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NEW
Updated Edition

RHETORIC Versus REALITY

**What We Know and
What We Need to Know
About Vouchers and
Charter Schools**

**Brian Gill
P. Mike Timpane
Karen E. Ross
Dominic J. Brewer
Kevin Booker**

*Supported by the Gund Foundation, Spencer Foundation,
Annie E. Casey Foundation, and Carnegie Corporation of
New York*



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Education vouchers and charter schools are two of the most prominent and far-reaching forms of family-choice policies currently in evidence in the nation's elementary and secondary schools. As such, they present important challenges to the traditional provision of public education in schools that are created, governed, funded, and operated by state and local authorities.

This book reviews the theoretical foundations for vouchers and charter schools and the empirical evidence of their effectiveness as set forth in hundreds of recent reports and studies. The literature analyzed includes studies that directly examine voucher and charter schools, in the United States and abroad, and, where relevant, comparisons between existing public and private schools. The book also examines the ways in which multiple dimensions of policy design—such as targeting, funding levels and limitations, admissions policies, academic standards and assessments, and accountability—will determine the nature and extent of any specific program's impact. The findings will be of interest to policymakers, researchers, and educators at every level of the education system who must assess numerous proposals for vouchers, charter schools, and other forms of family choice in education.

This second edition of this book is being launched in the summer of 2007 with updates to the introductory chapter and the lengthy chapter on academic achievement—the area that has seen the largest number of new studies since the first edition was published in 2001. The revised chapters have a date of 2007 in the headers. The original

chapters, which have a date of 2001 in the headers, may be updated in the future if resources are available.

This book is part of a larger body of research conducted by RAND Education on school reform, assessment and accountability, and teachers and teaching. It was supported by the Gund Foundation, Spencer Foundation, Annie E. Casey Foundation, and Carnegie Corporation of New York.

The debate over vouchers and charter schools lends itself well to RAND Education's mission—to bring accurate data and careful objective analysis to the national debate on education policy. RAND Education identifies new trends, problems, and opportunities and strives to give the policy community and the American public a clear picture of the choices they face in educating America's citizens.

CONTENTS

Preface	iii
Summary	xi
Acknowledgments	xxv
Chapter One	
FAMILY CHOICE AND THE COMMON SCHOOL	1
The Movement for Choice in Education	3
Common Features of Voucher and Charter Schools	9
Admission by Choice	11
Market Accountability	12
Nongovernment Operation	13
Public Policy and Private Choice: A Note on the Scope of Our Inquiry	15
Challenging the Common School Model	17
The Common School Model	17
The Challenge	20
“Private” or “Public”?	23
Defining the Relevant Empirical Issues	24
Academic Achievement	26
Choice	26
Access	27
Integration	27
Civic Socialization	28
Values and Knowledge in the School-Choice Debate	29
Summary: Key Policy Questions in Brief	31

Chapter Two

VOUCHERS AND CHARTERS IN POLICY AND PRACTICE	35
Policy-Design Dimensions Common to Voucher and Charter Programs	36
Regulatory Dimensions	36
Financing Dimensions	39
Examples of Regulatory and Financing Differences	41
Differences Between Voucher and Charter Programs	47
Public Accountability	47
Religion	49
Participation of Existing Private Schools	50
Funding	50
Education Tax Subsidies	52
Sample Voucher and Charter Policies	54
Sample Voucher Programs	54
Sample Charter Laws	56
Universal-Choice Systems of Autonomous Schools	57
Characteristics of Voucher and Charter Schools	60
Enrollment, School Size, and Pupil-Teacher Ratio	62
Grade-Level Configuration	64
Teachers	65
Program Content	66
Complementary Programs and Resources	68
Summary	69

Chapter Three

ACADEMIC ACHIEVEMENT	71
Theoretical Arguments	72
Effects on Students in Voucher and Charter Schools	74
Methodological Issues	75
Evidence from Voucher Programs	79
Evidence from Charter Schools	95
Evidence from School Choice in Other Contexts	110
Literature on Public and Private Schools	114
Final Thoughts on Achievement in Voucher and Charter Schools	116
Effects on Students Remaining in Assigned Public Schools	117
Systemic Effects of Vouchers	118

Systemic Effects of Charter Schools	122
Studies of Interdistrict and Public-Private Competition . .	125
What Is Not Yet Known About Academic Outcomes	126
Chapter Four	
CHOICE	129
Theoretical Arguments	130
Demand for Choice	131
Extent of Choice in the Current System	131
Demand for Existing Voucher and Charter Programs	133
Supply of Autonomous Schools	135
Existing Empirical Evidence	136
Constraints on Supply	138
Parental Satisfaction in Autonomous Schools	142
Parental Satisfaction in Voucher Schools	142
Parental Satisfaction in Charter Schools	148
A Concluding Note on Parental Satisfaction	150
Summary	151
Chapter Five	
ACCESS	153
Theoretical Arguments	154
Who Uses Vouchers?	157
Family Income of Voucher Students	157
Race and Ethnicity of Voucher Students	160
Prior Academic Achievement of Voucher Students	161
Education Level of Voucher Parents	162
Vouchers and Students with Disabilities	163
Who Attends Charter Schools?	166
Charter Schools and Children in Poverty	167
Race and Ethnicity of Charter-School Students	167
Prior Academic Achievement of Charter-School Students	168
Charter Schools and Students with Disabilities	169
Summary	169
Chapter Six	
INTEGRATION	171
The History of Choice and the Racial Politics of Schooling . .	172
Theoretical Arguments	174
Conceptual and Measurement Issues	176
Integration in Existing Voucher and Charter Programs	178

Integration in Voucher Schools	179
Integration in Charter Schools	182
Evidence from Other Contexts	186
How Do Families Choose?	187
Unrestricted-Choice and Open-Enrollment Plans	188
Controlled Choice and the Importance of Policy Details	191
Unresolved Complexities and Tensions	192
Between-School versus Within-School Integration	192
Integration in School versus Residential Integration	193
Targeting versus Integration in Charter Schools	194
Quality of Integration	194
Choice, Integration, and Social Trust	195
Summary	196
Chapter Seven	
CIVIC SOCIALIZATION	199
Historical Perspective	199
Historic Roots of the Democratic Purposes of Public Schools	200
Civic Socialization in the 21st Century	201
Theoretical Arguments Concerning Civic Socialization and Choice	202
Arguments in Favor of Vouchers and Charters	202
Arguments in Favor of Conventional Public Schools	203
Empirical Findings	205
What Is Civic Socialization?	205
Evidence from Existing Voucher and Charter Schools	206
Civic Socialization in Public and Private Schools	208
Civic Socialization in Catholic Schools	211
Summary	213
Chapter Eight	
CONCLUSIONS AND POLICY IMPLICATIONS	215
Assessing the Challenge	215
Summarizing the Evidence	216
What Is Known	216
What Is Not Known	218
What Could Be Known	220
What Might Be Learned Through a Grand Experiment	222

A Note on Cost	224
Implications for Large-Scale Choice Programs	227
Considerations in Policy Design	233
How Might Policymakers Maximize the Likelihood That Voucher/Charter Schools Will Be Academically Effective?	234
How Might Policymakers Maximize the Likelihood That Systemic Effects on Nonchoosers Will Be Positive Rather than Negative?	235
How Can Policymakers Ensure That a Substantial Number of Autonomous Schools Will Be Available?	237
How Can Policymakers Ensure That Autonomous Schools Will Serve Low-Income and Special- Needs Children?	239
How Can Policymakers Promote Integration in Pro- grams of Autonomous Schooling?	244
How Can Policymakers Ensure That Voucher/Charter Schools Will Effectively Socialize Their Students to Become Responsible Citizens of the American Democracy?	245
Final Thoughts	246
References	249

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FAMILY CHOICE AND THE COMMON SCHOOL

How can the education of the nation's children be improved? Although experts disagree about whether the average performance of American public schools has improved or declined over time, it is clear that their range of effectiveness varies greatly, from excellent to disgraceful. Public dissatisfaction is widespread: Only one-fourth of Americans believe the nation's public schools deserve A or B grades.¹ Americans are eager to reform their schools. The passage of the federal No Child Left Behind (NCLB) Act—the most ambitious federal intervention in K–12 education in American history—is perhaps the strongest evidence of public desire to improve school performance.

In this context, various reforms have been proposed to improve educational outcomes. One of the most controversial of these is to provide parents with a financial grant, or “voucher,” for use at any public or private school.² Proponents argue that students using vouchers would be able to attend more-effective and more-efficient schools; that the diversity of choices available would promote paren-

¹Rose and Gallup, 2004; Gallup Organization, 2000. It should be noted, however, that poll respondents gave the schools in their own communities and those attended by their eldest children substantially higher grades than they gave schools across the country (Rose and Gallup, 2004).

²*Voucher* has become a politically loaded word. It has a negative connotation in some circles and is often associated specifically with the conservative/libertarian ideas of Milton Friedman, perhaps the first to use it in the context of public subsidies for private-school tuition (see Friedman, 1955, 1962/1982). Some supporters of vouchers have sought to abandon the word, instead describing their proposals as “scholarship” or “school choice” programs. We chose to use *voucher* throughout this book because it is commonly recognized. Descriptively, it is the best word available; we intend no normative connotation in using it.

tal liberty and, if properly designed, would benefit poor and minority students; and that the competitive threat to public schools would induce them to improve. Everyone would then be better off. In what has become a fiercely contentious and highly political debate, opponents claim that vouchers would destroy public schools, exacerbate inequities in student outcomes, increase school segregation, breach the constitutional wall between church and state, and undermine the fabric of democracy by promoting narrow, particularistic forms of schooling.

Another proposal for educational reform, somewhat less controversial among policymakers and the public, is to establish “charter” schools—i.e., schools that are funded by public money but that are self-governing (rather than operating within the traditional system of public-school governance) and operate under a quasi-contract, or “charter,” issued by a governmental agency such as a school district or a state education authority. Charter schools have achieved considerable popularity across the political spectrum, although they are often the subject of debates about their funding and public oversight. The supporters of charter schools argue that they will serve as laboratories for pedagogical innovation, provide havens for students who have been poorly served by traditional public schools, promote parental involvement and satisfaction, improve academic achievement, and save public education. Those opposing charter schools have expressed concerns about their possibly leading to stratification in student placement and balkanization in curriculum. Recently, charter-school supporters have been put on the defensive, in the wake of a few widely publicized scandals and new questions about achievement results.

Taken together, vouchers and charters raise fundamental questions about the provision of public education in the United States. Although they are often perceived as opposing alternatives, we believe that they pose a similar challenge to the conventional system of public education—for better or for worse. We therefore believe it is appropriate to place them side by side in considering the effects they may produce on student outcomes.

This book has four aims. First, we identify and articulate the range of empirical questions that ought to be answered to fully assess the wisdom of policies promoting vouchers or charter schools, thereby

establishing a theoretical framework that accounts for the multiple purposes of public education. Second, we examine the existing empirical evidence on these questions, providing a broad assessment of what is currently known about the effects of vouchers and charter schools in terms of academic achievement and otherwise. Third, we discuss the important empirical questions that are as yet unresolved and consider the prospects for answering them in the future. Fourth, we explore the design details of voucher and charter policies, concluding with recommendations for policymakers considering their enactment.

The second edition of this book (summer 2007) includes new versions of this introductory chapter and Chapter Three, which addresses student-achievement impacts of vouchers and charter schools. The other chapters may be updated in the future.

THE MOVEMENT FOR CHOICE IN EDUCATION

Interest in both vouchers and charters is motivated by frustration with the existing system. Many strategies have tried to improve and reform the system from within. Back-to-basics curricula, teacher professional development, class-size reduction, raised graduation requirements, comprehensive school reform, standards development and high-stakes testing, abolition of social promotion, site-based management, and innumerable reading and math programs—these are only a few examples of strategies implemented in public schools since *A Nation at Risk* sounded the alarm about the quality of the American education system a quarter-century ago.³

But some observers of America's schools doubt that these strategies add up to enduring and comprehensive improvement. Those who support vouchers and charters have lost patience with traditional avenues of reform. In their view, policymakers have tried one school reform after another, for decades on end, without notable success.⁴ Vouchers and charter schools differ from other reform strategies because they are not programmatic. Rather than establishing a new

³National Commission on Excellence in Education, 1983.

⁴On the difficulty of changing actual teaching practice in schools, see, e.g., Cuban, 1993; Berman and McLaughlin, 1978.

program, imposing a new mandate, or injecting new resources into the existing public schools, vouchers and charters aim to induce reform by changing the fundamental organization of the school system. They share a belief in decentralization and accountability to parents; they reject a “one size fits all” approach to schooling. These characteristics are consistent with those of other forms of educational choice increasingly popular within the existing structure of the public system, including open enrollment and interdistrict enrollment policies, magnet schools, theme schools, and schools-within-schools. Vouchers and charters, however, go well beyond other forms of choice in the extent to which they inject market forces into a policy arena traditionally governed by political and bureaucratic forces.

The belief that tinkering with the system is fruitless has garnered support from some academics. Nearly two decades ago, John Chubb and Terry Moe, for example, applying public-choice theory, argued that reform is impossible in the existing system of public schools. In their view, direct democratic (and bureaucratic) governance turns schools into incoherent institutions dominated by interest groups rather than by a shared sense of educational mission and public purpose.⁵ Chubb and Moe proposed a regulated voucher system as an alternative. More recently, Paul Hill, Lawrence Pierce, and James Guthrie agreed that the existing system is too heavily bureaucratized and unresponsive to the needs of students and parents.⁶ They proposed that all public schools be autonomous institutions operated by independent organizations under contracts issued by school boards, rather than being directly operated by school districts.

Economic theorists, notably Milton Friedman, have long argued that more choice in education will lead to improved outcomes by permitting students to transfer to better schools, by introducing competitive pressure for schools to improve, and by permitting a better match between the needs of the individual student and the program offered by the school. Friedman initiated the American debate over

⁵Chubb and Moe, 1990.

⁶Hill, Pierce, and Guthrie, 1997.

vouchers in 1955 when he proposed replacing the existing system of educational finance and governance with a voucher system.⁷

Legal scholars such as John Coons and Stephen Sugarman, meanwhile, have supported vouchers as a matter of justice for the poor. In their view, educational choice is a basic parental right that the existing system grants only to those who can afford private-school tuition or a home in the suburbs. A voucher system, they argue, would be a step toward equal access to educational choices.⁸ Similarly, 35 years ago, Christopher Jencks and colleagues, responding to the revelations of educational inequality in the Coleman Report,⁹ proposed replacing the existing system of public education with a highly regulated voucher system specifically designed to favor low-income families and their children.¹⁰

The evolution of vouchers and charters also builds on a generation of experience with policies expanding the degrees of choice within public education: alternative schools, magnet schools, theme and examination schools, districtwide and interdistrict choice, and, since the 2002 passage of NCLB, choice for students in low-performing schools. These varieties of “public-school choice” have accustomed the public, policymakers, and educators to the idea that widespread choice is an important and possibly beneficial policy option. Meanwhile, the number of families choosing the most decentralized and parent-directed educational option—home schooling—has grown rapidly.

Many educators themselves, moreover, have long believed that choice programs offer opportunity on the supply side to create innovative instructional programs of a kind that traditional public systems would rarely countenance. Prominent educators involved in creating the most-ambitious public-school choice programs in the 1970s—such as Anthony Alvarado and Deborah Meier in New York—

⁷Friedman, 1955; see also Friedman, 1962/1982. Friedman was certainly not the first to propose a voucher-like system; much earlier proposals can be found in the writings of Adam Smith, John Stuart Mill, and Thomas Paine.

⁸Coons and Sugarman, 1978, 1999.

⁹Coleman, 1966.

¹⁰Center for the Study of Public Policy, 1970. This proposal is commonly identified by the name of its first author, Christopher Jencks.

clearly held this view.¹¹ Later proponents of even more-ambitious public-school choice programs (Hill, Pierce, and Guthrie, for example) agree.¹² Many of the founders and staff of charter schools are simply the most recent cohort of persons seeing and seizing this opportunity to create distinctive educational programs under public auspices, with the hope of enabling educators to act as more-creative professionals.¹³

In recent years, support for vouchers and charter schools has grown among some African-American educators, parents, and political leaders, such as Anthony Williams, the former mayor of Washington DC, who supported the recent establishment by Congress of a voucher program for low-income families in the District of Columbia. Their support for choice is based primarily on a conviction that schools responsive to parents will serve their children better than conventional public schools do. This is thought to be especially true in inner cities, where public schools have not lived up to the hopes engendered by desegregation and antipoverty policies, even half a century after *Brown v. Board of Education* and 40 years after federal programs for the education of disadvantaged students were created.¹⁴

In sum, public frustration and academic theory have together produced a situation in which alternatives to the conventional system of public education are under serious consideration. Conceptually, public funding for schooling does not require public operation of schools. The American standard—in which public funding is limited to government-operated schools—is neither logically necessary nor universally followed. In many countries (Australia, Canada, France,

¹¹See, e.g., Meier, 1995.

¹²See Hill, Pierce, and Guthrie, 1997.

¹³See, e.g., Meier, 1995; Hill, Foster, and Gendler, 1990; Finn, Manno, and Vanourek, 2000; Kolderie, 1990.

¹⁴On the opinion of minority parents, see Rose and Gallup (2000), which we discuss in more depth in Chapter Four. African-American leaders who support school choice, including some varieties of vouchers, include Polly Williams, a Wisconsin state legislator who was largely responsible for Milwaukee's voucher program; Floyd Flake, a former congressman who is now senior pastor of the Allen African Methodist Episcopal Church in Queens and an official of Edison Schools, Inc.; and Howard Fuller, a former superintendent in Milwaukee who founded an organization called the Black Alliance for Educational Options (BAEO).

the Netherlands, and Chile, to mention a prominent few), public funding is provided to nongovernment schools. In the United States, the federal government operates a voucher system in higher education: Government-subsidized grants and loans are used by students at public and private institutions alike—including church-affiliated colleges and universities. Even at the K–12 level, school districts sometimes pay specialized private providers (generally selected or approved by parents) to provide educational services to students with serious disabilities. Moreover, NCLB now requires large numbers of school districts around the country to subsidize a market in “supplemental educational services” (primarily tutoring) selected by parents from among a range of public and private providers.

In addition, some of the historic political and legal barriers to public funding of private K–12 schools seem to be weakening. During the 1990s, Wisconsin and Ohio established voucher programs for low-income students in Milwaukee and Cleveland. Arizona, Pennsylvania, Iowa, Rhode Island, and Florida have created programs to support vouchers indirectly with income-tax credits for charitable contributions to privately operated voucher programs. In addition to its tax-credit program supporting vouchers, Florida has created two other voucher programs: one for students in low-performing public schools (the Opportunity Scholarship Program) and another for students with disabilities (the John M. McKay Scholarships for Students with Disabilities Program). In 2002, in *Zelman v. Harris*, the U.S. Supreme Court upheld the constitutionality of the publicly funded voucher program in Cleveland, ruling that the establishment clause of the U.S. Constitution permits vouchers to be used at religious schools, as long as individual families make the decision about where to send their children and their voucher funds.

In the wake of the Supreme Court ruling, several states have seen legislative activity related to vouchers. Colorado passed legislation establishing a new voucher program, but it was invalidated by the state’s courts. Congress passed legislation creating a voucher program for low-income students in the District of Columbia which began operation in the fall of 2004. In 2006, Ohio expanded its voucher program, making it statewide, and Utah created a new, statewide voucher program in early 2007, which, pending court review and a possible statewide voter referendum, will soon begin operating. Meanwhile, Florida’s state courts invalidated its voucher program,

which provided scholarships to students in chronically low-achieving public schools, in 2006.

Opinion polls indicate considerable public support for providing public funds for private-school tuition, as well as for charter schools (although the extent of support and opposition depends on how the question is asked).¹⁵ An organization called the Black Alliance for Educational Options disseminates information about vouchers and other forms of school choice to African-American parents, inspired by the opinion polls suggesting that African-American parents are among the strongest supporters of vouchers.

Meanwhile, the political significance of charter schools—which represent another kind of market-based approach—is unquestionable. They represent one of the most popular reform strategies in education today. They have been celebrated by policymakers from all points on the political spectrum. Charter-school legislation has passed in 40 states and the District of Columbia. Although the first charter schools in the nation opened their doors only as recently as 1992, nearly 4,000 charter schools were operating in the 2006–07 school year, enrolling more than 1.1 million students.¹⁶

The political barriers to voucher and charter programs in K–12 education are being reduced within a broader policy environment that is favorable to programs promoting consumer choice and market-based accountability. Outside of education, voucher-like programs that use markets to achieve public-policy goals have become increasingly common—child-care and food-stamp programs, Section 8 housing subsidies, health-care financing, and even the tradable pollution credits of the Clean Air Act. Policymakers look with increasing favor on programs that use private, charitable—and even religious—organizations to deliver public services.¹⁷ Within education, some school districts have begun contracting with profit-making firms to operate public schools. NCLB promotes the contracting of school management as one of the sanctions for chronically low-

¹⁵See Rose and Gallup, 2000; Moe, 2001.

¹⁶ These figures are taken from the website of the Center for Education Reform (www.edreform.com), an advocacy organization that supports school choice.

¹⁷See Urban Institute, Brookings Institution, and Committee for Economic Development, 1998.

achieving schools and districts. Meanwhile, privately funded voucher programs have grown exponentially in recent years: At least 65 such programs are in place or starting up around the country.¹⁸ The largest program, the nationwide Children's Scholarship Fund (CSF), distributed over 60,000 scholarships in a five-year period.¹⁹

In short, both charters and vouchers are now prominent educational reform proposals. Policymakers need empirical information on their likely effects in order to assess their merits. Although both sides of the debate about vouchers and charters occasionally attempt to bolster their claims with research evidence, the debate is too often conducted without a sound empirical underpinning. Our intention is to illuminate the empirical evidence relevant to the debate. We believe (and argue later in this chapter) that, unlike other reform proposals, charters and vouchers pose fundamental challenges to America's existing system of K–12 schooling. In consequence, a thorough and objective empirical assessment of their likely effects is even more important—indeed, essential—for determining whether they will make good public policy.

COMMON FEATURES OF VOUCHER AND CHARTER SCHOOLS

Voucher and charter schools are not always recognized as comparable in terms of the fundamental issues of public values that they raise, so it is important to begin by explaining why we address them together. They are not, of course, identical. The first notable difference is the charter itself: Charter schools require the approval of a public body to begin operation,²⁰ whereas voucher schools are often existing private schools that require no explicit government endorsement to operate. This distinction leads to a second difference: Charter schools are not permitted to promote religion, whereas voucher schools often have a sectarian affiliation. Third, charter schools are subject to state and federal test-based accountability re-

¹⁸See the list compiled by the Center for Education Reform, available on its website at edreform.com/research/pspchart.htm.

¹⁹See the fund's website at www.scholarshipfund.org.

²⁰Ohio also permits nonprofit organizations to authorize charter schools, but only with the approval of the State Department of Education.

gimes such as NCLB, while voucher schools usually are not—although policymakers in some states are moving in this direction: Wisconsin recently amended the Milwaukee voucher program to require voucher students to be tested; Florida has likewise amended its tax-credit voucher program to require testing. We discuss the policy significance of these and other differences between vouchers and charters in Chapter Two.

As a political matter, vouchers are more controversial than charters are. Because charter schools receive government approval and are nonsectarian, they have come to be regarded as a species of “public-school choice”—a concept that has great popular appeal. Vouchers, by contrast, are often regarded as a threat to the very existence of public education. This dichotomy, however, obscures important common elements underlying the two. Both share three essential characteristics that distinguish them from conventional public schools:

1. *Admission by choice:* Students or their parents are permitted a choice of schools; no student is assigned to attend a voucher or charter school.²¹
2. *Market accountability:* The choice is partially or completely subsidized by public funds tied directly to student enrollment; funds reach the schools only as a result of a family’s decision to enroll a child.
3. *Nongovernment operation:* The choice includes schools not operated by local school districts or other government agencies. The schools involved have substantial freedom from public oversight, relative to conventional public schools, to control their curriculum, instructional methods, and staffing.²²

²¹See, e.g., Kolderie, 1990, 1993; Hassel, 1999; Finn, Manno, and Vanourek, 2000. Admittedly, charter schools that have been converted from conventional public schools add a complication. At the time of conversion, it is generally assumed that students previously assigned to the school will remain. Nevertheless, they are permitted to opt out (Finn, Manno, and Vanourek, 2000, p. 15).

²²To be sure, the extent of autonomy varies. Some charter schools that were formerly conventional public schools may remain to some extent under the direction of a local school district. Moreover, Catholic schools typically operate within bureaucracies of

Not all of these characteristics are entirely unique to voucher and charter schools. Admission by choice, for example, is also a feature of magnet public schools. But vouchers and charters push choice beyond the options available in magnet and alternative schools, introduce a level of market accountability that is unparalleled in K–12 public education, and take the novel step of providing direct public support for schools operated by nongovernment organizations outside the direct control of local school boards. We discuss each of these characteristics in turn.

Admission by Choice

The first characteristic that distinguishes charter and voucher schools from conventional public schools is that students/parents choose them rather than accepting assignment based on place of residence. Voucher students, like their tuition-paying classmates, must *actively* choose (or their parents must choose) the school they attend. Similarly, charter-school proponents universally agree that charter-school enrollment should be based on active family choice.

Whether the school has a choice in admitting students is another matter, one that depends on the details of the law authorizing the vouchers or charters. In some cases, attendance at a charter or voucher school may depend on the school's choice as well as the family's. Charter laws in a number of states permit schools to establish enrollment criteria consistent with their educational missions.²³ A national survey conducted for the U.S. Department of Education found that 59 percent of charter schools report that they have primary control over their student admissions policies.²⁴ Voucher

their own; although they are largely independent of government authority, some oversight is exercised at a higher level of the religious organization than the school itself.

²³Ted Kolderie, one of the founders of the charter-school movement, says that an essential characteristic of charter schools is that they do not practice selective admissions (Kolderie, 1990, 1993). In fact, however, some states permit charter schools to set admissions standards. States in which charter schools are permitted to establish enrollment criteria consistent with their particular educational focus include Connecticut, Delaware, New Hampshire, New Jersey, Pennsylvania, Rhode Island, and Virginia. Charter legislation in various other states does not specify whether admissions requirements may be established but does not specifically preclude them (RPP International, 1999). We return to this issue in Chapters Two, Four, and Five.

²⁴RPP International, 2000, p. 46.

students, meanwhile, often enroll in existing private schools that may practice selective admission of their tuition-paying students, favoring or disfavoring applicants on the basis of behavior, academic performance, religious identity, sex, or ability to pay. But most of the publicly funded voucher programs currently in place (in Milwaukee, Cleveland, and Florida) require participating schools to admit voucher students without regard to race, religion, grades, or test scores (though critics have complained that some schools may be violating the open-admission requirement). A number of charter laws likewise require open admissions in participating schools.²⁵ In sum, the specifics of the enabling laws determine whether schools are permitted to select students: Both voucher and charter programs can be designed either to permit selective admission or to require open access. This policy decision may have important implications for the empirical effects of a choice program; we discuss these implications in the concluding chapter.

While admission by choice distinguishes voucher and charter schools from the conventional public school in which enrollment is determined solely by a student's home address, this characteristic is not unique to voucher and charter schools: Magnet and alternative schools and intradistrict and interdistrict choice plans also permit parents to choose. Vouchers and charters, however, increase the range of choice beyond that contemplated by these public-school choice programs in that they expressly include schools not initiated and operated by local school districts.

Market Accountability

The second common characteristic distinguishing voucher and charter schools from conventional public schools is that they receive public funding only if parents decide to enroll their children. Funding follows students. For conventional public schools, including most other forms of choice schools, budgets are determined by the administrative and political decisions of district officials and school

²⁵RPP International, 1999.

board members.²⁶ Although public taxes provide funding for charter and voucher schools, the market mechanism of parental choice directs the public funds to particular schools. Charter and voucher schools cannot survive unless parents choose to send their children to them. A primary avenue of accountability for charter and voucher schools therefore runs directly to parents, whereas the primary avenue of accountability for conventional public schools is the school district's direct governance.

Nongovernment Operation

The feature of voucher and charter schools that is perhaps most distinctive—as compared with both conventional public schools and “choice-based” public schools (e.g., magnets)—is the fact that they are publicly funded but operated outside the direct control of a government agency. First, consider vouchers. Although voucher programs may include conventional public schools among the choice set, their distinguishing feature is the inclusion of schools operated by nongovernment organizations. Voucher programs include existing private schools, in which the majority of students may be paying tuition rather than receiving public subsidies. In Milwaukee and Cleveland, voucher programs have led to the opening of new schools designed primarily to serve voucher students. In both cases, however, these schools would typically be described as “private” because they are not operated by the school district or any other government agency. In practice, most of the voucher schools in Milwaukee and Cleveland are operated by religious organizations. Neighborhood organizations, other nonprofits, and profit-making firms may also operate voucher schools.

Like voucher schools, most charter schools are not directly operated by school districts, which traditionally have operated all public schools within their geographic boundaries.²⁷ As a book by three prominent charter-school advocates notes, charter schools resemble

²⁶To be sure, a part of the funding for public schools—from state and federal sources—is tied to enrollment. But the local revenues that typically provide a large portion of school-district funding are insensitive to enrollment.

²⁷Local school districts are often responsible for authorizing charters and occasionally choose to operate charter schools themselves.

private schools in that they are “independent . . . self-governing institutions.”²⁸ Like voucher schools, they can be established and operated by groups of teachers, groups of parents, nonprofit organizations, and (in many states) for-profit companies. Indeed, as is also true for most voucher schools, their reason for existence is to offer an alternative to the district-run public school.

Partly because they are not operated directly by government agencies, voucher and charter schools are able to offer education programs different from those offered in the public schools and to employ and deploy staff with more flexibility and fewer constraints. Charter schools are intended to have “wide-ranging control over their own curriculum, instruction, staffing, budget, internal organization, calendar, schedule, and much more.”²⁹ This is also true for voucher schools. Charter schools are typically exempt from some of the procedural regulations that constrain conventional public schools, and they are not subject to the day-to-day political direction of a local school district. This freedom attracts support from many educators, both inside and outside the public schools. It is intended to allow more imaginative, innovative curricula, more tailoring of programs to specific students, and less rigid application of bureaucratic norms and procedures (including collective bargaining rules)—in short, greater opportunity for professional education decisionmaking. The actual extent and effect of such opportunities are, of course, key empirical questions.

Charter and voucher schools differ substantially from more-limited forms of public-school choice. Magnet schools, alternative schools, and interdistrict choice have significantly expanded the range of public-school options available in various places around the country over the last quarter-century. In some communities, these different public-school choices permit families to select schools with programs similar to those that may be offered in charter schools. But unlike voucher and charter schools, all schools available under such plans are operated by conventional school districts. They permit choice only among a range of options determined and supplied by the school board. Charters and vouchers, by contrast, create oppor-

²⁸Finn, Manno, and Vanourek, 2000, p. 15.

²⁹Finn, Manno, and Vanourek, 2000, p. 15.

tunities for parents, teachers, nonprofit organizations, and private businesses to operate publicly funded schools outside the direct control of the local school district and board. Still, the historical record of older forms of school choice can inform an understanding of the likely effects of vouchers and charter schools, and we address evidence on these kinds of school choices where relevant in various later chapters.

Finally, it should be noted that, despite basic similarities, there is considerable variation among voucher and charter policies. The specific details of such policies vary widely on a raft of dimensions related to the financing and regulation of voucher and charter schools. We discuss these policy variations in depth in Chapter Two, and we discuss throughout the book, especially in the concluding chapter, how differences in voucher and charter policies are likely to produce different empirical outcomes.³⁰

PUBLIC POLICY AND PRIVATE CHOICE: A NOTE ON THE SCOPE OF OUR INQUIRY

In this book, we are concerned with public policies that promote parental choice among privately operated schools. Many families exercise school choice in the absence of government intervention, either by choosing a school district or attendance zone in which to live or by paying private-school tuition. We take for granted that the U.S. Constitution places these kinds of choices beyond the realm of government regulation.³¹ Voucher and charter programs, our focus, are public policies with the specific purpose of increasing the range of educational choices available.

Scholarship programs that are privately funded presently operate under the auspices of charitable organizations in many cities across the United States. These programs, sometimes described as “private

³⁰ The importance of the specific details of school-choice policies was a key message of the Brookings Institution’s National Working Commission on Choice in K–12 Education (2003).

³¹ Citizens’ freedom to reside where they wish and their freedom to send their children to private school are clearly settled in constitutional jurisprudence. This is in marked contrast to the Supreme Court’s stance on the extent of permissible public funding for religiously affiliated schools, which is rapidly evolving and not yet clear.

voucher” programs, provide important empirical evidence about the likely effects of publicly funded programs. In addition, a few states (including Arizona, Florida, Rhode Island, Iowa, and Pennsylvania) have passed new tax laws specifically designed to subsidize such programs, blurring the line between public and private funding by allowing taxpayers to be reimbursed for charitable contributions made to private voucher programs.³² As a result of the Arizona tax credit, funding for private voucher programs in the state increased exponentially, from \$2 million in donations in the first year the law was in effect (1998) to \$13 million in the subsequent year.³³ Although these tax-credit voucher programs are privately operated and nominally privately funded, in economic terms the tax credits create an implicit transfer from the state’s coffers to the voucher programs. In this respect, the tax credits in Arizona, Florida, and Pennsylvania are functionally equivalent to publicly funded voucher programs.

Other tax-system initiatives create tax benefits in the form of deductions, credits, or tax-free earnings that directly subsidize parental payments for private-school tuition (rather than subsidizing contributions to privately operated voucher programs).³⁴ These include, for example, the federal government’s Coverdell Education Savings Accounts, which permit families to earn tax-free income that can be used to pay tuition in K–12 private schools as well as college tuition; and state income-tax deductions or credits for private-school tuition costs in Illinois, Iowa, and Minnesota. We label these programs “education tax subsidies.”

Tuition subsidy programs that operate through the income-tax system (by subsidizing either private vouchers or tuition payments) may be the wave of the future, for legal and political reasons. Although the Supreme Court has settled the permissibility of vouchers under the U.S. Constitution, the constitutions of some states may be more restrictive, as suggested by recent rulings of state courts in Colorado and Florida invalidating voucher programs in those states. Programs

³²The Arizona credit is available to individual taxpayers and is 100 percent of the amount contributed, up to a maximum of \$500 per taxpayer. The Pennsylvania credit is available only to businesses and is a maximum of 90 percent of the amount contributed, up to a maximum of \$100,000 per business.

³³Wilson, 2000; Bland, 2000.

³⁴On programs that operate through the tax system, see James and Levin, 1983.

in which funding does not come directly from the public treasury are less likely to be found unconstitutional.³⁵ Income-tax subsidies may be more politically viable than direct vouchers as well.³⁶ Pennsylvania's income-tax credit for businesses' contributions to privately operated voucher programs passed the state legislature in 2001 without difficulty, despite the legislature's repeated rejection of a state-operated voucher program.

These constitutional and political issues are beyond the scope of this book, which focuses on the empirical effects of voucher and charter policies. Although education tax subsidies may differ from vouchers in political and constitutional terms, they raise the same public-policy questions as voucher programs that operate through explicitly publicly funded scholarships. They are therefore included in the scope of our study. Unfortunately, however, almost no evidence is available on their effects because it is difficult to track the students who benefit from such programs. In consequence, they appear in the empirical record less often than their policy importance merits.

CHALLENGING THE COMMON SCHOOL MODEL

The Common School Model

A public responsibility to provide education for all children is a deeply held American value, with roots going back to the founding of the nation.³⁷ In economic terms, public support for education makes sense because education is (in part) a "public good": It benefits not only those who are students, but society as a whole, which

³⁵See *Mueller v. Allen*, 463 U.S. 388, 1983. Arizona's tax-credit voucher program has been upheld by the state's highest court (*Kotterman v. Killian*, 972 P.2d 606, 1999).

³⁶A paper from the Cato Institute, a libertarian think tank, endorses the Arizona model of tax credits as the best way to promote educational choice (Olsen and Brouillette, 2000). Politically, income-tax subsidies usually generate more support and less opposition than vouchers do. For the differences in terms of public opinion, see Rose and Gallup, 1999.

³⁷Thomas Jefferson, for example, was a prominent early advocate of public support for education (see Gilreath, 1999). A national public commitment to education was made explicit in the Northwest Ordinance of 1787.

stands to gain from having a well-educated population.³⁸ In principle, government might support education through a variety of mechanisms that do not necessitate government operation of public schools. In practice, the public responsibility to support education has been executed for most of the nation's history through a system built on the model of the "common school." As this model has developed over the last two centuries, it has come to mean an institution operated by the government, under the democratic auspices of the local school board, which aims to serve all students in the locality with a common curriculum (permitting some variation in content at the secondary level).³⁹ This model implies that both the financing of education and the direct operation of the schools are government functions.

Historically, under this model, American public and private schools have operated in almost entirely separate worlds. American policymakers have often been suspicious of private schools. Legislative hostility toward private schools peaked early in the 20th century, when strong nativist sentiments brought forth efforts in a few states to require all children to attend public schools. (The Supreme Court preserved the private-school option in 1923 with *Pierce v. Society of Sisters*, which invalidated the state of Oregon's attempt to abolish private schools.) In the 1940s and 1950s, early efforts to establish federal funding for schools repeatedly foundered when advocates, motivated by concerns about the establishment of religion, refused to include funding for religious (mostly Catholic) schools. From the 1950s through the 1970s, the Supreme Court solidified the separation between public and private schooling. When state legislatures tried to provide direct aid to private religious schools, the Supreme Court invalidated the programs as violative of the First Amendment's prohibition on government establishment of religion. The result of this history is a compromise: Parents can spend their own money, but not public money, to send their children to private school. When it comes to publicly funded education, local school districts have maintained the exclusive franchise that the common school model has entailed.

³⁸Even libertarian-leaning neoclassical economists such as Milton Friedman assume that education is a public good that merits government support (Friedman, 1955).

³⁹See Tyack, 1974; Cremin, 1961.

In pre-industrial America, one factor favoring the common school model was efficiency. Population was distributed widely, and few communities were large enough to support multiple schools. Setting up a single public school was an ambitious undertaking that stimulated the tradition of local control still persisting today. Now, however, most Americans live in suburbs and cities that have sufficient population density to support a wide variety of schooling.

Other rationales for providing education via common schools are more relevant to 21st century America. The common school model is intended to promote not only academic achievement, but also several public purposes: equal access, social integration, and civic socialization. Ideally, the common school provides access to high-quality education for all children in the community—poor as well as rich, African-American as well as white, and students with disabilities as well as those with unusual talents. Ideally, the common school involves a healthy social mixing of children from all races and classes. Ideally, the common school educates children in the virtues of democratic citizenship. Those three purposes, it has been argued, require a local public-school system that is under the control of democratic institutions such as school boards.⁴⁰

Whether the common school model in fact serves its avowed purposes is an empirical question. Champions of the common school celebrate it as a uniquely democratic and American institution. They point to its service in offering opportunity to immigrants (in successive waves), minorities, and disabled children; in serving as the cockpit of social policy surrounding issues of race, class, and gender; in helping to produce the world's most productive, creative, and entrepreneurial economy; and in sustaining the world's oldest democracy. To other observers, however, the historical and contemporary realities mock the stated ideals of the common school. Allegedly "common" schools have often segregated and tracked children by race and class; and despite a generation of integration efforts, many urban systems remain highly stratified, and levels of racial integra-

⁴⁰On the democratic purposes of public schools, see, e.g., Guttman, 1987; McDonnell, Timpane, and Benjamin, 2000.

tion may actually be declining across America.⁴¹ Historically, public-school efforts at socialization have often been more doctrinaire than tolerant. Early public-school advocates sought to use the public schools to “Americanize” children who might otherwise be excessively influenced (in the reformers’ view) by their immigrant (often Catholic or Jewish) parents—i.e., “Americanization” meant that 19th century public schools espoused a generic, least-common-denominator Protestantism.⁴² More recently, the public-school perspective has become nonsectarian, indeed nonreligious; but it is now criticized by those who believe schools have abandoned the imparting of specific virtues and values in favor of relativistic, therapeutic perspectives.⁴³

The Challenge

In sum, the record of the common school in meeting its own ideals is ambiguous. Despite its shortcomings, however, the common school has provided the standard model for American public education since the mid-19th century. In this context, voucher programs—which would provide public funding for nongovernment schools, including those with sectarian religious affiliations—represent a significant departure for American public policy. Charter schools are less frequently recognized as a departure because they avoid the most politically volatile aspect of private schooling: affiliation with a religious sect. But in key respects—by embracing parental choice, pluralism in curriculum and pedagogy, and nongovernment operation—charters represent as much of a challenge to the system as vouchers do. Implicitly or explicitly, the supporters of vouchers and charters assume that these privately operated schools of choice will be more effective than conventional public schools—perhaps even in advancing the public goals that the common school model is specifically intended to promote.

⁴¹Orfield and Yun, 1999; Orfield and Eaton, 1996. For longer-term critical perspectives on sorting and stratification in public schools, see Bowles and Gintis, 1976; Spring, 1976.

⁴²This stance, it should be noted, led directly to the establishment of Catholic parochial-school systems (Tyack and Hansot, 1982, pp. 74–83).

⁴³See, e.g., Grant, 1988; Bellah et al., 1985; Bloom, 1987; Glenn, 2001a.

Supporters of both vouchers and charters propose that families should be able to choose the educational program they want for their children without having to move to a different school district or pay private-school tuition. These supporters assume that public schooling might exist in diverse forms: Charter schools are often organized to serve particular educational visions that may be in opposition to the educational philosophy of the local public-school district; voucher schools often include a sectarian religious focus unavailable in government-operated schools. And supporters of vouchers and charters suggest that the provision of education using public funds need not be the sole province of the local school district. Moreover, many of these supporters believe that these changes can promote both academic achievement and parental choice without serious harm (and perhaps with substantial benefit) to the public goals associated with the common school, including equal access, integration, and the socialization of effective citizens.⁴⁴ *In sum, both charters and vouchers challenge the model of the common school—in which all students are educated together with a common curriculum in a government-run school—in favor of the model of family choice—in which individual families are permitted to select non-government schools that reflect their needs and values.*

To be sure, not all voucher and charter schools are innovative or unique. Indeed, most of the educational programs and philosophies adopted by charter schools can be found in conventional public schools somewhere in the country. But in an individual community, charters and vouchers can create more choices than those presently available solely in conventional public schools. Charters and vouchers aim to give families the option of choosing schools that the local school district might not create on its own.

It should be noted that market accountability does not necessarily involve the abandonment of public oversight. Charter schools are subject to public accountability through the charter-granting process. Moreover, both charter and voucher schools may be subject to varying degrees of government regulation in all sorts of areas, includ-

⁴⁴John Coons, a long-time supporter of vouchers as a means of fairness to the poor, notes that the appropriate task is “to ask whether school choice, properly designed, can serve a range of democratic and human values—including efficiency—in a manner superior to the traditional school monopoly” (Coons, 2000).

ing admissions, facilities, finances, testing, teacher credentials, and even curriculum. In the European countries that provide public funding to private schools, the private schools are typically highly regulated. In Chapter Two, we explore how these regulations may vary in different voucher and charter policies.

But even when voucher and charter schools are regulated, market accountability and nongovernment operation are key characteristics representing a significant departure from the traditional American system of public education. Vouchers and charters are unique in creating publicly funded alternatives to the offerings of the local school district. Under the traditional framework, government accepts responsibility not only for subsidizing education, but also for providing the schools (through the local school district). Both vouchers and charters separate the function of subsidizing education from the function of operating schools—they seek to eliminate the local district's exclusive franchise in publicly funded schooling.⁴⁵ Voucher and charter laws assume that government remains responsible for subsidizing education but need not be responsible for running schools (though government-run schools may be included among the choices).⁴⁶ Governance and accountability are fundamentally different in voucher and charter schools than in conventional public schools. While conventional public schools are operated by local districts through political and bureaucratic channels, voucher and charter policies reduce political and bureaucratic governance in favor of self-governing autonomy and direct market accountability to parents.⁴⁷ (Charter schools, however, are subject to

⁴⁵The public-school establishment clearly recognizes the challenge. Teachers' unions and other public-school interest groups have overwhelmingly expressed strong public opposition to vouchers, and their view of charters is often one of suspicion, occasionally leaning to qualified support when they perceive their own interests and those of public education to be sufficiently safeguarded. (See Finn, Manno, and Vanourek, 2000, pp. 170–186.)

⁴⁶From an economics perspective, education's status as a public good implies the necessity for government subsidy, but not necessarily government operation, of schools (Lamdin and Mintrom, 1997). Some theorists have argued that government should get out of the business of operating schools (see, e.g., Mill, 1859/1978; Friedman, 1955; Hill, Pierce, and Guthrie, 1997).

⁴⁷The terms *political* and *bureaucratic* are intended to be descriptive rather than evaluative. The fact that public schools operate under political and bureaucratic accountability rather than market accountability does not mean that they are necessar-

the test-based accountability systems, such as NCLB, that apply to conventional public schools.)

This book systematically examines contemporary empirical evidence to determine the effects of this difference in governance and accountability in terms of basic goals of the education system. Opponents of vouchers and charters fear that privatizing the governance and operation of schools will undermine their public purposes; supporters believe that the public purposes of the education system will be served even though voucher and charter schools are not owned and operated by government. Policymakers need empirical information on the effects of vouchers and charters in order to assess their merits and resolve this dispute.

“Private” or “Public”?

Advocates of charter schools often distinguish them from voucher schools by declaring that charter schools are “public” and voucher schools are “private.” Unfortunately—apart from the issue of religious affiliation—this distinction obscures more than it illuminates. Indeed, charters and vouchers demand a reconsideration of what makes a school public.

Americans have traditionally defined public schools as those owned and operated by government. If operation by an agency of government is the critical characteristic of a public school, then neither charter schools nor voucher schools qualify as public. Charter schools nevertheless reasonably claim to be public because they do not charge tuition and (usually) are required to admit all applicants (if space is available). But voucher schools such as those in Milwaukee might make the same claim, because the regulations of their voucher program forbid them to charge tuition to voucher students (above the level of the voucher) and require them to admit all applicants (if space is available). Thus, if open access is the critical characteristic, some charter schools and some voucher schools qualify as

ily less flexible than voucher, charter, or private schools. In some instances, political and bureaucratic institutions may be more responsive than market institutions.

public, whereas others (and, indeed, some district-operated public schools) fail to qualify because they impose admissions standards.⁴⁸

In sum, vouchers and charters blur traditional distinctions between public and private schools because they are hybrids including both public and private elements. Indeed, they help to point out that conventional public schools also have both public and private elements, in terms of purposes, funding, and access. Conventional public schools simultaneously serve the private purpose of teaching marketable skills and the public purpose of promoting citizenship. Many conventional public schools benefit from supplemental private funding through local education foundations. And most public schools permit access only to those who live in their district—which frequently excludes low-income urban students from attending suburban public schools.

Given these ambiguities, there are reasonable grounds for disagreeing about whether charter and voucher schools are public or private. In our view, the distinction is a semantic distraction. The key issue is not the language used to describe the programs, but their empirical effects. Vouchers and charters have enough features in common that policymakers will need to assess some of the same empirical questions.

DEFINING THE RELEVANT EMPIRICAL ISSUES

This book seeks to define the full range of questions that policymakers should ask about the empirical effects of school choice. Defining those questions and assessing the wisdom of a voucher or charter law requires a complete understanding of the varied goals that a system of schooling should promote. The goals that are explicit or implicit in the arguments of both supporters and opponents of educational choice, and more generally in the philosophical positions of

⁴⁸These ambiguities already exist in higher education, where “private” universities enroll students supported by government-funded financial aid, and many “public” universities charge tuition, receive substantial amounts of private funding, and impose selective admissions standards.

those who have supported a public role in education over the last two centuries, can be divided into five broad outcome dimensions:⁴⁹

- Academic achievement
- Choice
- Access
- Integration
- Civic socialization

As should be clear from the preceding pages, these outcome dimensions are derived from the various goals that provide motivation for the advocates of the traditional common school and the advocates of vouchers and charters. We regard all five as legitimate ends of public policy. We recognize that these goals are sometimes in tension with each other, and that individuals will differ in prioritizing them; we do not attempt to resolve such philosophical disputes. Nevertheless, performance on all five can be empirically evaluated, and empirical evidence can help to clarify the debate.

We have used these five categories to structure this book. Following Chapter Two, which sets out key policy variables and provides basic descriptive data on voucher and charter schools, each of the next five chapters is devoted to empirical evidence concerning one of the outcome dimensions.

This second edition is being launched in the summer of 2007 with an update to the lengthy chapter on academic achievement—the area that has seen the largest number of new studies since the first edition of the book was published.

⁴⁹Henry Levin has proposed an evaluative framework similar to ours, with minor organizational differences (Levin, 2000). He posits four criteria on which vouchers should be evaluated: productive efficiency, freedom of choice, equity, and social cohesion. Productive efficiency addresses the same questions we discuss regarding academic outcomes and includes a concern for the costs of the system. (We address costs only briefly, in the concluding chapter.) Levin's freedom-to-choose category is addressed by our chapter on choice. We discuss equity in Chapters Five and Six, where we address the equitable distribution of choice and concerns about segregation, respectively. Finally, Levin's social cohesion seems to be similar to our civic socialization.

Academic Achievement

Academic achievement—which includes not only the skills and knowledge measured by standardized tests, but also long-term educational attainment (measured as advancement in school, graduation, and later participation in higher education)—is the appropriate outcome measure with which to begin an assessment of voucher and charter programs. This is the subject of the first chapter to be updated. The research literature now includes a number of studies that examine how voucher programs and charter schools operating in various locations around the United States have affected the test scores of participating students. Our discussion of academic achievement in Chapter Three begins with the relevant studies of achievement in publicly and privately funded voucher programs, then examines the evidence on achievement in charter schools—evidence that remains incomplete but has increased substantially since the completion of the first edition of this book in 2001. And we provide an overview of the literature on achievement in private schools, which may provide suggestive, if not definitive, evidence on the effects of vouchers and charters over the long term. This is particularly important with respect to outcomes such as high school graduation and college attendance, which have not yet been measured directly for the new voucher and charter programs. Finally, we address evidence from school-choice programs operating in other countries. Using all of the available evidence, we examine the academic effects on both participating students (those who attend voucher and charter schools) and nonparticipating students (those who remain in conventional public schools).

Choice

Family choice is not merely the mechanism that supports the operation of voucher and charter schools, it is also a valued outcome in its own right. Indeed, for many advocates of vouchers and charters, their primary virtue is that they give parents the opportunity to choose a school for their children. Supporters often assume that expanded parental liberty follows automatically from the establishment of charter or voucher programs. In fact, however, the schooling options created by voucher and charter programs, the number of families who have access to those options, and the subjective bene-

fits that parents derive from choice are all empirical issues. In Chapter Four, we address a range of empirical questions related to the choices made available to families by vouchers and charters. This involves first examining empirical evidence about the demand for voucher and charter schools and the supply of schools that vouchers and charters make available. To determine whether the new choices are meaningful to parents, we then explore evidence of the satisfaction levels of parents whose children attend voucher and charter schools.

Access

Chapter Five addresses the distribution of choice: Will vouchers and charters create additional choices solely for the middle and upper classes, or will they open up options to those who presently have the fewest choices? This question is hotly debated by the polemicists on both sides. Proponents argue that vouchers and charters are necessary if low-income (and minority) parents are to have the choices now available to upper-income (and white) families; opponents claim that voucher and charter schools will largely benefit upper-income families. Fortunately, considerable empirical evidence is available to address this dispute. We examine data on the income, race/ethnicity, parental education level, and disability status of students who attend voucher and charter schools.

Integration

The question of whether voucher and charter programs provide access to disadvantaged students is distinct from the question of how those students are sorted to individual schools. The common school model (in its ideal) aims not only to provide educational access to all students, but also to mix students from different racial and socioeconomic backgrounds in the same schools. In Chapter Six, we examine the empirical evidence about the sorting effects likely to be produced by school choice. We seek to understand whether vouchers and charters will lead to increased or decreased integration in terms of

race/ethnicity (and, to a lesser extent, socioeconomic status).⁵⁰ Theoretically, it is possible that school choice could lead to either outcome, so an empirical examination is critical. Some evidence on integration is available from existing voucher and charter programs, as well as from other school-choice programs in the United States and other countries.

Civic Socialization

Vouchers and charters involve a substantial decentralization of the education system, and they contemplate the creation of a wide variety of schools, each with its own curriculum, pedagogical style, and values. Opponents fear that voucher and charter schools will be dominated by private purposes and parental desires, neglecting the public function of schools to socialize students into good citizens. This concern is especially prominent among those who oppose voucher programs that include religious schools. Some supporters of vouchers and charters, by contrast, argue that privately operated schools are likely to be more effective than conventional public schools at the task of civic socialization.⁵¹ In Chapter Seven, we ask what is known about whether vouchers and charters are likely to promote or detract from the inculcation of the civic values necessary for the functioning of a healthy democracy. The evidence on civic socialization has increased since the publication of the first edition of this book, but it remains limited and largely indirect. We examine the available evidence, most of which is from comparative studies of public and private schools, and from studies of publicly funded private schools in other countries.

⁵⁰The extent to which vouchers and charters promote or reduce stratification by academic ability is another key empirical question. Because it directly relates to academic performance (via peer effects), we address it in Chapter Three rather than Chapter Six.

⁵¹See, e.g., Coons, 1998.

VALUES AND KNOWLEDGE IN THE SCHOOL-CHOICE DEBATE

The challenge to the common school model that is implicit in vouchers and charters ultimately relates to the basic values that the education system is intended to serve. Admittedly, American society lacks a universal consensus on these values. Americans argue about the relative importance of music and social studies, God and Darwin, multiculturalism and patriotism, vocational training and college preparation—as well as about the priority of values such as academic achievement, choice, access, integration, and civic socialization. In the debate over vouchers and charters, the tension between family choice and common schooling is especially striking. Some advocates of school choice believe that parents have a paramount right to direct their children's education. Some opponents believe that the common school should not be compromised under any circumstances, and that a key purpose of public education is to expose children to a broader range of ideas and values than that espoused by their parents. To the extent that Americans disagree about the basic priority of values such as these, our attempt to assess empirical issues is irrelevant. Resolving such fundamental disputes is a matter for philosophers and politicians, not researchers.

Fortunately for us, however, Americans in general are not especially ideological. Most Americans respect both parental liberty and the values associated with the common school—as well as the more mundane value of academic achievement. Indeed, many of those who support increased choice in schooling do so largely for pragmatic rather than ideological reasons. We believe that there is enough consensus on basic goals that a clarification of the empirical evidence will substantially advance the debate.⁵² Many of the arguments about vouchers and charters—regardless of whether they appeal to the values of achievement, choice, access, integration, or civic socialization—involve direct disputes about empirical effects.

This book aims to be nonideological, driven by the assumption that the empirical questions about vouchers and charters are critical. The

⁵² Levin and Belfield (2004) use a framework similar to ours for evaluating vouchers, but they have a more pessimistic perspective on the extent to which empirical evidence can resolve the debate, arguing that ideology is ultimately more important.

debate over school choice has produced two streams, each problematic for its own reasons: (1) an advocacy literature—both pro and con—that is uninterested in empirical evidence except when it can be used as ammunition on the rhetorical battlefield, and (2) an empirical literature that is focused too narrowly on a limited range of questions. We hope to broaden the empirical debate to include the full range of questions that must be addressed if wise public policy is to be made regarding vouchers and charters.

We do not introduce new empirical evidence. Indeed, we rely heavily on prior empirical efforts. The research literature evaluating voucher experiments has grown rapidly in recent years; in some cases, the same data have been analyzed and reanalyzed by several groups of researchers. Systematic evaluations of charter schools have also begun to appear at a rapid pace, especially since first edition of this book was published. We examine these evaluations in the chapters that follow, but we also use empirical evidence from other literatures—including comparisons of public and private schools and studies of school choice in other countries—to assess a broader range of questions than have typically been addressed in the direct evaluations of vouchers and charters.

The first limitation of the empirical debate is that it concentrates largely on achievement-test scores, often ignoring the other key outcome dimensions. As Laura Hamilton and Brian Stecher have pointed out, the use of test scores in basic skills is not a very rich way to evaluate schools that are explicitly intended to provide alternatives to the conventional public system.⁵³ A few researchers have addressed an additional issue related to access, asking whether vouchers and charters are serving disadvantaged students. But these measures reflect only a few of the many outcomes that may be affected, positively or negatively, by vouchers and charters. In particular, the structural shift from a model of common schooling to a model of family choice is not merely a matter of ideological preference; it raises a number of serious empirical issues. Although vouchers and charters appeal to the ideal of family choice, the extent to which they create real alternatives, the quality of those alternatives, and the availability of those alternatives to a wide range of families

⁵³ Hamilton and Stecher, 2006.

are all empirical questions. Although vouchers and charters challenge the model of the common school, the extent to which they impact the underlying values associated with that ideal—social integration and civic socialization—is an empirical question. All of these empirical questions are important to public policy independent of their effects on academic achievement per se.

A second problem with the existing debate is that evaluations of voucher and charter programs focus largely on students attending voucher and charter schools and neglect students who remain in conventional public schools (except as those peers form a comparison group). Because vouchers and charters potentially represent a transformation of the entire system for distributing schooling, evaluations of empirical evidence must consider that effects may be felt by nonparticipating as well as participating students. If the supporters of school choice are correct, nonparticipants will benefit from the competition created, which will induce improvement in the public schools. If the opponents of school choice are correct, nonparticipants will be harmed by the removal of voucher and charter students from the conventional public schools. In either case, the effects of school choice will not be limited solely to students who switch to voucher or charter schools.

SUMMARY: KEY POLICY QUESTIONS IN BRIEF

In sum, policymakers should answer a series of questions in assessing the wisdom of vouchers and charters:

- *Academic achievement:* Will voucher and charter schools promote the academic skills, knowledge, and attainment of their students? How will they affect the achievement of those who remain in assigned public schools?
- *Choice:* What is the parental demand for voucher and charter schools? Will it induce a supply response that makes a variety of desirable school options available? What do voucher/charter parents think of their children's schools?
- *Access:* Will voucher/charter programs be available to those who presently lack educational options, notably low-income (fre-

quently nonwhite) residents of inner cities? Will they provide any options for students with special needs?

- *Integration:* Will voucher and charter schools increase or reduce the integration of students across and within schools by race/ethnicity and socioeconomic status?
- *Civic socialization:* Will voucher and charter schools contribute to the socialization of responsible, tolerant, democratically active citizens, or will they promote intolerance and balkanization?

One voucher/charter policy may have radically different effects than another in terms of achievement, choice, access, integration, and civic socialization. Throughout our explication of these empirical issues, we consider important differences between and among voucher and charter policies. In Chapter Two, prior to addressing the empirical questions in depth, we discuss in detail the wide range of variation among voucher and charter programs on dimensions such as the level of public subsidy, regulation of admissions and curriculum in participating schools, and targeting of programs to at-risk populations. Our concluding chapter (Chapter Eight) explicitly considers how these policy variations should be expected to influence the outcomes resulting from voucher and charter programs.

Ultimately, whether charters or vouchers are good public policy depends not only on the outcomes on the five dimensions discussed, but also on the costs incurred by adopting such reforms. Tallying the direct fiscal costs of vouchers and charters may be relatively straightforward, but an accurate assessment requires a full accounting of all economic costs, which may include costs (or cost reductions) borne by existing public schools and by private parties. As yet, very few researchers have systematically addressed the costs of voucher and charter programs.⁵⁴ We do not address costs in depth, but we do discuss them briefly in Chapter Eight.

Compared with other educational reforms, voucher and charter programs are more challenging to evaluate because they are not programmatic; their purpose is to create a wide variety of distinguishable schools rather than to implement a singular, consistent

⁵⁴One early attempt can be found in Levin and Driver (1997).

program. As will become clear in the chapters that follow, the evidence on most of the policy questions is less than definitive. Nevertheless, direct evidence on some of the questions is accumulating rapidly, and various kinds of indirect evidence are available to inform the debate. Suggestive evidence can be found in studies of privately funded voucher programs, the international experience with public funding of private schools, and research comparing private and public schools. We focus first of all on evidence from evaluations of existing voucher and charter programs. Where these evaluations leave important questions unanswered, we consider whether further research on existing programs might be beneficial.

Further research on existing programs, however, is not likely to answer several of the most important empirical questions about vouchers and charters. We therefore consider in Chapter Eight the possible utility of a new choice experiment and the design elements that such an experiment would need in order to permit researchers to answer further questions.

Some of the empirical questions may be unanswerable in the absence of large-scale implementation of voucher or charter programs. Policymakers, however, are often required to make decisions with incomplete information. In the interest of ensuring that decisions are made with the best information available—even if it is incomplete—we conclude Chapter Eight by exploring the relationship between the details of policy design and outcome measures. Our aim in doing so is to provide policymakers with a guide to designing programs able to produce the greatest benefit (or least harm) in terms of their desired outcomes in the dimensions of achievement, choice, access, integration, and civic socialization.

ACADEMIC ACHIEVEMENT

The first question that policymakers ask about voucher and charter programs is whether they will improve or harm academic achievement. Vouchers and charters may have positive or negative effects on conventional public schools, so the question about achievement effects should be asked systemically, both for students who choose to attend voucher/charter schools and for students who remain in conventional public schools. We define academic achievement broadly, to include attainment (measured by advancement in school, graduation, and later participation in higher education) as well as academic skills and knowledge. Ideally, achievement measures would include not only assessments of basic skills in reading and math, but broader gauges of knowledge, cognitive skills, and creativity, in wide-ranging domains from science to fine arts.¹ In practice, the available assessments often focus on a relatively narrow range of basic skills. Fortunately, proponents and opponents of vouchers and charters agree that the promotion of basic academic skills is a key function of education—a necessary, if not sufficient, metric for the evaluation of school performance. A later chapter of this book describes the more-limited evidence available on the effects of autonomously operated schools on civic knowledge, attitudes, and skills, which are impor-

¹As Hamilton and Stecher (2006) have pointed out, limiting an assessment of the performance of charter (and presumably voucher) schools to their performance in terms of basic skills is unfortunate given that the schools are often established to serve specific educational missions that may not be captured in basic-skills results.

tant outcomes in themselves, although only a few scholars have sought to examine them empirically.²

This chapter summarizes the empirical evidence related to academic achievement under voucher and charter programs for both choosers and nonchoosers. Vouchers and charters are relatively recent innovations that have had limited opportunity to be evaluated systematically over a substantial period of time. Nevertheless, a number of evaluations directly address many of the critical empirical questions. Moreover, studies of public and private schools, of school-choice programs of older varieties, and of private-school subsidies in other countries provide additional evidence relevant to both voucher and charter programs. We begin with theoretical arguments on both sides.

THEORETICAL ARGUMENTS

Proponents argue that vouchers and charters will improve academic outcomes because autonomous schools are more effective and focused than are conventional public schools, which, in their view, lack a clear sense of mission and are unduly constrained by politics and bureaucracy. In their 1990 book, *Politics, Markets, and America's Schools*, John Chubb and Terry Moe use a large national data set on schools and students to develop an organizational theory of democratic governance of schooling, concluding that whatever the historical intent and experience might have been, contemporary public schools cannot function effectively precisely *because* they are democratically governed.³ In their view, public schools are paralyzed by a convoluted balancing of the interests of educators, unions, community forces, and politicians. In this web of action, effective educational programs cannot be created and sustained. According to Chubb and Moe, only redirection of authority to parents and families, so that they can choose the schools their children attend, can shatter and replace existing arrangements sufficiently to give hope of improved educational outcomes.

²See, e.g., Wolf and Macedo, 2004; McDonnell, Timpane, and Benjamin, 2000; Buckley and Schneider, 2004; Campbell, 2001a.

³Chubb and Moe, 1990. Chubb subsequently left academia to join Edison Schools, Inc., where he is now chief education officer.

Similarly, Paul Hill, Lawrence Pierce, and James Guthrie argue that conventional public schools are too heavily bureaucratized, rule-bound, and interest-group dominated to consistently operate effectively.⁴ They believe that the operation of schools by political bodies distracts schools from their basic educational mission, interposing educationally irrelevant concerns about compliance, standardization, and employment. In their view, the existing governance structure of public schools cannot be expected to produce effective education on a wide scale. Motivated by studies of successful schools, they propose to have all public schools operated autonomously, by nongovernment organizations, as schools of choice under contracts with school boards—creating what is essentially a system of universal charter schools.

Opponents of choice, in contrast, argue that conventional public schools are often just as effective as private and charter schools. In their view, the higher achievement often seen in private schools results not from a more effective educational program, but from the private schools' ability to select privileged students from highly motivated, high-income families. Moreover, they argue that public schools are in fact improving their performance through a variety of reform methods, including class-size reduction, district-level governance reforms, state and federal accountability systems, and research-based curriculum interventions. Although these arguments challenge the view that conventional public schools cannot be reformed, supporters of choice respond by arguing that improvements to the conventional system are possible in the short term but will not be sustained without basic changes in educational governance.⁵

Much of the debate between supporters and opponents of choice centers on the likely systemic effects on nonchoosing students. Voucher and charter programs may affect academic achievement not only for students who enroll in voucher and charter schools, but also for students who remain in conventional public schools. Sup-

⁴Hill, Pierce, and Guthrie, 1997; Hill and Celio, 1998.

⁵In their view, the reforms of well-meaning, effective, and charismatic leaders will eventually fade away if schools lack the institutional structure to sustain them. Discussions of the political and bureaucratic constraints on conventional public schools can be found in Hill and Celio, 1998; Hill, Campbell, and Harvey, 2000; Hess, 1999.

porters of choice, appealing to the power of the market, often argue that vouchers and charters will provide competition for conventional public schools—in order to survive, they will be forced to improve.⁶ If so, students who remain in conventional public schools will benefit from the introduction of vouchers or charters.

By contrast, opponents worry that voucher and charter schools will “skim the cream” from the public schools—i.e., will enroll the highest-achieving and most-advantaged students. They argue that students remaining in the conventional public schools will be worse off as a result, because they will lose the benefit of associating with highly motivated, high-achieving peers. Both the competition argument and the cream-skimming argument are theoretically plausible; which effect will dominate is a critical empirical question.

As shown in the pages ahead, the existing empirical literature has a number of weaknesses that preclude comprehensive and definitive answers to all the relevant questions about academic outcomes. Nevertheless, the store of evidence available about both voucher and charter schools continues to grow. Moreover, even where the evidence is less than definitive, guidance can be provided on how specific variations in the details of voucher and charter policies are likely to affect achievement. Here and in later chapters, the details of policy design will be critical to predicting empirical effects. We postpone an in-depth discussion of the implications of policy variation until Chapter Eight.

EFFECTS ON STUDENTS IN VOUCHER AND CHARTER SCHOOLS

We begin with evidence on the academic effects on students attending charter or voucher schools. This evidence is more plentiful than is the evidence on systemic effects on nonchoosers (which we address later in the chapter).

⁶This view is not universal among supporters of choice. Milton Friedman, for example, would like government to get out of the business of operating schools entirely (see Friedman, 1955, 1962/1982). Chubb and Moe’s view that conventional public schools are bureaucratically and politically constrained suggests that such schools may not be capable of improvement (see Chubb and Moe, 1990). Frederick Hess (2002) has described some of the institutional constraints that can blunt the effect of competition.

Methodological Issues

An experimental design with random assignment to the “treatment” and “control” conditions is often regarded as the ideal methodology in social science research because it avoids the problem of selection bias,⁷ which is the single thorniest methodological problem in empirical studies of vouchers and charter schools: Students and parents who choose voucher and charter schools are likely to differ in systematic ways from those who remain in assigned public schools. Any observed differences in outcomes, then, might result from pre-existing differences in the students and their families rather than from differences in the effectiveness of schools. If voucher and charter students come from highly educated and highly motivated families, they may perform better than public-school students even if their schools are no more effective. By the same token, if students entering voucher and charter schools have not done well in conventional public schools, they may perform worse than public-school students even if their schools are just as effective. And even if researchers adjust their findings based on observable background characteristics (such as parental income and education), unobservable characteristics (such as how much parents and students value education) can have a substantial effect on outcomes.

Random assignment solves the problem of selection bias by ensuring that the treatment and control groups have similar characteristics. If assignment to a school is determined by lottery, the achievement of applicants who win the lottery for vouchers or charters can be directly compared with the achievement of applicants who do not. Because the two groups have similar background characteristics—including unobservable characteristics related to motivation and values—researchers and policymakers can have confidence that any observed differences in achievement result from the voucher/charter program itself.

⁷See, e.g., Burtless, 1995; Krueger, 1999. For a discussion of some of the weaknesses of experiments, see Heckman and Smith, 1995. Random assignment cannot solve all methodological problems; moreover, experiments do not necessarily duplicate all of the conditions that would hold in an actual policy implementation. We address these issues later in the chapter.

Full random assignment is incompatible with one of the aims of vouchers and charters, both because choice is itself one of the major goals of the reform and because the creation of a chosen community in the school is postulated as a primary mechanism for improving outcomes. More-limited randomization is possible, however, when the number of applicants for a program exceeds the number of spaces available. Spaces can be allocated randomly among the applicants. Four of the privately funded voucher programs did exactly that: Applicants were selected to receive vouchers by lottery. In consequence, some of the best evidence about the empirical effects of school choice (on students who choose) comes from the private scholarship programs. Our discussion below includes all of the existing reports on randomized experimental studies of vouchers and charter schools.⁸ New randomized experimental studies are now under way to examine effects of the federally funded voucher program in Washington DC and to evaluate a set of oversubscribed charter middle schools.⁹

Even randomized experiments have limitations. Results obtained in programs or schools where demand for spaces outstrips supply may not be relevant to programs or schools that are having trouble filling their spaces. It would not be surprising if oversubscribed schools using lotteries are better schools than undersubscribed schools with space available. If so, using the lottery to conduct a randomized evaluation would produce valid estimates of the effects of the oversubscribed schools but would overestimate the effects of the undersubscribed schools that were left out of the analysis. In the terms of research methodology, randomized experiments have very strong “internal validity” (for causal inference about a carefully described

⁸In practice, evaluations with random assignment are not as simple as this discussion suggests. Assessments are complicated by noncompliance and attrition. In experimental voucher studies, for example, some lottery winners did not use their vouchers, and some lottery losers found other ways to enroll in private schools; moreover, many members of both treatment and control groups did not return for follow-up study. These issues are discussed later, in the context of the voucher experiments.

⁹Both of these studies are funded by the National Center for Education Evaluation (NCEE) of the U.S. Department of Education. The DC voucher study is being conducted by Westat (a contract research organization) and Georgetown University, and the charter-middle-school study is being conducted by Mathematica Policy Research, Inc. Early descriptive reports from the DC study include Wolf et al. (2005) and Wolf et al. (2006).

sample included in the experiment) but sometimes sacrifice “external validity” (for causal inference about a larger population of potential participants).

Most voucher and charter programs do not incorporate randomized research designs. Researchers therefore have been forced to use other methods to deal with the problem of selection bias. In a 2006 paper, Julian Betts and Paul Hill, writing for the National Charter School Research Project, describe the various methods that have been used in different studies, assessing their strengths and weaknesses.¹⁰

One of the strongest “quasi-experimental” methods uses longitudinal panel data sets to follow the progress of individual students over time. Several recent studies of charter schools have used longitudinal data sets to conduct “within-student” comparisons of achievement, examining differences in the achievement of individual students who move from conventional public schools to charter schools and vice versa. Such quasi-experimental, within-student designs directly address selection bias by comparing the achievement of *the same students* in two different kinds of schools.

Although within-student analyses provide strong controls for selection bias, they raise a concern about external validity: Because their estimates of effects are derived entirely from the students who can be observed in both kinds of schools, they implicitly assume that the effects on those students are similar to effects on other students who spend their entire academic careers in conventional schools or schools of choice. It is very difficult to know whether this assumption is correct. A recent study of nine Chicago charter schools by Caroline Hoxby, of Harvard University, and Jonah Rockoff, of Columbia University, found that, relative to a randomized experimental method, the within-student method consistently underestimated the charter schools’ positive effects.¹¹ Similarly, Dale Ballou and colleagues at Vanderbilt University have shown that annual gains for all students in Idaho charter schools look quite different from gains

¹⁰Betts and Hill, 2006. The National Charter School Research Project includes a website that provides brief summaries of a lengthy list of charter-school achievement studies (www.ncsrp.org).

¹¹Hoxby and Rockoff, 2005; see also Hoxby and Murarka, 2006.

shown by students who transferred from conventional public schools to charter schools.¹² Although most studies lack the opportunity to apply randomized experimental methods as a check against the validity of the within-student results, researchers using within-student analysis should nevertheless examine their data in a variety of ways to check the robustness of their results.

In the absence of randomized experiments or longitudinal data, the best method that researchers have to control for systematic, unobservable differences between choosers (in voucher or charter schools) and nonchoosers (in conventional public schools) is an “instrumental variable” (IV) approach that complements standard statistical controls for student demographic characteristics. Researchers using this approach seek to find variables that are correlated with the likelihood of attending a voucher or charter school but uncorrelated with achievement; these then can be used as “instruments” to adjust for unobserved differences. Unfortunately, it is often very difficult to find variables that unambiguously meet these criteria.

The following discussion considers the best available current evidence relevant to academic achievement in voucher and charter schools. We have included all of the experimental evidence, several quasi-experimental studies that use longitudinal data sets, and a few cross-sectional studies that include IV adjustments for selection bias.

It should be noted, however, that some of the studies we discuss are new and have not yet been subjected to the scrutiny of extensive academic peer review. Some caution in interpreting their significance is thus needed. The reliability of evaluation findings is ensured in the long term both by the peer review process and by reanalysis of the data by other researchers. Findings on the Tennessee class-size reduction experiment of the 1980s, for example, have become widely accepted over the past decade as a result of extensive reanalysis and publication, not only by the original evaluators, but also by other researchers.¹³ To provide the most-current information available, however, we could not wait until all relevant studies had been peer reviewed, published, and reanalyzed. The discussion

¹²Ballou, Teasley, and Zeidner, 2006.

¹³See, e.g., Krueger and Whitmore, 2001; Krueger, 1999; Rouse, 2000.

below therefore includes the best of the studies available as of July 2007.

Evidence from Voucher Programs

Most of the notable voucher programs and education tax subsidies operating in the United States were launched after 1990.¹⁴ In the years since, more than a few studies of the achievement effects of the voucher programs have appeared—many involving competing analyses of the same data. Education tax subsidies, by contrast, which have been adopted in several states (including Arizona, Florida, and Pennsylvania, as described in Chapter Two) to produce public support for privately operated voucher programs, have produced no studies of academic effects.

Every new report on the academic effects of voucher programs has produced a torrent of commentary from both critics and defenders in the research community. Thus, although the intensive scrutiny has helped to clarify the studies' strengths and weaknesses, the blizzard of competing claims and counterclaims has surely left many readers bewildered. This chapter aims to provide a sober assessment of the bottom line.¹⁵

Studies have evaluated not only the publicly funded voucher programs in Milwaukee, Cleveland, and Florida, but also a variety of privately funded, charitable-scholarship programs operating in cities across the United States. From a research perspective, these privately funded scholarship programs—sometimes described as “private

¹⁴For decades, a few rural school districts in Maine and Vermont have practiced what is sometimes called “tuitioning”—i.e., they have sent small numbers of children to private schools because they lacked sufficient numbers of students to operate schools of their own (Greene, 2000a). And a few states have had long-standing programs permitting small state income-tax deductions for private-school tuition. We are aware of no evaluations of the achievement effects of these programs. Also, in the early 1970s in Alum Rock, California, the federal government sponsored a public-school choice program that was often described as a voucher experiment. In fact, however, private schools were not permitted to participate, and participating public schools were protected by regulations from any potential negative effects of competition among themselves. In short, the Alum Rock experiment was not a true voucher program (Levinson, 1976).

¹⁵Other recent, useful summaries include Ladd (2002), McEwan (2000a, 2004), and Levin (2002).

vouchers”—are useful for predicting the empirical effects of publicly funded programs. Privately and publicly funded voucher programs may differ from each other in scale and in the regulations attached, but the funding source per se makes little difference to the student or the school (although regulatory provisions attached to public funding may be quite important). In consequence, privately funded scholarship programs may produce empirical effects similar to those that would be produced by publicly funded voucher programs.¹⁶ Moreover, several states have blurred the line between publicly and privately funded programs by establishing education tax subsidies that encourage private contributions to privately operated voucher programs by reducing the tax liability of the contributors—creating a subsidy that is implicitly, if not explicitly, public. We begin with the evidence from private voucher programs because several of them have incorporated randomized experimental designs.

Experimental voucher studies. The newest experimental voucher evidence comes from the federally sponsored voucher program in Washington DC, established in 2004, known as the DC Opportunity Scholarship Program. The U.S. Department of Education released the findings of the first-year achievement impact study, led by Patrick Wolf of the University of Arkansas, in June 2007. Because the program was oversubscribed, scholarships were awarded by lottery. To examine total program impact on student achievement, the study compared the results of lottery winners with those of lottery losers (regardless of whether the winners actually used their scholarships or whether the losers attended public schools). The authors found no impact, positive or negative, on average test scores in reading or math. Similarly, they found no impact of the effect of using a voucher to attend a private school on average reading or math test scores.¹⁷ These results reflect the effects of only about the first seven

¹⁶Because privately funded scholarship programs do not directly result in reduced funding to public schools (as do many publicly funded programs and proposals), they may have a smaller effect on public schools than do publicly funded programs. This difference, however, is not relevant to their effect on students using vouchers.

¹⁷Wolf et al., 2007. The authors found evidence of positive effects in math for two subgroups of students (higher-achieving students and students from public schools that were not identified for improvement under NCLB), but they acknowledge that these effects may be the result of random differences given that they appeared in only two of ten subgroups examined.

months of schooling for participating students; it will be important to see whether positive or negative effects become evident with additional years of participation.

The most-thoroughly analyzed experimental voucher evidence with several years of participation data comes from New York City. In 1997, the School Choice Scholarship Foundation, a nonprofit organization in New York, began offering scholarships worth up to \$1,400 to low-income students in grades 1 through 5, focusing especially on students coming from public schools that have low achievement-test scores. In the first year, the program received 20,000 applications for 1,300 scholarships. The scholarships were awarded by lottery, and a comparably sized group of applicants who were rejected was chosen for comparison.

Daniel Mayer of Mathematica Policy Research and colleagues reported results from three years of studying the winners and losers of the 1997 lottery. The evaluators measured achievement for participants in the New York experiment using math and reading components of the Iowa Test of Basic Skills (ITBS). Comparing the average test scores of students who used vouchers to attend private school for two years with those of a comparable group of students who did not, they found no statistically significant difference in reading or math.¹⁸

¹⁸Mayer et al., 2002, Table D-1. Unless otherwise stated, statistical significance is measured at a level of 0.05 throughout our discussion. In New York and the other sites of voucher experiments discussed below, comparison of achievement outcomes of voucher users and the control group required statistical adjustments to account for the fact that some lottery winners did not use their vouchers. In New York, 78 percent of those offered vouchers used them to attend private school for at least one year, 55 percent used them in all three years, and 22 percent did not use them at all. Meanwhile, 4 percent of those who lost the lottery found their way into private school for all three years, and 12 percent attended private school for at least one year (Mayer et al., 2002, p. 13). Most likely, families that actually used their vouchers (because they had the means and motivation to pay the remaining tuition) were a nonrandom sample of all lottery winners. The lottery mechanism, however, created an ideal instrumental variable, permitting an IV adjustment to ensure a fair comparison between voucher winners and the control group. The IV adjustment was used for the results we discuss, which Mayer describes as a “private-school effect.”

In addition to reporting a private-school effect, Mayer’s team reports the effect of a voucher *offer*, as measured by a simple comparison of differences in outcomes between lottery winners and losers. The effect of the offer should be relevant to policymakers, because the policy instrument they have available is the offer of a voucher. In

Mayer's team also analyzed results separately for African-American and Latino students, who together constituted the overwhelming majority of the voucher users in New York. The story for Latino students—half of all participants—was the same as that for the total population: No evidence of a statistically significant private-school effect in math or reading was observed after three years.¹⁹

For African-American students, Mayer's team found evidence of a private-school advantage. Voucher users' scores on a composite math and reading test were higher than those of the African-American control group by statistically significant margins. The composite-test scores of African-American students who attended a private school at any point during the three-year program were eight percentile points higher than those of African-American students who never attended a private school, a difference that corresponds to a substantial effect size (0.37 of a standard deviation).

There has been considerable controversy over the effect of the New York City voucher program on the test scores of African-American students. Alan Krueger and Pei Zhu, of Princeton University, re-analyzed the Mayer team's data, making several methodological changes. With these changes, the positive effect of offering a voucher to African-American students becomes insignificant.²⁰ Paul Peterson and William Howell, two of the co-authors of the Mayer report, disagree with all of the changes made by Krueger and Zhu. The arguments have been played out in a series of responses and counterresponses, with separate commentary by two of the other co-authors of the original report.²¹ In another study, John Barnard and colleagues used a sophisticated stratification model to correct for noncompliance and missing-data issues in the program implementation.²² They found positive voucher effects on the math scores of

general, readers should recognize that the "voucher-offer effect" in New York was about half as large as the private-school effect (Mayer et al., 2002, p. 15).

¹⁹Mayer et al., 2002, Table D-1.

²⁰The reanalysis focused on the "intent-to-treat" estimate, i.e., the estimate of the policy effect of offering a voucher (including the effect on those who were offered vouchers but did not use them), rather than the effect of using a voucher to attend a private school.

²¹Peterson and Howell, 2004; Krueger and Zhu, 2004a,b; Myers and Mayer, 2003.

²²Barnard et al., 2003.

students at low-performing schools and also found that this positive voucher effect was stronger for African-American students. Although we do not address all of the technical points here, our bottom-line conclusion is that the New York voucher experiment provides fairly strong evidence that the voucher offer benefited the achievement of many participating African-American students.²³

Similar randomized voucher experiments have been conducted in three other cities. In Dayton, Ohio, and Washington DC (in 1998), and in Charlotte, North Carolina (in 1999), nonprofit organizations distributed tuition scholarships to low-income students, allocating the scholarships by lottery in imitation of the New York program. As in New York, the vouchers were relatively small, with maximum amounts ranging from \$1,200 to \$2,200; families were expected to contribute a portion of tuition costs. William Howell and colleagues used an instrumental-variables analysis in combination with the randomized lottery to estimate the achievement impact of voucher use in Washington and Dayton, as well as New York.²⁴ They found that African-American students in all three locations who switched from public to private school gained on both math and reading, relative to students who remained in public schools, with the largest effects found in Washington DC.²⁵ There, however, the public-school control group caught up to the voucher group after three years.²⁶ African-Americans constituted more than 70 percent of the participants in both cities, and no effect was found for other ethnic groups.²⁷ Averaged across the three cities, the effect was equal to approximately one-third of a standard deviation—fairly large in terms of most educational interventions, equal to about one-third of the average racial gap in achievement in the country.

²³ See also McEwan, 2004.

²⁴ The authors use an indicator for private-school status in the first year of evaluation as an instrument, so that students who decline treatment in the first year but use the voucher in the second year are considered for estimating the second-year impacts.

²⁵ In Dayton, the advantage for African-American voucher users achieved statistical significance at 0.1, but not at 0.05 (Howell and Peterson, 2002b, Table 6-1).

²⁶ Howell and Peterson, 2002a.

²⁷ Howell et al., 2002.

Meanwhile, in Charlotte, Jay Greene used the voucher lottery to examine achievement after one year and found statistically significant advantages for voucher students in both reading and math. This positive voucher effect corresponds to 0.25 standard deviation. The Charlotte results are not disaggregated by ethnicity, but the overwhelming majority of participants were African-American.²⁸

In sum, the experimental voucher findings are largely positive for African-American children (although no effects have become apparent after one year of participation in the federally funded voucher program in DC). The effect sizes in several of the studies are large enough to make a substantial dent in the racial gap in student achievement. Still, caution is necessary in their interpretation. Substantial numbers of the study participants—both voucher users and nonusers—failed to participate in the follow-up testing.²⁹ The researchers adjusted their findings by weighting inversely according to the probability of responding, but it is impossible to know whether this weighting captured unobserved differences. A high attrition rate is problematic because it is possible that the lottery winners who continued to show up for standardized testing were those who were doing well in their voucher schools. Because biased attrition is always a possibility in social experiments, a nonresponse rate substantially above 30 percent is often regarded as reason for concern.³⁰

Another unanswered question about the experimental studies is this: Why would vouchers have an effect only for African-American students? Howell and Peterson plumbed survey data associated with the experimental voucher studies to explore a variety of possible explanations, from class size to peers, without finding a clear answer.³¹ African-American students constituted the majority of participants in three of the four cities, but the New York study included a substantial number of Latinos, for whom no effect was found.³² The specific reason for the effect is critical to understanding its generalizability

²⁸Greene, 2000b, Tables 2, 3.

²⁹Myers et al., 2000, Table 1; Howell et al., 2002; Greene, 2000b, p. 2.

³⁰See Orr, 1999.

³¹Howell and Peterson, 2002a.

³²As Latinos are the fastest-growing ethnic group in the United States, this difference may be important.

and its implications for public policy. Later in this chapter, we discuss a variety of possible explanations for the effect and their implications.

Despite these concerns, the findings from the experimental studies constitute the most compelling evidence available on the achievement effects of vouchers (for voucher students). It should be noted that these are short-run effects, and it will be critical to see whether they grow or dissipate in the long term. Further follow-up of the experimental and control groups in coming years would provide an extremely valuable source of information on the long-term effects of vouchers—ideally, not only in terms of test scores, but also for other outcome measures, including dropout and graduation rates, college attendance, and future earnings.

Vouchers in Milwaukee. There is no good, current evidence on the achievement effects of Milwaukee's publicly funded voucher program, despite the fact that it has been operating for a substantial length of time and that it now enrolls more than 17,000 children. However, a new study of the Milwaukee program is now under way, results of which are not yet available.

Milwaukee's voucher program began operating in 1990, opening to both fanfare and controversy. The Wisconsin legislature, which established the program, commissioned a five-year evaluation that was conducted by John Witte of the University of Wisconsin. Comparing voucher students with a sample of Milwaukee public-school students, Witte ultimately found "no consistent difference" in achievement in reading or math.³³ Subsequently, Jay Greene, Paul Peterson, and Jiangtao Du reanalyzed the Milwaukee data using a different comparison group: voucher applicants who were unable to use their vouchers because they could not find space in a participating school. This team of researchers argued that the thwarted applicants were a more appropriate control group than the one Witte had used because their failure to use the vouchers created a "quasi-experiment." Greene, Peterson, and Du found statistically significant advantages for voucher students in both reading and math after

³³Witte, 2000, p. 132.

four years in the program.³⁴ Later still, Cecilia Rouse of Princeton University reanalyzed the data once more, in this case using both quasi-experimental and statistical controls. She found that voucher students did better in math but not reading, and that the math advantage accumulated over time, reaching a fairly substantial one-third to one-half of a standard deviation after four years.³⁵

In our view, Rouse's analysis is the most likely to be accurate. She subjected her findings to a number of statistical tests to confirm their robustness and found similar results using both quasi-experimental and statistical controls. Even so, her results are of minimal relevance to the general debate over vouchers and charters (as Rouse herself has suggested) and even to the current operation of the Milwaukee program.

When the Milwaukee data were collected, the program involved a small number of students concentrated in a few schools. Initially, enrollment in the voucher program was capped at 1 percent of enrollment in Milwaukee public schools; moreover, only nonsectarian schools were permitted to participate. This restriction excluded the great majority of private schools in the city. In the program's first year of operation (1990–91), only 341 students participated, enrolling at only seven voucher schools. Following the evaluation's completion, however, the Wisconsin legislature amended the program's rules, raising the cap on the number of students who could enroll to 15,000 and allowing religiously affiliated schools to participate. The result was a dramatic expansion in the number of schools and students participating: Enrollment more than tripled between 1997–98 and 1998–99, when religious schools joined the program. Suddenly, 70 percent of voucher students were attending religious schools (mostly Catholic institutions). In 2006–07, nearly 18,000 Milwaukee students used vouchers to attend 124 different private schools.

Results from a program consisting of a few hundred students attending seven nonsectarian voucher schools are of minimal relevance to predicting the results from a program enrolling 18,000 students at

³⁴Greene, Peterson, and Du, 1997, 1998.

³⁵Rouse, 1998.

124 voucher schools, most of which are sectarian.³⁶ As we show below, the literature on public and private schooling suggests that, compared with other private schools, Catholic schools may have a unique advantage for low-income minority children. In sum, the findings from the early years of the Milwaukee voucher program tell little about the effectiveness of the program as it exists today and tell even less about the effectiveness of voucher and charter programs generally. Rouse's results are methodologically solid, but they speak only to the effectiveness of a handful of nonsectarian private schools in Milwaukee in the early 1990s.³⁷

Vouchers in Cleveland. Achievement results from studies of Cleveland's voucher program, unfortunately, are largely unenlightening. Cleveland's voucher program, established by the Ohio legislature and aimed at low-income families, began operating in the 1996–97 academic year. About 5,700 students are currently participating.

One study of the Cleveland program examined the operation of two schools that were established to serve voucher students, but the researchers had no public-school group with which to compare gains, and their data included only the two schools, which have since dropped out of the voucher program in order to convert to charter status.³⁸

The official evaluation of the Cleveland program was conducted by an Indiana University team that examined the effects on students who were in first grade when the program was started.³⁹ They ex-

³⁶To be fair, both Witte and Rouse have expressed concern about the extent to which the program's findings can be generalized (see Rouse, 1998; Witte, 2000, pp. 150–151). The problem with generalizing from the early Milwaukee results has also been raised in Moe (1995) and McEwan (2000c).

³⁷More recently, Jay Greene (2004) compared graduation rates of Milwaukee public schools with those of ten voucher schools and found substantially higher graduation rates in the voucher schools. But the analysis was limited to a single cohort of students and used aggregate, schoolwide data rather than longitudinal records on individual students; moreover, it had no way to control for selection bias.

³⁸Peterson, Howell, and Greene, 1999; Archer, 1999.

³⁹Metcalf et al., 2003. A paper by Clive Belfield, of the National Center for the Study of Privatization in Education, reanalyzes the data from the official Cleveland voucher evaluation, finding no significant differences between the relevant groups, with a few exceptions. In the absence of pre-treatment information on the students (i.e., some kind of assessment result prior to their entering the voucher program), and because

amined the 2001–02 fourth-grade reading and math scores of students who used the voucher to attend private schools in all four years, comparing their scores to those of students who were offered the vouchers but did not use them, as well as to those of students who were not offered a voucher. After controlling for observable student characteristics and prior scores, they found no difference in fourth-grade reading and math scores between voucher and non-voucher students. The reporting of the results, however, leaves a series of unanswered questions about methodology and the validity of the comparison group of nonvoucher students.⁴⁰

In sum, the existing evidence does not permit strong conclusions about the achievement effects of the Cleveland voucher program.

Implications of an expanded pool of choosers. Care is needed in interpreting the relevance of the findings of these studies for larger-scale, more generously funded choice programs. First of all, the privately funded experimental programs usually involve only partial scholarships, with substantial family co-payments, which may produce an unusual sample of voucher users. Consider the following: Parents who are willing to pay partial tuition are those who are especially motivated to get their children into private school. The most-motivated parents may have three unusual characteristics: (1) they may be especially well informed about options in the educational market, (2) they may value education very highly,⁴¹ and (3) their children may be having unusual difficulty in their current public schools. These children thus may be especially likely to move to high-quality voucher schools, and they may have the greatest potential to improve their achievement in new schools.

This point does not undermine the internal methodological validity of the experimental studies, because allocation by lottery ensures

the study design makes it impossible to identify an appropriate control group, it is difficult to know what to make of these results (Belfield, 2005).

⁴⁰Other researchers have concluded, as we have, that the official evaluation of the Cleveland program is too problematic for any conclusions about achievement effects to be drawn from it. (See McEwan, 2000c; Peterson, Greene, and Howell, 1998.)

⁴¹Goldhaber notes that empirical evidence suggests that parents often do select schools based on academic quality, but that nonacademic characteristics, such as the proportion of white students in a school, also motivate parental choices (Goldhaber, 1999; see also Goldhaber, 1997; Weiher and Tedin, 2002; Lankford and Wyckoff, 1992).

that voucher winners are comparable to voucher losers, and the evaluators use an appropriate statistical technique (the IV approach) to account for the fact that some voucher winners do not use their vouchers. Nevertheless, the external validity of the experimental findings is uncertain: They may or may not predict the achievement effects of more-generous, publicly funded programs that bring in a larger segment of the population (e.g., the Milwaukee voucher program).

In all of the experimental studies, a substantial number of lottery winners did not use their vouchers. In New York, 75 percent of those awarded scholarships used them in the first year; 62 percent used them in both of the first two years.⁴² First-year users constituted only 54 percent of voucher winners in Dayton and 53 percent in Washington DC.⁴³ In Charlotte, less than half used their scholarships in the first year.⁴⁴ According to survey responses of parents in New York, Dayton, and Washington DC, the most prominent reason that vouchers went unused was inability to pay additional tuition and associated costs (above the value of the scholarship).⁴⁵ This strongly suggests that a larger voucher, by reducing the family's co-payment (perhaps to zero), would produce a higher "take-up rate" among eligible families. (Indeed, the federally funded voucher program that subsequently began operating in DC with a much larger voucher, worth up to \$7,500, saw much higher usage rates: 75 percent, versus 53 percent for the privately funded voucher program.⁴⁶) The additional students brought into the program, however, might be those with somewhat less to gain by transferring to a voucher school and with less-motivated and less-informed parents. In consequence, average achievement gains for a generous voucher/charter program on a larger scale might be somewhat lower than the

⁴²Howell et al., 2002.

⁴³Howell et al., 2002.

⁴⁴Greene, 2000b.

⁴⁵Myers et al., 2000, pp. 15–16; Howell and Peterson, 2000, Table 4; Wolf, Howell, and Peterson, 2000, Table 4. In Dayton and Washington, the survey asked parents why their child was not in their preferred school rather than why the voucher went unused. Although these questions are not identical, we think they address the same issue.

⁴⁶Wolf et al., 2005.

achievement gains suggested in the small-scale experimental programs.

The black box of the voucher experiments. An increase in the take-up rate is not the only reason that a large-scale, publicly funded program might produce results different from those of a small-scale experiment. To predict how the results might differ requires an understanding of the mechanisms behind the experimental results. Unfortunately, the experimental evaluations have had access to only limited information about school operations and therefore have not been able to provide strong evidence about *why* voucher schools seem to perform better for the population of low-income African-American students. There are several possibilities:

- *Peers:* Any advantage associated with voucher-school attendance may result (in part or entirely) from attending school with classmates of higher socioeconomic status or higher academic ability rather than from a more-effective school program.⁴⁷ Researchers generally have great difficulty disentangling peer effects from program effects, and the voucher experiments were not designed to separate these mechanisms. Examining second-year results from the privately funded voucher program in Washington DC, Patrick Wolf and Daniel Hoople found tentative evidence suggesting that African-American students in that voucher program may have benefited from attending schools that were slightly more racially integrated than the all-black public schools of their peers.⁴⁸
- *Class size:* In Milwaukee, Cleveland, New York, Dayton, Washington DC, and Charlotte, voucher schools typically had smaller classes than did nonvoucher schools.⁴⁹ Tennessee's widely reported experimental study on class-size reduction demonstrated

⁴⁷See McEwan, 2000a; Levin, 1998; Goldhaber, 1999, 1996.

⁴⁸Wolf and Hoople, 2006.

⁴⁹Rouse, 2000; Metcalf, 1999; Myers et al., 2000; Greene, 2000b; Wolf, Howell, and Peterson, 2000; Howell and Peterson, 2000. In 1993–94, the average self-contained class in private schools across the country had 21.8 students, versus 23.8 in public schools. Catholic schools, however, which constitute a large part of the private-school market in inner cities, had slightly larger self-contained classes, at 25.7 students. (See Choy, 1997.)

that reducing class size in primary grades by one-third (from about 23 to about 15 students) results in achievement gains for all students, but especially for low-income and African-American students.⁵⁰ In most of the voucher cities, the difference in class size between public and voucher schools was not large (two or three students, as reported by school records and parent surveys). Nevertheless, class size may explain some of the advantage for African-American voucher students.⁵¹

- *School size:* Total enrollments of schools participating in the voucher experiments were not reported, but it is likely that most of the schools are smaller than the urban public schools attended by the control groups. In general, private schools are far smaller than public schools: Average enrollment is well under 300 students, compared with 475 in a typical public school.⁵² Although there is less evidence on the academic effect of school size than there is on class size, some scholars believe that small schools lead not only to higher achievement, but also to a more equitable distribution of achievement (i.e., small schools have particular advantages for low-income children).⁵³ Contrary to this expectation, however, Wolf and Hoople's preliminary analysis in the Washington DC private voucher program suggested that students were doing better in larger schools.⁵⁴
- *Unusually bad local public schools:* As Dan Goldhaber pointed out, vouchers might help children in communities where public schools are especially low-performing, because it would not be

⁵⁰Krueger, 1999. More recent work also found an achievement effect (though small) in a statewide class-size reduction program in California (Stecher and Bohrnstedt, 2000).

⁵¹Cecelia Rouse believes that, in Milwaukee, the positive effect of vouchers may have been explained by smaller classes (Rouse, 2000). In Charlotte, Jay Greene concluded that even though class size was smaller in the voucher schools, it did not explain the advantage for voucher students (Greene, 2000b). The issue has not been directly explored in Cleveland, Dayton, Washington DC, and New York.

⁵²See Choy, 1997; RPP International, 2000, p. 20.

⁵³See Bickel and Howley, 2000; Walberg and Walberg, 1994; Stevens and Peltier, 1994; Guthrie, 1979; Fowler, 1995; Mik and Flynn, 1996. On the equity effect, see especially Bickel and Howley, 2000.

⁵⁴Wolf and Hoople, 2006.

hard for private schools to do better.⁵⁵ The relative advantage of Catholic schools for urban residents that was found in some studies (discussed below) is consistent with this possibility.

- *Better matching of students' needs to schools' programs:* Voucher and charter schools may be better for students with particular needs, even if not for all students. That is, any advantage for voucher students may result not from a general productivity advantage for autonomous schools, but from a coupling of parents' accurate identification of the particular needs of their children with the opportunity to choose a school appropriate for their children.
- *Focus, mission, and values:* A variety of scholars have attributed effectiveness to the institutional focus on a basic educational mission and set of values that is characteristic of some private schools—most notably, the Catholic schools that have enrolled a substantial proportion of voucher students in many cities.⁵⁶ Wolf and Hoople found preliminary evidence suggesting that in Washington, teachers viewed by students as “interested in them, good listeners, fair, respectful, and willing to punish cheaters” may have contributed to the gains of African-American voucher students.⁵⁷
- *Higher academic expectations:* One consequence of a stronger focus on educational mission and values may be higher academic expectations for students. In general, Catholic schools are less likely than public schools to stratify students in academic tracks differentiated by perceived student ability.⁵⁸ African-American students (as well as other minority and low-income students) in public schools are disproportionately likely to be

⁵⁵Goldhaber, 1999. See also Neal (1997), which found that Catholic schools perform better than many urban public schools but only comparably to many suburban public schools.

⁵⁶See, e.g., Hill, Foster, and Gendler, 1990; Hill, Pierce, and Guthrie, 1997; Coleman, Hoffer, and Kilgore, 1982; Coleman and Hoffer, 1987; Chubb and Moe, 1990; Bryk and Driscoll, 1988.

⁵⁷Wolf and Hoople, 2006, p.22.

⁵⁸Bryk, Lee, and Holland, 1993; Coleman, Hoffer, and Kilgore, 1982; Coleman and Hoffer, 1987.

placed in low-achieving tracks.⁵⁹ The apparent voucher advantage for African-American students may therefore result from uniformly higher academic expectations in voucher schools. Consistent with this view, Wolf and Hoople found that private voucher students in DC appeared to derive a benefit in math achievement from being given larger amounts of homework.⁶⁰

All of these explanations are possible, separately or in combination.⁶¹ (It should be noted, moreover, that only a few of them apply exclusively to African-American students.) Different explanations lead to different predictions about the results that might be produced by larger-scale programs. Existing schools have a limited capacity to absorb new students while maintaining the characteristics that made them effective in the voucher experiments. A larger program may create a number of tensions not evident in the experiments. For example:

- Any positive peer effects from the experimental programs may disappear when scale is increased. A voucher program that fills schools with large numbers of low-income, low-scoring students may not produce the same benefits as an experimental program that puts a few disadvantaged students into schools with more-advantaged classmates.
- Voucher schools may feel pressure to increase the size of their classes and school enrollments. (However, since smaller classes are one reason parents choose voucher schools,⁶² there may be a strong incentive to keep class size from rising even if total demand increases.)
- Benefits may be minimal (or even negative) for voucher schools in communities that already have effective public schools.

⁵⁹Oakes, 1985, 1990; Gamoran, 1987; Braddock and Dawkins, 1993.

⁶⁰Wolf and Hoople, 2006.

⁶¹Howell and Peterson (2002) also tried to explore several of these possible explanations using parental survey data associated with the experimental voucher studies. They found no clear support for any of the explanations, but given that their measures of the variables were indirect (based on parent surveys), it is not possible to rule out any of them.

⁶²See RPP International, 2000, p. 24; Myers et al., 2000, Table 3.

- Institutional focus on a mission might be maintained under large-scale voucher programs, but how enrollment pressure will affect school character is unknown. Moreover, a unified focus may derive in part from a deep value commitment by parents, and families who are fully subsidized may be less committed to a school than families who are paying part of the tuition (as in the experiments).
- Large-scale voucher programs, like charter programs, will rely to some extent on new startup schools. Existing private schools would almost surely be unable to meet the vast new demand for spaces, and newly created voucher schools—perhaps supplied largely by the for-profit sector—might not be as effective as some existing (Catholic, for example) schools.
- The uniformly high expectations that seem to characterize many Catholic schools might be challenged by a large influx of students whose socioeconomic status is low. Egalitarian ideals might be undermined by the challenge of educating a newly heterogeneous student population. Voucher schools might be tempted to lower their expectations or to adopt the kinds of tracking systems often used in conventional public schools.

In sum, then, evidence on the academic achievement of students in existing, small-scale voucher programs can be characterized as promising for low-income African-Americans; showing neither harms nor benefits for other participating students (based on a very small amount of data); and limited in its scope and breadth of applicability. And even if the results of the voucher experiments are read in their most favorable light, they provide only weak guidance about the academic effects of a large-scale voucher program.⁶³ Additional evidence from the long-established voucher program in Milwaukee and the newer, federally funded voucher program in Washington DC—expected to become available over the next few years—will go a long way toward addressing these uncertainties.

⁶³See Nechyba (2000) and Epple and Romano (2002) for a discussion of how the design of a voucher program can influence the effect the program has on student sorting.

Evidence from Charter Schools

Charter laws have been established in 40 states and the District of Columbia, new schools have been opening at a rapid pace, and total charter enrollments now exceed a million students. The empirical research has followed a few years behind the growth of the schools themselves, and the number of rigorous studies of achievement in charter schools has expanded substantially since the first edition of this book was published in 2001.⁶⁴

Only two studies thus far have made use of randomized experimental designs. Hoxby and Rockoff used information on winners and losers of randomized entrance lotteries for nine oversubscribed Chicago charter elementary schools to perform an experimental analysis of the performance of those schools.⁶⁵ Because they were able to follow not only the students who won the lottery, but also those who lost the lottery and remained in public schools, they had a comparison group that controlled for unobservable differences between students. They found that students who won the lottery and attended the charter schools performed better, on average, in both reading and math than the students who lost the lottery and stayed in public schools. Although the study's internal validity is very strong, its external validity is unknown: It provides very good evidence on the achievement effects of nine charter schools in Chicago, but there is no way to know whether these charter schools are typical. Indeed, it is entirely possible that charter schools that are oversubscribed are more effective than those with waiting lists. This likelihood should cause readers to take care in interpreting the generalizability of any charter-school studies that rely exclusively on schools with waiting lists. The U.S. Department of Education has commissioned a larger, randomized experimental study of charter schools, of which we await results.

The second randomized experimental study of charter schools released its initial results in July 2007 in a report by Caroline Hoxby and Sonali Murarka of the National Bureau of Economic Research.

⁶⁴For a comprehensive list of recent studies, see the website of Paul Hill's Center for Reinventing Public Education (www.crpe.org).

⁶⁵Hoxby and Rockoff, 2005.

Hoxby and Murarka gathered achievement data from citywide sources in New York, connecting them with information on admissions lotteries from charter schools around the city. They found that most of the charter schools operating in New York City in 2005–06 were oversubscribed and therefore operated lotteries to determine admissions. They used the lotteries to construct a treatment group of students who had won admission and a control group of students who had not. For students who enrolled in the charter schools after winning the lotteries, they found positive and statistically significant effects in both reading (measuring 0.04 standard deviations per year in charter schools) and math (measuring 0.09 standard deviations). Although these results are specific to New York City, they are nonetheless more notable than the previous results in Chicago, because they include not only a larger number of schools, but also a large proportion of all the charter schools in the city. The results represent the strongest evidence to date of charter schools' achievement impacts, although whether they would apply outside of New York City is unknown.

Hoxby and Murarka also made a preliminary attempt to examine some of the features of charter school operations that are associated with positive achievement results. They point out that this analysis is exploratory and cannot produce the same strong causal inferences as the overall analysis, because it relies on statistical correlations rather than random assignment. The school characteristic that is most strongly associated with positive achievement results in their study is a longer school year for students. Hoxby and Murarka expect that additional data—on more students and more charter schools—will produce substantially more information in future reports from the study, potentially providing powerful evidence on the long-term effects of charters on outcomes that include graduation from high school.

Some of the strongest studies of charter-school achievement are statewide assessments that have been conducted in Michigan, Arizona, Texas, North Carolina, Idaho, Florida, California, and Wisconsin—states that have some of the largest numbers of charter schools. Before we address these studies, however, we consider some recent studies that have attempted to gauge the achievement effects of charter schools across the country.

National studies of charter-school achievement. Since the publication of the first edition of this book, several studies have attempted to measure charter-school achievement effects across multiple states or the country as a whole.⁶⁶ Unfortunately, none of these studies meet the methodological standards that we set earlier in this chapter, and none support clear conclusions about charter-school effects. We nevertheless discuss them here because they have received considerable public attention.

In 2004, the American Federation of Teachers (AFT) examined data from the National Assessment of Educational Progress (NAEP), which included nationwide samples of charter schools and conventional public schools. The AFT noted that average NAEP test results for the national sample of students in charter schools were usually lower than average NAEP test results for students in the same demographic groups in conventional public schools.⁶⁷ More recently, two scholars at the University of Illinois analyzed student-level data from the NAEP that allowed them to account for a variety of student characteristics in examining math achievement in grades 4 and 8. They found no difference between performance of charter and conventional public-schools in eighth-grade math, but conventional public schools were outperforming charter schools in fourth-grade math.⁶⁸

Shortly after the release of the 2004 AFT report, Harvard's Hoxby released a study comparing achievement results on state tests in charter schools across the country with the results in conventional public schools located in close proximity to the charter schools. Hoxby found that students in charter schools, on average, had slightly higher state test scores than did students in nearby conventional public schools.⁶⁹

What should the public make of these dueling studies? Our view is that none of these analyses shed light on the achievement effects of charter schools. Although the data, methods, and results of the two

⁶⁶Carnoy et al. (2005) includes a discussion of some of the national studies and the public debate about them.

⁶⁷Nelson, Rosenberg, and Van Meter, 2004; American Federation of Teachers, 2004.

⁶⁸Lubienski and Lubienski, 2006.

⁶⁹Hoxby, 2004.

approaches differ, they are undermined by the same problem, selection bias. Both studies use data from a single point in time, failing to account for the possibility that students in charter schools might have unusual patterns of prior achievement. There is no way to tell from these data whether the differences in average scores—whether favorable or unfavorable to charter schools—are attributable to the schools or to the students they enroll.⁷⁰

New charters in Michigan. Eric Bettinger, of Case Western University, used a statewide data set of achievement test scores in Michigan to analyze the effectiveness of charter schools.⁷¹ Michigan has one of the most permissive charter laws in the United States, and by 1999—five years after the state’s first charter school opened—already had 170 charter schools operating. This rapid growth made it possible to find a substantial cohort of charter schools opening at the same time. Bettinger examined scores on Michigan’s statewide standardized test for charter schools that opened in 1996–97 (there were more than 30), comparing them with scores at conventional public schools nearby. He examined school performance longitudinally, controlling for demographic characteristics of school populations and comparing charter schools with a treatment group of public schools within a five-mile radius of each charter school. Unfortunately, the data available to Bettinger consisted of school-level averages, which do not permit as precise an analysis as student-level data.

Controlling for demographics and baseline test scores, Bettinger compared changes in charter-school achievement to changes in the achievement of public schools in the same communities for two years following the opening of a cohort of new, startup charter schools in 1996. Looking at fourth graders, he found no statistically significant differences between achievement in charter schools and that in comparable public schools. Even though most charter

⁷⁰ See Zimmer and Gill (2004) for further commentary on this point.

⁷¹ Bettinger, 2005.

schools had improved their scores in their first two years of operation, the conventional public schools had improved as much.⁷²

Charters in Texas. Two studies of charter schools in Texas, one by Booker et al., of Texas A&M University, and the other by Hanushek, Kain, and Rivkin, used data on changes in the test scores of individual students, permitting a more finely tuned analysis than was possible in Bettinger's study.⁷³ Both studies examined scores on the Texas Assessment of Academic Skills (TAAS), beginning in 1997, when the state's first charter schools opened. Hanushek, Kain, and Rivkin used results through 2001, while Booker et al. used results through 2002. Both studies used a longitudinal, quasi-experimental, within-student analysis that controlled not only for student characteristics (including prior test scores), but also for school-level demographic characteristics.⁷⁴ Both studies examined the test-score gains of individual students in grades 4 through 8.

Booker et al. found that student test scores drop substantially in students' first year in a charter school and that this drop is largest for students entering a charter school in its first year of operation. Students who attended charter schools for at least three years recovered from the first-year drop in reading by the end of their second year and the drop in math by the end of their third year, so that their gains were ultimately comparable to those of students in conventional public schools. And students in charter schools that had been operating for longer periods of time showed larger gains than did students in newer charter schools.

Hanushek, Kain, and Rivkin performed a similar analysis, except that they did not include a separate control for moving to or from a charter school. Their results therefore do not separate out the effect of a student's first year in a charter school from the overall charter-school effect on student test scores. They found that Texas charter students' achievement growth in math was not significantly different from that

⁷²Another study of Michigan's charter schools using data updated to 1999–2000 and a larger set of charter schools reached similar conclusions, but its methodology does not permit clear quantification of aggregate results (Horn and Miron, 2000).

⁷³Booker et al., 2007; Hanushek, Kain, and Rivkin, 2002.

⁷⁴The adjustment for the school's demographic characteristics may help to separate a peer effect from a school-productivity effect.

of students in conventional public schools and that charter students had slightly less reading growth than did students in conventional public schools. They also found that while first-year charter schools had a negative effect on score growth in both reading and math, charter schools in their fourth year of operation and beyond had a positive effect on math-score growth.

In short, the results of the two studies are broadly consistent, but Booker et al. showed that student achievement trajectories in Texas charter schools depend not only on the age of the charter school but also on the length of time the student spends in the school. Both studies rely on within-student comparisons of achievement that include only students who have attended both charter schools and conventional public schools; further analysis might help to clarify whether students who attend only charter schools experience similar effects.

Charters in Arizona. A study of achievement in Arizona charter schools used student-level test scores longitudinally linked over three years in the late 1990s.⁷⁵ Lewis Solmon (an economist at the Milken Family Foundation, formerly dean of the UCLA School of Education) and colleagues used methods similar to those of Booker et al. and Hanushek, Kain, and Rivkin. Solmon's team found that, compared with students remaining in conventional public schools, students spending two to three years in charter schools could expect gains in their Stanford Achievement Test reading scores. In math, students spending two to three years in charter schools did at least as well as, and perhaps better than, students in conventional public schools (depending on model specifications). Three-year charter students likewise had an achievement advantage in reading. As in Texas, a student's first year in a charter school typically had a negative effect on test scores—apparently the cost of changing schools. Nevertheless, over time, “the positive effect of charter schools outweighed the negative effect of moving.”⁷⁶

A separate analysis by Solmon and Pete Goldschmidt, of UCLA, used the same Arizona data with slightly different (but still longitudinal)

⁷⁵Solmon, Paark, and Garcia, 2001.

⁷⁶Solmon, Paark, and Garcia, 2001, p. 20.

methods to compare the reading-test-score gains of charter- and public-school students at different grade levels, controlling for observable student characteristics. They found that in elementary grades, Arizona charter-school students had significantly greater test-score gains than public-school students, but that by the middle grades, the reading gains were about the same for charter- and public-school students, and in the high school grades, the public-school students had larger reading gains.⁷⁷

Charters in Florida. Tim Sass, of the University of Florida, used a longitudinally matched data set to examine the performance of Florida charter schools.⁷⁸ Charter schools have existed in Florida since the 1996–97 school year, and by 2003 the state had more than 250 charter schools. Sass’s data included math and reading scores on the Florida Comprehensive Achievement Test (FCAT) for students in grades 3 through 10, for 1998 through 2003. His analysis, like those in Texas, examined differences in achievement for individual students who attended charter schools and conventional public schools (it did not examine students tested only in charter schools).

Sass found that student achievement was lower in Florida’s first-year charter schools than in conventional public schools, but by their fifth year of operation, Florida charter schools outpaced conventional public schools by an amount equal to 10 percent of the average annual achievement gain. Sass also found that student achievement was lower in charter schools that targeted special-education and at-risk students, compared with nontargeted charter schools and public schools, even after controlling for student characteristics. Sass’s findings are consistent with the results from the Texas study showing that student achievement improves as charter schools mature and gain more experience.

Charters in North Carolina. Robert Bifulco, of the University of Connecticut, and Helen Ladd, of Duke University, used longitudinally linked student test-score data from 1996 through 2002 to examine the performance of charter schools in grades 4 through 8 in North Carolina. The first charter schools in North Carolina opened

⁷⁷Solmon and Goldschmidt, 2005.

⁷⁸Sass, 2005.

in the fall of 1997, and by 2002, 92 charter schools were operating in the state. Bifulco and Ladd used the state's end-of-grade reading and math tests to measure student test-score growth. As in the Texas and Florida studies, Bifulco and Ladd used a within-student, quasi-experimental design, drawing inferences from differences in achievement shown by individual students who moved between charter schools and conventional public schools. However, Bifulco and Ladd also conducted analyses that included charter students who were never tested in conventional public schools, thereby providing more confidence in the robustness of their results.

Bifulco and Ladd found that students in charter schools had lower test-score growth in both reading and math than students in public schools (0.10 standard deviation lower in reading, 0.16 lower in math).⁷⁹ Moreover, these negative effects remained significant even for charter schools that had been in operation five years or more. This finding contrasts with the Texas studies, where a similar methodology found that more-mature charter schools had relatively strong performance.

Charters in California. A RAND Corporation study of charter schools in California used longitudinally matched data from six school districts, including Los Angeles and San Diego (two of the largest school districts in the nation), to examine student achievement in charter schools.⁸⁰ The data contained student math and reading test scores in grades 2 through 11, for 1998 through 2002, permitting the examination of individual student gains and a within-student, quasi-experimental analysis.

The RAND analysis found that students in California charter schools were doing about as well as those in conventional public schools in both reading and math, in elementary and secondary grades.⁸¹ In a separate analysis using cross-sectional, statewide achievement data, RAND found that students in non-classroom-based charter schools—i.e., charter schools that rely heavily on technology to pro-

⁷⁹ Bifulco and Ladd also found that the negative charter achievement effect is larger for African-American students in math.

⁸⁰ Zimmer et al., 2003; Buddin and Zimmer, 2005.

⁸¹ Some of the estimates were slightly positive and others were slightly negative, but the size of the average difference was small in all cases.

vide education away from a conventional school site, often in students' homes—had significantly lower achievement than those in public schools, controlling for students' demographic characteristics. Unfortunately, the six districts with longitudinal data did not have enough students in non-classroom-based charter schools to examine this difference in a way that accounts for prior achievement levels. It is therefore not clear whether the non-classroom-based charter schools are less effective or whether, instead, the students they attract are unusually low-achieving to begin with. Most states do not have sufficient non-classroom-based charter schools to test this difference, but the finding is an interesting indicator that student performance may vary depending on the type of charter-school program. Further investigation into the relative performance of different kinds of charter schools—classroom-based and non-classroom-based, startup schools and preexisting schools converted to charter status—is warranted.⁸²

In a report published by the Public Policy Institute of California, Julian Betts and colleagues used similar longitudinal, within-student methods to examine the achievement effects of charter schools in San Diego from 1998 through 2004.⁸³ Effect estimates were mixed, depending on grade level, subject, and type of charter school (startup or conversion), but overall, Betts and colleagues reached conclusions similar to those of the RAND study: Charter schools were doing about as well as conventional public schools, on average, despite having lower levels of resources. Like several of the other studies of charter schools, this study found that startup charters performed poorly in their first few years of operation, with results subsequently improving.

Charters in Idaho. Dale Ballou and colleagues at Vanderbilt University published a paper in 2006 that assesses achievement effects of Idaho's charter schools, in the process raising new methodological questions about the longitudinal methods that are now commonly

⁸² Zimmer and Buddin (2006) used these data to examine the impact of charters by student race. They found no evidence that charter schools are improving the performance of minority students in California.

⁸³ Betts et al., 2006.

being used to examine achievement impacts.⁸⁴ Using longitudinal methods that examine changes in the achievement of individual students who move between conventional public schools and charter schools, they found that transferring students showed academic benefits from switching to charter schools. They also found, however, that average achievement gains among all charter students (not only those with observed test scores in conventional public schools) were smaller than average achievement gains among all public-school students. This result creates doubt about the extent to which results for students who transfer between charter schools and conventional public schools are generalizable to all charter students. Ballou et al. acknowledge that results seen in Texas, North Carolina, and Florida do not appear to be affected by this problem, but they note that the Idaho results demonstrate the importance of checking the sensitivity of longitudinal estimates to assumptions about the representativeness of transferring students. Their sensitivity tests drive them to a cautious conclusion that Idaho's charter schools have smaller achievement benefits than its conventional public schools have.

Charters in Wisconsin. John Witte and colleagues at the University of Wisconsin-Madison used longitudinal, student-level data from 1998–99 through 2001–02 in grades 3 through 10 to examine the performance of charter schools in Wisconsin.⁸⁵ After controlling for student fixed effects, they found a positive charter-school effect on math scores, with a magnitude of about two points in the national percentile ranking. They found no effect on reading scores. The positive charter effect in math was smaller for African-American students than for white or Hispanic students. Witte et al. also employed alternative methods that likewise found positive charter effects.

Charters in an anonymous, large urban school district. Scott Imberman, of the University of Maryland, likewise used longitudinal, student-level achievement data and within-student comparisons to examine the effect of charter schools on student achievement in an anonymous, large urban school district.⁸⁶ He found that charter

⁸⁴ Ballou, Teasley, and Zeidner, 2006.

⁸⁵ Witte et al., 2007.

⁸⁶ Imberman, 2007.

schools had mixed effects on achievement, with positive results in math and negative results in reading. Imberman's study is distinguished from the others reported here in that it is the first to seriously examine not only test scores, but also other outcomes: attendance, retention in grade, and disciplinary actions. Imberman found no significant effect of charter schools on attendance or retention but found that charter schools appear to reduce students' behavioral problems (as measured by disciplinary actions) significantly. The favorable effect on discipline is larger in startup charters than in conversion charters. Imberman conducted an exploratory analysis that suggests that the favorable impact on discipline may be largely due to charter schools' smaller enrollments and smaller class sizes. His estimates are robust to several of the methodological concerns raised about longitudinal methods by Ballou et al. and Hoxby and Murarka. The favorable discipline effect is quite promising and suggests the need for additional studies that examine outcomes other than annual test results.⁸⁷

Other studies of achievement in charter schools. The studies described above do not exhaust the literature on student achievement in charter schools. Other studies, however, have lacked the data or the analytic methods needed to reach clear conclusions about the effects of charter schools. Some studies, for example, have been forced to rely on longitudinal data sets of schoolwide (rather than student-level) achievement results.⁸⁸ Unfortunately, for startup charter schools, this requires using a baseline achievement level that is typically measured at the end of the school's first year of operation (because state achievement tests are typically administered in the spring).⁸⁹ If, however, charter schools do not perform well in their first year of operation—as indicated by several of the studies described above—then measuring a growth trajectory from the end of the first year will overestimate charters' net achievement gains. In the absence of a baseline achievement measure that can plausibly be

⁸⁷ One methodological concern about the study is the possibility that charter schools simply do not report disciplinary actions as reliably as do conventional public schools.

⁸⁸ See, e.g., Miron, 2005; Miron, Nelson, and Risley, 2002; Loveless, 2003; Greene, Foster, and Winters, 2003.

⁸⁹ The Bettinger (2005) study described above had the unusual advantage of a baseline measure administered in the fall of the charter schools' first year of operation.

viewed as “pre-treatment,” post-startup trajectories cannot be validly interpreted as full effects of charter schools.

Indeed, the same problem afflicts analyses of longitudinal student-level data that examine gains of charter-school students who have not also attended conventional public schools. Two studies—one in Florida and one in Delaware—have examined student-growth trajectories over time without regard to whether students changed schools during the period when growth was measured. The Florida study found that charter-school students had larger average gains in reading and math than public-school students.⁹⁰ The Delaware study found little difference in growth rates from grades 3 to 5, but from grades 5 to 8 and grades 8 to 10, the charter-school students had gains that were at least equivalent to, and in several comparisons significantly larger than, the gains of a matched group of students in conventional public schools.⁹¹ Unfortunately, however, both of these studies may overestimate the effects of charter schools by leaving out the effect of the first year in the charter school. Examining gains over time without including the entire period of attendance in a charter school is potentially misleading.⁹²

Summary and implications. In sum, even if we restrict our attention to the best longitudinal studies, evidence on the academic effectiveness of charter schools is mixed. A New York City study found positive impacts of charter schools in math and reading; a Michigan study found charters to be holding their own in grade 4 compared with conventional public schools; two Texas studies found that more-mature charter schools are performing well, while new charter schools are performing worse than conventional public schools; two Arizona studies found mixed results, some favoring charters and some favoring conventional public schools; a North Carolina study found that charter schools are performing worse in both reading and

⁹⁰Florida Department of Education, 2004.

⁹¹Miron, 2007.

⁹²We also exclude a study by Eberts and Hollenbeck (2002) that used student-level data from Michigan but, constrained by the testing system in place in the state at the time, lacked the ability to analyze achievement growth within subjects. Moreover, the study incorporated statistical controls for factors such as school size and class size that should not be controlled, because they are appropriately viewed as part of the charter-school “treatment.”

math than conventional public schools are; a Florida study found that new charter schools are, on average, performing poorly, but charter schools with five or more years of experience are outperforming conventional public schools; a Wisconsin study found positive effects of charter schools in math; an Idaho study found ambiguous but possibly negative results for charter schools; two California studies found that charter schools are approximately holding their own in comparison with conventional public schools; and a study of an anonymous, large urban district found mixed effects on achievement but positive effects on student behavior. In the studies finding charter-school effects that differed from those of conventional public schools, none of the differences, positive or negative, were large.⁹³

What should readers make of the differences in results? First, it is possible that the variation in results is at least partly attributable to methodological differences. Although all of the included studies used longitudinal designs, their particular methodological approaches were not identical. For example, not all of the studies examined the effect of charter schools at different points in the schools' history and over extended periods of enrollment by individual students. Given that most of the average effects observed in the studies were relatively small, results could well depend on secondary methodological issues such as these.

Moreover, different studies—conducted in different states and at different times—may be differentially affected by their reliance on students who have been tested in both charter schools and conventional public schools. As previously noted, the within-student method necessarily excludes students who have been enrolled exclusively in charter schools, because they have no comparison point. Whether the effects on “stayers” are similar to the effects on “movers” is unknown, but the proportion of charter students who are movers is likely to vary across states and years, potentially leading to

⁹³Results were reported in different measurement units in the various studies, so they cannot be easily compared with each other. But none of the studies showed charter-school effects that appeared comparable to those seen in Tennessee's class-size-reduction experiment, for example.

variations in results that are unrelated to the ultimate effectiveness of the schools.⁹⁴

Different results may also stem from the examinations being administered at different stages in the schools' development. Taken together, these studies suggest that the newness of charter schools is important, as continuing charters produce better academic outcomes than those in their first year of operation.⁹⁵ Since most states have relatively new charter industries, student achievement in charter schools may improve as the schools mature. Also, students seem to do worse in their first year in a charter school and to improve in subsequent years. This finding is consistent with research indicating that student mobility across schools has a negative effect on academic achievement⁹⁶—although the Texas results from Booker et al. suggest that transferring to a charter school produces an unusually large dip (that is later overcome).

The first year of operating a school seems likely to pose universal challenges that would have short-term negative effects for charter schools everywhere. It may explain the unimpressive results of the Michigan study, which limited its examination to charter schools in their first two years of operation. Similarly, since none of the charter schools included in the North Carolina study were more than five years old, it is possible that their performance will improve as they become more experienced. If charter-school maturity predicts effectiveness, then policymakers in many states may need to wait a few years to get an accurate, long-term picture of how charter schools will affect student achievement.

⁹⁴More generally, as Ballou et al. (2006) pointed out, unweighted estimates of state-wide charter-school effects give disproportionate weight to recently opened charter schools and to charter schools that experience large amounts of enrollment churn—which may well be the less-effective charter schools. It should be possible to address this point by reweighting results to be proportionate to school enrollments, but we are not aware of any studies that have yet done so.

⁹⁵Unfortunately, the randomized experimental study of New York City charters is not likely to shed much light on the first-year question, because most New York City charters were not oversubscribed in their first year of operation and therefore did not conduct admissions lotteries (Hoxby and Murarka, 2007). The findings of that study should therefore be viewed as indicating the effects of charters *after* their first year of operation.

⁹⁶See Pribesh and Downey, 1999; Swanson and Schneider, 1999; Hanushek, Kain, and Rivkin, 2004.

Finally, the differences in results across states may be related to differences in charter laws and the larger policy environments in which charter schools operate. As Chapter Two demonstrates, charter laws vary from state to state on a wide variety of policy-design dimensions. These differences may be relevant in a variety of ways. For example, to the extent that experience is relevant to effectiveness, states that permit public and private schools to convert to charter status may see better results than states that rely largely on new startups to build a charter sector. Future studies should expand the knowledge base by comparing the effectiveness of charter schools converted from public schools, charter schools converted from private schools, and charter schools that are new startups. (RAND's study of California charters took a step in this direction, but examining these differences in charter types was possible only with cross-sectional data, making it difficult to determine whether differences among charter-school types resulted from the effectiveness of the schools or from the kinds of students enrolled.) Other policy-design differences that could affect the effectiveness of charter schools include the amount of funding provided and the types of organizations that serve as authorizing and regulatory agencies for charter schools. RAND is currently undertaking a multistate study that will address some of these issues. We discuss possible implications of various design dimensions in greater detail in Chapter Eight.

Differences in charter laws and policy environments will affect average achievement results only if they first produce differences in the way charter schools operate. Most of the rigorous studies of charter-school achievement, however, like the experimental voucher studies, have had little or no information on charter-school operations that might help to explain achievement effects. The newly released experimental study of New York City charters is a notable exception, and its finding of a correlation between a longer school year and positive achievement impacts merits examination in other studies and other locations. Future research should not only examine the effects of different charter policies, but should also seek to get inside

the black box of charter-school operations to learn what explains differences in effects for different schools.⁹⁷

The list of unknowns with respect to the effectiveness of charter schools is capped by a question about long-term effects. There is as yet almost no evidence on the long-term effects of charter schools on the academic attainment of their students, including effects on high school graduation and college participation. This question should be at the top of the agenda for future charter-school research. As small schools that are intended to operate with a strong sense of academic mission, charter schools may be likely to affect students' identification with school and academic ambitions more than their scores on state achievement tests. If charter schools succeed in reducing dropout rates, increasing the likelihood of graduation, and increasing postsecondary participation, such achievements could render test-score effects unimportant by comparison (particularly given the small size of the test-score effects measured thus far). Whether charter schools in fact improve academic attainment, however, is for now entirely unknown. The new RAND multistate study of charter schools, under way in 2007, is seeking to address the issue in two jurisdictions where postsecondary data on charter-school graduates is available.

Evidence from School Choice in Other Contexts

A variety of studies have attempted to examine the achievement effects of school choice in contexts outside the voucher and charter programs that are the focus of this book. Public-school choice programs have increased in a variety of guises in the United States, and the international scene provides a wide array of school-choice policies that include both public and private schools. These kinds of evidence are less directly relevant to our inquiry than are the evaluations of existing U.S. voucher and charter programs given the differences in policies or institutional context. On the American scene, previous public-school choice policies (whether interdistrict choice, magnet schools, or alternative schools) did not involve the participa-

⁹⁷RAND's in-progress multistate study of charter schools aims to do this by incorporating operational data from the U.S. Department of Education's Schools and Staffing Survey along with achievement data.

tion of autonomous schools operating outside traditional district governance. Some other countries have school-choice policies that more closely resemble vouchers or charters, but the institutional and historical context is usually quite different, and the “public” and “private” sectors are often not directly comparable to those in the United States. Despite these differences, international and U.S. experiences with school choice may provide two kinds of evidence that are sparse or absent in existing voucher and charter evaluations: evidence about long-term effects and evidence about the effects of choice being implemented on a large scale.⁹⁸

In fact, the literature on school choice in other contexts provides a few suggestive pieces of evidence but no findings sufficiently consistent to provide clear guidance about the effects of vouchers and charters in the long term or on a large scale. Here we describe findings from a number of these contexts:

- Despite extensive experience with public magnet schools in many communities across America over the last three decades, researchers have been unable to reach a consensus on clear findings about the academic effectiveness of these schools. The problem of selection bias is at least as much of a methodological morass in the case of magnet schools as it is in nonexperimental evaluations of voucher and charter schools, because magnets often impose academic standards in their admissions processes.⁹⁹
- The public-school choice program enacted in Alum Rock, California, in the early 1970s—commonly, if questionably, described as a voucher program—produced no conclusive results on academic achievement (the inconclusive findings resulted in part

⁹⁸In addition, international evidence may be particularly useful for examining the effects of privately operated schools on civic socialization, where the evidence in the American context is particularly thin (see Wolf and Macedo, 2004). Civic socialization is addressed in Chapter Seven.

⁹⁹For summaries, see Goldhaber, 1999; Orfield, 1990. A 1996 article using a national database found some positive effects for magnet schools, but the instrumental variables used in the analysis were probably flawed and may have biased results upward (Gamoran, 1996). On the problems with the instrumental variables used, see McEwan, 2000a. For a study of magnet schools using a student lottery design, see Ballou, Goldring, and Liu, 2006.

from data limitations and changes in program implementation).¹⁰⁰

- A number of school districts that have adopted choice plans internally (e.g., Cambridge, Massachusetts; Montclair, New Jersey; New York City's District 4 in East Harlem) have seen test scores improve.¹⁰¹ Unfortunately, it is very difficult to demonstrate whether these single-district improvements are caused by the choice plans or by other factors, such as an influx of additional resources, changes in student demographics, or the operation of inspired leadership. We have seen no studies that can definitively demonstrate a causal link to the school-choice policies in these districts.¹⁰²
- Although many nations in Western Europe and elsewhere outside the United States subsidize private schooling through a variety of mechanisms, few of the studies of these programs have adequately dealt with the selection bias problem.¹⁰³

¹⁰⁰See Capell, 1981; Levinson, 1976.

¹⁰¹See Schneider, Teske, and Marschall, 2000; Henig, 1994. Cullen, Jacob, and Levitt (2005) found no achievement effect of public school choice in Chicago, and Hastings, Kane, and Staiger (2006) found no achievement of public school choice in Charlotte, using a lottery design.

¹⁰²Schneider, Teske, and Marschall make a valiant effort to factor out some of the nonchoice factors in analyzing performance in District 4 (Schneider, Teske, and Marschall, 2000). We do not believe, however, that the demographic variables they use are sufficient to control for possible changes in the unobserved characteristics of the students. In particular, the substantial number of students attracted to District 4 from other parts of New York City are likely to come from families who value education highly.

¹⁰³We are indebted to Patrick McEwan for providing an exhaustive analysis of the international literature on school choice (private correspondence, July 3, 2000). Studies include West and Pennell, 1997; Glenn, 1989; Ambler, 1994; Fiske and Ladd, 2000; Angus, 2000; Bashir, 1997; Calderon, 1996; Cox and Jimenez, 1991; Daun, 2000; Edwards, Fitz, and Whitty, 1989; Fuller and Clarke, 1994; Gauri, 1998; Glewwe and Patrinos, 1999; James, 1984; Jimenez, Lockheed, and Wattanawaha, 1988; Jimenez et al., 1991; Jimenez and Sawada, 1999; Kim, Alderman, and Orazem, 1999; King, Orazem, and Wohlgemuth, 1999; Kingdon, 1996; Knight and Sabot, 1990; Lassabille, Tan, and Sumra, 2000; Louis and Van Velzen, 1991; Miron, 1993, 1996; Mizala and Romoaguera, 2000; Psacharopoulos, 1987; Riddell, 1993; Toma, 1996; Vandenbergh, 1998; Walford, 2000; Walford, 2001; Williams and Carpenter, 1991; Wylie, 1998.

- We know of three studies of school choice outside the United States that address academic achievement and seem to make effective adjustments for selection bias:
 - The first of these was in Chile. For the last 20 years, Chile has had a voucher program that is strongly based on Milton Friedman's market-oriented proposal. A study by Patrick McEwan and Martin Carnoy, which controlled for student background characteristics, unobserved differences, and school socioeconomic status, found that test scores were slightly higher in Chile's Catholic schools than in its public schools. In nonreligious private schools (most of which are for-profit institutions that came into existence with the establishment of the voucher program), however, achievement was no better than in public schools and perhaps slightly worse.¹⁰⁴
 - The second study came from Indonesia. Indonesia has no voucher program per se, but many private schools receive government subsidies. The study examined the long-term effects of private schooling, adjusting for background characteristics and unobserved differences, and found that graduates of nonreligious private schools had significantly higher earnings than graduates of public schools.¹⁰⁵
 - The third study, from Colombia, examined a program that provided vouchers to 125,000 children from low-income neighborhoods. Many of the vouchers were awarded by lottery, giving the researchers the opportunity to use an experimental methodology. After three years, lottery winners were less likely to have repeated a grade, and their test scores were 0.2 standard deviation higher than those of lottery losers.¹⁰⁶ A follow-up study found that voucher lottery winners

¹⁰⁴McEwan, 2000b. They also make the point that even if no achievement effect is found for the voucher program, the voucher schools have less funding and similar achievement, so they are arguably more cost-effective.

¹⁰⁵Bedi and Garg, 2000.

¹⁰⁶Angrist, Bettinger, and Kremer, 2006. Because this study compared lottery winners with lottery losers, the effects described are those of a voucher offer, rather than voucher use. The effects of actually using a voucher to attend private school for three years would be larger, because not all lottery winners used their vouchers (like the

were 20 percent more likely to graduate from high school and had significantly higher college-entrance-exam scores than unsuccessful applicants.¹⁰⁷

In sum, the evidence on public-school choice policies in the United States is equivocal, and the best international evidence—limited as it is—is somewhat favorable to choice schools, except in Chile, where the results are mixed. The favorable long-term effects found in Colombia are encouraging, and they reinforce the importance of measuring long-term impacts of voucher and charter schools in the United States. The studies summarized in this section have uncertain relevance for debates over vouchers and charters, because institutional contexts are so varied, especially in the case of international studies. In Chile, for example, Catholic schools outspend public schools to produce their superior outcomes;¹⁰⁸ in the United States, by contrast, Catholic schools typically spend substantially less than public schools do. Similarly, the institutional characteristics of public and private schools in Indonesia and Colombia are likely to be quite different from those in the United States. Meanwhile, American studies of other forms of school choice do not produce consistent results and are likely to be influenced by variations in policy details and local context.

Literature on Public and Private Schools

In addition to the literature on subsidized school choice in other contexts, there is extensive research literature comparing the effectiveness of public and private schools in the United States. The literature comparing test-score results in public and private schools remains hotly contested. After a number of early studies based on national data sets had found an advantage for private schools in general and Catholic schools in particular, more-recent studies, typically employing more-sophisticated statistical tools, found mixed re-

private voucher programs in the United States, the Colombia voucher program covered only part of tuition costs).

¹⁰⁷Angrist, Bettinger, and Kremer, 2006.

¹⁰⁸McEwan, 2000b.

sults.¹⁰⁹ We will not discuss these studies in depth, for two reasons: The findings remain controversial, and the voucher experiments provide more-direct evidence on specific voucher effects.¹¹⁰

In one respect, the research literature on public and private schools provides evidence beyond what is available from the voucher experiments. The academic outcomes addressed by the experimental studies have thus far been limited to test scores, while some of the nonexperimental research literature has also compared the academic attainment—high school graduation and college attendance—in public and private high schools. In contrast to the literature on achievement, the literature on attainment is relatively consistent: Most studies find that Catholic high schools produce higher educational attainment and that the size of the effect is larger for minority students in urban areas. That is, most studies find that urban minority students are more likely to graduate from high school and attend college if they attend Catholic high schools.¹¹¹ The most recent of these studies employed a method for assessing the likely size of selection bias and found that even after accounting for its largest likely effect, Catholic schools had positive effects on both high school graduation and college attendance.¹¹² While they are certainly not definitive, these positive findings about the effects of Catholic schools on educational attainment are promising, and they confirm the urgency of longer-term studies of the attainment effects of voucher and charter schools.

¹⁰⁹Early studies that favored private schools include Coleman, Hoffer, and Kilgore, 1982; Coleman and Hoffer, 1987; Chubb and Moe, 1990. The more-recent studies that reached mixed conclusions include Goldhaber, 1996; Neal, 1997; Altonji, Elder, and Taber, 2000; Sander, 1996; Jepsen, 1999a; Toma, 1996. For a detailed review, see McEwan, 2000a.

¹¹⁰Altonji, Elder, and Taber (2005) tested the validity of different instrumental variables in determining the effect of Catholic schooling and found that none of the candidate instruments were useful in identifying its independent effect.

¹¹¹See the summaries of the literature in McEwan, 2000c, 2000a. Studies include Altonji, Elder, and Taber, 2000, 2005; Neal, 1997; Evans and Schwab, 1995. Two studies found somewhat less-positive outcomes, suggesting that attending private high schools (religious and nonreligious) may increase the likelihood of attending a selective college and persistence in college, but not the likelihood of attending college generally or the likelihood of graduating from high school (Figlio and Stone, 1999; Eide, Goldhaber, and Showalter, 2004).

¹¹²Altonji, Elder, and Taber, 2005.

Final Thoughts on Achievement in Voucher and Charter Schools

What are policymakers to make of this array of evidence related to the academic effectiveness of voucher and charter schools? First, the evidence suggests that small-scale, targeted voucher programs may help low-income urban African-American children; both nonexperimental studies of attainment in Catholic schools and experimental voucher studies of achievement point in this direction. The effects for African-American students are in some instances large enough that they could substantially reduce the racial achievement gap for participating students. The implications for larger-scale voucher programs, however, are far less clear. In the case of charter schools, the evidence on academic achievement is mixed but can be interpreted as promising for the future as the schools mature. Still, results from North Carolina and Idaho and from early years of charter-school operation in other states provide cause for concern. No studies have yet addressed long-term effects on academic attainment in charter schools.

Large-scale programs—whether voucher or charter—generate further uncertainties. The experimental voucher programs have been conducted on a small scale, and charter programs, though usually larger, have yet to enroll even 10 percent of the school-age population in more than a handful of cities. Perhaps the greatest uncertainty associated with scale concerns the supply of school spaces. Under both voucher and charter laws, the entities with the largest incentives to fill the demand for new schools are for-profit companies (where they are permitted to participate). In Chile, where for-profits filled much of the demand after a nationwide voucher program was created, evidence suggests that they have been no more effective than public schools and have been less effective than Catholic schools.¹¹³

The participation of such companies in K–12 schooling is so new in the United States that there is as yet little systematic evidence on their effectiveness. The most ambitious study of student achievement under for-profit managers to date is RAND's 2005 report on

¹¹³McEwan, 2000b.

Edison Schools, the nation's largest education management organization.¹¹⁴ Edison aims to create autonomous, focused schools with high expectations for all students. Consistent with many of the charter-school studies, RAND found evidence of a negative effect on student achievement in the first year of Edison management, followed by improvement. Unfortunately, however, data were insufficient to reach strong conclusions about net long-term effects. Moreover, whether Edison's comprehensive, research-based design is typical of for-profit operators is unknown.

We discuss issues related to the supply of voucher and charter schools in more depth in Chapter Four. More generally, Chapter Eight further examines how policy variations in voucher and charter programs may lead to different outcomes.

EFFECTS ON STUDENTS REMAINING IN ASSIGNED PUBLIC SCHOOLS

Having exhausted the available evidence on the academic effects of voucher and charter schools on students who choose them, we move on to the systemic academic effects of vouchers and charters on nonchoosing students. The question of systemic effects is at least as important as the question of direct effects, and it represents the heart of the political battle over vouchers and charters. Under most proposed choice plans (with the notable exceptions of those that would change how all schools operate, such as the Hill/Pierce/Guthrie universal-choice proposal), the majority of students are likely to remain in conventional public schools. In consequence, the sum total of effects on these students—whether positive or negative—may well outweigh the effects on students who actively choose voucher or charter schools.

Although the political dispute about systemic effects is clear, the empirical information needed to decide the debate is very difficult to find. One problem is that the debate involves at least four different possible mechanisms of influence. Supporters of choice argue that vouchers and charters will be good for the public schools because (1) market competition will induce improvement and (2) innovation will

¹¹⁴Gill et al., 2005.

induce imitation. Opponents of choice argue that vouchers and charters will harm the public schools because (3) they will drain the public schools of their best students, reducing the positive influence of high-achieving peers, and (4) they will permit the most-motivated parents to exit the public system, reducing parental pressure for improving the schools.¹¹⁵ Separating the effects of multiple mechanisms of influence is not easy.

It might be possible to design an evaluation that assesses the net effect of all of the mechanisms. But the methodological challenges of measuring and understanding systemic effects on nonchoosers are great—even more daunting than the challenge of dealing with the selection bias associated with interpreting direct effects on choosers. The experimental voucher studies, for example, have no way of determining whether vouchers are having positive or negative effects on local public schools. The challenges begin with the problem of defining competition and identifying the conventional public schools most affected by competition: Are they the ones that actually lose students to voucher or charter schools, the ones merely at risk of losing students, or the ones located in geographic proximity to voucher or charter schools?¹¹⁶ Despite these challenges, a few creative efforts have attempted to assess the systemic effects of competition on conventional public schools.

Systemic Effects of Vouchers

Studies of the effectiveness of voucher schools for voucher students are proliferating rapidly, but evidence about the systemic effects of vouchers is scant. These effects have not been assessed by the experimental studies in New York, Washington DC, Dayton, or Charlotte. To be sure, the methodological challenges are even greater

¹¹⁵Note that the extent of peer effects on student achievement is itself a topic that has generated substantial research literature that has not yet produced a definitive consensus (see, e.g., Hoxby and Weingarth, 2005; Moffit, 2001; Hoxby, 2000a; Argys, Rees, and Brewer, 1996; Jencks and Mayer, 1990; Gaviria and Raphael, 1997). This literature is summarized in McEwan (2000c).

¹¹⁶Levacic (2004) discusses the difference between structural and behavioral measures of competition and points to evidence that structural measures (such as geographic proximity) do not necessarily translate into the perception of a competitive threat.

here than with respect to charter schools. The privately funded experimental programs are quite small and may not have any measurable effects on public schools.¹¹⁷ The publicly funded programs in Cleveland and (especially) Milwaukee are larger, but the fact that they focus on single districts makes it difficult to assess whether any changes that occur are attributable to the programs. The only systematic study of the effects on public schools of the publicly funded voucher programs in Milwaukee or Cleveland is Caroline Hoxby's study of the Milwaukee program.

Systemic effects in Milwaukee. Hoxby compared public schools in Milwaukee that had a significant percentage of students eligible for the voucher program (based on family income) to schools that did not have very many eligible students, as well as schools outside of Milwaukee.¹¹⁸ She found that the public schools that were the most impacted by the voucher program had higher achievement growth in both reading and math, relative to their achievement growth prior to the voucher program, and that this increase was larger for the schools with a high proportion of students eligible for vouchers, smaller for Milwaukee schools with few eligible students, and lowest for a matched set of non-Milwaukee schools. One potential shortcoming of this analysis is that with school-level data, the systemic effects of vouchers could be confounded with other factors changing students' sorting among schools.

Systemic effects in Florida. The prospects for assessing systemic effects of vouchers may be better in Florida, because Florida's Opportunity Scholarship Program is specifically designed to provide an incentive to low-performing public schools to improve their students' academic achievement. The voucher policy is tied to the state's high-stakes testing program (known as the A+ Accountability

¹¹⁷The privately funded voucher program in Edgewood, Texas, is unusual because it makes vouchers available to nearly all students in the district. It is therefore far more likely than the other privately funded voucher programs to produce a systemic effect on the public schools. An analysis by Jay Greene and Greg Forster, of the Manhattan Institute, found that, controlling for aggregate demographic characteristics, Edgewood's public schools showed aggregate achievement gains from 1998 to 2001 that outpaced the gains of most other districts in Texas (Greene and Forster, 2002). The method employed—and the fact that only one district could be examined—does not permit strong inferences, but the results are encouraging.

¹¹⁸Hoxby, 2002.

system), which rates all public schools in the state on an A–F scale. The fact that the incentive focuses on a subset of schools creates a kind of quasi-experiment: Schools that have received an F in the past are given the voucher “treatment” if they receive a second F, while all other schools are not subject to this voucher “threat” (at least in the current year).

Whether the Florida program has induced improvements in targeted public schools—and whether those improvements can be attributed specifically to the voucher threat—has been the subject of considerable debate among researchers.¹¹⁹ Most of the studies agree that schools given F ratings showed subsequent improvements in student achievement on the state test—although one important study, by David Figlio and Cecilia Rouse, found evidence casting doubt about whether those improvements are robust enough to generalize to tests other than the state assessment. Moreover, the studies have reached differing conclusions about whether the improvement is attributable to the voucher threat. Vouchers represent only one (albeit very prominent) aspect of that accountability system; another important factor is the grade itself, since a school that receives an F undoubtedly experiences considerable social and political pressure to improve, independent of the voucher threat. Because the grading system and the voucher threat were introduced in Florida as a package, there is no way to separate their impacts.¹²⁰ The safest conclusion is that Florida’s F schools improved their students’ state-test scores as a result of the state’s high-stakes accountability system, but vouchers may or may not have contributed to that improvement, and the robustness of the improvements is in question.

The specific response of Florida’s F schools has more to do with the high-stakes accountability system than with vouchers per se. Nevertheless, the Florida story shows that public schools are capable of responding to external pressure. In addition, it shows that the spe-

¹¹⁹Greene, 2001; Camilli and Bulkeley, 2001; Kupermintz, 2001; Chakrabarti, 2005; West and Peterson, 2005; Figlio and Rouse, 2004.

¹²⁰Martin Carnoy, of Stanford University, found evidence that other high-stakes grading systems introduced by states—without the threat of vouchers—have induced similar improvements in the test scores of low-performing public schools (Carnoy, 2001).

cific nature of the response will follow directly from institutional incentives, perhaps with unintended consequences.

Even if the voucher threat contributed to the behavioral response of Florida's F schools—a possibility that must be considered speculative—it is important to recognize that the specific response may be contingent on the specific policy. Different voucher/charter policies might produce quite different competitive responses from the public schools. In Florida, F schools have a very clear incentive to raise test scores so that vouchers do not become available to their students.¹²¹ In Milwaukee, by contrast, vouchers are available regardless of public-school performance, and the public schools must persuade parents of eligible students to stay. The strategies necessary to keep parents happy may be very different—in desirable or undesirable ways—from the strategies needed to raise test scores above a minimum level.

Systemic effects in Chile. Patrick McEwan and Martin Carnoy used a national longitudinal data set on student achievement to examine how the presence of competing voucher schools affects achievement

¹²¹One concern about the Florida results relates to the specific methods by which F schools responded to the system and improved their students' test scores. A newspaper story in the *St. Petersburg Times* discussed the dramatic improvement in writing scores months before the Greene study was released and looked into the changes in curriculum and instruction that produced the dramatic improvement (Hegarty, 2000). The reporter found that many schools had shifted their curricula to devote large amounts of time to practice in writing essays in exactly the format required by the Florida Comprehensive Assessment Test (FCAT) writing exam. As the article declares, "Out of fear and necessity, Florida educators have figured out how the state's writing test works and are gearing instruction toward it—with constant writing and, in many cases, a shamelessly formulaic approach." Whether this approach yields a real improvement in writing skills or merely an improvement in test-taking skills is open to question. Similarly, a *New York Times* article found that in the two Florida schools whose students had become eligible for vouchers, the curriculum had been narrowed dramatically to focus almost entirely on the fields included on the FCAT: math, reading, and writing. Those schools, like the other schools that received F grades in 1999, improved their performance on the FCAT substantially in 2000—enough to avoid another F grade. Despite this improvement, however, the principal of one of the schools said, "We're leaving out important parts of the education process. They're going to learn what's on a test. But are they going to learn to be able to cooperate with each other in the business world? Are they going to be creative thinkers?" (principal Judith Ladner, as quoted in Wilgoren, 2000a). Ironically, the *Times* found that the private (mostly Catholic) schools chosen by the students who used the vouchers apparently do not have narrow, test-focused curricula. For a more favorable view of the behavioral responses of Florida public schools threatened by vouchers, see Innerst, 2000.

in public schools in Chile.¹²² Unlike the Florida studies, this study examined the effect of actual competition rather than the effect of threatened competition. Methodologically, this is difficult, because vouchers in Chile are available to anyone, rather than being targeted to induce a response in a specifically defined group of low-performing public schools. Causation can run in both directions: The presence of voucher schools may cause nearby public schools to improve through competition, but the presence of low-performing public schools may induce voucher schools to enter the market. Disentangling these effects with a longitudinal research design, McEwan and Carnoy found that competition produced positive effects in the Santiago metropolitan area (of a magnitude of about 0.2 standard deviation in both math and Spanish achievement) but may have produced small negative effects (of about 0.05 standard deviation in math and Spanish) in the rest of the country (where three-fourths of the population resides). It is not clear why effects in Santiago differed from those elsewhere, but it is plausible that competition would work more effectively in an area of high population density.

In a study of the evidence from Chile and elsewhere, Patrick McEwan found that large-scale voucher programs may encourage sorting that would lower the achievement of public-school students, with no compelling evidence that this would be offset by competitive gains in voucher schools.¹²³

Privatization in Sweden. A recent volume by Anders Bjorklund and colleagues examined the effects of the introduction of market-based mechanisms for delivering education in Sweden.¹²⁴ They found small positive effects on students' math and reading skills but not across-the-board effects—students whose parents had limited education and foreign-born students did not experience benefits.

Systemic Effects of Charter Schools

Several of the studies examining student performance in charter schools also looked at the systemic effects of charter schools on stu-

¹²²McEwan and Carnoy, 1999.

¹²³McEwan, 2004.

¹²⁴Bjorklund et al., 2005.

dent performance in public schools.¹²⁵ Eric Bettinger's study of academic achievement in Michigan charter schools examined the effects of charter schools on nearby public schools. He compared the performance of public schools located near charter schools with that of public schools not located near charter schools. He found, first of all, that charter schools in Michigan were not "skimming the cream"—i.e., drawing the best students from the public schools; in fact, charter-school students tended to be lower-performing than their public-school counterparts. He also found no evidence that nearby public schools benefited from the opening of charter schools nearby—public-school test scores showed "little or no effect" from the presence of neighboring charter schools.¹²⁶

In a study of the systemic effects of charter schools in Michigan and Arizona, Caroline Hoxby looked at the trends in achievement at public schools before and after they faced significant competition from charter schools, which she defined as having at least 6 percent of the students in the district attending charter schools.¹²⁷ She found that public elementary schools in Michigan and Arizona had higher average math and reading gains when they faced significant charter competition, compared with their average achievement gains before charter competition. This approach of comparing schools to their own prior-performance trends is useful because it controls for unobservable school characteristics, but it can cause problems if the characteristics of the students in the districts change over time. Without longitudinal data at the student level, it is difficult to control for these possible sorting effects.

Several recent studies that have assessed the effects of charter schools on their own students (described in the preceding section) have used the same large-scale, student-level data sets to assess whether charter schools are having effects on achievement in nearby

¹²⁵ See Zimmer and Buddin (2005) and Bifulco and Ladd (2006) for discussion of the conceptual issues involved in measuring the degree of charter competition that a conventional public-school district or campus faces.

¹²⁶ Bettinger, 2005. Interestingly, Toma, Zimmer, and Jones (2006) found that Michigan charter schools disproportionately draw students from private schools rather than from conventional public schools, suggesting that competitive effects may be more strongly felt by private schools.

¹²⁷ Hoxby, 2002.

conventional public schools. Kevin Booker and colleagues used a statewide, longitudinal, student-level data set in Texas to examine the effect of charter schools on students in grades 4 through 8 in nearby public schools.¹²⁸ They found that charter schools in Texas, like those in Michigan, were drawing primarily low-achieving students. Controlling for the prior performance of students and schools, they found a small but statistically significant positive effect of charter schools on both math and reading test-score growth at nearby public schools. This positive effect persisted across several different methods of measuring charter presence.

Other studies have applied a similar technique in different states, with varying results. Tim Sass found that in Florida, being near a charter school was associated with greater test-score growth in math for public schools, but that there was no significant effect on reading test scores.¹²⁹ Robert Bifulco and Helen Ladd found no effect in North Carolina on math or reading test-score growth at public schools from being located near a charter school.¹³⁰ Ron Zimmer and Richard Buddin examined the systemic effect of charter schools in California, using the longitudinally matched data for six large school districts from an earlier RAND study, and they found no evidence that charter schools were affecting student achievement at nearby public schools.¹³¹ They also collected survey data from conventional public schools and found no reported change in programs or perceived negative effects from charter schools entering the market.

Overall, the results of the studies examining the systemic effects of charter schools on achievement in conventional public schools suggest that there is reason for cautious optimism. The studies generally find charter schools having either a small positive effect on student performance in surrounding public schools or, at worst, no systemic effect on the public schools. There is need of considerably more evidence on the point, however, to gain a better sense of the conditions under which charter schools might promote healthy competitive re-

¹²⁸ Booker et al., 2006.

¹²⁹ Sass, 2005.

¹³⁰ Bifulco and Ladd, 2005.

¹³¹ Zimmer and Buddin, 2006.

sponses from conventional public schools. It is not surprising that the effect of charter schools on public-school achievement would vary from state to state: The financial arrangements in the charter laws, the degree of autonomy that charter schools have from district control, the type of students that charter schools are attracting, the level of preexisting competition among public schools and between public and private schools, and the rate at which the public-school districts are growing could all impact the systemic effect of charter schools on public-school achievement.

Studies of Interdistrict and Public-Private Competition

There is a growing body of literature assessing more generally the effects of competition in the K–12 education market.¹³² As Patrick McEwan notes in a review paper, many of these studies employ a similar general strategy: They measure the level of competition, using the proportion of students attending private schools in a locality, and they employ multiple regression to register the correlation between competition and outcomes, accounting for family background characteristics. As these are nonexperimental studies, they must deal with two potential sources of bias (noted by McEwan): First, communities are likely to have characteristics that influence both student outcomes and the number of private schools. If those characteristics are not adequately represented by observable factors such as socioeconomic status, then the competitive effects might be overstated, with the negative result that an effect appearing to be caused by competition might in fact be caused by some unobserved characteristic of the community. Second, the relationship between the quality of public schools and the number of private schools (or charter schools) in a community surely flows in both directions. It is possible that competition improves public-school quality, but it is also likely that low public-school quality leads to the proliferation of private-school alternatives. A researcher who ignores this two-way relationship could easily underestimate any positive effects of competition on public schools.

¹³²For an excellent summary of this literature, see McEwan, 2000c. The literature includes, among other studies, McMillan, 1998; Arum, 1996; Hoxby, 1994; Funkhouser and Colopy, 1994; Armor and Peiser, 1997; Dee, 1998.

Although most of the studies recognize these methodological hurdles, we agree with McEwan that the problems have not been fully resolved. The most prominent work that finds competition to have a positive effect on public-school quality is that of Caroline Hoxby;¹³³ several other researchers have also found positive effects.¹³⁴ Robert McMillan, in contrast, finds that the effect of private schools on public schools is zero at best and may be negative, because the reduction of parental pressure on public schools is as important as any positive effect of competition.¹³⁵ Regardless of whether the findings are positive, however, all of the studies have had difficulty identifying appropriate instrumental variables that can account for unobserved differences among communities.¹³⁶ In sum, this literature is highly disputed and has not yet produced definitive results.

WHAT IS NOT YET KNOWN ABOUT ACADEMIC OUTCOMES

Despite the proliferation of studies in recent years, there are significant gaps in what is known about the effects of voucher and charter schools on academic achievement and attainment. First of all, academic outcomes have been narrowly defined, focusing on test scores in reading and math. Future studies should include measures that reflect the richer set of academic outcomes that schools are expected to produce. This is particularly important because, as Laura Hamilton and Brian Stecher have noted, many voucher and charter schools serve missions that aim to produce longer-term outcomes that are not likely to be fully captured by scores on tests of basic skills.¹³⁷ At the very least, researchers should examine academic attainment (including continuation in school, graduation, and college attendance) in voucher and charter schools. More evidence on academic-attainment measures will become available as the programs develop longer histories. Examination of a broader measure of academic outcomes is particularly important in places such as Flor-

¹³³Hoxby, 1994; see also Hoxby, 1996, 2000a.

¹³⁴See, e.g., Arum, 1996; Dee, 1998.

¹³⁵McMillan, 1998. Jepsen also generally finds no effect of private-school competition on public schools (Jepsen, 1999b).

¹³⁶On this issue, see McEwan, 2000c.

¹³⁷Hamilton and Stecher, 2006.

ida, where narrowly defined test-score improvements are the specific target of the threat to impose vouchers.

Second, the best available evidence about the achievement effects of voucher and charter schools comes from black-box experimental studies, which do not explain why an achievement effect might occur. To predict whether the findings of the voucher experiments are generalizable, the mechanisms for the effects must be understood. More-extensive studies of the actual school and classroom conditions of voucher and control students would be extremely valuable.

A final gap in the empirical record should be evident from the relative balance of the two major sections of this chapter: Most studies have focused only on students in the choice schools, ignoring systemic effects (negative or positive) on students who remain in assigned public schools. The greatest uncertainties about the academic effects of vouchers and charters concern these systemic effects on nonchoosers. Although the number of studies of systemic effects has grown since the first edition of this book was published, and the results of several of them suggest promise, more research on the point is imperative. Given that, in terms of sheer magnitude, the effects on nonchoosers may dwarf those on students in the voucher and charter schools because most students are likely to remain in conventional public schools, it is critical that researchers find additional information to identify positive or negative systemic effects.

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