

PERFORMANCE DIFFERENCES BETWEEN RELIGIOUS AND NONRELIGIOUS SCHOOLS

Dr. Geert Driessen

ITS, Radboud University Nijmegen, the Netherlands

g.driessen@its.ru.nl www.geertdriessen.nl

Prof. Michael S. Merry

University of Amsterdam, the Netherlands

m.s.merry@uva.nl

Dr. Orhan Agirdag

University of Amsterdam, the Netherlands

orhan.agirdag@gmail.com

THE DUTCH EDUCATION SYSTEM

Freedom of education principle:

- ◉ to found schools
- ◉ to organize the teaching in schools
- ◉ to determine the religious, ideological or educational and didactical principles

Public (neutral) and religious schools:

- ◉ full equal state funding
- ◉ budget based on number of students
- ◉ extra funding based on number of disadvantaged students (parental education; immigrant status)

PARADOX: RELIGIOUS SCHOOLS IN A STRONGLY SECULARIZED DUTCH SOCIETY

| | Religion population (%) | | Denomination schools (%) | |
|--------------|-------------------------|----|--------------------------|----|
| No religion | 63 | | 32 | |
| Religious | 37 | | 68 | |
| • Protestant | | 15 | | 30 |
| • Catholic | | 14 | | 30 |
| • Islamic | | 5 | | <1 |
| • Other | | 3 | | 6 |

EXPLANATIONS RELIGIOUS SCHOOL CHOICE

- ◉ support political religious parties and laws
- ◉ deliberate choice parents; religious beliefs and values (Christian, Muslim)
- ◉ simply nearest school
- ◉ student composition (public schools: more low-SES and immigrant) → quality → achievement
- ◉ religious schools perform better

EXPLANATIONS OUTCOME DIFFERENCES

- ◉ selectivity thesis: religious schools attract better and more motivated students
- ◉ strong achievement-oriented socializing culture
- ◉ large degree of solidarity and involvement of parents, teachers, and administration
- ◉ more stable educational climate
- ◉ more effective management and administration

RESEARCH QUESTION & HYPOTHESES

Research question

Are there any output differences between public and the various religious schools - taking into account their differing student populations?

Hypotheses

- Religious schools will perform better in the area of *non-cognitive measures*, because they were explicitly established with this aim in mind.
- Religious schools, owing to their distinctive mission, will also perform better *academically* than public schools serving a comparable student population.

DATA

The COOL⁵⁻¹⁸ cohort study 2013/14

National representative sample of 386 elementary schools:

- 143 Public (i.e. nonreligious)
- 101 Protestant
- 125 Catholic
- 17 Islamic

27,457 students in grades 2, 5 and 8 (6, 9 and 12-year-olds)

DEPENDENT VARIABLES (EFFECT MEASURES)

| Grade | Cognitive domain |
|-------|------------------------------------|
| 2 | Language |
| | Math |
| 5 | Reading |
| | Math |
| 8 | Reading |
| | Math |
| 8 | <i>Elem. school leavers' test:</i> |
| | Language |
| | Math |
| | Study skills |
| | Total |
| 8 | Recommendation secondary ed. |

| Grade | Non-cognitive domain |
|-------|----------------------|
| | <i>Motivation:</i> |
| 5 | Self-efficacy |
| | Task motivation |
| 8 | Self-efficacy |
| | Task motivation |
| | <i>Citizenship:</i> |
| 8 | Knowledge |
| | Reflection |
| | Skills |
| | Attitudes |

INDEPENDENT & CORRECTION VARIABLES

| Independent variables | |
|-----------------------|--------------------|
| School denomination | Public (reference) |
| | Protestant |
| | Catholic |
| | Islamic |

| Correction variables | |
|----------------------|------------------------|
| Student level | parental education |
| | immigrant origin |
| School level | % low educated parents |
| | % immigrant students |

METHOD

Multilevel analysis: SPSS Mixed models

Model testing

1. gross denomination effect: differences between public schools and each of the denominational school sectors
2. correction at student level (parental education, immigrant background)
3. net denomination effect: correction at student plus school level (% low educated, % immigrant)

All effect measures standardized: z-scores (mean=0; sd=1)

Interpretation effects: 0.20=small; 0.50=medium; 0.80=strong

EFFECTS OF DENOMINATION ON COGNITIVE PERFORMANCE (REFERENCE: PUBLIC SCHOOLS)

| Grade | Domain | Gross effects (model 1) | | | Net effects (model 3) | | |
|-------|----------------|----------------------------|-------|--------|--------------------------|-------|--------|
| | | Prot. | Cath. | Islam. | Prot. | Cath. | Islam. |
| 2 | Language | 0.14 | 0.07 | -0.70 | -0.00 | -0.06 | -0.10 |
| | Math | 0.07 | 0.09 | -0.23 | -0.02 | -0.01 | 0.06 |
| 5 | Reading | 0.14 | 0.17 | -0.37 | 0.02 | 0.06 | 0.10 |
| | Math | 0.18 | 0.12 | -0.24 | 0.07 | 0.03 | 0.27 |
| 8 | Reading | 0.09 | 0.16 | -0.25 | -0.08 | -0.00 | 0.29 |
| | Math | 0.19 | 0.15 | 0.13 | 0.06 | 0.03 | 0.25 |
| 8 | Language | 0.22 | 0.09 | -0.33 | 0.08 | -0.03 | 0.05 |
| | Math | 0.16 | 0.09 | -0.00 | 0.05 | 0.00 | 0.20 |
| | Study skills | 0.20 | 0.12 | -0.23 | 0.06 | 0.02 | 0.06 |
| | Total | 0.20 | 0.15 | -0.20 | 0.06 | 0.03 | 0.13 |
| 8 | Recommendation | 0.13 | 0.07 | -0.15 | 0.02 | -0.01 | 0.03 |

$p < 0.05$ $p < 0.01$ $p < 0.001$

EFFECTS OF DENOMINATION ON NON-COGNITIVE PERFORMANCE (REFERENCE: PUBLIC SCHOOLS)

| Grade | Domain | Gross effects (model 1) | | | Net effects (model 3) | | |
|-------|---------------|----------------------------|-------|--------|--------------------------|-------|--------|
| | | Prot. | Cath. | Islam. | Prot. | Cath. | Islam. |
| 5 | Self-efficacy | -0.08 | -0.06 | 0.29 | -0.04 | -0.02 | -0.01 |
| | Motivation | -0.10 | -0.01 | 0.27 | -0.05 | 0.02 | 0.04 |
| 8 | Self-efficacy | -0.07 | -0.05 | 0.37 | -0.04 | -0.03 | 0.10 |
| | Motivation | -0.08 | 0.04 | 0.60 | 0.00 | 0.11 | -0.08 |
| 8 | CS Knowledge | 0.03 | 0.09 | -0.44 | -0.08 | -0.01 | -0.12 |
| | CS Reflection | -0.11 | -0.06 | 0.55 | -0.06 | -0.02 | 0.10 |
| | CS Skills | -0.14 | -0.03 | 0.57 | -0.10 | 0.00 | 0.00 |
| | CS Attitudes | -0.10 | -0.02 | 0.59 | -0.06 | 0.02 | 0.05 |

$p < 0.05$ $p < 0.01$ $p < 0.001$

CONCLUSIONS

- ◉ After controlling for input differences no cognitive nor non-cognitive output differences between religious and public non-religious schools remain.
- ◉ Explanations for the religious school paradox solely based on the output measures are insufficient. Reasons other than the academic performance need to be examined.
- ◉ Importantly, the above does not hold for Islamic schools. They have low raw scores but are by far adding the greatest educational value.