

Do Children Perform Better in Religious Schools? Evidence from Population Data

Deni Mazrekaj and Christiaan Monden

Objective

To compare school outcomes of students in religious schools versus students in public schools using population data from the Netherlands

Background

Religious schools enjoy a high academic reputation

Percentage of U.S. Adults Who Rate Types of Schools As					
	Excellent	Good	Fair	Poor	
Independent	21	50	17	4	
Religious	21	42	21	9	
Charter	14	41	23	9	
Home	14	32	31	15	
Public	5	39	35	19	
		The state of the s			

However, religious minority schools seen as problematic

New York City Questions English,

Math and Science Taught at Yeshivas

Inspectorate investigates Islamic schools

Inspectorate investigates materials

for homophobic teaching materials

Literature

- Meta-analysis of over 90 studies (Jeynes, 2012)
 religious school advantage of about 0.15 SD in primary education and 0.17 SD in secondary education
 - ➤ However, almost all studies investigated only Catholic schools in the US, Australia or UK where religious schools are privately funded and include mostly high-SES students
- Studies using treatment effect bounds to separate the effect of religious schooling from private schooling: religious school advantage explained by selection effects (Altonji et al., 2005; Elder & Jepsen, 2014; Gibbons & Silva, 2011; Gihleb & Giuntella, 2017; Ngiem et al. 2015)
 - > However, exclusively Catholic primary schools

Contribution

- Administrative population data (1999-2007 cohorts) from the Netherlands where state has been funding religious schools since 1917: same funding irrespective of religion
- Catholic, Mainstream Protestant, Orthodox Protestant (e.g., Evangelical, Baptist), Islamic, Jewish, and Hindu schools
- We study both primary (high-stakes standardized test) and secondary education (diploma attainment, tertiary education enrolment)

Methods

Oster (2019) bounds

 Comparing students in religious vs public schools if the selection on unobserved characteristics is just as large as the selection on observed characteristics

Results

			DESCRIPTIV	E STATISTICS	S			
	All children	Public	Catholic	Mainstream Protestant	Orthodox Protestant	Jewish	Islamic	Hindu
$\mathbf{Sex} \; (\mathbf{boy} = 1)$.50	.50	.50	.50	.50	.52#	.47#	.49
Origin (minority = 1)	.16	.20	.13#	$.14^{\#}$.03#	.32#	.97#	.98#
Household education								
Less than high school	.15	.16	.14	.14	.14	$.06^{\#}$.53#	.31#
High school diploma	.46	.42	.47#	.48#	.52#	.34#	.33#	.50#
Bachelor degree	.23	.22	.24	.23	.23	.24	.09#	.14#
Master degree or Ph.D.	.16	.20	.16#	.15#	.11#	.36#	.05#	.06#
Household income	76,779	76,744	78,257	76,644	72,175#	95,097#	37,588#	53,738#
Mother's age at birth	31.03	31.16	31.25	30.86	29.57#	32.41#	28.13#	29.38#
Household structure								
Married parents	.67	.61	.68#	.71#	.93#	.76#	.75#	.42#
Cohabiting parents	.12	.14	.12	.09#	.01#	$.04^{\#}$	$.08^{\#}$.13
Parent and stepparent	.06	.07	.06	.06	.02#	.02#	.02#	.06
Single parent	.15	.18	.14#	$.14^{\#}$.04#	.18	.15#	.38#
Family transitions	.45	.54	.42#	.41#	.14#	.50#	$.48^{\#}$	1.08#
Household size	2.28	2.19	2.21	2.31	3.41#	2.63#	3.00#	2.07
Birth order	1.77	1.71	1.70	1.79	2.74#	2.23#	2.34#	1.71
Number of schools	7,108	2,704	2,154	1,886	305	< 8*	50	< 8*
Number of children	1,113,235	394,738	400,761	261,758	46,289	350	7,511	1,828

Number of children

Note:

BOUNDING THE CAUSAL EFFECT OF RELIGIOUS SCHOOLS ON CHILDREN'S ACHIEVEMENT, DIPLOMA ATTAINMENT, AND ENROLMENT INTO TERTIARY EDUCATION

	Standardized test core in primary education	Diploma attainment in secondary education	Tertiary education enrolment
School denomination (ref: public)			
Catholic	.015*	.006	.003
	(.007)	(.008)	(.004)
Mainstream Protestant	.042***	.011	.020
	(.010)	(.009)	(.021)
Orthodox Protestant	.078*	.019	.014
	(.038)	(.028)	(.029)
Jewish	130	032	.021
	(.011)	(.041)	(.019)
Islamic	.280**	.010	.025
	(.108)	(.011)	(.027)
Hindu	.396***	.026	.075
	(.088)	(.024)	(.069)
Number of children	1,113,235	506,198	437,668

Note: Bootstrapped standard errors are in parentheses (1,000 replications). R^2 max is set at 1.3 times R^2 from the regression including all controls as recommended by Oster (2019). The selection ratio is set at 1, indicating that the selection on unobserved characteristics is as high as the selection on observed characteristics. Control variables include birth year, gender, origin, household education, household income, mother's age at birth, household structure, number of family transitions, household size, and birth order. * p < .05; ** p < .01; *** p < .001 (two-tailed t-tests).

Conclusion

- Children in all but Jewish schools perform better on the standardized test than children in public schools
- The benefits of religious schooling were largest for children in Islamic and Hindu schools
- In the longer run, the influence of religious schooling faded out



[#] The coefficient is significantly different from the baseline coefficient of children in public schools in column 2 at the 5 percent level using a two-tailed z test for continuous variables and a two-tailed test of proportions for categorical variables.

^{*} For confidentiality reasons, Statistics Netherlands prohibits specifying the exact number of schools if the number is lower than eight.