

# Chicago Fed Letter

## Private schools and school enrollment in Chicago

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Does enrollment in private school increase educational attainment? After reviewing some research on national trends concerning private (versus public) schooling, the author examines how private school options in the Chicago metropolitan area might affect academic achievement for various demographic groups.

### 1. Private high school share, by city

City size rank	City	Private (percent)
1	New York	18
2	Los Angeles	11
3	Chicago	17
4	Houston	8
5	Philadelphia	21
6	Phoenix	7
7	San Diego	7
8	Dallas	10
9	San Antonio	8
10	Detroit	8

SOURCE: U.S. Census Bureau, 2003, *2000 Decennial Census of Population and Housing*, Washington, DC.

**Although** the private share in basic education in Chicago has been declining, partly as a result of Catholic school closings, Chicago still educates a relatively high percentage of its children in private schools. In 2000, the City of Chicago ranked third among the ten largest cities in the United States in the percentage of high school students attending private schools, behind Philadelphia and New York City (figure 1). Chicago ranked seventh out of the 50 largest cities. About two out of three private school students in Chicago attend Catholic schools. At the national level, about one out of ten students attend private grade schools and high schools. About half of this population is enrolled in Catholic schools. Over time, the private share in education has remained at about 10%, although the Catholic share of this population was much higher in the past—about 90% in 1960.

One of the important issues in economic research and education policy is whether private schools increase academic achievement. The payoffs to educational attainment have been high and rising along a number of dimensions, including lifetime earnings and health. Accordingly, there have been many recent policy initiatives to enhance educational attainment through reform and financing of U.S. schools, including bolstering the ability of low-income families

to choose private schooling. In this *Chicago Fed Letter*, I review some of the academic evidence on private schooling and educational achievement. I also examine private schooling in the Chicago metropolitan area and its possible effect on school enrollment. For the purposes of this article, the Chicago metropolitan area is defined as the City of Chicago and suburbs of Chicago within Illinois (called the Chicago Primary Metropolitan Statistical Area by the U.S. Census Bureau).

### Literature: A thumbnail sketch

Most of the studies on private schools have focused on Catholic schools. One reason for this is that Catholic schools have accounted for the largest share of the private school sector. Existing data sets are often too small to estimate the effects of other types of private schools, such as Jewish schools or independent nonsectarian schools.<sup>1</sup>

To address whether private schooling produces superior educational outcomes, it is necessary to understand what determines the decision to attend private schools. For example, some of the reasons that families choose private schools, other than the schools' performance per se, may also affect educational outcomes. And so, an understanding of the private–public school choice will help distinguish the possible causes of educational outcomes.

## 2. Private school enrollment, by demographics

Age	City of Chicago			Suburbs of Chicago		
	White	Black	Hispanic	White	Black	Hispanic
	(----- percent -----)					
12	48	8	10	15	8	7
13	45	12	12	15	9	9
14	46	8	10	13	8	6
15	49	9	16	13	6	6
16	44	8	17	11	7	9
17	51	9	16	12	6	8
18	59	11	23	19	11	8

SOURCE: U.S. Census Bureau, 2003, *2000 Decennial Census of Population and Housing*, Washington, DC.

Some of the factors that have been found to affect private school attendance are as follows. Catholic religion and Catholic religiosity as measured by church attendance have large effects on Catholic school attendance. Evangelical Protestants are also more likely to send their children to private schools. In general, families with stronger religious views are more likely to opt for faith-based schools. Religious schools account for over 80% of the enrollment in private schools nationwide. Economic variables, including family income and parents' education, usually increase the probability of attending private schools, while private school tuition has a negative effect. The quality of public schools in proximity to the home has also been shown to be an important factor: The demand for private schools is higher where the quality of public education is lower. Further, studies show some evidence of "white flight" to private schools as the percentage of blacks in public schools increases.

Influential studies on the effects of Catholic and other private schooling were published by Coleman, Hoffer, and Kilgore in 1982 and Coleman and Hoffer in 1987.<sup>2</sup> These studies indicated that Catholic schools increased academic achievement and educational attainment for those enrolled in them. However, the studies were controversial because they did not adequately control for the possibility that Catholic school effects were driven by unobserved variables, including those things that often determine the selection of private schools, such as ability of students and family values (e.g., the religiosity of parents).

Catholic schools had a large positive effect on high school graduation rates for minorities (blacks and Hispanics) in inner cities.<sup>3</sup> For non-Hispanic whites, Neal found no Catholic school effect in suburban areas and a modest positive effect in inner cities. In a previous study, I also found a large positive Catholic school effect on educational attainment for minorities in inner cities and no effect for whites in suburban areas.<sup>4</sup>

Studies have also tried to find and measure any effects that private schools exert on the quality of public schools through competitive pressures. A review of many of these studies suggests that competition has a small positive effect on the quality of public education.<sup>5</sup> Harvard economist Caroline Hoxby has been one of the leading exponents of the view that private schools improve the quality of public schools through competitive pressures.<sup>6</sup>

### Evidence from Chicago

What are the private school options available in Chicago, and how can we draw on existing data to throw additional light on the possibility that private school options might affect educational attainment? Recent data have been compiled from the 5% Public Use Micro-data Sample (PUMS) from the *2000 Decennial Census of Population and Housing*. The PUMS data are derived from samples of areas (called Public Use Micro-data Areas, or PUMAs) that have a population of at least 100,000. Figure 2 shows these data on private school enrollment, by age, race, ethnicity, and location, in the Chicago metropolitan area. The data

Since the Coleman studies, many researchers have examined the effects of private schooling, trying to control for unobserved selectivity in the private school sector. An important study of this type by Derek Neal at the University of Chicago found that after controlling for selectivity,

indicate that roughly half of non-Hispanic whites in the City of Chicago attend private schools. This is not the case in suburban areas where private school enrollment rates are about 15% for 12 and 13 year olds and about 11% or 12% for high school students. Private school enrollment rates generally increase for 18 year olds in both the City of Chicago and the suburban areas because part of this group has started college. Of the whites enrolled in Catholic schools in the Archdiocese of Chicago, almost all (95%) are Catholic.

For blacks in the City of Chicago, private school enrollment rates range from 8% to 12%; rates are slightly lower in suburban areas for blacks. One of the reasons for lower enrollment rates for blacks in private schools is that private schools in the Chicago area are mostly Catholic, while blacks are mostly Protestant. Of the blacks enrolled in Catholic schools in the Archdiocese of Chicago, three out of four are not Catholic.

For Hispanics in the City of Chicago, private school enrollment rates range from about 10% to 12% for the youngest ages and increase to about 16% or 17% for high school students; rates in the suburbs are less than 10% for Hispanics regardless of age. Almost all of the Hispanics who are enrolled in Catholic schools are Catholic.

Data on school enrollment rates, by age, race, ethnicity, and location, are presented in figure 3. The data indicate that 98% to 99% of non-Hispanic whites are enrolled in school in both the City of Chicago and suburbs of Chicago from the ages of 12 through 16. For 17 year olds, enrollment rates for whites decline by 5 percentage points in the City of Chicago and 3 percentage points in suburban areas.

Among blacks, 98% to 99% are enrolled in school through the age of 15. Thereafter, enrollment rates decline to about 90% at age 17 in the City of Chicago and 93% in the suburbs of Chicago. Enrollment rates fall off more dramatically for blacks at age 18 relative to whites in both the City of Chicago and the suburban areas.

### 3. School enrollment, by demographics

Age	City of Chicago			Suburbs of Chicago		
	White	Black	Hispanic	White	Black	Hispanic
----- percent -----						
12	99	99	99	99	99	97
13	99	99	97	99	99	98
14	98	98	98	99	99	96
15	99	98	95	99	99	95
16	98	97	86	98	96	86
17	93	90	78	95	93	76
18	82	63	61	80	67	51

SOURCE: U.S. Census Bureau, 2003, *2000 Decennial Census of Population and Housing*, Washington, DC.

Although Hispanic enrollment rates are slightly less than white and black enrollment rates at younger ages, they start to fall off more dramatically after age 15. By the age of 17, over 20% of Hispanics are not enrolled in school in the City of Chicago and almost 25% are not enrolled in the suburbs of Chicago. Enrollment rates for Hispanics are about the same as for blacks at age 18 in the City of Chicago; only one in two Hispanics are enrolled in school at age 18 in the Chicago suburbs.

#### Statistical estimates

I conducted statistical (probit) estimates of the probability that respondents age 15–17 were not enrolled in school (called the dropout rate). This procedure allows one to test whether private schools might have a significant effect on school enrollment rates in the Chicago region after controls are made for other background factors. The private school variable is defined as the percentage of grade school and high school students in the area in which they live (PUMA) that attended a private grade school or high school in 2000. The additional adjustments that are made to estimate dropout rates include household income, the householder's (parent's or guardian's) education, whether the respondent lived in a married-couple household, gender, age, race/ethnicity (black and Hispanic), whether the sample area was in the City of Chicago, and average household income in the sample area. Estimates were undertaken for all teens age 15–17 and by race and ethnic background.

For all respondents, a one standard deviation increase in the percentage attending private schools would reduce the

dropout rate of 5.4% by a very modest 0.3 percentage points. It was also found that males and Hispanics were more likely to drop out, while respondents from more affluent and highly educated households were less likely to drop out of school. For non-Hispanic white respondents, the percentage attending private schools did not affect the dropout rate of 2.6%.

The results for blacks and Hispanics both indicated a more substantial negative relationship between the percentage attending private schools and the dropout rate. For blacks, a one standard deviation increase in the percentage of blacks in private schools (about 3 percentage points) would reduce the dropout rate of 5.7% by about one-sixth. Another way to look at this relationship is that if blacks attended private schools at about the same rate as non-Hispanic whites in the metropolitan area, private schools would be associated with reducing the black dropout rate by about one-half. For Hispanics, the negative relationship between private school enrollment in an area and the dropout rate was even more substantial. A one standard deviation increase in the percentage of Hispanics attending private schools (about 5 percentage points) would be associated with reducing the dropout rate of 13.3% to about 10.8%.

#### Conclusion

Although the vast majority of students in suburban schools graduate from high school, with a high percentage going on to college, this is not the case in the City of Chicago. In a recent study, the four-year high school graduation rate in public schools in Chicago was estimated at only 54%.<sup>7</sup> Although the high school graduation rate is low in many large cities in the United States, the rate in Chicago is lower than in many other large cities. For example, in a study of the largest public school districts in the United States, the 2001–02 graduation rate was

estimated at 51% for Chicago, while it was 66% for New York City and 59% for Philadelphia.<sup>8</sup>

Apart from whether private schools increase test scores, they have been shown to be successful in keeping students in school. For example, data from the Catholic Archdiocese of Chicago indicate that 97% of students in Catholic schools, which disproportionately serve low-income minority students, graduate from high school. Data from the *2000 Decennial Census of Population and Housing* that have been analyzed here and other studies suggest that private schools in the Chicago metropolitan area probably increase school enrollment rates for black and Hispanic students of high school age, thus increasing the probability that they will graduate from high school.

Over time, the percentage of students attending private schools in Chicago has declined. This is partly a result of the decline in the number of Catholic schools. Over the past 30 years, the number of Catholic schools in Chicago has declined by about 50%. Student enrollment in these schools has declined even more—from about 132,000 in 1976–77 to about 52,000 in 2004–05.<sup>9</sup> Since 1990, the percentage of students attending

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private schools in Chicago has declined from about one in five to approximately one in six. One of the possibilities this raises is that fewer students might be completing high school than would be

the case if more students had access to private schools, especially students from black and Hispanic backgrounds. An additional outcome of this decline is

that the cost of public education has increased more than would otherwise be the case as more students have been absorbed into public schools.

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<sup>1</sup> A recent phenomenon has been the growth of hybrid public–private schools, often called charter schools. These schools are typically “chartered” by public entities and paid for with public monies, but they resemble private schools in that they are less bound in their organizational structure by rules and regulations.

<sup>2</sup> James S. Coleman, Thomas Hoffer, and Sally Kilgore, 1982, *High School Achievement: Public, Catholic, and Private Schools Compared*, New York: Basic Books; and James S. Coleman and Thomas Hoffer, 1987, *Public and Private High Schools: The Impact of Communities*, New York: Basic Books.

<sup>3</sup> Derek Neal, 1997, “The effects of Catholic secondary schooling on educational attainment,” *Journal of Labor Economics*, Vol. 15, pp. 98–123.

<sup>4</sup> William Sander, 2001, *Catholic Schools: Private and Social Effects*, Norwell, MA: Kluwer Academic Publishers.

<sup>5</sup> Clive R. Belfield and Henry M. Levin, 2001, “The effects of competition on educational outcomes: A review of U.S. evidence,” Columbia University, Teachers College, National Center for the Study of Privatization in Education, working paper, No. 35, available at [www.ncspe.org/list-papers.php](http://www.ncspe.org/list-papers.php).

<sup>6</sup> Caroline Minter Hoxby, 1994, “Do private schools provide competition for public schools?,” National Bureau of Economic Research, working paper, No. 4978, December; and Caroline Minter Hoxby, 1996, “The effects of private school vouchers on schools and students,” in *Holding Schools Accountable*, Helen F. Ladd (ed.), Washington, DC: Brookings Institution Press.

<sup>7</sup> Elaine Allensworth, 2005, *Graduation and Dropout Trends in Chicago: A Look at Cohorts of Students from 1991 through 2004*, University of Chicago, Consortium on Chicago School Research, report, January, available at [www.consortium-chicago.org/publications/pdfs/p75.pdf](http://www.consortium-chicago.org/publications/pdfs/p75.pdf).

<sup>8</sup> Jeffrey Sable and Lee M. Hoffman, 2005, *Characteristics of the 100 Largest Public Elementary and Secondary School Districts in the United States: 2002–03*, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, report, August, available at <http://nces.ed.gov/pubs2005/2005312.pdf>.

<sup>9</sup> Loyola University Chicago, Institute of Urban Life, 1990, *Chicago’s Private Elementary and Secondary Schools*, report; and Archdiocese of Chicago, Office of Catholic Schools, 2005, *Annual Report*, Chicago.