# Double for nothing? Experimental evidence on an unconditional teacher salary increase in Indonesia

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# Motivation and objectives

- Essential component of personnel economics: should governments pay public servants more to get better service delivery?
- Public sector teachers: big debate around the world, currently in the US, every once in a while in France, and in developing countries.
- Pros: attract better people, motivate them, give them better working conditions (no need to work second jobs for example)
- Cons: if not conditional on performance, then why would it work in the long term?

# Context

- Indonesia 2009-2012: public school teachers able to double their pay if undergo easy certification.
- Justification: will increase motivation and commitment of teachers, will enhance their performance and therefore children's education will improve.
- Policy implemented in a slow-phase in, in each district 10% of teachers are invited to do the certification every year, typically called by seniority
- Authors: create variation in the intensity of treatment by strongly intensifying rate of certified teachers in certain (randomized) school districts.
- In "treated" schools, 60% of teachers are paid double, vs in control schools, only 30 to 40%. Everything else seems the same on average.

# Results

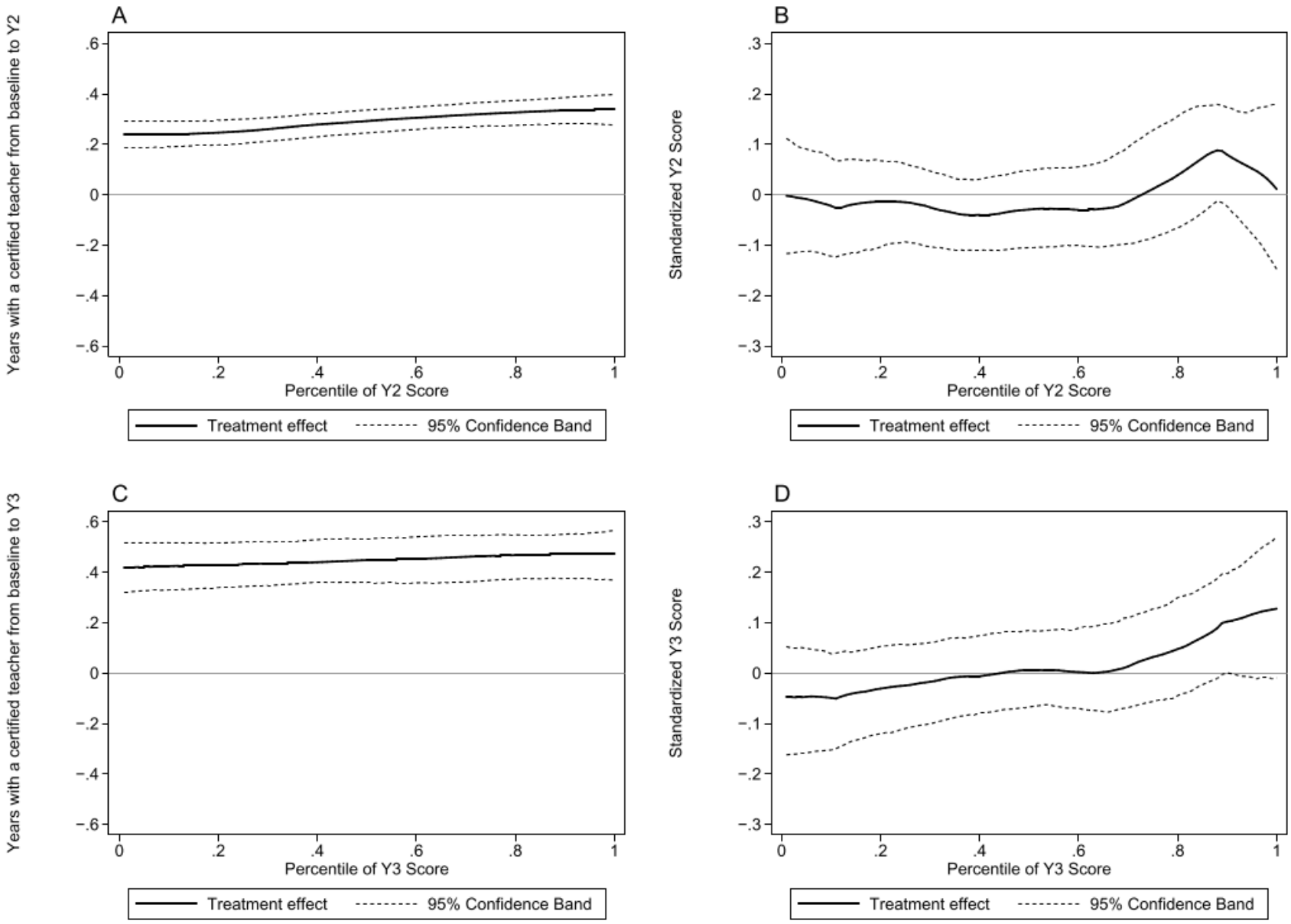
## More money, less financial problems...

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All teachers | | | | | | Target teachers only | | | | | |
| | $Y2$ | | | $Y3$ | | | $Y2$ | | | $Y3$ | | |
| | Control mean | ITT (simple diff.) | ITT (diff. in diff.) | Control mean | ITT (simple diff.) | ITT (diff. in diff.) | Control mean | ITT (simple diff.) | ITT (diff. in diff.) | Control mean | ITT (simple diff.) | ITT (diff. in diff.) |
| Financial problems | 0.50 | -0.09*** | | 0.56 | -0.09*** | | 0.48 | -0.13*** | | 0.51 | -0.16*** | |
| | [0.50] | (0.02) | | [0.50] | (0.02) | | [0.50] | (0.02) | | [0.50] | (0.03) | |
| Satisfied with total income | 0.60 | 0.09*** | | 0.60 | 0.07*** | | 0.60 | 0.17*** | | 0.65 | 0.13*** | |
| | [0.49] | (0.02) | | [0.49] | (0.02) | | [0.49] | (0.02) | | [0.48] | (0.02) | |
| Absent from school at least once last week | 0.14 | -0.00 | -0.02 | 0.13 | 0.01 | -0.00 | 0.12 | -0.03* | -0.04** | 0.10 | 0.00 | -0.01 |
| | [0.34] | (0.01) | (0.01) | [0.33] | (0.01) | (0.01) | [0.32] | (0.02) | (0.02) | [0.31] | (0.02) | (0.02) |
| *Baseline controls* | | no | yes | | no | yes | | no | yes | | no | yes |

## But no improvement for students.

| | (1) $Y2$ | (2) $Y3$ |
|---|---|---|
| Treatment effect | -0.005 | 0.010 |
| | (0.024) | (0.026) |
| Observations | 279,066 | 274,993 |
| $R^2$ | 0.28 | 0.24 |

# Even with QTE?



# Comments

- Can reject a 0.1 s.d. increase at the 95% level. (who's surprised?)
- Importantly: means the only channel through which unconditional teacher pay could increase student outcome is through recruiting better teachers -¿ in the very long term only, very expensive.
- $138 for 0.175 s.d. improvement per year.
- What did they do exactly? Change the intensity of treatment? Ok, but would have been a first step to compare the students of certified, paid teachers with other students.