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Religion, Religiosity and Private Schools

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ARTICLES

RELIGION, RELIGIOSITY, AND PRIVATE SCHOOLS

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The effects of religion and religiosity as measured by attendance at weekly religious services on the demand for private schooling is assessed. It is shown that Catholics, fundamentalist/evangelical Protestants, and respondents who attend religious services more often have a higher demand for private schooling. Data from the National Opinion Research Center's "General Social Survey" are used.

INTRODUCTION

There are numerous studies on the effects of private elementary and secondary schools on academic achievement and other outcomes. Many of these studies pay some attention to the determinants of private school attendance in models that try to correct for selectivity in the private school sector. However, they tend to focus on the effects of private schooling rather than upon the demand for private schooling. There is a smaller literature that focuses on the demand for private schooling. These studies tend to focus on the effects of key economic variables like price and income on the demand for private schooling. Less attention is usually given to the religious nature of private schools although most private schools have a religious orientation. In treating religion, most of the studies on the demand for private schooling and on the effects of private schooling do little more than adjust for Catholic religion (or a proxy for Catholic religion) in estimates of the demand for private schooling. The reason for the Catholic school focus is that they have accounted for a large share of private school enrollment over time. The effects of other religions and heterogeneity within religions are usually not considered.

In the United States, about 1 in 10 students have attended private elementary and secondary schools since the 1940s. Before 1970, about 9 out of 10 students in the private school sector attended Catholic schools. Catholic schools have declined in importance over time. Today, they account for about one out of two students in the private school sector (see

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Table 1). In 1960, there were nearly 13,000 Catholic schools with an enrollment of over 5 million. By 1999, there were approximately 8,000 Catholic schools with an enrollment of about 2.5 million. The decline in Catholic schooling has been offset by increases in other religious schooling and, to a lesser extent, nonsectarian private schooling. Evangelical Protestant schools have shown the most growth over the past 3 decades. By 2000, about 38% of private school enrollment was in non-Catholic religious schools. This is up from about 16% in the mid-1970s (see Table 2).

Table 1

Private and Catholic Primary and Secondary School Enrollment, 1940-2000

	(1)	(2)
	% Private	% Catholic of (1)
1940	9.3	91.8
1950	12.2	93.4
1960	13.6	92.6
1970	11.1	76.5
1980	11.5	58.3
1990	11.3	47.3
2000	11.2	48.6

Note. Sources: United States Bureau of the Census (1975, 2000).

In this essay, the probability of attending private schools is a focus. This study is different from previous studies in that a national data set is studied to consider both the effects of different religions and religiosity as measured by the regularity of attending religious services on the probability that parents send their children to private schools. The results indicate that Catholics, evangelical and fundamentalist Protestants, and respondents with higher levels of religious services attendance, especially Catholics with higher levels of church attendance, are significantly more likely to send their children to private schools. Other significant determinants of private school attendance include location, family income, and parents' education.

Table 2

Type of Private School, 1989-90 and 1999-00

Type	1989-90	1999-00
Catholic	54.5%	48.6%
Conservative Christian	10.9%	15.0%
Baptist	5.8%	6.1%
Mainline Protestant	7.1%	7.6%
Jewish	3.2%	3.5%
Other Religious	6.0%	5.7%
Nonsectarian	13.2%	15.7%

Note. Mainline Protestant includes Episcopalian, Methodist, Lutheran, and Presbyterian.
Sources: U.S. Department of Education (1992, 2001).

RELATED STUDIES

One of the reasons that parents might choose to send their children to private schools is that they perceive that the private schools that are available to them are better than the public school alternatives. For this reason, many studies have tried to estimate whether private schools are superior. These studies implicitly tend to gauge the demand for private schooling. Studies by Coleman, Hoffer, and Kilgore (1982) and Coleman and Hoffer (1987) suggested that Catholic high schools in particular increased test scores and the probability that students graduated from high school. Their results for other private high schools were problematic.

Since the study by Coleman et al. (1982), many other researchers have tried to test whether private schools have an effect on either academic achievement as measured by test scores or educational attainment. Most of these studies have focused on Catholic high schools although a few consider other private schools as well. Noell (1982) found that Catholic high schools did not increase test scores. Murnane, Newstead, and Olsen (1985) found that Catholic high schools had a positive effect on Hispanic test scores and no effect on Black test scores. Their results for non-Hispanic White students were not conclusive.

The results of more recent studies are also mixed. These studies tend to

focus on correcting for selection into Catholic and other private schools. The earlier studies by Coleman and his colleagues did not formally correct for selection into private schools. Several studies indicate that Catholic high schools have positive effects on academic outcomes (Evans & Schwab, 1995; Neal, 1997; Sander & Krautmann, 1995). The study by Neal (1997) is of particular interest because it suggests that Catholic schools have a more substantial effect on educational outcomes in locations where the quality of public schooling is more problematic. This study finds relatively large Catholic school effects in big cities for minorities and less substantial effects (or no effect) for White students. The reason for this is that the public school alternatives for minorities (Blacks and Hispanics) are low relative to the alternatives for White students. Sander (2001) also found that Catholic high schools have large effects on high school graduation rates for minorities in big cities; further, Catholic high schools have no effect on graduation rates of White students. Similarly, Sander (2000) observed that Catholic schools increase the amount of homework undertaken by minority students and have no effect on the amount of homework done by White students. A study by Ludwig (1997) showed that Catholic schools do not increase achievement. Similarly, Goldhaber (1996) found that private schools overall do not increase achievement. Figlio and Stone (1999) observed that achievement gains in private religious schools are limited to Blacks and Hispanics. Perhaps the most rigorous study on Catholic schools by Altonji, Elder, and Taber (2000) found that Catholic schools have positive effects on educational attainment, especially by minorities, but no effect on test scores.

Most of the studies on Catholic schools have focused on Catholic high schools. One study on Catholic grade schools noted a positive Catholic school effect on achievement for respondents who attended a Catholic grade school for 8 years. However, if non-Catholics who attended Catholic grade schools are excluded from the sample, the Catholic schooling effect becomes zero. Further, the effect of Catholic grade schools on achievement is zero for respondents with 1 to 7 years of Catholic schooling (Sander, 1996). A more recent study on Catholic grade schools finds that Catholic schools have no effect on mathematics test scores and a positive effect on reading test scores (Jepsen, 2003).

Another line of research has examined the effects of educational vouchers on achievement. For the Milwaukee voucher experiment, Rouse (1998) found that voucher students gained more in mathematics than they would have otherwise in public schools; however, there is no effect on reading scores. In another study on the Milwaukee voucher program, no achievement gains were found (Witte, 2000). Howell and Peterson (2002)

provided an analysis of education vouchers throughout the United States.

The results of the relatively large number of studies on Catholic schools and the more modest literature on other private schools suggests that Blacks and Hispanics should have a greater demand for private schooling other things being equal because the public school alternatives that are available to them are inferior. For White students, this is not the case. The effect of Catholic and other private schools on educational outcomes by White students is either modestly positive or zero.

Other research has focused on the determinants of attending Catholic and other private schools. These studies usually adjust for Catholic religion (or a proxy for Catholic) as a determinant of private school attendance. Other religions and religiosity are usually not taken into account. An older study by Greeley and Rossi (1966) is an exception in that Catholic religion and measures of Catholic religiosity were used to estimate the demand for Catholic schooling. A more recent study by Long and Toma (1988) used micro data to estimate private school attendance adjusting for Catholic religion (measured at the state level) and other background variables. Lankford and Wyckoff (1992) used micro data from New York State to estimate religious school attendance. They created a proxy for Catholic religion based upon a student's ancestry to control for the effect of religion. West and Palsson (1988) used state-level data to estimate the percentage enrolled in private schools during the 1970s. They adjusted for the percentage Catholic in a state. Hamilton and Macauley (1991) used school-district data from New Jersey to estimate private school choice. They created a proxy for the percentage Catholic in a school district based upon ethnic background. Chiswick and Koutroumanes (1996) used national data to estimate parochial and nonsectarian school attendance. They also created a proxy for Catholic religion. One of the few studies that considered non-Catholic religions on school choice adjusted for the effect of the percentage of evangelical Protestants in a county on the location choice of evangelical Protestant elementary schools in California in 1978-1979 (Downes & Greenstein, 1996).

DATA

Data were drawn from the National Opinion Research Center (1998, 2000) General Social Survey (GSS). The GSS has been undertaken almost annually since 1972. It consists of a cross-sectional national sample of men and women 18 years of age and older who live in a non-institutional setting in the United States. For the samples in 1998 and 2000, a question was asked regarding the type of school parents selected for their children.

METHODOLOGY AND MODEL

Probit was used to estimate the probability that respondents sent their children to private schools because the dependent variable takes on a value of either zero or one. The sample of respondents was restricted to men and women with children over 5 years old. Respondents were asked if they have any children older than 5. If their children did not attend public school, they were asked what type of school their children attend or attended.

Several different estimates of private school attendance were undertaken. In the first case, adjustments were made for the religion of the respondent including Catholic, fundamentalist Protestant, Jewish, other non-Christian religion (called "Other Religion"), and no religion. The omitted religion was mainline (or non-fundamentalist) Protestant. The definition of fundamentalist was based upon self-reported identification rather than upon a denominational affiliation. The breakdown of Protestants into two groups was done because previous research suggests that fundamentalists differ in their behavior from mainline Protestants. Further, research suggests that their importance has increased markedly in the United States since the 1960s and that this is increasing the demand for conservative Christian schools (Fogel, 2000; Marty, 2000). The other background variables that were used to estimate the type of school attended included age, schooling (in years), Black, Hispanic, region (relative to south), type of residence (relative to rural), the survey year, income, whether the respondent is currently married, and number of children. West indicates living in the Mountain or Pacific regions. East indicates living in the New England or Middle Atlantic regions. North indicates living in the East North Central or West North Central regions. South includes the South Atlantic, East South Central, and West South Central regions. Big city indicates living in a central city of 1 of the 12 largest metropolitan areas in the United States. Suburb indicates living in a suburb of 1 of the 12 largest metropolitan areas. Small city indicates living in a city or town outside a rural county. Income is a categorical variable that is relative to the highest income category ($110,000 and over). It was recorded as follows: Income 1 is less than $8,000; Income 2 is $8,000 to $17,499; Income 3 is $17,500 to $24,999; Income 4 is $25,000 to $39,999; Income 5 is $40,000 to $59,999; Income 6 is $60,000 to $89,999; and Income 7 is $90,000 to $109,999.

In the second estimate, different measures of Protestant were used following the methodology suggested by Steensland et al. (2000). The categories are evangelical Protestant, Black Protestant, mainline Protestant, and a small residual Protestant category (called "Other Protestant") and are based upon denominational affiliation. Mainline Protestant was used as the omitted category in the estimate. The other variables that were used to

Table 3

Summary Statistics

	Mean	Standard Deviation
Private School	14.7%	35.3
Catholic	23.6%	42.5
Evangelical Protestant	30.5%	46.1
Black Protestant	10.3%	30.4
Mainline Protestant	18.3%	38.7
Other Protestant	2.2%	14.6
Fundamentalist	32.3%	46.8
Jewish	2.1%	14.3
Other Religion	0.7%	8.4
No Religion	10.2%	30.2
Highest Attendance	28.7%	45.2
High Attendance	14.9%	35.6
Medium Attendance	7.3%	26.0
Low Attendance	12.2%	32.8
Age	51.6 years	15.4
Education	12.9 years	2.9
North	24.9%	43.3
East	20.0%	40.0
West	17.9%	38.4
Big City	8.2%	27.4
Suburb	11.3%	31.7
Small City	69.4%	46.1
Black	17.1%	37.7
Hispanic	5.4%	22.6
Married	55.4%	49.7
Children	2.7%	1.6
Income 1	7.5%	26.4
Income 2	13.3%	33.9
Income 3	9.9%	29.8
Income 4	17.5%	38.0
Income 5	16.2%	36.8
Income 6	12.8%	33.4
Income 7	3.7%	19.0

Note. Source: National Opinion Research Center (1998, 2000).

estimate private school attendance are the same as above.

The additional estimates that were undertaken try to control for the

effects of religiosity as indicated by weekly attendance at religious services on private school attendance. The third and fourth estimates included all of the variables that were used to estimate private school attendance in the first and second cases and four variables indicating religious services attendance. "Highest Attendance" indicates attendance every week or more than once a week. "High Attendance" indicates attendance almost every week or 2 to 3 times per month. "Medium Attendance" indicates attendance about once a month. "Low Attendance" indicates attendance several times a year. This variable is relative to attendance less than several times a year.

An additional two estimates include measures of church attendance for Catholics and the various Protestant variables. Other religious groups including those with no religious affiliation were excluded because there are too few observations for some of the interactions between religious affiliation and attendance. The religious variables in these estimates are simply interaction terms between the four attendance variables and the Catholic and Protestant religion variables.

The key shortcoming in the model is that some variables that might affect private school enrollment are not available. This would include private school tuition and the quality of public schools that are available to respondents. Although there are important variables that are omitted from the analysis (because they are not available in the data set), this should not result in flawed estimates of the effects of religion and religiosity on the demand for private schools. This would only be the case if the omitted variables were correlated with the religion and/or religiosity variables. Summary statistics for the data set are presented in Table 3.

RESULTS

Probit estimates of private school attendance are presented in Tables 4 and 5. The results in Table 4 are for all respondents. In Table 5, the results are for Catholics and Protestants. The coefficients in the tables indicate marginal effects at the mean values of the other variables in the estimate (the Xs). For brevity, the results for the non-religion related coefficients are excluded. In the first two columns of Table 4, adjustments are made for religion and the other background variables. In columns 3 and 4, adjustments are also made for attendance at religious services. The results in the first two columns indicate that Catholic religion has a highly significant and relatively large positive effect on private school attendance. Fundamentalist Protestant, evangelical Protestant, and other Protestant also have significant positive effects on attendance although the magnitude of the coefficients is smaller than the magnitude of the Catholic effect. This suggests that non-mainline Protestants or non-fundamentalist Protestants

Table 4

Probit Estimates of Private School Attendance

	(1)	(2)	(3)	(4)
Catholic	.14***	.13***	.13***	.12***
Evangelical Protestant		.04**		.03
Black Protestant		-.02		-.01
Other Protestant		.08*		.06
Jewish	.03	.02	.05	.04
Other Religion	.06	.04	.05	.03
No Religion	.03	.02	.08***	.07***
Fundamentalist	.06***		.05***	
Highest Attendance			.12***	.12***
High Attendance			.07***	.07***
Medium Attendance			.06**	.06**
Low Attendance			.07***	.07***
Age	.002***	.001***	.001***	.001**
Education	.02***	.02***	.02***	.02***
North	.01	.01	.01	.01
East	.003	-.001	.006	.001
West	-.04*	-.04**	-.03*	-.04*
Big City	.10***	.10***	.09***	.11***
Suburb	.06*	.05*	.04	.06**
Small City	.07**	.06**	.05**	.07***
Black	.01	.03	-.003	.004
Hispanic	-.01	-.01	-.02	-.02
Married	.01	.01	.003	.002
Children	.01*	.01**	.01*	.01*
Income 1	-.07*	-.07*	-.06*	-.06*
Income 2	-.07**	-.07**	-.06***	-.07***
Income 3	-.03	-.03	-.03	-.03
Income 4	-.01	-.01	-.02	-.01
Income 5	-.002	-.001	-.01	-.001
Income 6	-.004	-.002	-.01	-.003
Income 7	-.006	-.01	-.01	-.004
χ^2	171.1***	165.5***	214.1***	218.5***
N	2,401	2,401	2,401	2,401

Note. Coefficients indicate marginal effects calculated at the means of the Xs.
* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.

are less likely to send their children to private schools. The coefficients for Jews, other religion, and no religion were not significant. The other significant coefficients in the estimates include positive age, education, big city, suburb, small city, and children effects and negative "Income 1" and "Income 2" effects. The income effect indicates that only relatively poor respondents (household income of less than $17,500) are less likely to send their children to private schools. One of the somewhat surprising results is that respondents with more children are more likely to send their children to private schools. This suggests that respondents who have a preference for larger families also have a preference for sending their children to private schools.

Probit Estimates of Private School Attendance, Catholics and Protestants

	(1)	(2)
Catholic Highest	.22***	.20***
Catholic High	.12***	.10***
Catholic Medium	.06	.04
Catholic Low	.11***	.09**
Fundamentalist Highest	.07***	
Fundamentalist High	.05	
Fundamentalist Medium	.06	
Fundamentalist Low	.08**	
Other Protestant Highest	.07	
Other Protestant High	.15	
Other Protestant Medium	.08	
Other Protestant Low	.05	
Mainline Highest		-.04
Mainline High		-.05
Mainline Medium		-.06
Mainline Low		-.05
Evangelical Highest		.02
Evangelical High		.03
Evangelical Medium		.03
Evangelical Low		.04
χ^2	199.3***	187.8***
N	2,090	2,090

Note. Coefficients indicate marginal efforts calculated at the means of the Xs.
* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.

The adjustments for attendance at religious services (columns 3 and 4) indicate that respondents with the highest attendance (weekly or more often) are more likely to send their children to private schools relative to other respondents. Respondents who have either high attendance, medium attendance, or low attendance all had about the same probability of sending their children to private schools. The probability was lower than those with the highest attendance and higher than the omitted category. The results for the other coefficients are similar to the results above with a couple exceptions. No religion is now significantly positive while evangelical Protestant and other Protestant are no longer highly significant.

The estimates in Table 5 indicate that Catholics with the highest attendance at religious services are the most likely to send their children to private schools. Further, Catholics with "High Attendance" and "Low Attendance" are significantly more likely to send their children to private schools than Catholics with "Medium Attendance" or the omitted category. Fundamentalist Protestants with "Highest Attendance" and "Low Attendance" were significantly more likely to send their children to private schools relative to fundamentalist Protestants with "High Attendance," "Medium Attendance," or the omitted category. However, regardless of the level of attendance at religious services, Catholic attendance tends to have a larger effect than fundamentalist Protestant attendance on the probability of private school enrollment. The other attendance coefficients including evangelical Protestant attendance are not highly significant. An adjustment was not made for Black Protestant attendance because none of the preliminary results showed any relationship between this variable and private school enrollment.

DISCUSSION

The results in this paper suggest that the demand for private schooling is strongly affected by religion and religiosity: Catholics and evangelical Protestants (and fundamentalist Protestants) are significantly more likely to send their children to private schools than mainline Protestants, non-fundamentalist Protestants, or other religions. Further, respondents who attend religious services weekly (especially Catholics) are more likely to send their children to private schools.

Previous studies have usually not taken into account the effects of non-Catholic religions and religiosity on the demand for private schooling. The vast majority of students who attend private grade schools and high schools in the United States are in religious schools. Although enrollment in private nonsectarian schools has increased, it only accounts for a small share of the enrollment in private schools and less than 2% of the enrollment in grade schools and high schools overall. This suggests that a key driving force

behind private elementary and secondary schooling in the United States is religion. It also suggests that many private schools are not close substitutes for public schools. Further, if there were more choice in education in the United States through publicly or privately funded choice initiatives or other means, there would undoubtedly be an increase in private school enrollment, but the increase would be constrained by the religious nature of private schooling. This aspect of the market for private schooling has not received much attention in the related literature on this topic.

The importance of religion and religiosity in the demand for private schooling is suggested by the Milwaukee Parental Choice Program, a school choice program created in Milwaukee in 1989 and started in 1990. At the outset, participants in the program could only choose secular schools. In 1998-1999, the program was expanded to include religious schools. Within 1 year, enrollment in the choice program more than tripled. Further, about two out of three choice families listed religious instruction as an important reason for selecting a private school (Bezruki, 2000).

One of the additional implications of this study is that studies on the effects of private schooling need to consider the effects of religiosity on private school outcomes. Related studies show that both Catholic religiosity and Protestant religiosity have positive effects on educational outcomes (Freeman, 1986; Jeynes, 1999; Lehrer, 2003; Sander, 2001). The religiosity of smaller religious groups might also affect educational outcomes, but data sets are often too small to separate out the effects of religiosity of small groups like Jews, Muslims, and so on. If religiosity is not taken into account in studies on private school effects, the effects of religiosity might be confounded with the effects of private schooling.

The results also indicate that families from the lowest income categories and parents with less education are less likely to send their children to private schools. These results are consistent with previous research that shows that private schools are increasingly serving fewer low-income students and more high-income students (Riordan, 2000).

Another result that merits comment regards the effect of location of private school enrollment. Respondents from big cities are the most likely to send their children to private schools followed by respondents from small cities. This probably captures several different factors. First, almost half of all Catholic schools are located in big cities. Second, big cities have the density to support more types of private schools. Third, if the quality of public education is low in big cities this would increase the demand for private schools. Another location factor of significance was a negative West effect. To some extent, this reflects higher Catholic school densities in the East and Midwest regions and lower Catholic school densities in the West (McDonald, 1999; United States Bureau of the Census, 2000).

RECOMMENDATIONS

Levin (2002) provides four criteria for evaluating private schools: freedom of choice, equity, productive efficiency, and social cohesion. This framework might be used to draw recommendations including suggestions for further research from the research above. The first criterion (freedom of choice) is used to evaluate whether private schools increase the ability of families to choose schools that are consistent with their religious beliefs. Private schools would be evaluated favorably on this criterion because they disproportionately serve religious Catholic and evangelical Protestant families. Educational choice initiatives would further increase the ability of religious families to choose a religious education for their children. Hoxby (1996) estimated that $1,000 directed payments via a choice program would increase private school enrollment by about four percentage points. Educational choice initiatives would be particularly advantageous to Catholic families because private schools are disproportionately Catholic.

A second criterion that Levin uses for evaluating private schools is equity. Although private schools serve some low-income families, the results in this study and elsewhere indicate that private schools are increasingly serving more affluent families. If more students from disadvantaged backgrounds were given more access to private schools through some form of school choice, this should result in higher levels of achievement for students who might otherwise attend lower quality public schools.

More research is needed to address Levin's other two criteria. Regarding productive efficiency, two lines of research merit more attention. First, more information is needed on the effects of non-Catholic private schools. Most of the research in this area has focused on Catholic schools. And second, more information is needed on the costs of private schooling. Comprehensive data are not available. More research is also needed on the effects of private schooling on social cohesion (the fourth criterion). Almost no attention has been given to this issue.

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