

Effects of a Well-Designed Teacher Training Program  
in Israel.  
Angrist and Lavy, 1998

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# The program

- "30 towns"
  - ▶ Israel, 1995-, Two districts from Northern Jerusalem and many other towns
  - ▶ increased budget for schools
  - ▶ but teachers' salaries kept fixed
  - ▶ in Jerusalem, extra money was spent mostly on teacher training
  - ▶ weekly training with outside experts
  - ▶ focused on modern teaching methods
- Treatment group
  - ▶ 10 schools in Northern Jerusalem
  - ▶ teachers of fourth graders
- Outcome variables
  - ▶ standardized reading tests (administered for middle school admission)
  - ▶ standardized math tests (designed for the program evaluation)
- Non-experimental design

# The control group

- Non-experimental control group
  - ▶ schools in Jerusalem (same school district)
  - ▶ 11 control schools
  - ▶ average reading test scores in treated and control schools are very similar in 1994
- Matching students
  - ▶ by their 1994 test score
  - ▶  $4 \times 4$  categories created from the two test scores
  - ▶ "matching estimation:" average treatment - control differences within each category
  - ▶ no difference in 1994

# Results

- Math

- ▶  $ATE = 0.25$
- ▶ smallest in the lowest group (0.15, not significant)
- ▶ largest in the third group (0.35)

- Reading

- ▶  $ATE = 0.40$
- ▶ smallest in second and fourth group (0.17-0.19, not significant)
- ▶ largest in lowest group (0.71)

# Cost-effectiveness

- Estimated effect is 0.25-0.40 units of standard deviation
  - ▶ average cost per class is \$12,000
- Comparison: cost of similar effect from reduced class size
  - ▶ based on estimates by Angrist and Lavy (the Maimonides-rule paper)
  - ▶ decreasing class size from 40 to 30 would increase test scores by 0.15
  - ▶ cost would be around \$21,500 per class
  - ▶ an increase of 0.25 would therefore cost around \$35,000
  - ▶ almost three times the cost of teacher training