

Heterogenous Impacts of Education Policies by Gender and Culture

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Introduction

Motivation

- ▶ Human capital accumulation leads to economic growth.
- ▶ How to promote education:
 - ▶ Supply-side intervention
 - ▶ e.g. School construction (Duflo, 2001 and 2004 etc.)
 - ▶ Cost reduction approach
 - ▶ e.g. subsidization in RCTs (Benhassine et al., 2013; Baird et al., 2011 etc.)
 - ▶ e.g. Removing tuition (Lucas and Mbiti, 2012; Keats, 2018; Duflo et al., 2021 etc.)

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Motivation

- ▶ Supply-side interventions can fail when the demand for education is low.
- ▶ Particularly, the demand for daughters' education is low.
 - ▶ Son preferences in resource allocation (Jayachandran and Kuziemko, 2011; Jayachandran, 2015)
 - ▶ Gender roles and higher opportunity costs to enrol daughters (Giménez-Nadal et al., 2011; Burde and Linden, 2011)
- ▶ Cost reduction can effectively raise the demand for education.
 - ▶ Particularly, zero prices boost the demand for underused goods (Shampanier et al., 2007; Cohen and Dupas, 2010; Ashraf et al., 2010; Dague, 2014; Dupas et al., 2016; Iizuka and Shigeoka, 2022)

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Relevant context: Indonesia in the 1970s

- ▶ In Indonesia, both policies were simultaneously launched:
 - ▶ FPE, or the abolishment of primary school fees (1977 and 78)
 - ▶ INPRES school construction (1973 - 78) (Duflo, 2001, 2004; Martinez-Bravo, 2017; Mazumder et al., 2019; Bazzi et al., 2020; Jung et al., 2021; Rizal et al., 2023; Hsiao, 2023 etc.)
- ▶ INPRES was effective for boys but *not* for girls on average (Breierova and Duflo, 2004; Hertz and Jayasundera, 2007; Ashraf et al. 2020)

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Relevant context: Indonesia in the 1970s

	(1)	(2)	(3)	(4)	(5)
Dependent variable:	Child ever worked	Child worked in the last month	Child is employed for housework	No Labor Force Participation	
Female	0.0334*** (0.00540)	0.0368*** (0.00487)	0.0112*** (0.000716)	0.332*** (0.00967)	0.441*** (0.0210)
Observations	9,609	9,609	289,144	3,077,134	128,214
R-squared	0.019	0.019	0.011	0.218	0.256
Controls for religion, ethnicity/language, birthplace	o	o	o	o	o
Data	IFLS5		1990 Census	2010 Census	1990 Census

- ▶ A low demand for daughters' education in Indonesia:
 - ▶ A heavier housework burden for daughters (a higher opp. cost)
 - ▶ Lower labor market returns to education for girls

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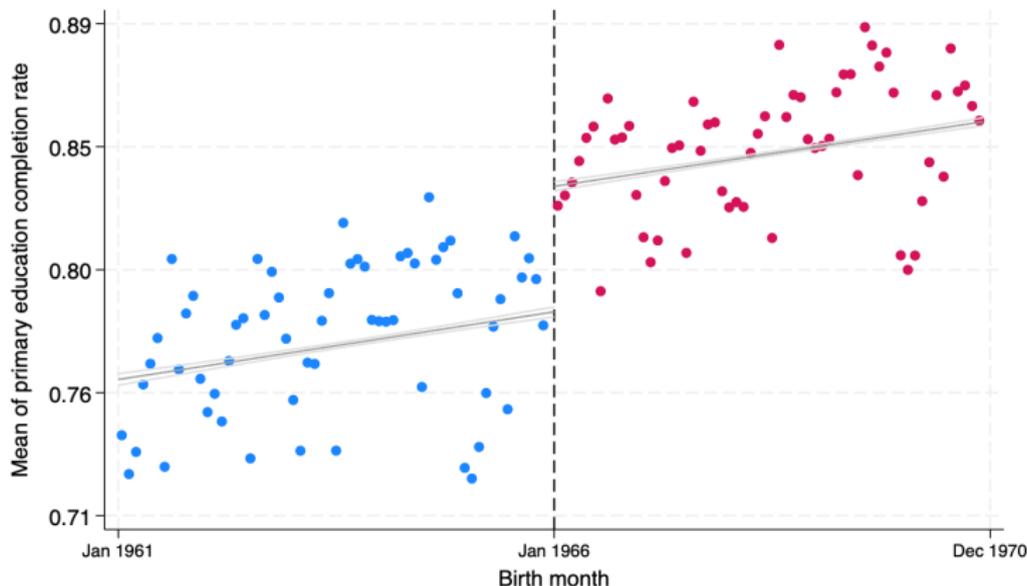
Research questions

- ▶ **Research question 1:**

When the demand for female education is low, does the cost reduction approach outperform supply-side interventions?

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Methodology



Female Primary Education Completion Rate

- **Methodology:** RDD (birth months as the running variable)

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Summary of findings

► **Key findings:**

- Cost reduction (FPE) outperformed a supply-side intervention (INPRES) in improving female education.
 - Increased completion rates across all education levels, from primary to university education, and improved literacy
 - Boys also improved these measures but relatively by less, resulting in a narrower gender gap in education
 - e.g. the primary educ. completion rates improved by 4.7-5.3 % (3.6-4.1 ppt) for girls and 3.0-3.5 % (2.6-3.0 ppt) for boys
- But supply-side interventions can complement cost reduction.
 - FPE was more effective in the areas with more INPRES schools

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Summary of findings

- ▶ In the remainder of the paper:
 - **Research question 2:** How does a local culture shape the impacts of education policies differently?
 - Motivation: INPRES increased female education in groups with bride price (BP) practice (Ashraf et al., 2020)
 - BP: transfer from groom family to bride family upon marriage
- ▶ **Key findings:**
 - No evidence of improved effectiveness of FPE in BP groups
 - Marriage market returns to female education in BP groups
 - ... complementary to INPRES as an extra source of demand
 - ... likely crowded out by the direct demand increase by FPE