

Do Parents Compensate or Reinforce Child Ability Gaps? Evidence from Egypt using Private Tutoring

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ERF Annual Conference

June 2, 2020

Motivation

- ❑ There are natural differences in children's initial endowments and cognitive abilities.
- ❑ How parents respond to these differences, have significant implications on the children's future chances and prospects.
- ❑ The question is debatable in the literature with inconclusive findings.

Our fundamental research question

- ❑ To assess the parental investment responses to siblings' ability gaps in Egypt: who compensates, who reinforces or who equalizes?

Outline

- **Literature**
- **Data**
- **Methodology**
- **Findings**
- **Conclusion and Next Steps**

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Related literature

Parental investment in children could have three main directions :

1. Who reinforces?

- Parents direct financial and nonfinancial resources to more able children to maximize returns to investment (Griliches, 1979; Behrman, Pollak and Taubman, 1982; Becker and Tomes, 1986).
- Marginal returns to investment is higher when the child is of higher ability .

Related literature

2. Who compensates ?

- Parents seek to compensate or equalize gaps in children outcomes, so they divert more resources to less endowed children (Behrman, Rosenzweig, & Taubman, 1994; Datar, Kilburn, & Loughran, 2010; Rosenzweig & Schultz, 1982).
- Parents are motivated by equity more than efficiency.

Related literature

3. Who neutralizes ?

- Still others found neutral effect of child endowment differences and parental investment decisions (Almond and Currie, 2010; Yi *et al.*, 2015).

Related literature

4. Other factors?

- Also, socio-economic and demographic factors could shape the investment strategy that parent can follow (Eirich, 2011; Erola, Jalonen and Lehti, 2016), where wealthy families could adopt compensating strategies to equalize outcomes across siblings and at the same time, poor families may decide to invest their limited resources on higher endowed children (Hsin, 2012).

Related literature

2. Jacobs externalities

- ❑ Concentration of firms' from variety of industries within geographic regions.
- ❑ “Urbanization economies”.

Which

- ❑ Promote opportunities to imitate, share and recombine ideas and practices across industries.
- ❑ Promote Inter-Industry knowledge spillovers.
- ❑ Promote competition rather than monopoly serves as an incentive for firms to innovate, speed up technology adaptation and promote economic growth.

Outline

- Literature
- **Methodology**
- Descriptive Statistics
- Preliminary Findings
- Summary of results

Data

- ❑ ELMPS 2012
- ❑ The sample is restricted to only two siblings
- ❑ Randomly selected
- ❑ who complete primary education and who are observed in at least one round (1998, 2006, or 2012),
- ❑ And live within their households with their parents' heads of households.
- ❑ The sample consists of 950 siblings from 450 households.

Model

➤ Ordered probit model

$$S_{ij}^* = \alpha_i + \sum_{k=1}^K \beta_{ki} X_{kij} + u_i$$

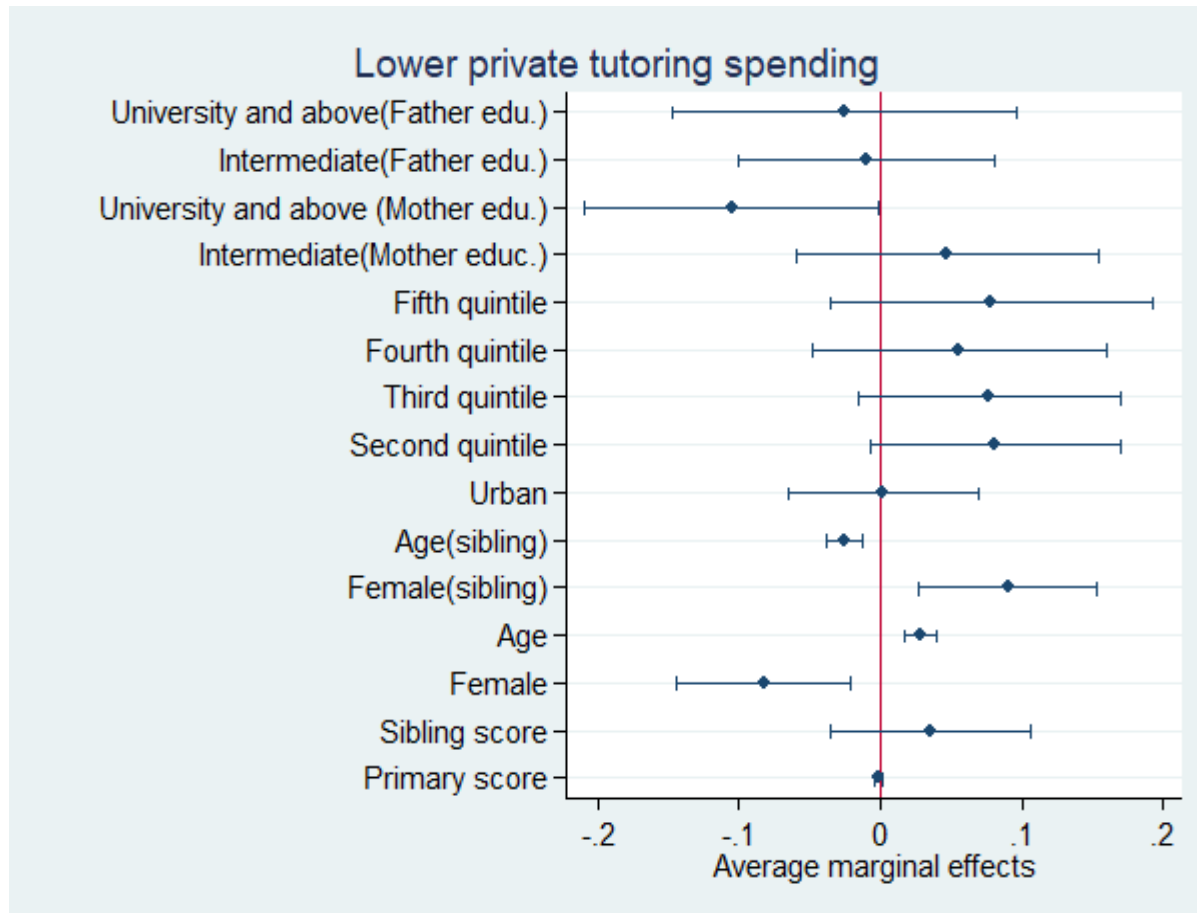
- S_{ij} is the outcome variable of child i in household j measured as the difference in investment outcome between index child and the other sibling, and it takes three values; -1, 0, and 1.
- X_{ki} is a K vector of child level, sibling and family characteristics, and
- u_i is the standard random error term.

Model

- Expenditure on private tutoring as a fraction of family income, receiving group or private tutoring, are used as a direct measure of school investment.
- The key control variables of interest, $primaryscore_i$ of the focal child
- $index_i$ denote the child's primary score as a measure of the own endowment, $index_i$ is a binary variable equals 1 if the sibling has a higher primary score and equals zero otherwise.
- X_{ij} is a vector of child and sibling level characteristics including child's age, and sex.
- Y_j is a vector of parental and household-level characteristics including the mother's education level, the father's education level, the household economic status measured by the wealth index, and the region of residence.

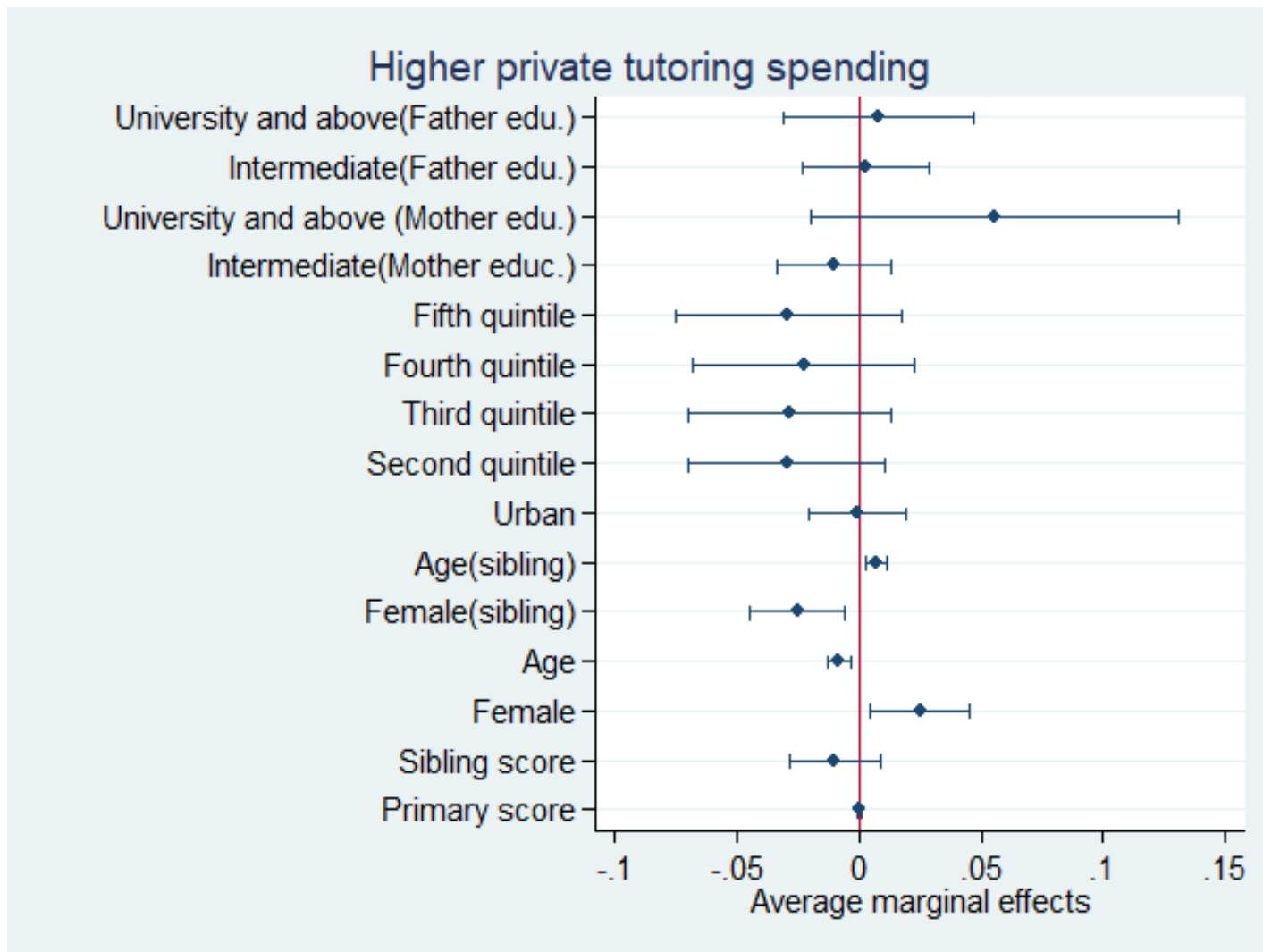
Findings

- Predicted probabilities of lower private tutoring spending



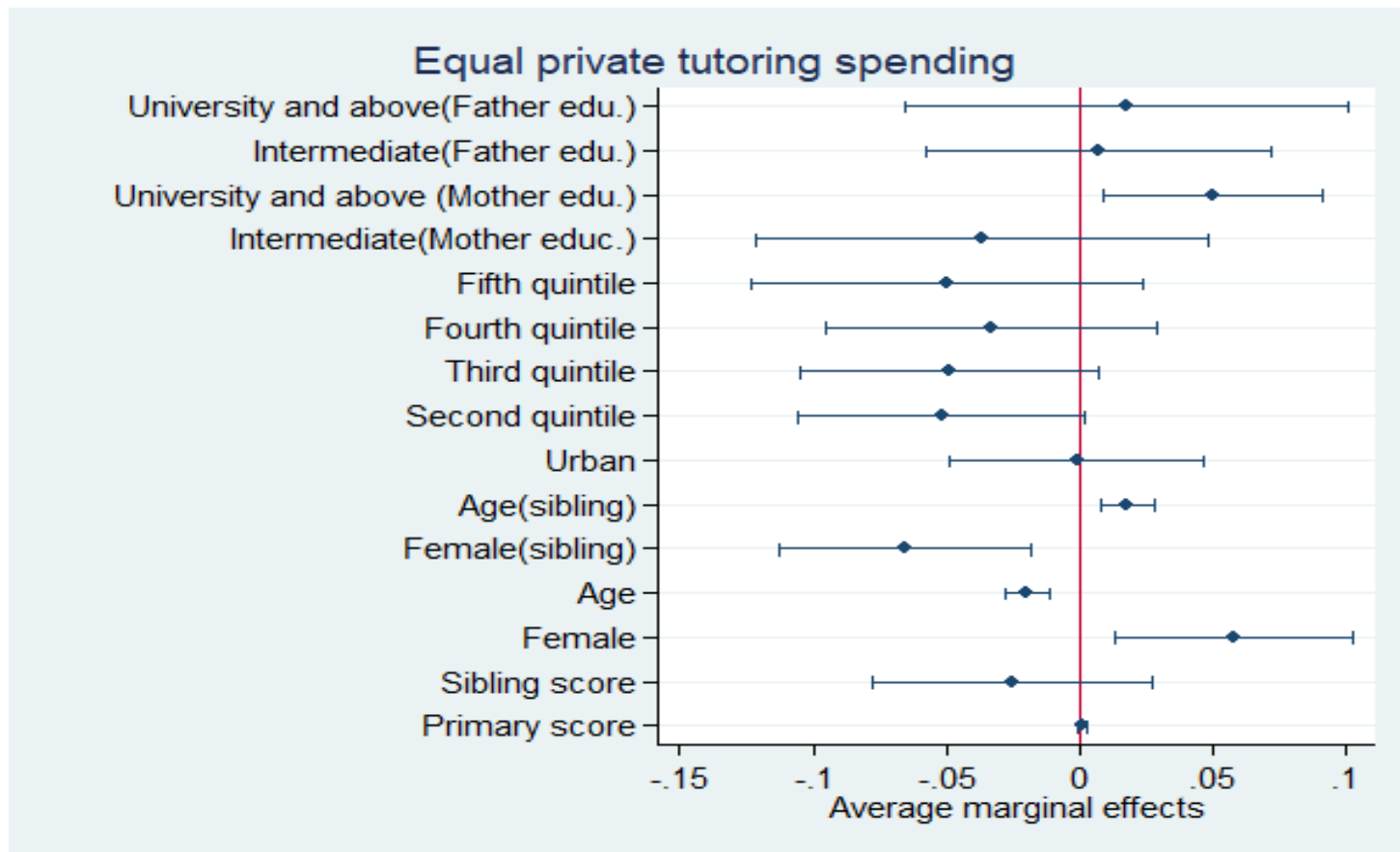
Findings

- Predicted probabilities of higher private tutoring spending



Findings

- Predicted probabilities of equal private tutoring spending



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Summary of results

- ❑ Parent's investment acts as a net equalizer between siblings in financial terms.
 - This result suggests that differences in primary scores between siblings are muted by parental responses which imply spending equal amounts on both siblings regardless of the differences in their scores.
- ❑ Mother's education has a powerful effect on squeezing the ability gaps between siblings.
- ❑ Higher tutoring investment in favor of female students.
- ❑ Younger sibling receives more tutoring than older sibling.

Thank You