.³⁸ Georgia's and Arizona's programs are the only two non-special needs programs that do not restrict students' eligibility based on means-testing or whether they are currently enrolled in failing schools.³⁹

❖ DO PROGRAMS WITH MORE REGULATIONS HAVE LOWER SCHOOL-PARTICIPATION RATES?

At this point, we have established there are large differences in regulatory burden across the thirteen programs. We have also shown that the programs have a wide range of participation rates. Now we return to the primary objective of the study and examine the extent to which more stringent regulation is linked to lower participation. Using the PSS dataset described earlier, we test the hypothesis that schools will be significantly less likely to participate in programs with high regulatory burden scores.

We test this hypothesis by examining the correlation between programs' regulatory burden scores and participation rates. The research literature points to a variety of factors other than regulatory burden that may explain differences in participation rates across programs. These include differences in private school characteristics (e.g., religious orientation, program focus, grade configuration, ethnic diversity), the amount of excess capacity available to enroll additional students (e.g., number of open seats, student-teacher ratio, and enrollment size), the level of demand from eligible families (e.g., poverty rates, enrollment in neighboring public schools, high school graduation rates, per-pupil expenditures of local school districts, and the number of adherents to the school's religion in the county), and differences in the

amounts of subsidy available to students via the voucher or tax credit scholarship programs (e.g., the number of scholarships available, average scholarship amounts). We use a statistical technique called logistic regression to control for the influence of these extraneous factors on participation rates. This allows us to “predict” the participation rates that would occur if the programs and their school populations were similar on all these factors (see Appendix for more details).

Our results point to a moderate negative relationship between regulatory burden and private school participation. Figure 5 (page 18) illustrates this relationship by plotting the thirteen programs’ predicted participation rates against their regulatory burden scores. For example, the Milwaukee voucher program is shown at the intersection of its regulatory burden score of seventy-six and its predicted participation rate of 58 percent. The red trend line running through Figure 5 displays the average predicted participation rate at increasing levels of regulatory burden. To gauge the impact of regulatory burden we can compare the average predicted participation rates at low and high levels of regulatory burden. Following the red trend line in Figure 5, we see that a shift from a low regulatory burden score of ten to a high regulatory burden score of seventy-five associates with a decrease in participation rates from 62 percent to 53 percent. This implies that moving from very low regulation (think Arizona’s Individual Tax Credit Scholarship program) to very high regulation (think Milwaukee’s voucher program), would lead to a 9 percentage point drop in participation.

❖ ARE SOME TYPES OF PRIVATE SCHOOLS MORE SENSITIVE TO REGULATION THAN OTHERS?

Next, we will consider whether some types of private schools are more sensitive to regulatory burden than others. By their nature, some schools may be more or less inclined to participate, regardless of regulatory burden. To investigate these issues we compare predicted participation rates of schools with different religious orientations.

In addition to presenting their predicted participation rates under average regulation, we report their odds of participation in programs with low and high regulations. A “low” regulated program would have regulations similar to Arizona’s individual tax credit program or Georgia’s tax credit program, while a program with “high” regulations would be similar to Milwaukee. If certain types of private schools are more deterred by regulations, we

would expect a larger gap between their participation in low- and high-regulated programs. The results of the simulation are displayed in Figure 6. In addition to the participation rates, we provide the weighted number of schools and the share of private school enrollment for each school type.

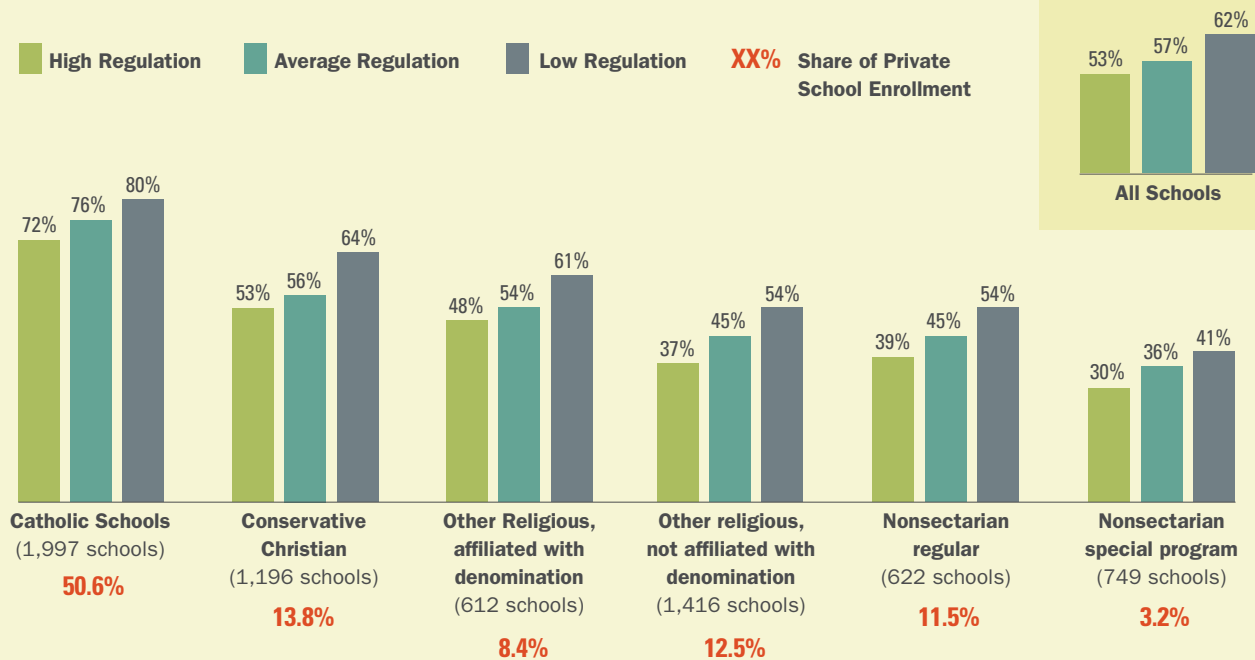
The findings in Figure 6 indicate that some segments of the private school market are indeed more likely to participate in school-choice programs than others. Moreover, some appear more sensitive to regulation than others.

Catholic schools are significantly more likely to participate in school-choice programs than are the other five private school segments. The predicted participation rates of Catholic schools are 19 percentage points above the average of all schools in the data set (76 percent versus 57 percent). They also appear to be less deterred by regulations: Their predicted participation rates exceed 70 percent, even in programs with high regulations. These findings should bring some relief to those concerned that too much regulation will drive schools away and cause a shortage in seats for voucher students. Catholic schools, which account for almost 40 percent of private school enrollments nationally (51 percent in our data set), appear to be a highly dependable supplier of seats to voucher students.

What accounts for this? The most obvious answer is self-preservation. Catholic-school enrollment has been declining for almost fifty years, with one in five Catholic schools closing its doors over the last decade.⁴⁰ Vouchers provide an opportunity to replenish lost enrollment and, in some cases, stave off closure.⁴¹ Another explanation could be that voucher programs are well-aligned with the Catholic church’s mission to serve the poor.⁴² Consequently, Catholic schools are strongly encouraged to participate by their diocesan leaders. On the other hand, it could also be that Catholic schools are simply in greater demand from eligible families because their tuition rates are reasonable and they have a heavy presence in urban areas.

Non-sectarian schools are significantly less likely to participate in private school-choice programs than their religious counterparts, and they appear more deterred by heavy regulation. We see in Figure 6 that when regulations shift from low to high, non-sectarian participation drops 15 percentage points from 54 to 39 percent, compared to an average decline of 9 percentage points (62 to 53). One reason these schools may be less inclined to participate, particularly in programs with heavy regu-

Figure 6. Predicted participation rates by school religious orientation and regulation level



Source: Authors' calculations using data from the 2009–10 PSS and program regulation information collected from state departments of education.

Notes: Figure 6 reports the total number of schools (using weights) and enrollment in our sample of schools on thirteen programs. The predicted participation rates shown in Figure 6 are the average predicted probabilities for each school segment under different specifications on the value of the regulatory burden measure (Low Regulation = 10, Average = 45, High Regulation = 75). These are derived from a random effects logit model (see Appendix for details). Schools' predicted probabilities are obtained for each level of regulatory burden holding all other independent variables at their means and averaging over the random effects. Sample restricted to schools observed in 2009–10 PSS data, excluding schools identified by the PSS as special education schools, early childhood programs, or Amish schools. Unweighted sample includes 5,863 schools.

lation, is that they have fewer open seats. Enrollment in non-sectarian private schools has grown faster in the past decade than it has in other private school segments, in part because they have proven less vulnerable to charter school expansion.⁴³ Restrictions on tuition and fees may also play a role. The average tuition rate of non-sectarian private schools is roughly three times higher than those of either Catholic or other religious schools.⁴⁴ This would explain why non-sectarian schools avoid heavily regulated programs that restrict their ability to charge families more than the set voucher (scholarship amount). And again it could be a function of demand. Low-income minority families, who comprise the majority of eligible voucher (scholarship) recipients in many programs, tend to be more religious and therefore may gravitate to religious schools.⁴⁵

Among non-sectarian schools, those designated as “special program” are least likely to participate. Their predicted participation rate of 36 percent is half that of Catholic schools. In programs with high regulations, their chances of participating drop to 30 percent. The majority of this segment consists of Montessori schools. Schools that embrace the Montessori philosophy—which emphasizes individualized, self-paced, exploratory learning—do not look favorably on standardized testing, which might explain why they shy away from school-choice programs.⁴⁶ Another reason these schools are less likely to participate is that they tend to be smaller, which means they have less space and administrative capacity to handle the paperwork associated with participation. Our analysis found that the odds of a school with fewer than fifty students participating were close to half those of other schools.

PART III: SURVEY RESULTS

❖ ABOUT THE SURVEY

In this section, we will present findings from a survey of private schools in Cleveland, Cincinnati, Dayton, Indianapolis, and Milwaukee. The survey was designed to gather information on private schools' reasons for participating or not participating in one of the four voucher programs that operate in these five cities: The Milwaukee Parental Choice Program (Milwaukee), the Cleveland Scholarship and Tutoring Program (Cleveland), Ohio's Ed Choice Program (Cincinnati and Dayton), and Indiana's Choice Scholarship program (Indianapolis).⁴⁷

Table 5 provides information about our survey sample, including the number of participating and non-participating schools that were surveyed across the five cities, as well as response rates.⁴⁸ The survey was administered in the spring of 2012 to 369 private schools. Surveys were addressed to school principals. Overall, 241 schools (65 percent) responded to the survey, including 73 percent of participating schools (n=179) and 50 percent of non-participating schools (n=62).

Table 5. Survey sample and response rate

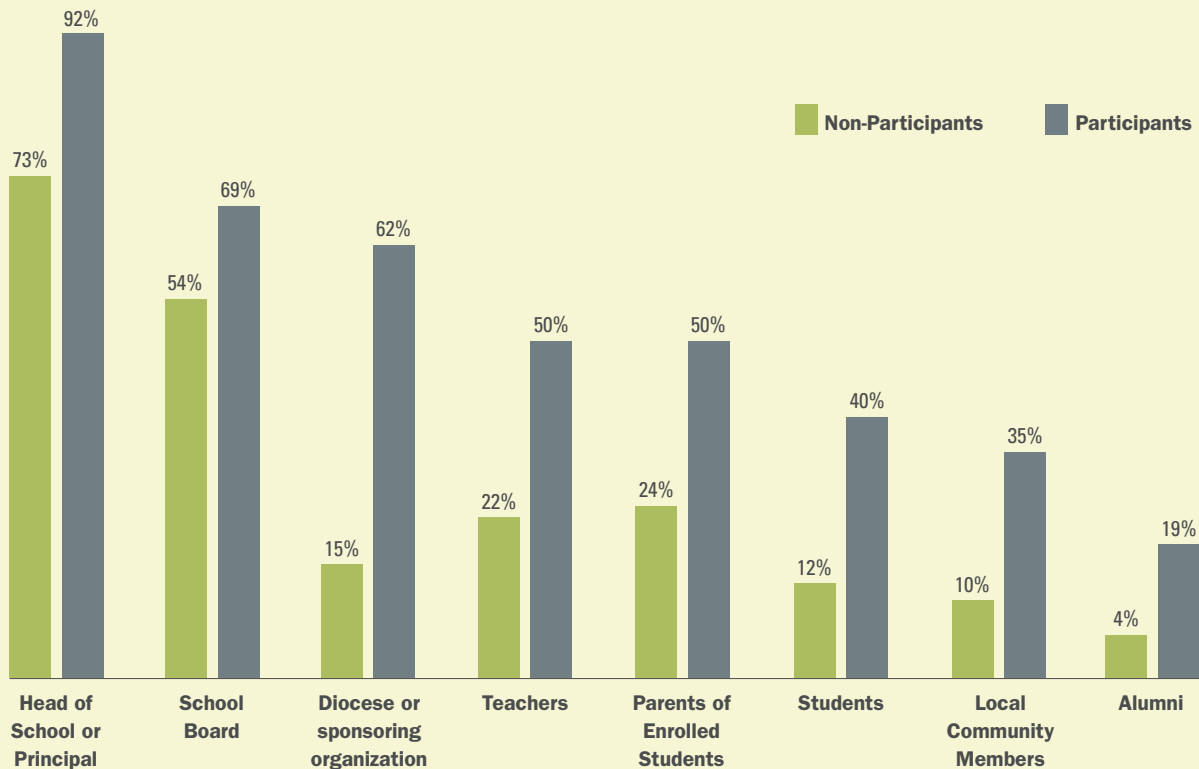
VOUCHER PROGRAM	NO. OF SCHOOLS SURVEYED	NO. OF RESPONDENTS	SURVEY RESPONSE RATE
EdChoice Scholarship Program (Cincinnati and Dayton)			
Participating Schools	66	52	79%
Non-Participating Schools	57	29	51%
Total Schools	123	81	66%
Milwaukee Parental Choice Program (Milwaukee)			
Participating Schools	99	69	70%
Non-Participating Schools	22	12	55%
Total Schools	121	81	67%
Indiana Choice Scholarship Program (Indianapolis)			
Participating Schools	46	34	74%
Non-Participating Schools	39	19	49%
Total Schools	85	53	62%
Cleveland Scholarship and Tutoring Program (Cleveland)			
Participating Schools	34	24	71%
Non-Participating Schools	6	2	33%
Total Schools	40	26	65%
All Programs			
Participating Schools	245	179	73%
Non-Participating Schools	124	62	50%
Total Schools	369	241	65%

Source: Program-participation data collected from state departments of education.

Note: Table 5 shows the survey sample and survey response rates by program and participation status.

Figure 7. Percent of respondents indicating group or individual had a moderate or major influence on school’s decision to participate

How much influence did each group or individual have on your school’s decision to participate (or not) in the voucher program?



Source: Survey results.

Note: Results in Figure 7 based on responses from 241 private schools (179 participants, 62 non-participants). Figure 7 reports percentage of respondents who indicated that constituency had either a “moderate influence” or “major influence” on their decision. Survey Question: How much influence did each group or individual have on your school’s decision to participate in the voucher program? Respondents were asked to select one of the following responses: “No influence,” “Minor Influence,” “Moderate Influence,” “Major Influence,” “Not Sure.”

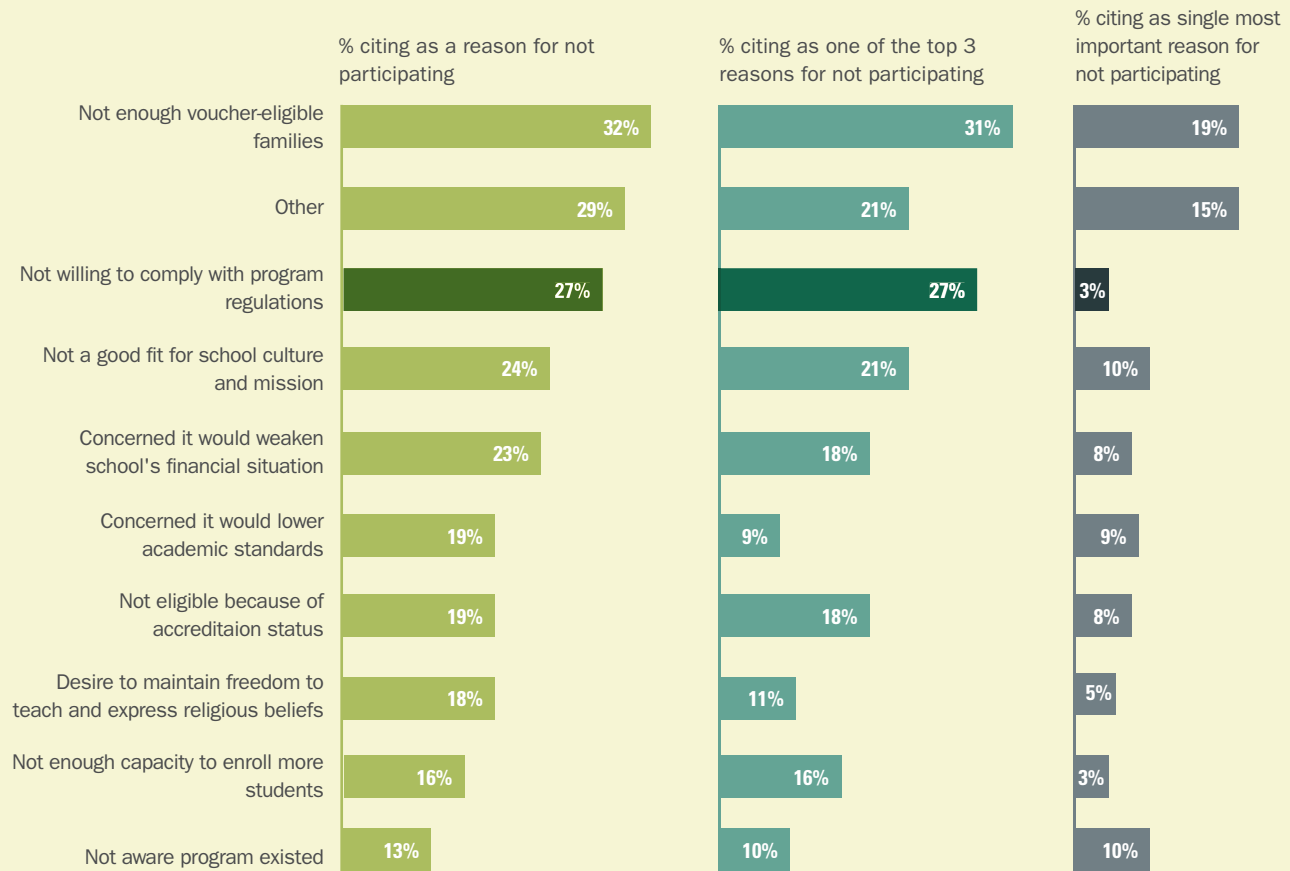
❖ WHO INFLUENCES THE DECISION TO PARTICIPATE?

Before delving into *what* influenced the decision, we examine *who* influenced the decision. Respondents were asked to gauge the level of influence of eight constituencies on their decisions shown in Figure 7. We see that school leaders (principals and school boards) have the greatest influence over whether or not to participate. Participating schools reported higher levels of influence for all eight constituencies, which stems from the fact that many non-participants were not aware of the program or did not see any demand from eligible voucher families, making their stakeholders’ perspectives unimportant.

❖ WHAT REASONS DO SCHOOLS GIVE FOR NOT PARTICIPATING IN VOUCHER PROGRAMS?

To identify the top reasons for non-participation, we asked non-participating schools to review a list of possible reasons why they might choose not to participate in a voucher program and to check all that apply. We then asked them to rank their top three reasons for not participating. Their responses, shown in Figure 8, convey a sense of the importance of regulations, as compared to other considerations. The figure contains three bar charts: the first shows the percentage of respondents who indicated that the reason was applicable to their decision; the second shows the percentage indicating the reason was one of their top three reasons, and the third shows the percentage who indicate that the reason was their most important reason.

Figure 8. Reasons private schools give for not participating in voucher programs



Source: Survey results.

Note: The results in Figure 8 are based on responses from sixty-two non-participants. Figure 8 presents three bar charts. The first reports the percentage of respondents indicating “Yes,” the reason did apply to their school’s decision not to participate. The second bar chart reports the percentage of respondents who listed the reason as one of their top three for not participating. The third bar chart reports the percentage of respondents who listed the reason as the single most important for not participating. Participants who indicated “Other” were asked to provide a brief written description of their reason. Two common reasons provided were (1) they were not fully informed on program regulations and (2) the public schools in their area were high performing. The survey question was, “Below are some reasons why schools might not participate in voucher programs. Which of following apply to your school?”

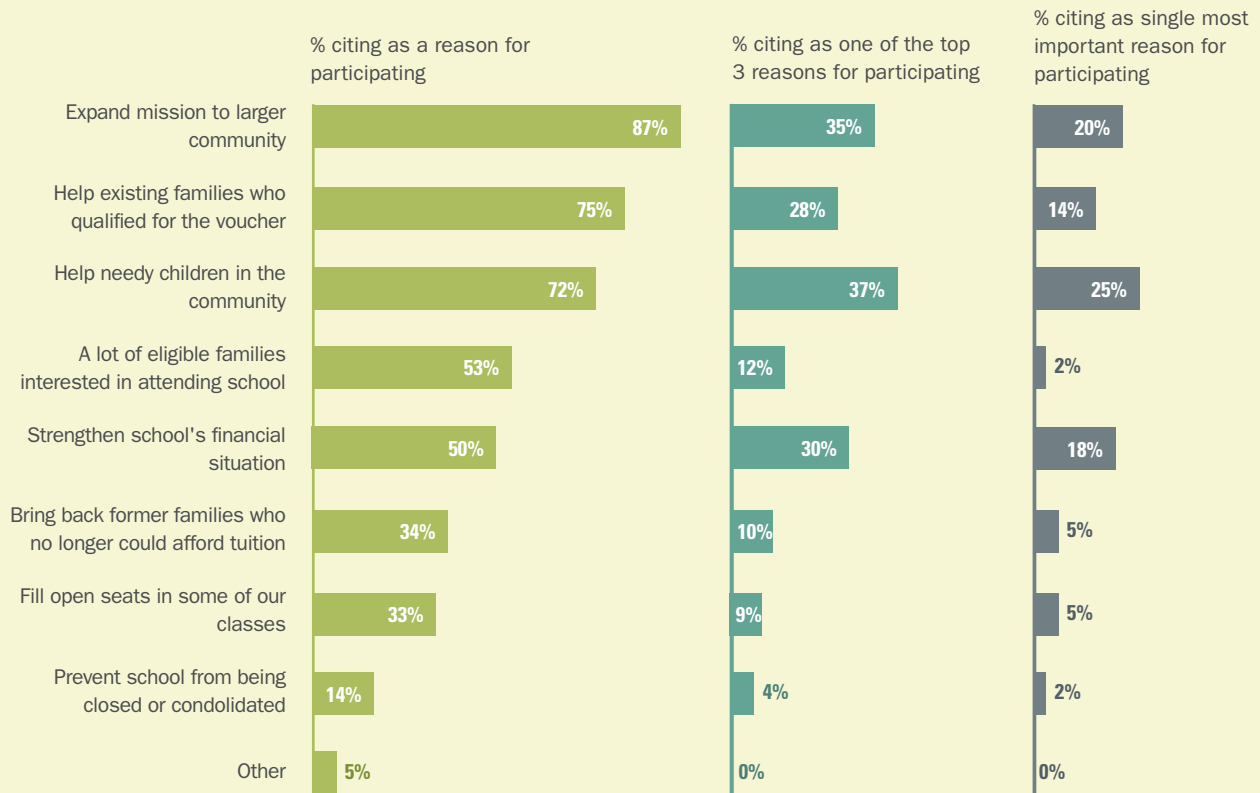
The most-cited reason for non-participation was a lack of student demand. Close to one-third of non-participants indicated that there were “not enough voucher-eligible families interested in attending” their school. Almost one-fifth cited low demand as the single most important reason for not participating.

Twenty-seven percent of non-participating schools indicate that “unwillingness to comply with program regulations” was a reason for not participating, making it the *third* most frequently cited reason, after a lack of voucher-eligible families and “other” reasons (see Figure 8’s note for more information on what “other reasons” entails). All of the schools that cited regulations as a reason ranked it among their top three, but only 3

percent (two schools) ranked it the *single* most important reason for not participating. Program regulations appear to be an important contributing factor to non-participation but are rarely the single most-important factor.

Twenty-four percent of non-participating schools felt that the choice program was not a good fit for their school’s mission, with nearly all of these schools (21 percent) considering it one of their top three reasons. Overall, 23 percent of non-participating schools felt that program participation would hurt their school finances. Few schools (16 percent) indicated that capacity limits were at the heart of their decision to not participate.

Figure 9. Reasons private schools give for participating in voucher programs



Source: Survey results.

Note: The results in Figure 9 were based on responses from 179 participants. The first bar chart reports the percentage of respondents who indicated “Yes,” the reason did apply to their school’s decision to participate. The second bar chart reports the percentage who listed the specified reason as one of their top three for participating. The third bar chart reports the percentage who listed the reason as their single most important for participating. The survey question was, “Below are some reasons why schools might participate in voucher programs. Which of following apply to your school?”

Meanwhile, 13 percent of non-participating schools indicated that they had never heard of their local voucher program. Though this was the least-cited reason, it suggests that there is more work to be done in choice program outreach and awareness efforts.

❖ WHAT REASONS DO SCHOOLS GIVE FOR PARTICIPATING IN VOUCHER PROGRAMS?

Using the same protocol, we asked participating schools about their reasons for joining voucher programs (Figure 9). The top three reasons that schools cited for participating were expanding the school’s mission to a larger community (87 percent), helping families already at their school who qualified for the voucher (75 percent), and helping needy children (72 percent). Observe that all three revolve around a central theme of serving the community.

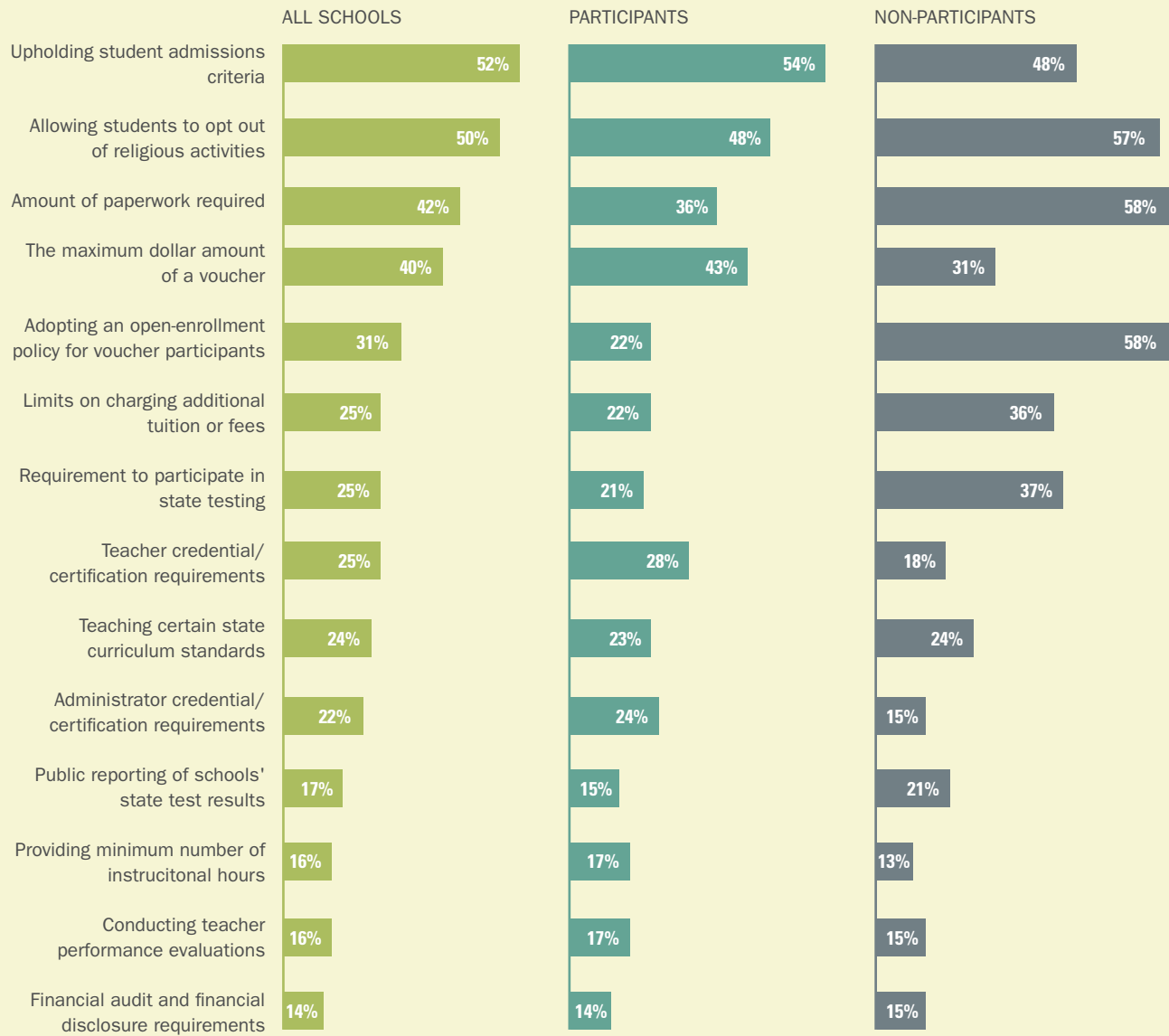
Half of the participating schools indicated that strengthening the school’s financial situation was a reason for participation, with 18 percent citing this as their most important reason. Other items that led schools to participate were driven by existing financial issues, such as filling open seats (33 percent) or preventing school closure or consolidation (14 percent)—both of which were among the *least* cited reasons.

❖ WHICH REGULATIONS ARE MOST IMPORTANT TO SCHOOLS’ PARTICIPATION DECISIONS?

In addition to asking schools to identify their top reasons for participating or not participating in voucher programs, we asked them to rate the importance of specific program requirements in their decisions (Figure 10).⁴⁹ These responses allow us to ascertain the types of regulations that are most worrisome to private schools.

Figure 10. Importance of different program requirements to schools' decisions regarding participation in voucher programs

Percent of schools indicating factor was "Very Important" or "Extremely Important" to their participation decision

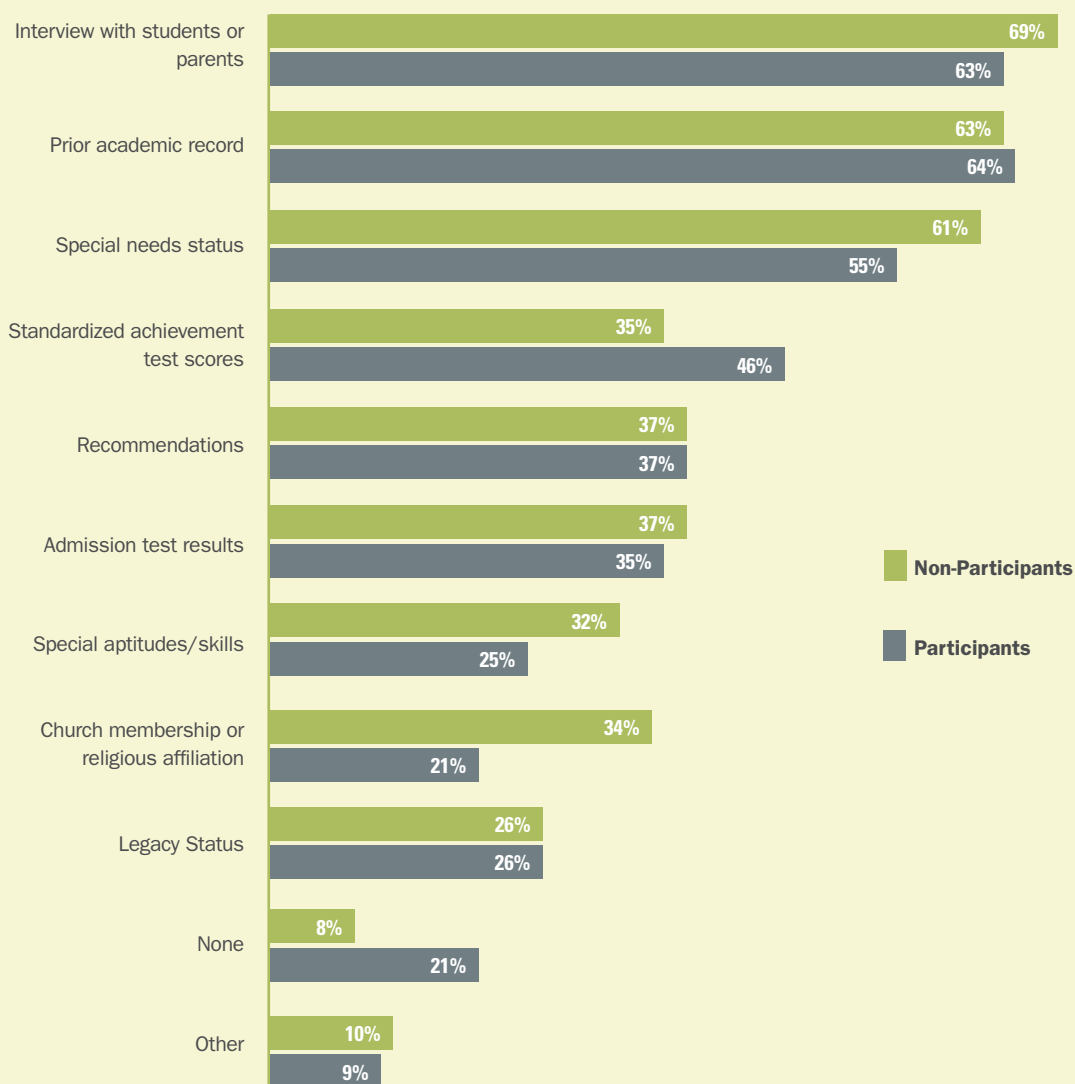


Source: Survey results.

Note: The results in Figure 10 are based on responses from 241 private schools (179 participants and 62 non-participants). Figure 10 reports the percentage of respondents who indicate that each factor was either "very important" or "extremely important" to their decision. Separate figures are presented for all private schools (n=241), participants (n=179), and non-participants (n=62). The survey question was, "Below are some specific factors that might influence a school's decision to participate in a voucher program. To what extent were these factors important when your school was deciding whether or not to participate?"

Figure 11. Information used by participating and non-participating schools in their student admissions process

Percentage of private schools that consider information in student admission process



Source: Survey results.

Note: The results in Figure 11 were based on responses from 241 private schools (179 participants and sixty-two non-participants). Figure 11 reports the percentage of participants and non-participants indicating that the information was considered in the admissions process. “Legacy Status” refers to whether or not the student has family members currently or previously enrolled in the school. The survey question was, “What information does your school consider in the admissions process?”

The survey data reveal that, of all types of regulations, schools are most sensitive to those that impose restrictions on their student admissions procedures. More than half of all respondents (54 percent of participants and 48 percent of non-participants) indicated “upholding student admissions criteria” was either a “very important” or “extremely important” factor in their respective decisions, ranking it the highest among the re-

quirements listed in the survey. Furthermore, nearly six out of ten non-participants (58 percent) rated “adopting an open-enrollment policy” as a “very important” or “extremely important” factor in their decision.

Also important to private schools in determining whether or not to participate was the requirement to allow students to opt out of religious activities. This

was noted by 57 percent of non-participants and 48 percent of participants. Yet it is peculiar, considering only one of the four programs (Milwaukee’s) has such a requirement. This result may indicate respondents’ unfamiliarity with program requirements, but it may also hint at how sensitive religious schools are to restrictions on their religious identity.

The amount of paperwork required was rated the third most influential factor among all schools, and the top factor among non-participants. A full 58 percent of non-participants and 36 percent of participants indicated that it was very or extremely important to them. The increase in paperwork that results from program participation can be significant, particularly for smaller schools with few administrators. Complaints about paperwork burden were pervasive in the open-ended comments provided by participating schools.

One in four respondents indicated that participation in state testing was very or extremely important. This requirement factored more heavily into the decisions of non-participants (37 percent) than those of participants (21 percent). Indiana and Ohio, however, both require private schools to administer state standardized tests as a condition of state accreditation (chartering), so testing was already the norm for many participating schools.

The survey data suggest private schools are less concerned about the accountability aspect of state testing than they are about the burden of actually administering the tests. For instance, among non-participants, 37 percent rated the “requirement to participate in state testing” as very or extremely important, whereas 21 percent indicated the same for “public reporting of school’s state test results”. The open-ended comments back up the claim that accountability is a major concern. Many respondents expressed frustration that they have to administer the state tests in addition to the norm-referenced tests required by their diocese or governing body, or they voiced concern that standardized testing was incongruent with their school’s educational philosophy. However, none of the respondents commented on the publication of their test results or other aspects related to accountability.

Teacher and administrator credentials, minimum instructional hours, and disclosing school finances were among the least important factors for both participants and non-participants. Many participating schools commented that they complied with these regulations long before they signed up for the voucher program, in part because they are required for state accreditation.

❖ ARE NON-PARTICIPATING SCHOOLS MORE SELECTIVE?

As noted above, private schools aim to safeguard their admissions procedures. To learn more about such procedures in private schools, we asked participants and non-participants about the type of information they use to screen potential students (see Figure 11). Both tended to rely on similar information—most commonly parent interviews, prior academic records, and special-needs statuses. Twenty-one percent of voucher participants indicated that they do not use any information to guide admissions, compared to 8 percent of non-participants. This difference was entirely driven by responses from participating schools in Milwaukee, which cannot legally use any information aside from eligibility status when admitting voucher students. The other three programs do not have this restriction but require schools to abide by written admissions guidelines.

❖ ARE NON-PARTICIPATING SCHOOLS MORE EXPENSIVE?

We also inquired about schools’ tuition and fees. Each respondent was asked to select one of three price ranges that best described the total per-student tuition and fees that a full-time pupil would pay at their schools. Separate ranges were provided for K–8 and 9–12 students. Table 6 compares the tuition and fees of participating and non-participating schools,

Table 6. Tuition costs relative to voucher amount for participating and non-participating schools

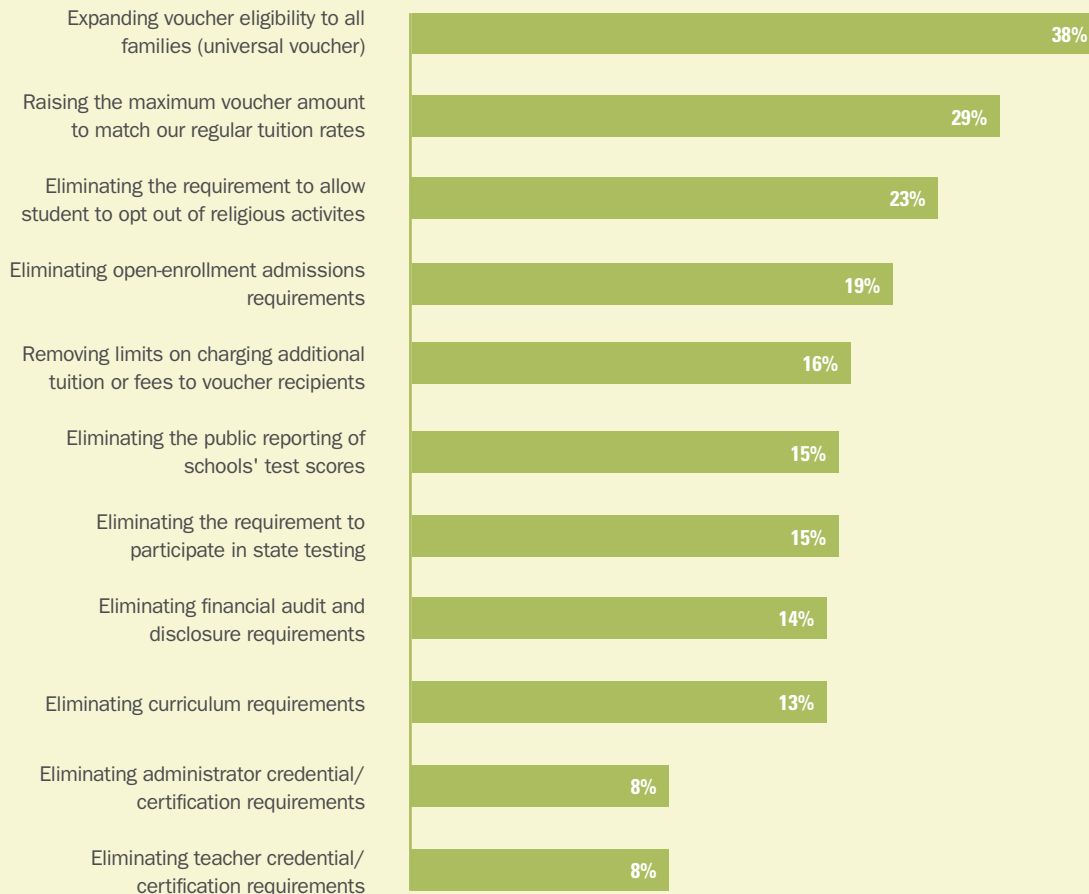
	PARTICIPANTS	NON-PARTICIPANTS	ALL SCHOOLS
Tuition below voucher amount by at least \$1,000	21%	26%	23%
Tuition within \$1,000 (above or below) of voucher amount	3%	6%	4%
Tuition exceeds voucher amount by at least \$1,000	76%	69%	73%

Source: Survey results.

Note: The results in Table 6 are based on responses from 241 private schools (179 participants and 62 non-participants). The rows may not sum to 100 percent due to rounding. The actual survey item presented three ranges of dollar amounts. Schools were asked to respond separately for K–8 and 9–12 tuition amounts. The survey question was, “Which of the following best describes the total per-student cost of tuition and compulsory fees for full-time enrollment in your school?”

Figure 12. The influence of expanding voucher eligibility to all families on private school participation

How would the following changes influence your school's likelihood of participation in the future?



Source: Survey results.

Note: The results in Figure 12 are based on responses from 62 non-participants. The bars in Figure 12 indicate the percentage of non-participants indicating they would be “much more likely” to participate if a program enacted the change listed to the left of the bar. The survey question was: “How would expanding the voucher eligibility to all families (universal voucher) influence your school’s likelihood of participation in the future?” Response options included: “No more likely to participate,” “somewhat more likely to participate,” “much more likely to participate,” and “not sure.”

relative to the maximum voucher amounts for their respective programs in 2011–12.

If financial costs are a major deterrent to participation, we might expect non-participants to be more likely to have tuition and fees that exceed maximum voucher amounts. The data do not bear this out. In fact, the proportion of schools reporting total per-student tuition and fees at least \$1,000 above the voucher amount is slightly higher for participants than non-participants (76 percent compared to 69 percent). However, it is possible that the actual tuition rates of non-participants in our survey are still considerably higher, on average, than those of

participating schools, but the survey did not pick up on this difference because our top category was too broad to discriminate between, say, a participating school charging \$8,000 and a non-participating school charging \$16,000.⁵⁰

The results show the majority of schools are subsidizing the tuition of their voucher students, with three out of four participating schools reporting that their total cost of tuition and fees for full-time students exceeded the maximum value of the voucher by at least \$1,000. This does not mean that most schools are in worse financial condition as a result of their participation in voucher programs. For a school with an enrollment shortfall,

accepting a voucher student at a discounted rate may be preferable to taking a complete loss on an empty seat. But while the voucher amounts may be sufficient for filling excess capacity, they may be too low to incentivize schools to expand their enrollment in order to serve more voucher families.

❖ WHAT REGULATORY CHANGES WOULD ENTICE SCHOOLS TO PARTICIPATE?

Finally, we asked non-participating schools what changes to the program requirements would influence their decision to participate in the future. We posed a number of hypothetical regulatory changes to the non-participating schools in our survey sample and asked them to indicate whether, if these hypothetical changes were put in place, they would be more likely to participate.

The item that elicited the strongest response was “expanding voucher eligibility to all families” (see Figure 12), with 38 percent of non-participants indicating they would be “much more likely to participate” if this change occurred. This again points to low demand as the primary reason for non-participation (recall that “lack of demand from eligible families” was the top-ranked reason cited by non-participants in Figure 8).

Twenty-nine percent of non-participants would be more likely to participate if voucher amounts were raised to match their existing tuition levels. Additionally, we see more evidence that schools are sensitive to restrictions on religious activities and admissions procedures.

PART IV: DISCUSSION

An overarching goal of private school choice programs is to improve the educational options available to underserved families—and to do this with efficiency. Accomplishing this goal will require smart policy that fosters a strong supply of private schools willing to enroll voucher and tax credit scholarship recipients. While purely descriptive, this study offers several valuable insights on how the design of program regulations may affect private school participation.

We found that over half of all private schools participate in voucher or tax credit scholarship programs. There are large differences in participation rates across thirteen programs. The greatest cause of this variation is simply demand from eligible families—it varies across locations. However, regulation also plays an important role in shaping not only how many schools sign up but also the types of schools that participate.

Catholic schools, which comprise over a third of the private school market, have participation rates exceeding 70 percent in even the most highly regulated programs. This inelastic participation is driven in part by a commitment to serving the poor and in part by the need to counteract declining enrollments. In many Catholic schools, particularly urban ones, the majority of students enrolled are voucher recipients, which means that Catholic schools must participate at nearly any cost. Other types of private schools are less inclined to participate and more easily deterred by high levels of regulation.

Survey results indicate that private schools react most strongly to regulations that impact their religious freedom and selective admissions. These are defining features of the majority of private schools in the U.S., and it would seem counterproductive to require private schools to become less “private” in order to participate in school choice programs. To the extent that issues like creationism and cream-skimming represent real threats to the public interest, program designers may want to explore alternatives that do not require existing private schools to fundamentally change their identities—for instance, incentive-based approaches offering larger scholarship amounts to schools that follow the state science curriculum or adopt open-enrollment admissions policies.

Programs that place heavy restrictions on religious practice and admissions procedures will require additional incentives to convince existing schools to participate. Raising voucher amounts is one way to do this, though this comes at the cost of lower efficiency. Our survey data reveal that voucher amounts fall short of tuition for three out of four private schools. Higher voucher amounts are expected to boost participation, particularly among more expensive non-sectarian schools, whose present participation rates are just half that of Catholic schools. Moreover, they may help generate the second source of supply: new schools. The current funding levels of most programs are insufficient to attract new school operators, in part because there is such strong competing demand for new schools in the charter school sector, where per-pupil funding is closer to that of traditional public schools.

Another way to incentivize strong participation is to minimize the paperwork burden. Paperwork burden is a top concern among private schools, particularly small schools, which often do not have the central-office capacity to take on tasks such as verifying the income of all prospective enrollees. Ohio’s EdChoice program and Florida’s tax credit scholarship programs set good examples of how programs can lighten the paperwork burden on schools. Both centralize the process of verifying family-eligibility requirements, whereas most other programs require the schools themselves to both verify income eligibility and help those families file the paperwork to receive a voucher.

Maintaining clear and consistent regulations from one year to the next will also foster stronger participation among existing schools. Indeed, the strongest theme emerging from the open-ended comments to the survey relates to frustration over constantly changing rules. The D.C. Opportunity Scholarship Program serves as an extreme example: Over the span of eight years, the program has been enacted and un-enacted, defunded and subsequently re-funded in a series of highly publicized political battles. Unstable regulatory environments such as D.C.’s are bound to create anxiety amongst participants and hesitancy from non-participants.

We found little evidence from the survey to suggest designers should shy away from testing and accountability

requirements out of concern that they will stifle participation. The concerns of non-participating schools regarding testing were more related to their philosophical opposition to standardized testing and the burden of administering the state test on top of the test required by their governing organizations. They did not express strong opposition to the accountability aspect of testing, such as publicizing test scores or receiving letter grades from the state.

This descriptive research makes a number of contributions to our understanding of the role of regulations and other factors in shaping the supply of private schools in school choice programs. Even so, there is great deal we still need to learn. Most importantly, additional research is necessary to identify the policies that foster a *higher-quality* supply of private school participants, not just a larger supply. This includes factors that encourage the most effective existing private schools to sign up and that ensure ineffective schools make a quick exit.

APPENDIX: TECHNICAL INFORMATION ON THE DESCRIPTIVE ANALYSIS

Table A-1. Primary sources used to gather information on private school regulations

NAME	REGULATION DATA SOURCES
D.C. Opportunity Scholarship Program	<ol style="list-style-type: none"> Scholarships H.R. 471 “How to Use your Scholarship,” D.C. Investment Trust, http://www.dcscholarships.org/elements/file/OSP/How%20to%20Use%20Your%20Scholarship%2012-13%20(English).pdf
Indiana Choice Scholarship Program	<ol style="list-style-type: none"> Indiana Code 20-51-1; Indiana Code 20-51-4 “Application to Become an Eligible School Under Indiana’s Choice Scholarship Program,” Indiana Department of Education, http://www.doe.in.gov/sites/default/files/school-choice/application-become-eligible-school.pdf “Indiana Choice Scholarship Program: Frequently Asked Questions – Eligible Schools,” Indiana Department of Education, http://www.doe.in.gov/sites/default/files/school-choice/2012-05-faqforschools.pdf
Louisiana Student Scholarship for Educational Excellence	<ol style="list-style-type: none"> Louisiana HB 976 Louisiana Department of Education, “Criteria for School Participation in the Student Scholarship for Educational Excellence Program,” http://www.louisianaschools.net/ide/uploads/20035.pdf
Ohio EdChoice Scholarship Program	<ol style="list-style-type: none"> Ohio Code 3310 <i>Ohio Educational Choice Scholarship Program: Policy and Procedures Manual</i>, Ohio Department of Education
Cleveland Scholarship and Tutoring Program	<ol style="list-style-type: none"> Ohio Code 3313 <i>Cleveland Scholarship Tutoring Program 2009-10 Policy Manual</i>, Ohio Department of Education
Milwaukee Parental Choice Program	<ol style="list-style-type: none"> Wisconsin Stat. 119.23 “Milwaukee Parental Choice Program: Program Forms,” Wisconsin Department of Public Instruction, http://sms.dpi.wi.gov/sms_forms
Arizona Individual School Tuition Organization Tax Credit	<ol style="list-style-type: none"> Ariz. Stat. 43-1089, Arizona Department of Revenue <i>Manual for School Tuition Organizations</i>, Arizona Department of Revenue, http://www.azdor.gov/LinkClick.aspx?fileticket=NfhvNE7I864%3d&tabid=114
Arizona Corporate School Tuition Organization Tax Credit	<ol style="list-style-type: none"> Ariz. Stat. 43-1183, http://www.azleg.state.az.us/ars/43/01183.htm <i>Manual for School Tuition Organizations</i>, Arizona Department of Revenue, http://www.azdor.gov/LinkClick.aspx?fileticket=NfhvNE7I864%3d&tabid=114
Florida Tax Credit Scholarship Program	<ol style="list-style-type: none"> Florida Stat. 1002.395 “Participate Now,” Step Up for Students, http://www.stepupforstudents.org/HowItWorks/ForSchools/ParticipateNow
Georgia Private School Tax Credit	<ol style="list-style-type: none"> Georgia HB 325
Iowa School Tuition Organization Tax Credit Program	<ol style="list-style-type: none"> Iowa Code 422.11S
Pennsylvania Educational Improvement Tax Credit	<ol style="list-style-type: none"> Pennsylvania Article XVII – F
Rhode Island Corporate Tax Credit Scholarship Program	<ol style="list-style-type: none"> Rhode Island Code Chapter 44-62

Table A-2. Private school choice program requirements used to determine regulatory burden scores

	AZ CORP TCS	AZ IND TCS	CLEV VOUCHER	DC VOUCHER	OH ED CHOICE	FL TCS	GA TCS	IN VOUCHER	IA TCS	LA VOUCHER	MILW VOUCHER	PA TCS	RI TCS
Financial Reporting & Disclosure													
Submit annual financial report that includes audit by independent public accountant													
Submit annual financial report													
Disclose voucher/scholarship expenditures													
Disclose non-voucher/scholarship expenditures													
Provide state with details on tuition rate structure													
Eligibility Requirements													
Register private school with state													
Accreditation/charter required for participating schools at some point													
Accreditation/charter required at time of participation													
Application Requirements													
Notify state of intent to participate													
Submit application to participate for the first time													
Required to submit application every year													
Application fee required													
Required to submit proof of financial viability													
Required to submit proof/certificate of insurance													
Required to obtain surety/fidelity bond or letter of credit													
Curriculum & Instruction Requirements													
Maintain copies of Constitution, etc.													
Display American flag in each classroom													
Provide instruction on American civics, history, or heritage													
Provide instruction in core subjects (reading, math, science)													
Provide education on drugs, alcohol, tobacco													
Follow state academic content standards													
Tuition & Fee Restrictions													
School cannot charge voucher recipient more than voucher amount													
Maximum set on scholarship/voucher amount (cap)													
Fixed voucher amount set for all eligible recipients													
Parents required to contribute portion of scholarship													

Table A-2. Private school choice program requirements used to determine regulatory burden scores (cont'd)

	AZ CORP TCS	AZ IND TCS	CLEV VOUCHER	DC VOUCHER	OH ED CHOICE	FL TCS	GA TCS	IN VOUCHER	IA TCS	LA VOUCHER	MILW VOUCHER	PA TCS	RI TCS
Certification & Licensure Requirements													
Criminal background checks for all employees	■		■		■	■		■	■			■	■
Bachelor's degrees required of instructional staff			■	■	■	■		■	■	■	■		■
Teacher certificate/license required of all teachers			■		■			■	■				
Administrator certificate/license required of all administrators			■		■			■			■		
Annual performance evaluations required of all teachers								■					
Oversight													
State budget line item for program oversight/compliance						■					■		
Designated office in state department of education for compliance			■		■	■					■		
Published instructions on how to report fraud or violations			■		■	■					■		
Program staff conducts announced site visits			■	■	■	■			■	■			
Program staff conducts unannounced site visits			■		■			■					
Admissions & Enrollment Guidelines													
Abide by written admissions policy			■		■	■		■			■		
Students allowed to opt out of religious activity											■		
Lottery required for oversubscription			■	■	■	■		■		■	■		
Cap on voucher students in first few years										■	■		
Adopt open-enrollment policy										■	■		
No enrollment preference for siblings													
No enrollment preference to students previously enrolled													
School required to admit new students in all grades offered				■	■	■					■		
Restricted to students enrolled in public school or Kindergarten students	■		■	■	■	■	■	■		■	■		
Program restricted to families based on income	■		■	■	■	■		■	■	■	■	■	■
Restricted to families assigned to failing schools					■					■			
Restricted to families assigned to failing schools and in poverty										■			
Testing & Accountability Requirements													
Administer some form of standardized test	■		■	■	■	■		■	■	■	■		
Administer the state's standardized tests			■		■			■		■	■		
Test voucher recipients in at least one grade	■		■	■	■	■		■	■	■	■		
Test voucher recipients in all grades	■		■	■	■	■		■	■	■	■		

Table A-2. Private school choice program requirements used to determine regulatory burden scores (cont'd)

	AZ CORP TCS	AZ IND TCS	CLEV VOUCHER	DC VOUCHER	OH ED CHOICE	FL TCS	GA TCS	IN VOUCHER	IA TCS	LA VOUCHER	MILW VOUCHER	PA TCS	RI TCS
Administer test to non-voucher students													
Report annual test scores to state													
Provide parents with student's test scores													
State releases test scores at state level													
State releases test scores at school level													
State releases test scores at subgroup level													
School receives annual accountability rating from state													
Follow state regulations regarding test security and proctoring													
Pay costs of administering tests													
Required to maintain school improvement plan/strategic plan													
Paperwork & Reporting													
Maintain student health records													
Maintain certificate of occupancy for building and facilities													
Maintain immunization records for all students													
Have fire safety inspections													
Submit annual compliance report													
Maintain daily attendance records on voucher students													
Submit enrollment records of voucher students at least once per year													
Submit enrollment records of voucher students at least twice per year													
Verifying family income eligibility status													
Maintain records of family income eligibility													
Submit application for scholarship on parents' behalf													

*Indicates requirement applies to program

Source: Program regulation information collected from state departments of education

Note: The Milwaukee Parental Choice Program's pre-accreditation requirement is considered a form of accreditation for the purposes of this study.

Table A-3. Reliability Statistics on the Regulatory Burden Measure

	NO. ITEMS (REQUIREMENTS)	INTERNAL CONSISTENCY (CRONBACH'S ALPHA)	ITEM-REST CORRELATION (INDEX)
School Eligibility Requirements	3	0.72	0.77
Application Procedures	7	0.82	0.84
Admissions & Enrollment Guidelines	12	0.69	0.78
Tuition Restrictions	4	0.61	0.64
Testing & Accountability Requirements	13	0.91	0.94
Financial Reporting & Disclosure	5	0.80	0.82
Curriculum & Instruction Requirements	6	0.77	0.32
Compliance Reporting	11	0.82	0.91
Certification & Licensure Requirements	5	0.71	0.63
Oversight	5	0.76	0.66
Overall	71	0.92	

Source: Regulation information collected from state departments of education.

Note: Table A-3 reports the number of requirements in each of the ten domains, along with the internal consistency Cronbach's alpha coefficient for each domain and the correlation of each domain-level score to the rest of the domain-level scores.

❖ MODEL OF SCHOOL PARTICIPATION

We use a random intercept logistic regression model to examine the relationship of regulatory burden and private school participation. The model we fit predicts participation as a function of school and program factors. It can be written as:

$$P_{jk}^* = X_{jk}\beta + Z_k\lambda + R_k\delta + \mu_k + \varepsilon_{jk}$$

Where $P_{jk} = 1$ if $P_{jk}^* \geq 0$; $P_{jk} = 0$ if $P_{jk}^* < 0$

Where P^* is conceptualized as a latent continuous response variable representing the propensity of school j to participate in their school choice program k , which underlies P_{jk} , the observed binary indicator of school participation status in 2011-12.⁵¹

X_{jk} is a vector of school-specific independent variables that includes measures of the local demand for the private school from eligible voucher recipients, the excess capacity of the school to enroll more students, and other school characteristics expected to influence participation. Descriptions of these variables are provided in Table A-4. Some of the variables are taken from Private School Universe Survey (PSS) data in the

year (s) immediately prior to the enactment of schools' respective choice programs to address concern that the post-program measures are endogenous to participation. For instance, school enrollment size will be endogenous to participation in post-program years because schools that enroll voucher/scholarship students are expected to see an increase in enrollment. β is a vector of coefficients that corresponds X_{jk} .

Z_k is a vector of program-level explanatory variables with coefficients λ . The small sample of programs ($n=13$) imposes limits on the number of program-level factors we can include in the same model. Our base model includes two program-level controls that we expected to influence school participation. An estimate of the total number of vouchers/scholarships available to eligible families in 2011-12 and the average voucher/scholarship amounts.

R_k is the measure of the regulatory burden that comes with participation in program k . This measure is constant for all schools within a given program jurisdiction. As described in the main body of the report, R is based on the number of requirements each program has across 10 domains of regulation. Seventy-one unique requirements were counted across the 10 domains. Min-max normalization is used to put programs' results on a scale with a plausible range of 0 to 100 (observed range 8

to 76). The measure is adjusted to account for differences in the “baseline” regulatory burden that apply to schools across the 11 states in our sample; some of the 71 requirements we counted apply to *all* private schools in certain states and only participating schools in others. Our interest is in the effects of the regulatory burden that is specific to participation, so we adjust the scores for baseline requirements by calculating the regulatory burden scores for *non-participating* schools in each program (using the same 71 requirements shown in Table A-2) and then subtracting these from the scores of *participating* schools. The minimum and maximum scores from the participating schools distribution are used to calculate the non-participant scores in order to maintain the scale.

The quantity we are most interested in is the effect of a change in R_k on the probability school participates in a school choice program. Our hypothesis is that schools will have lower probabilities of participation at higher

levels of R_k . Accordingly, our null hypothesis is that the coefficient on R_k will be zero, $H_0: \delta = 0$. μ_k represents program-specific random intercepts, which are included to capture the effects of unobserved factors that are constant for all schools in the same program. The random intercepts are assumed to be normally distributed $\mu_k \sim N(0, \psi)$ independent and identically distributed across schools and independent of X_{jk} . ϵ_{jk} are residual errors which follow a standard logistic distribution and are assumed to be independent of μ_k and X_{jk} . The model is estimated by maximum likelihood methods.

We ran a number of variants on model 1 in order to test the robustness of our results to different specifications on the model, sample, and construction of the regulatory burden measure. First, we ran Model 1 on the subsample of schools located in urban communities (n=2023 unweighted). The urban sample includes all schools with an urban-centric community type designation of large

Table A-4. Variables used in model of relationship between choice program regulations and private school participation

VARIABLE NAME	DESCRIPTION	SOURCE
Outcome Variables		
Participation Status	School applied to participate or was registered as participant for 2011-12	State DOE websites
Community/ Demand Factors		
Rural	School located in Census-designated rural area	PSS
Town-Suburb	School located in Census-designated town or suburb	PSS
District 4 Year Graduation Rate	Freshmen graduation rate in local school district	CCD
Religious Adherence Rate	Countywide adherence rate to school's religion (per 1000 residents)	2010 USRC
Poverty rate in neighboring schools	Pct. of public school students enrolled within 5 mile radius on free or reduced price lunch in 2009-10	CCD
Voucher Eligible Student Nearby	School has at least 1 eligible student within 5 miles	PSS, 2000 Census, CCD
High Poverty ZIP Code	> 23 percent (90th percentile) of residents in ZIP code live below poverty line	PSS, 2000 Census
High Public School Density	School has > 15 public schools located within 5 mile radius	CCD
Local school district Per-Pupil Expenditures	Per pupil expenditures of local public school district (2008-09)	CCD
Enrollment and Capacity		
Enrollment drop prior to program	School enrollment declined by more than 25 students over 3 years immediately prior to program launch	PSS
High Student-Teacher Ratio	Ratio of students to private schools was 20:1 or higher prior to program launch	PSS, CCD
Small School	50 ≥ students enrolled in school in year prior to program launch	PSS

Table A-4. Variables used in model of relationship between choice program regulations and private school participation (cont'd)

VARIABLE NAME	DESCRIPTION	SOURCE
School Characteristics		
High School	School served grades 9-12 exclusively prior to choice program launch	PSS
High Minority	> 50% of student population enrolled in year prior to program launch was minority (non-white)	PSS
Alternative School	School classified as Alternative School	PSS
Montessori School	School classified as Montessori School	PSS
Non-Catholic Religious School	School has religious orientation other than Catholic	PSS
Catholic	School classified as Catholic school	PSS
Tuition & Costs (Program Level)		
Average Scholarship/Voucher Amount of Program	Average scholarship amount of program	Friedman Foundation
No. available scholarships	The total number of vouchers/scholarships available to eligible families.	Alliance for school choice
Regulatory Burden (Program Level)		
Overall Regulatory Burden Score	Normative measure ranging from 0 to 100 based on number of requirements across 10 domains (total of 71 possible requirements)	Author calculations

Sources: Data were collected from the 2009-10 Private School Universe Survey (PSS), the 2010-11 Common Core of Data (CCD), the Alliance for School Choice, the Friedman Foundation, various state departments of education, the 2000 Census, and the 2010 U.S. Religious Census: Religious Congregations & Membership Study (USRC).

Notes: Table A-4 indicates the data sources for variables used in base logit model specification (Model 1). All participation data are from the 2011-12 with the exception of Louisiana, which used the list of schools indicating their intent to participate in the new statewide program in 2012-13.

that participation rates will be lower in new programs as a function of schools (and families) unfamiliarity with the requirements for participation. A number of the schools in Indianapolis that responded to our survey indicated they did not learn about their program early enough to apply for it.

Third, we introduce a fixed effect for voucher programs, excluding the other program level controls, but retaining the regulatory burden measure. This model tests the association of regulatory burden to school participation while controlling for systematic differences in participation between schools in voucher and tax credit scholarship programs.

Fourth, we estimate Model 1 using an alternative weighting scheme for the measure of regulatory burden, which assigns weight to the domain-level scores according to the level of importance revealed in the survey responses. The alternative “survey-based” weights are derived from respondents’ average rating

of the importance of factors (items) that corresponded to each of the 10 domains of regulation. We use the average of their ratings on the 5-point Likert scale ranging from 1 = “not at all important” to 5 = “extremely important”. The survey-based weights may better represent the type of regulatory burden that schools respond to, although the preferences of the survey respondents in the four voucher programs may not generalize to schools in the other 9 programs. The original and alternative weights for the 10 domains are shown in Table A-5.

Fifth, we specified a probit model with correlated random effects in an attempt to correct for potential selection bias in the sample that arises due to school eligibility (accreditation) restrictions.⁵² Specifically, this is to deal with the fact that the sample includes 63 non-chartered schools in Ohio and 148 non-accredited schools in Indiana that are not eligible to participate in their respective voucher programs. Since ineligible schools do not have the option to partici-

pate, their participation outcomes are treated as missing in Model 1. Selection bias will arise if the ineligible schools differ from the eligible schools in unobserved ways that affect their probability of participation. The bivariate probit model makes a correction for this bias.

Finally, we replaced the program random-effects with state fixed-effects in order to exploit the within-state variation in program regulatory burden that exists in Arizona. Arizona has two tuition tax-credit scholarship programs that have different levels of regulation. We include the state fixed effects to test if schools within the same state are more likely to participate in the program with lower regulatory burden. Robust standard errors are used to account for multiple observations of Arizona schools in the sample.

Results from different specifications were not substantively different in terms of the magnitude or significance of the marginal effects of regulatory burden on participation. In all specifications we find a positive and statistically significant association of regulatory burden to the odds of participation.

Table A-5. Original and survey-based weighting of regulatory burden measure

REGULATION DOMAIN	ORIGINAL WEIGHT (EQUAL-WEIGHTING)	ALTERNATIVE WEIGHT (SURVEY-WEIGHTING)
Eligibility Requirements	10%	7%
Application Requirements	10%	6%
Curricular Requirements	10%	8%
Tuition & Fee Restrictions	10%	12%
Student Admission Guidelines	10%	17%
Paperwork & Reporting	10%	16%
Oversight & Enforcement	10%	6%
Licensure & Credentialing	10%	9%
Financial Disclosure & Reporting	10%	6%
Testing & Accountability	10%	8%

Source: Regulation information collected from state departments of education.

Note: Table reports the weight assigned to each of the 10 domains when calculating the overall average regulatory burden. The original measure assigns equal weight (10%) to all 10 domains, while the alternative weighting scheme assigns weights based on the results of the private school survey conducted in Milwaukee, Indianapolis, Dayton, Cincinnati, and Cleveland.

ENDNOTES

1. Greg Forster and James L. Woodworth, *The Greenfield School Revolution and School Choice* (Friedman Foundation for Educational Choice, June 2012), <http://www.edchoice.org/CMS-Modules/EdChoice/FileLibrary/853/Greenfield-School-Revolution-and-School-Choice.pdf>.
2. Adam Schaeffer, "A Strategic Defeat for Educational Freedom," *Huffington Post*, March 5, 2011, http://www.huffingtonpost.com/adam-schaeffer/a-strategic-defeat-for-ed_b_857687.html.
3. Michael J. Petrilli et al., *When Private Schools Take Public Dollars: What's the Place of Accountability in School Voucher Programs?* (Thomas B. Fordham Institute, March 2009), http://www.edexcellencemedia.net/publications/2009/200904_whenprivateschoolstakepublicdollars/School%20Vouchers%20Report.pdf.
4. As this study shows, it's possible for a school to agree to participate in a program and go through the various steps required to do so yet, for various reasons, end up in any given year with no pupils from it.
5. Participation rates are "raw" in that they do not factor in whether or not schools are eligible to participate, school proximity to eligible voucher/scholarship recipients, number of scholarships available, etc. See report for "adjusted" participation rates that consider such variables.
6. This might be, for example, the result of a narrowly defined program; a dearth of families (or public schools) in the vicinity that meet the program's eligibility requirements; a lack of awareness or interest in the program among those who might benefit from it; and/or insufficient funding to cover all who might otherwise be eligible to take part.
7. We're aware that simply by flagging these concerns with admissions and religious practices, we may be alerting enemies of private school choice to new ways to curb the spread and take-up rates of such programs.
8. "The Year of School Choice," *Wall Street Journal*, July 5, 2011, <http://professional.wsj.com/article/SB10001424052702304450604576420330972531442.html>.
9. Michelle Gininger, *School Choice: Legislation State by State* (American Federation for Children, 2011), accessed January 11, 2013, http://www.federationforchildren.com/system/uploads/119/original/Legislation_State_by_State_2011.09.19.pdf?1316465450; "The Year of School Choice."
10. Clive R. Belfield, Henry M. Levin, and Heather L. Schwartz, "School Choice and the Supply of Private Schooling Places: Evidence from the Milwaukee Parental Choice Program," Occasional Paper No. 84, National Center for the Study of Privatization in Education (New York: Teachers College, 2004), http://www.ncspe.org/publications_files/OP_84.pdf; Julian R. Betts, "The Economic Theory of School Choice," in *Getting Choice Right: Ensuring Equity and Efficiency in Education Policy*, ed. Julian R. Betts and Tom Loveless (Washington, D.C.: Brookings Institution Press, 2005) 14-39.
11. Milton Friedman, "The Role of Government in Education," in *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962), 85-107.
12. Martin R. West, *School Choice through the Tax Code: Past Limitations, Future Prospects* (Cambridge, MA: Program on Educational Policy and Governance, Harvard University, 2002).
13. Patte Barth, Jim Hull, and Rebecca St. Andrie, *Searching for the Reality of Virtual Schools* (Alexandria, VA: Center for Public Education, May 2012), <http://www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Searching-for-the-reality-of-virtual-schools-at-a-glance/Searching-for-the-reality-of-virtual-schools-full-report.pdf>.
14. Stephen P. Broughman et al., *Private School Universe Survey (PSS): Public-Use Data File for School Year 2009-10* (National Center for Education Statistics, March 2012), <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012320>; Malcom

Glenn and Michelle Gininger, *School Choice Now: The Year of School Choice: School Choice Yearbook 2011-12* (Washington, D.C.: Alliance for School Choice, 2012), http://s3.amazonaws.com/assets.allianceforschoolchoice.com/admin_assets/uploads/67/scy2012.pdf.

15. School choice for special-education students is a prominent aspect of the school-choice movement, and its research demands separate, dedicated studies such as those by Marcus & Greene (2009) and Wolf, Witte, & Fleming (2012). Marcus A. Winters and Jay P. Greene, *How Special Ed Vouchers Keep Kids From Being Mislabeled as Disabled*, Civic Report no. 58 (Manhattan Institute for Policy Research, 2009), http://www.manhattan-institute.org/html/cr_58.htm; Patrick J. Wolf, John F. Witte, and David J. Fleming, "Special Choices," *Education Next* 12, no. 3 (2012), 16-22, <http://educationnext.org/special-choices/>.
16. The Ohio EdChoice Scholarship Program and the Louisiana Student Scholarships for Educational Excellence Program, often referred to as "failing school" programs, direct scholarships specifically toward students enrolled in low-performing public schools. Only the Arizona Individual School Tuition Organization Tax Credit and the Georgia Private School Tax Credit, both tax credit scholarship programs, lack state legislation requiring needs-based student eligibility requirements.
17. Scholarship Granting Organizations (SGOs) are also referred to as School Tuition Organizations (STOs).
18. In a 2011 case regarding Arizona's personal tax credit scholarship program, the U.S. Supreme Court ruled that taxpayer donations to SGOs are not government property. *Arizona Christian Sch. Tuition Org. vs Winn*, 131, 131 S. Ct. 1426, 179 L. Ed. 2d 523 (2011).
19. Louisiana's participation rates are based on the 2012–13 school year.
20. Participation data for Louisiana's voucher program is from 2012–13. We used the Louisiana Department of Education's published list of private schools that submitted "intent to apply" forms for the 2012–13 school year so we could measure participation in the expanded statewide program. There were 508 schools (13.3 percent) in the master participation list that could not be matched to records in the PSS data, either because the school was not in the PSS file (which would be the case if the school opened after 2009 or did not complete the PSS questionnaire), changed its name, or was designated as a special-education or early-childhood school and was therefore dropped from the PSS dataset prior to merging in participation data. Of the 366 unmatched participants, 72 percent were from two programs: 220 from Florida's tax credit scholarship program and 146 from Arizona's Individual Tax Credit Scholarship program.
21. Defining participation based on evidence of "intent to participate" versus evidence of enrolling voucher/tax credit scholarship students is preferable since the latter is entirely contingent the existence of demand for the school from eligible families, which is not our primary interest.
22. The unweighted response rate for the 2009–10 PSS was 93.8 percent, so this sample is representative of all of the private schools in operation in 2009–10 (Stephen P. Broughman et al., *Private School Universe Survey (PSS): Public-Use Data File for School Year 2009-10*). Early-childhood centers, special-education schools, and Amish schools were dropped from the dataset. In addition to the PSS and participation lists, we incorporate data from a variety of sources: zip codes and county-level demographics are from the U.S. Census (*Summary File 3: Poverty Status in 1999 of Individuals* (Washington, D.C.: U.S. Census of Population and Housing, Government Printing Office, 2000); county-level information on religious adherence rates is from the 2010 U.S. Religion Census (Clifford Grammich et al., *2010 U.S. Religion Census: Religious Congregations and Membership Study* (Lenexa, KS: Association of Statisticians of American Religious Bodies, 2012), http://www.thearda.com/rcms2010/rcms_notes.asp); and data on neighboring public schools (demographics, enrollment, per-pupil funding, and graduation rates) are from the NCES Common Core of Data (Patrick Keaton, *Numbers and Types of Public Elementary and Secondary Schools From the Common Core of Data: School Year 2010–11—First Look* (Washington, D.C.: National Center for Education Statistics, April 2012), <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2012325rev>).

23. The D.C. Opportunity Scholarship Program does not require accreditation, but it does require participating schools to present their accreditation information to families upon request.
24. The pre-accreditation process is unique to the Milwaukee Parental Choice Program. The process entails a review and approval of private schools' educational plans. Pre-accreditation is meant for previously non-accredited schools or newly founded schools; already-accredited schools do not have to obtain pre-accreditation in order to participate. Private schools that obtain pre-accreditation must obtain full accreditation within three and a half years in order to continue participating in the Milwaukee Parental Choice Program, as stipulated in the program's statutes. Alan J. Borsuk, "Just 3 New Voucher Schools Approved," *Milwaukee-Wisconsin Journal Sentinel*, July 20, 2009, <http://www.jsonline.com/news/education/51268272.html>.
25. "Nonpublic School Accreditation," Iowa Department of Education, accessed January 11, 2013, http://educateiowa.gov/index.php?option=com_content&task=view&id=482&Itemid=529.
26. The State of Ohio and Private Schools: Essentials and Historical Background," Ohio Association of Independent Schools, www.oais.org/files/5168/_Documents/PS_StateOH.doc.
27. Indiana assigns accountability grades to all state-accredited schools, not just those participating in the Indiana Choice Scholarship program.
28. This metric is modeled after the World Bank's Ease of Doing Business: Distance to Frontier Score, which is used to measure countries' regulatory environments as it pertains to starting and operating businesses (World Bank, *Doing Business 2012: Doing Business in a More Transparent World* (Washington, D.C.: World Bank, 2011), <http://www.doingbusiness.org/-/media/FPD-KM/Doing%20Business/Documents/Annual-Reports/English/DB12-FullReport.pdf>). Rescaling the requirement count Y to Z for program p in domain x requires: $Z_{px} = [\text{Max}(Y_x) - Y_{px} / \text{Max}(Y_x) - \text{Min}(Y_x)] * 100$. This measure is sometimes referred to as "The Percentage of Maximum Possible" (see Patricia Cohen et al., "The Problem of Units and the Circumstance for POMP," *Multivariate Behavioral Research* 34, no. 3 (1999), 315-346, <ftp://ftp.rush.edu/users/molebio/JMichael/thumb1007/POMPpaper.pdf>).
29. We explored a variety of approaches to weighting the domain-level scores when aggregating to an overall regulatory burden score, including weighting by the number of possible regulations in the domain, weighting according to the internal-consistency reliability of the domains, and weighting according to the preferences indicated by the survey results. The distribution and relative rankings of the thirteen programs' overall scores were not substantively different using these approaches, and neither were the results of the probit analysis.
30. The internal-consistency reliability coefficient (Cronbach's alpha) for the ten domains is .926 (see Appendix for more details on the measure's reliability). The regulatory-burden scores also have a strong negative correlation to the Friedman Foundation's grading of school restrictions (0.83); a lower grade from Friedman corresponds to a higher regulatory-burden score.
31. Simeon Djankov et al., "The Regulation of Entry," *The Quarterly Journal of Economics* 117, no. 1 (2002), 1-37, <http://www.doingbusiness.org/-/media/GIAWB/Doing%20Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Regulation-of-Entry.pdf>.
32. Adam B. Schaeffer, "The Public Education Tax Credit," Policy Analysis no. 605 (Cato Institute, December 2007), <http://www.cato.org/sites/cato.org/files/pubs/pdf/pa-605.pdf>.
33. Program regulatory-burden scores only consider regulations imposed on participating private schools, and thus, regulations imposed on SGOs in tax credit scholarship programs are not factored into a program's score. Common program regulations of SGOs include disclosure of financial activity and background checks of SGO employees.
34. "History of the Choice Program," Choose Your School Wisconsin, accessed January 11, 2013, <http://www.chooseyourschoolwi.org/history-wisconsin-school-choice-program.html>.
35. "Receiving a Charter," Ohio Department of Education, last modified January 4, 2013, <http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=701&ContentID=1211&Content=133090>.

36. Subgroup test scores for scholarship recipients are released on the ODE website at the district level, according to which public school district the student would be assigned to if she were not participating in a choice program. Performance on the private school–level is calculated but must be requested from ODE.
37. Vicki E. Murray, “An Analysis of Arizona Individual Income Tax-credit Scholarship Recipients’ Family Income, 2009–10 School Year,” Program on Education Policy and Governance Working Paper (Cambridge, MA: Harvard Kennedy School, 2010), http://www.hks.harvard.edu/pepg/PDF/Papers/PEPG10-18_Murray.pdf.
38. Southern Education Foundation, *A Failed Experiment: Georgia’s Tax Credit Scholarships for Private Schools* (Atlanta, GA: The Southern Education Foundation, 2011), http://www.southerneducation.org/content/pdf/A_Failed_Experiment_Georgias_Tax_Credit.pdf.
39. Arizona’s program monitors the number of scholarships going to low-income families.
40. Gilbert Cruz, “Looking for Solutions to the Catholic-School Crisis,” *Time*, October 12, 2009, <http://www.time.com/time/nation/article/0,8599,1929589,00.html>.
41. Peter Meyer, “Can Catholic Schools Be Saved?” *Education Next* 7, no. 2 (2007), 12–20, <http://educationnext.org/can-catholic-schools-be-saved/>.
42. A number of church writing and documents highlight how the Catholic mission can be advanced through choice programs. “Church Documents,” Alliance for Catholic Education, University of Notre Dame, accessed January 11, 2013, <http://ace.nd.edu/pea/church-documents>.
43. Richard Buddin, “The Impact of Charter Schools on Public and Private Enrollments,” Policy Analysis no. 707 (Cato Institute, August 2012), www.cato.org/pubs/pas/PA707.pdf.
44. Thomas D. Snyder and Charlene M. Hoffman, “Digest of Education Statistics 2002: NCES 2003–060” (Washington, D.C.: National Center for Education Statistics, U.S. Department of Education, 2003), <http://nces.ed.gov/pubs2003/2003060.pdf>.
45. Paul Peterson and Matthew Chingos’ recent analysis of a privately funded voucher program in New York City found that low-income minority families are drawn more towards religious schools, particularly Catholic schools. The predicted participation rates in Figure 6 adjust for differences in county religious-adherence rates, but this variable may not have captured these dynamics.
46. “Private Schools,” American Montessori Society, accessed January 11, 2013, <https://www.amshq.org/School%20Resources/Private.aspx>; Chris Holfester, *The Montessori Method* (Ipswich, MA: EBSCO Publishing, 2008), accessed January 11, 2013, http://www.williamsburgmontessori.org/wp-content/uploads/2010/08/The_Montessori_Method.pdf.
47. The Ohio Ed Choice and Indiana Choice Scholarship programs are open to schools across those states, but the survey frame was limited to schools in Cincinnati, Dayton, and Indianapolis. We narrowed the sampling frame to these cities to ensure that our limited resources were spent gathering responses from schools that actually faced a participation decision at some point in time. Given the high concentrations of eligible voucher recipients in these cities, we expected the majority of private schools to be aware of their voucher programs and likely to have made an intentional choice on whether to participate, which ultimately would increase the reliability of their responses.
48. We offered schools both a hard copy and online version of the survey. Schools were encouraged to complete the online survey when possible. Surveys in both formats were administered to schools in May 2012. Of the 241 responding schools, 68 percent responded to the survey online and 32 percent responded via hard copy. Schools were offered two forms of incentives for participating. First, all schools in the sample were mailed a \$5 gift card along with their hard-copy survey. The gift card was available for immediate use and not contingent upon completing the survey. Second, schools that completed the survey within the announced survey window were entered into a raffle to win a set of e-readers.
49. The actual survey scale shown in Figure 9 included nine additional items (factors). For the sake of parsimony, we chose to display only the fourteen items that were specific to program regulations.

50. Patrick Wolf's evaluation of the D.C. Opportunity Scholarship found that non-participants were significantly more likely to have tuitions above the program's scholarship cap. Patrick Wolf et al., *Evaluation of the DC Opportunity Scholarship Program: Impacts After One Year: NCEE 2007-4009* (Washington, D.C.: Institute for Education Sciences, June 2007), <http://ies.ed.gov/ncee/pubs/20074009/>.
51. As discussed earlier, P_{jk} is equal to 1 for all schools for which we could find some type of documentation indicating they sought participation in the program in the 2011–12 school year. This includes schools that filed paperwork indicating “intent to participate” with a state program office or, in the case of tuition tax credit programs, schools listed as a partner school on the website of an SGO. An exception to this was our approach to Louisiana, for which we used application data 59 from the 2012–13 school year (the Louisiana Department of Education's list of schools that filed an “intent to participate” form in the summer of 2012) because that's when the program was expanded statewide.
52. Alfonso Miranda and Sophia Rabe-Hesketh, “Maximum Likelihood Estimation of Endogenous Switching and Sample Selection Models for Binary, Ordinal, and Count Variables,” *Stata Journal* 6, no. 3 (2006), 285-308, <http://www.stata-journal.com/sjpdf.html?articlenum=st0107>

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