

# Catholic Schools in the United States: Basic Diagnostic of Trends in Enrollment and Student Achievement

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## Abstract

The National Catholic Education Association estimates that in the 2018-19 school year, 1.8 million children were enrolled in elementary and secondary Catholic schools in the United States. This is a sharp reduction in comparison to the 5.2 million children who were enrolled in Catholic schools in 1965. The first part of this paper provides a basic analysis of long-term trends in enrollment in Catholic schools in the country. It also discusses some of the factors that may have led to the decline in enrollment over time. The second part of the paper reviews the performance of students in Catholic schools on national learning assessments in comparison to students in public schools. While enrollment in Catholic schools has declined, students in Catholic schools have continued to perform better than students in public schools. While this does not imply that Catholic schools themselves perform better, it is encouraging for the schools. At the same time, data from international student assessments suggest that there is still ample room for improvement for students in Catholic and public schools alike.

**Keywords:** K12 education, Catholic schools, United States, Enrollment, Achievement.

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## 1. Introduction

According to data from the National Catholic Education Association (NCEA), 1.8 million children were enrolled in primary and secondary Catholic schools in the United States in 2018-2019 (McDonald and Schultz, 2019). The country ranks seventh in the world in terms of total enrollment in K12 Catholic schools after India, the Democratic Republic of Congo, Uganda, Kenya, Malawi, and France (Secretaria Status, 2018). Yet the number of students enrolled in Catholic schools in the United States has steadily declined for the last 50 years, while it has increased in much of the developing world. Based on two notes prepared for NCEA (Wodon, 2019a, 2019b), this paper documents trends in enrollment and some of the challenges faced by Catholic schools in the country as well as some of their achievements.

Catholic schools have a long history in the United States. The United States' Conference of Catholic Bishops notes on its website that the first Catholic school in the United States was opened by Franciscans in 1606 in Florida<sup>1</sup>. Additional schools were later opened in other states, especially in Maryland, Pennsylvania and New York State that had a larger Catholic population. Georgetown University was established in 1789 by Bishop John Carroll as the first Catholic University in the United States. But it is only in the middle of the 19th Century that the number of Catholic schools and universities started to grow more rapidly in part to respond to demand from Catholic immigrants.

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1 See <http://www.usccb.org/about/public-affairs/backgrounders/history-catholic-church-united-states.cfm>.

The NCEA which represents and supports K12 Catholic education nationally was founded in 1904. At the turn of the century, the number of parochial Catholic primary schools was estimated 3,500. Two decades later, it had increased to 6,551 schools. For secondary schools, growth was even more rapid in the beginning of the 20th century from approximately 100 high schools in 1900 to more than 1,500 in 1920. The number of schools and total enrollment continued to increase until the mid-1960s. It reached a peak in 1965 with 5.2 million children enrolled in close to 13,000 schools. Since then, the number of children enrolled in Catholic schools has steadily declined for both elementary (primary) and secondary schools. For preschools, there has been a rise in enrollment until the mid-1990s and a stabilization thereafter. At the tertiary level, enrollment in Catholic Universities continued to grow until a few years ago when a slight decline was observed in part due to difficulties in maintaining enrollment and revenues in some comparatively smaller colleges and universities (Catholic and otherwise).

Many reasons may have led to the decline in enrollment in K12 Catholic schools over the last fifty years, but the largest factor has probably been the rising cost of tuition for parents. Historically, religious orders and parishes played a major role in operating Catholic schools. This meant that the out-of-pocket cost for parents of enrolling their children in the schools was relatively cheap since many priests, nuns, and religious brothers worked for free or for very low pay in the schools. The decline in vocations in the United States led to a massive change in staffing in the schools. Today, less than three percent of the teaching staff in Catholic schools is from the clergy or religious communities (McDonald and Schultz, 2019). Almost all teachers are lay, which means that even if they are willing to work for lower pay than teachers in private secular or public schools, the cost for parents of enrolling their children in the schools is higher. Combined with stagnant wages and incomes for most of the population over the same period, Catholic schools have become less affordable for the poor and many among the middle class.

While enrollment in Catholic schools has declined, the performance of students in the schools has remained strong in comparison to students in public schools. There is a substantial literature suggesting the possibility of a Catholic school advantage, starting with early work by Coleman et al. (1982), Greely (1982), Coleman and Hoffa (1987), and Bryk et al. (1993). These authors advanced the hypothesis of a Catholic school effect leading to good performance thanks in part to an emphasis in the schools and the broader Catholic community on both excellence and social justice. This emphasis may have led Catholic schools to ensure better success especially among low-income and minority students enrolled in the schools. Subsequent studies among others by Evans and Schwab (1995), Sander and Krautman (1995), Sander (1996), Neal (1997), Altonji et al. (2005), Carbonaro (2006), Hallinan and Kubitschek (2013), and Freeman and Berends (2016) also suggest the possibility of a Catholic school advantage. Yet there is no unanimity of this topic as there are also some studies not finding evidence of a Catholic school advantage after controlling for the characteristics of the students who enroll in Catholic versus public schools and the characteristics of their families (see for example Jepsen, 2003, and Elder and Jepsen, 2014). The debate on the existence of a Catholic school advantage and the magnitude of that advantage is therefore not fully resolved.

Given this context, the aim of this paper is to provide a basic diagnostic of K12 Catholic schools in the United States, focusing first on enrollment, and next on student achievement. How has the number of students in K12 Catholic schools evolved over the last few decades, and what have been the implications for their market share? What are some the challenges faced by the schools today? And what have been their achievements? Section 2 documents trends in enrollment. Section 3 reviews the performance of students on national learning assessments, with additional perspective provided through a discussion of the country's ranking in international metrics. A brief conclusion follows.

## 2. Enrollment in K12 Catholic Schools

### 2.1 Trends in Enrollment

Table 1 provides trends in enrollment and in the number of schools by decade since 1920. The data can also be used to compute the average size of schools by dividing total enrollment by the number of schools. In 2018-19, 1,239,449 students were enrolled in elementary and middle schools (first eight grades) with an additional 549,914 students in secondary schools (last four grades). This leads to a combined enrollment of 1.8 million children in close to 6,300 schools.

**Table 1: Number of Schools and Enrollment, 1920-2019**

	Elementary		Secondary	
	Schools	Students	Schools	Students
1920	6,551	1,796,000	1,552	130,000
1930	7,923	2,223,000	2,123	242,000
1940	7,944	2,035,000	2,105	361,000
1950	8,589	2,561,000	2,189	506,000
1960	10,501	4,373,000	2,392	880,000
1970	9,366	3,359,000	1,986	1,008,000
1980	8,100	2,293,000	1,540	846,000
1990	7,395	1,983,000	1,324	606,000
2000	6,923	2,013,084	1,221	639,954
2010	5,889	1,507,618	1,205	611,723
2019	5,092	1,239,449	1,197	549,914

Source: McDonald and Schultz (2019).

In a context of declining student enrollment, one might expect a reduction in both the number of schools (because of school closures as well as schools being merged) and the average size of schools. This is indeed the case. The decline in the number of the schools was steeper than the decline in the average size of the schools. This makes sense given that when several schools operate in the same area, schools with dropping enrollment can be merged with other schools. Still, the long-term decline in enrollment has also led to slightly smaller schools on average, especially for elementary schools.

The fact that the average size of schools is declining may be a concern for the future given that it is difficult to keep schools financially sustainable when they are too small for tuition and other revenues to cover the cost of operating the schools. At the same time, Catholic schools tend to be larger than other faith-based schools, at least at the elementary level. This could be because many Catholic schools are located in cities which allows for larger schools to operate since population density is higher. But lessons could perhaps be learned from the ability of other religious schools to function with often substantially smaller number of students on average per school<sup>2</sup>.

For the 49 years from 1970 to 2019, the (negative) annual growth rate for student enrollment at the elementary level was -2.0 percent per year, while it was -1.2 percent per year at the secondary level.

2 NCEA does not collect data on enrollment in Catholic nurseries and preschools, but data at that level are available for the United States and other countries from the annual statistical yearbooks of the Office of Church Statistics. The 2018 edition of the yearbook provides data up to 2016 (Secretaria Status, 2018). At the preschool level, there was an increase in the number of nurseries and preschools and the number of children enrolled until the mid-1990s, but thereafter the trends are similar to what is observed at the elementary and secondary levels.

The trends from 2010 to 2019 are similar to this long term decline, suggesting no stabilization in recent years. What is today the market share of Catholic schools? Estimates can be obtained by comparing data from NCEA with data from the Digest of Education Statistics published annually by the National Center for Education Statistics. The data available from the latest Digest for the 2018-19 school year are estimates based on projections, but they are reliable. The estimation suggests that Catholic schools account today for approximately 30 percent of all students in elementary and secondary private schools, and 3.5 percent of all students in public and private schools combined. Catholic schools used to have a substantially larger market share, but given the decline in enrollment in the schools and the increase in enrollment nationally, this market share has decreased over time.

How does the United States compare to other countries? Estimated by Wodon (2018) based on data from the Office of Church Statistics suggest that globally, the market share of Catholic schools is at 4.8 percent for primary schools and 3.5 percent for secondary schools. In Africa, the market shares of Catholic schools are estimated at 10.7 percent for primary schools and 7.4 percent for secondary schools, but in countries such as China and Russia, the role played by Catholic schools is minimal or non-existent. Overall, in the Americas (which also include Central America and South America) and in Europe, the market share of Catholic schools has declined over time. By contrast, in Africa and in Oceania, there has been an increase. In Asia, there has been a gain in market share at the primary level, and a loss at the secondary level. It can be shown (as expected) that market shares for Catholic schools tend to be significantly higher in countries where the schools benefit from public spending, but other religious, cultural, and historical factors also play a role.

Since enrollment in Catholic schools has dropped in the United States while it has increased in many other countries, especially in the developing world, the share of students in Catholic schools globally that live in the United States has dropped substantially. Data on enrollment in Catholic schools from the statistical yearbooks of the Church go back to 1973. The United States accounted that year for 13.6 percent and 10.4 percent of global enrollment in Catholic elementary and secondary schools, respectively. By 2016, these shares had dropped to 3.4 percent and 2.9 percent. For nurseries and preschools, the decline in the share of enrollment in Catholic schools accounted for by the United States has been smaller, but the end value is of a similar order of magnitude with 2.2 percent of all students in Catholic nurseries or preschools living in the United States. The share of students enrolled in Catholic schools globally who live in the United States will probably continue to decline in the future since enrollment is rising in the developing world and especially in Africa due to both high rates of population growth leading to larger cohorts of students and gains in educational attainment with progressively larger shares of students completing their primary education and continuing at the secondary level.

## **2.2 Shifts among Private Schools**

Enrollment in Catholic schools in the United States has been declining for the last 50 years. Has this trend also been observed for other private schools? Or are losses in Catholic schools due to a loss of market share for Catholic schools in comparison to other private schools? Recent analysis by Murnane and Reardon (2018) with the Private School Universe Surveys provides useful insights on this question (see also Murnane et al., 2018, for a summary of the authors' analysis). The authors show that between 1989 and 2013, private schools lost ground, but that among private schools, losses were concentrated for the most part in Catholic schools.

Using the Private School Universe Surveys, Murnane and Reardon estimate that there was a decline in enrollment in private schools overall from 3.15 million students in 1989 to 2.77 million in 2013, but with markedly different trends depending on the type of school being considered. In 1989, 1.77 million students were enrolled in Catholic elementary schools according to the survey. This was more than all other private schools combined, since 0.36 million students were enrolled in conservative Christian schools, 0.70 million in other religious schools, and 0.33 million in non-sectarian private

schools. By 2013, the number of students enrolled in Catholic elementary schools had dropped to 1.15 million according to the survey for that year. By contrast, conservative Christian schools and other religious schools increased their enrollment slightly to 0.39 million students and 0.72 million students respectively. Non-sectarian private schools had a larger gain with 0.50 million students enrolled in 2013.

As a result, while 56 percent of all children enrolled in private elementary schools were in Catholic schools in 1983 according to the analysis by Murnane and Reardon, the Catholic market share among all private schools dropped to 42 percent in 2013. The market shares of the three other types of private schools among students enrolled in private schools all increased over the same period<sup>3</sup>.

Murnane and Reardon also provide data on enrollment by region and location for the various types of private schools. The market share of Catholic schools among private schools declined between 1989 and 2013 in the Northeast and in cities, but it held steady or even grew in the other regions and in suburbs and rural areas. This suggests that the factors leading to the decline in enrollment and market share for Catholic schools nationally are complex and depend on the area considered. Because Catholic schools have had a stronger presence in cities in comparison to other types of private schools, with typically larger schools in terms of enrollment in each school than for the other types of private schools, the decline in cities led to a national decline in market share. But Catholic schools have done well in comparison to other private schools in other parts of the country.

### ***2.3 Factors Leading to the Decline in Enrollment***

Several reasons may have led to the decline in enrollment in Catholic schools in the United States. As mentioned in the introduction, the rising cost of tuition for parents is probably one of the main factors. Data from NCEA suggest that since the early 2000s, the average annual tuition cost for students in Catholic schools has been rising continuously at a rate well above that of inflation. For example, in the 2017-18 academic year, tuition costs reached \$4,841 at the elementary level and \$11,239 at the secondary level, versus respectively \$1,787 and \$4,100 in 2000-01 (for data on the operating costs of Catholic schools and tuition, see NCEA, 2018). While children from disadvantaged families may receive tuition assistance from schools, the increase in tuition still threatens affordability for many families. The constraints that tuition costs generate for the ability of Catholic schools to reach the poor are not peculiar to the United States (see for example Wodon, 2019c, on sub-Saharan Africa), but the decline in enrollment in the United States likely due in part to the rise in tuition costs has been much more pronounced than in most other countries.

One positive trend, however, is the increase in the number of states that have adopted school choice legislation. The American Federation for Children notes that today, 54 private school choice programs are in operation in 26 states plus the District of Columbia and Mexico. In 1996, only two such programs were in operation. While the programs currently fund only a very small part of the budgets of Catholic schools, this could change in the future and help reduce the average tuition costs paid by parents, at least for disadvantaged groups.

The issue of affordability affects the ability of Catholic and other private schools to serve the poor. This is one of the main points made by Murnane and Reardon in their analysis of trends in enrollment in private schools. The authors note that the decline in enrollment in Catholic elementary schools was concentrated among children from low- and middle-income families, probably in large part because of rising tuition costs. At the same time, the authors note that tuition costs also increased in many other types of private schools. Therefore the issue of affordability may not have been the sole reason

3 Estimates of enrollment in Murnane and Reardon differ from estimates based on the Digest of Education Statistics. This is in part because of the use of different data sources, but also because different calendar years are used for the comparisons. For example, the market share of Catholic schools among all private schools is higher in the analysis by Murnane and Reardon for 2013 than what is obtained using the latest data from NCES for the school year 2018-19, but this is in part due to losses in enrollment in Catholic schools between 2013 and 2019.

for the decline in enrollment in Catholic schools in comparison to trends observed in other private schools. However, because middle-class families now tend to live in the suburbs more, the fact that many Catholic schools were located in cities may have led to a higher exposure of those schools to the lack of affordability of tuition costs for the poor.

Apart from affordability issues, other factors may have contributed to the decline in enrollment over time in Catholic schools. Several such factors are discussed here. The discussion is not meant to be comprehensive or exhaustive. Rather, a few commonly cited explanations for the decline in enrollment are provided. First, Catholic schools have been exposed to more competition not only from other private schools, but also from the growth of charter schools which now enroll 3.3 million children nationally. While those schools are public and funded (mostly) by states, they are privately managed and thereby offer some of the advantages traditionally associated with private schools. Charter schools represent an attractive option for the poor in low-income urban areas, which is also where Catholic schools have experienced their losses in market share, as mentioned earlier.

Second, there has been a trend towards secularization in the United States, with a larger share of the adult population not affiliated with any religion. According to the Pew Research Center's 2014 Religious Landscape Study (Smith et al. 2015), the share of Catholics in the adult population declined from 24 percent in 2007 to 21 percent in 2014. Secularization may not affect all religions and all religious schools equally. It also does not mean that religion matters less for those who are affiliated with a particular faith. For example, in the South, conservative Christian schools gained market share among private schools. It has been suggested that this could be due in part to decisions by the Supreme Court to ban prayer in public schools, which may have made conservative Catholic schools more attractive to this particular segment of the population. Still overall, secularization may reduce the willingness of at least some parents to make the financial sacrifices necessary to send their children to a Catholic school.

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Third, the sex abuse scandal that affected the Church especially in the Northeast may also have contributed to a decline in enrollment in Catholic schools. Boston was the epicenter of the crisis, but other areas were also affected. Various factors may have been at work. Parental preferences for Catholic schools may have been weakened by the crisis, but in addition the financial cost for the Church of settling cases may have reduced the ability of dioceses in the Northeast to subsidize their Catholic schools, possibly leading to a decrease in scholarships and a corresponding increase in out-of-pocket costs for families.

Fourth, while students in Catholic schools continue to perform better on national assessments than students in public schools, the gap between students in Catholic schools and public schools is not necessarily large for all students. As discussed in the next section, data from the National Assessment of Educational Performance (NAEP) suggest that Catholic schools have fewer students failing to achieve basic thresholds of competency than public schools. This is good news for Catholic schools with respect to their mission towards the poor since on average, students who perform very poorly on assessments tend to come from disadvantaged socio-economic backgrounds. Yet if fewer of those students enroll in Catholic schools due to affordability issues, the comparative advantage of Catholic schools may apply to a smaller share of students in the future. In addition, as public and other private schools improve their performance, the extent to which the population will continue to perceive Catholic schools as having an advantage may be reduced.

Furthermore, a more technical point must be made even if it may not affect perceptions of Catholic schools in the population at large. Even if students in Catholic schools do perform on average better than students in public schools on various assessments, this does not by itself imply that Catholic schools themselves perform better than public schools. This is because differences in scores on assessments may be due to differences in the characteristics of the students who enroll in Catholic versus public schools, as opposed to differences in the characteristics of the schools. The literature does suggest a Catholic school advantage, but this advantage may not be large in absolute terms once controls for the characteristics of students enrolling in Catholic schools are accounted for in the analysis, and it may

also not be as large as simple comparisons of test scores on national and other learning assessments may suggest.

Finally, there has been a weakening of the social fabric of many communities, as noted among others by Putnam (2000). The loss of social capital in communities may have reduced the perceived role played by local parishes and Catholic schools. Said differently, the bond that used to tie families to Catholic schools may have been weakened over time, as has been observed for many other bonds with community institutions such as service clubs or volunteer organizations.

The above discussion is only tentative and the hypotheses advanced for the long-term decline in enrollment would need to be firmed up by more detailed research. Apart from the factors mentioned here, other factors may also have contributed to the decline in enrollment in Catholic schools. Assessing the extent to which various factors actually did contribute to declining enrollment would require advanced quantitative analysis that is beyond the scope of this paper.

Before concluding, apart from the trend towards school choice legislation mentioned earlier that may reduce affordability constraints for at least some students, another sign of hope for future enrollment in Catholic schools should be mentioned. It is the fact that the share of the Hispanic or Latino population is increasing nationally. A majority of this population is Catholic, so this group represents a natural target group for enrollment. In some geographic areas, efforts targeted at this population have already led to gains in enrollment among the Latino community, but there is substantial additional potential for uptake. This shift in population shares may also be one of the reasons why in the West, Catholic schools apparently increased their market share among all private schools.

### **3. Student Achievement**

#### ***3.1 Trends in Student Performance on National Assessments***

The picture that emerges from the data presented in the previous section is that of a Catholic education system in crisis in the United States. However, this picture would not be accurate without a discussion of some the achievements of Catholic schools. There is a substantial literature in the United States on the performance of students in Catholic schools in comparison to the performance of students in other schools. Broadly speaking, Catholic schools are perceived as doing well in comparison to public schools, but the extent to which this is due to the performance of the schools or to differences in the characteristics of the students who enroll in Catholic versus public schools remains debated.

Measures of student performance on standardized tests are available from the National Assessment of Educational Progress (NAEP). The latest results are for 2015. Key statistics from 2000 to 2015 are provided for public and Catholic schools in Table 2 for proficiency in mathematics. Unfortunately, data for other private schools or for the overall universe of private schools including Catholic schools are not available for recent years. Older data for the 1990s are also available on the NAEP website but findings are similar, so the focus is on data since 2000.

**Table 2: Average Student Performance in Math in Public and Catholic Schools, NAEP 2000-15**

Year	Mathematics, 4 <sup>th</sup> Grade			
	Public	Catholic	Absolute Difference	Percentage Difference
2015	240	247	7	2.9%
2013	241	246	5	2.1%
2011	240	245	5	2.1%
2009	239	245	6	2.5%
2007	239	246	7	2.9%
2005	237	244	7	3.0%
2003	234	244	10	4.3%
2000	224	237	13	5.8%
Mathematics, 8 <sup>th</sup> Grade				
2015	281	293	12	4.3%
2013	284	295	11	3.9%
2011	283	295	12	4.2%
2009	282	297	15	5.3%
2007	280	292	12	4.3%
2005	278	290	12	4.3%
2003	276	289	13	4.7%
2000	272	284	12	4.4%

Source: NAEP data.

The first estimate in the Table indicates that the average NAEP math score for students in 4th grade was 240 on a scale of 0 to 500. Since 2007 few gains have been achieved, but performance was lower before in both Catholic and public schools. Gaps between students in Catholic and public schools have decreased over time, but students in Catholic schools continue to do (slightly) better than those in public schools. The Table also provides estimates of student performance for 8th graders. In 8th grade, gaps are a bit larger between students in Catholic and public schools, and they have remained stable over time. Other data are available from NAEP for performance in the sciences and for 12th grade students, but Table 2 is sufficient to show that students in Catholic schools on average tend to perform slightly better on mathematics than students in public schools.



A similar finding emerges in Table 3 for reading ability. Students in Catholic schools tend to perform better on average than students in public schools, and the gaps between students from both types of schools tend to be larger in both absolute and proportional terms. These gaps have not changed much over the 15 year period for which estimates are reported in this paper. These findings for both mathematics and reading are encouraging for Catholic schools. The differences in performance reported in Tables 2 and 3 are often statistically significant. Yet these differences in student performance do not necessarily imply that Catholic schools themselves perform better than public schools. They only show that students in Catholic schools perform better than those in public schools.

**Table 3: Average Student Performance for Reading in Public and Catholic Schools, NAEP 2000-15**

Year	Reading, 4 <sup>th</sup> Grade			
	Public	Catholic	Absolute Difference	Percentage Difference
2015	221	237	16	7.2%
2013	221	235	14	6.3%
2011	220	235	15	6.8%
2009	220	236	16	7.3%
2007	220	232	12	5.5%
2005	217	234	17	7.8%
2003	216	235	19	8.8%
2000	211	229	18	8.5%
Year	Reading, 8 <sup>th</sup> Grade			
	Public	Catholic	Absolute Difference	Percentage Difference
2015	264	284	20	7.6%
2013	266	286	20	7.5%
2011	264	283	19	7.2%
2009	262	281	19	7.3%
2007	261	282	21	8.0%
2005	260	280	20	7.7%
2003	261	281	20	7.7%
2002	263*	281*	18*	6.8%*

Source: NAEP data.

Note: For Reading in 8<sup>th</sup> grade, the last data point is 2000.

### 3.2 Distribution of Performance on National Assessments

Table 4 provides additional information by considering the share of students falling into various categories of proficiency. To explain the estimates, consider the estimates for public schools in 2015. One in five students (19 percent) in 4th grade performed below the basic level in mathematics, so that 81 percent performed above that level. The next two statistics show the shares of students performing above proficiency (39 percent) and at an advanced level (7 percent). Statistics are again provided for 4th and 8th grade comparing public and Catholic schools.

**Table 4: Distribution of Student Performance in Mathematics and Reading, 2000-2015**

Year	Public				Catholic				Public				Catholic			
	<B	≥B	≥P	A	<B	≥B	≥P	A	<B	≥B	≥P	A	<B	≥B	≥P	A
	<b>Mathematics, 4<sup>th</sup> Grade</b>								<b>Mathematics, 8<sup>th</sup> Grade</b>							
2015	19	81	39	7	10	90	48	8	30	70	32	8	18	82	44	11
2013	18	82	41	8	12	88	48	8	27	73	34	8	16	84	46	12
2011	18	82	40	6	12	88	46	6	28	72	34	8	15	85	46	12
2009	19	81	38	6	12	88	46	7	29	71	33	7	13	87	47	13
2007	19	81	39	5	10	90	48	6	30	70	31	7	17	83	42	9
2005	21	79	35	5	12	88	43	5	32	68	28	6	19	81	40	8
2003	24	76	31	4	12	88	43	5	33	67	27	5	19	81	39	8
2000	36	64	22	2	19	81	33	3	38	62	25	5	23	77	32	5
	<b>Reading, 4<sup>th</sup> Grade</b>								<b>Reading, 8<sup>th</sup> Grade</b>							
2015	32	68	35	8	17	83	52	15	25	75	33	3	9	91	55	9
2013	33	67	34	8	18	82	49	13	23	77	34	4	8	92	59	10
2011	34	66	32	7	18	82	50	14	25	75	32	3	9	91	55	8
2009	34	66	32	7	18	82	50	15	26	74	30	2	9	91	51	6
2007	34	66	32	7	20	80	44	11	27	73	29	2	9	91	52	8
2005	38	62	30	7	20	80	46	14	29	71	29	3	10	90	49	7
2003	38	62	30	7	19	81	48	14	28	72	30	3	10	90	51	7
2002	38	62	30	6	20	80	47	13	26	74	31	2	10	90	51	6
2000	43	57	28	6	25	75	41	10	-	-	-	-	-	-	-	-

Source: NAEP data.

Notes: <B = Below basic; ≥B = At or above basic; ≥P = At or above proficient; A = Advanced. For Reading in 8<sup>th</sup> grade, the last data point in the Table is for 2002.

Table 4 suggests that higher average scores for students in Catholic schools come in part from a smaller share of students performing below basic level. For example, for mathematics in 4th grade, in comparison to 19 percent of students performing below basic level in public schools in 2015, the proportion is 10 percent in Catholic schools. This leads to a difference in the shares of student below the basic level of nine points. For mathematics in 8th grade, the gap between Catholic and public schools in the shares of students performing below the basic level is larger at 15 points. For reading in 4th grade, the gap is at 12 points. Finally, the largest gap is observed for reading in 8th grade where nine percent of students perform below the basic level in Catholic schools versus 25 percent for public schools, yielding a gap of 16 points.

In general, the shares of students performing at or above the basic level but below proficiency are not too different between Catholic and public schools, but Catholic schools have more students performing above the proficiency level. The statistics suggest that enrollment in Catholic schools may be especially beneficial for students who would otherwise have performed poorly. This finding cannot be ascertained simply on the basis of the statistics provided in this paper, but it is often mentioned in the literature based on more detailed research that accounts for the characteristics of the children enrolled in various types of schools.

The estimates in Tables 2 to 4 suggest that students in Catholic schools perform relatively well in comparison to students in public schools. This is good news for Catholic schools, especially given their stated mission to serve in priority students from disadvantaged backgrounds that may do less well on learning assessments. Yet again the basic statistics provided in this paper do not necessarily imply that Catholic schools perform better. For example, the share of students from disadvantaged backgrounds enrolled in Catholic schools has decreased over time as mentioned above, which may contribute to better average student performance. Furthermore, the estimates are not indicative of high performance either, whether students are enrolled in Catholic or public schools.

The distribution of student performance in Table 4 suggests that less than half of the students in public schools perform at the proficiency level on the NAEP tests for mathematics and reading. In Catholic schools in 2015, the proportion of students performing at or above the proficiency level is 48 percent for mathematics in 4th grade, 44 percent for mathematics in 8th grade, 52 percent for reading in 4th grade, and 55 percent for reading in 8th grade. In other words, only about half of the students perform at the proficiency level. There is thus room for improvement in Catholic as well as in public schools. The factors leading to low performance for many students are complex, and not necessarily related to the performance of the schools themselves since student and family characteristics often have a larger impact on student performance than school characteristics. Still, it remains that average performance levels are generally not high across the board.

While space is lacking in this paper to explore other dimensions of student performance in detail, it should be noted that students in Catholic schools also tend to perform well on other metrics. For example, graduation rates from high school tend to be higher in Catholic than in public schools, and the proportion of students who go to college is also larger in Catholic than in public schools.

Finally, the focus of this paper on student performance on the NAEP is narrow given the aim of Catholic schools to educate towards fraternal humanism. Even when keeping a focus on whether students are equipped to be productive as adults in labor markets, there is much more to education than the acquisition of cognitive skills as measured in traditional learning assessments. The changing nature of work has implications for the skills that workers will need to acquire in school and beyond to become team-oriented problem-solvers who can adapt to new circumstances. High-order cognitive and socio-emotional skills will increasingly be valued. Character education and grit must also be nurtured, and a case can be made that schools should also promote the acquisition of sound values.

### ***3.3 International Comparisons of Learning Achievement***

The fact that there is room for improvement is also clear from international comparisons. On average, students in the United States perform less well than students in many other developed countries. This emerges clearly in data from international student assessments such as the Programme for International Student Assessment (PISA) which measures reading ability and performance in mathematics and science among 15-year-olds. The latest PISA data are for 2015 (estimates for 2018 will be released in 2020). That year, a total of 71 countries participated in the assessment. The United States ranked 38th in mathematics and 24th in reading and science, which is not high. When compared to other countries that are members of the Organization for Economic Cooperation and Development, the United States stood towards the lower tail of the distribution.

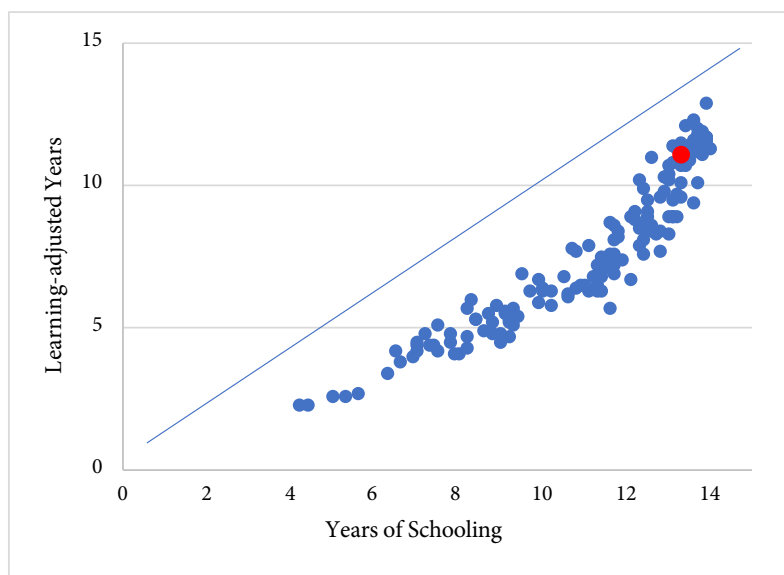
Therefore a slightly better performance for students in Catholic schools in comparison to those in public schools in the United States does not necessarily place students in Catholic schools at a high level by international standards. Similar findings for the performance of students in the United States are found when considering other international assessments such as PIRLS (Progress in International Reading Literacy Study) or TIMSS (Trends in International Mathematics and Science Study).

Another way to provide international perspective is to rely on harmonized learning outcomes data recently released by the World Bank. Data have been compiled for 157 countries to compare their performance according to two metrics: the number of years of schooling that children are expected to complete, and a learning-adjusted measure that accounts for learning performance. The learning-adjusted estimates incorporate findings from PISA and other international student assessments to account for the fact that while some students may be enrolled in a particular grade, they may not perform at the level of that grade on international assessments. This leads learning-adjusted years of schooling to be lower than the expected years of schooling since some students perform below expectations for their grade. With 13.3 years of expected schooling, but only 11.1 years under the learning-adjusted measure, the United States ranks 32nd, which is below a number of other countries that have lower levels of economic development.

Figure 1 provides a scatter plot for 157 countries comparing their performance according to two metrics: the number of years of schooling that children are expected to complete is on the horizontal axis, and the learning-adjusted measure on the vertical axis that accounts for learning performance. The distance between the observations on the scatter plot and the diagonal represents the loss in learning-adjusted years of schooling due to poor learning in school leading some students to perform below expectations for their grade. The United States does better than most other countries, but this is not surprising given that the level of economic development of the United States is much higher than that of most other countries. More concerning is the fact that many high income and even some upper middle-income countries perform better on the harmonized measure than the United States.

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**Figure 1: International Comparison of Learning-Adjusted Years of Schooling**



Source: Based on data from World Bank (2018).

These harmonized measures are not perfect, but they do suggest that important gains can and should be achieved for American students, whether they are in public or Catholic schools. As already noted, even good performance in Catholic schools in comparison to public schools does not necessarily imply great performance by international standards, especially in comparison to other countries with similar levels of economic development.

#### 4. Conclusion

The objective of this paper was to provide a basic diagnostic of trends in enrollment and achievement in Catholic schools in the United States. The analysis in this first part of the paper was based for the most part on enrollment data from NCEA, with a few additional insights from the literature, relying especially on a recent article by Murnane and Reardon.

Two main findings stand out regarding trends in enrollment. First, probably due in large part to rising operating costs leading to higher average tuition and affordability issues for the poor and the middle class, enrollment in Catholic schools has declined almost continuously since the mid-1960s when it reached a peak of 5.2 million children. Second, in comparison to Catholic schools, conservative Christian schools, other religious schools, and non-sectarian private schools have had more success in keeping or even growing their enrollment, at least since the late 1980s. This suggests that apart from issues of affordability that affect all private schools, the decline in enrollment in Catholic schools may have been due in part to other factors as well. These factors may include competition from charter schools in major cities where Catholic schools have traditionally had a strong presence, the pressure of secularization which may not affect all types of religious schools in the same way, the sex abuse scandal that affected the Catholic Church in the Northeast, a possibly less salient Catholic school advantage, and an erosion of the perception of this advantage. These are conjectures, and more detailed work would be needed to quantify the role of various factors in the decline in enrollment.

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Still, with 1.8 million students in elementary and secondary schools, Catholic schools continue to play a major role in the country's education system, with market shares of the order of 3.5 percent when considering all schools, and 30 percent among private schools. How may enrollment in Catholic schools evolve in the future? While this is difficult to predict, some of the current difficulties are likely to persist. Pressures related to affordability are not likely to change in the near term even if a growing number of states are adopting school choice legislation that can help in providing vouchers for some students. Pressures related to secularization are also not likely to change in the near term and the deepening sex abuse crisis affecting the Catholic Church may have an additional negative effect on future enrollment. On the other hand, the fact that the (majority Catholic) Hispanic or Latino population is rapidly growing in the country represents an opportunity. Yet to build on this and other opportunities to stem the long-term decline in enrollment, Catholic schools need to do their homework to understand the forces shaping their local education market, and implement interventions that can help them thrive.

The second part of the paper focused on student achievement. Again, two findings stand out. First, students in Catholic schools on average perform better than students in public schools on learning assessments such as the NAEP. Although this has not been discussed here in details, Catholic schools also tend to have higher graduation rates in secondary schools and a larger share of students going to college than public schools. Some of the differences between students in Catholic and public schools are far from negligible, as is the case for the reading assessment of the NAEP. Second, the higher average scores for students in Catholic schools come in part from a smaller share of students performing below basic level. Catholic schools may thus be especially beneficial for students who might otherwise perform poorly. This is good news for the mission of Catholic schools since they often aim to serve in priority students from disadvantaged backgrounds who tend to do less well in school (even if the share of the students from disadvantaged backgrounds that attend the schools has decreased over time).

Yet the better performance of students in Catholic schools does not necessarily imply that Catholic schools themselves perform better than public schools given the issue of self-selection. It is likely that part of the higher performance of at least some students in Catholic schools in comparison to public schools is due to differences in the characteristics of the students and their families, rather than to differences in the performance of the schools themselves. In addition, even if there is a Catholic school advantage leading to better performance for students in Catholic schools in comparison to the performance that would have been observed for those students in public schools, this does not imply that students in Catholic schools in the United States are doing very well. First, many students do not achieve proficiency levels as defined by the NAEP. In addition, the American education system as a whole is performing relatively poorly on cross-country measures of learning outcomes from international assessments. The same finding is observed when relying on the expected number of learning-adjusted years of schooling that children are expected to complete. The data thus suggest that there is room for improvement in Catholic and other schools beyond the important achievements recorded to-date.

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