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Wild, Frederik

Heterogeneous Effects of Womens Schooling on Fertility, Literacy and Work: Evidence from Burundis Free Primary Education Policy

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Heterogenous Effects of Women's Schooling on Fertility, Literacy and Work

Evidence from Burundi's Free Primary Education Policy

Frederik Wild
University of Bayreuth

David Stadelmann
University of Bayreuth

Literature Review and Contribution

- **Adolescent pregnancy is a prevailing issue...**
 - In sub-Saharan Africa, 10% of women between the ages 15-19 have already given birth to at least one child (United Nations [2022](#))

- **...and attached to several detrimental outcomes**
 - Adverse infant and child health, increased maternal mortality, lower human capital, and less favorable labor market outcomes (Levine et al. [2009](#))

- **Educating women widely recognized as an effective policy to**
 - Tackling challenges to gender equality at large (United Nations [2001](#))
 - Influence fertility behavior via *income & learning* (Becker [1960](#); Michael [1973](#))
 - Reduce teenage pregnancies and their negative consequences (World Bank [2017](#))

- **Early empirical literature has consistently shown a negative link** (Cochrane [1979](#); Martin [1995](#); Ainsworth et al. [1996](#))
- **However, education and/or childbearing is often jointly determined** (Martinez and Odhiambo [2018](#))
- **More recent literature employs quasi-experimental methods** (Breierova & Duflo [2004](#))
- **In sub-Saharan Africa, Free Primary Education Policies (FPE) act as exogenous shocks to schooling** (e.g. Behrman [2015](#); Keats [2018](#))

Newer literature confirms negative (causal) effect of education on fertility in sub-Saharan Africa

- **We add onto the recent literature by**
 - Investigating Burundi's Free Primary Education Policy of 2005 as a natural experiment
 - Assessing the effects of education on fertility, literacy and work outcomes
 - **Exploring a distinct heterogeneity:** women's household wealth (wealthy vs. poor)
- **Heterogeneities have not been explored extensively by recent literature**
 - Particularly in the downstream effects of education
- **However, decisions on schooling and childbirth often depend on socio-economic background** (Ilahi [2000](#); Levine et al. [2009](#))

- **Our results show that**

- Burundi's FPE positively influenced educational attainment, both for poor and wealthy
- Policy-induced schooling reduced (desired) teenage fertility and associated mechanisms
- Downstream effects of added education are **distinctly heterogenous**

- **One year of policy-induced education effects... [poor vs. wealthy]**

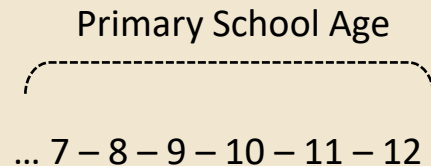
- ...literacy by **6.7pp** vs. **2.7pp** (insignificant)
- ...desired # of children by **6.4%** vs. **2.2%** (insignificant)
- ...likelihood of teenage pregnancy by **6.9pp** vs. **1.2pp** (insignificant)
- ...likelihood of teenage marriage by **9.0pp** vs. **4.5pp**
- ...likelihood of working outside of the hh. for cash by **5.7pp** vs. **0.8pp** (insignificant)

Empirical Strategy & Data

- **We follow the literature and employ a fuzzy Regression Discontinuity Design (RDD) of “*just treated*” women** (e.g. Behrman [2015](#); Keats [2018](#))
- **FPE policy of 2005 abruptly removed school fees (year-over-year)**
 - Eligibility solely dependent on children’s age at time of intervention (i.e. their year of birth)
 - Intervention *exogenously* sorts pupils into treatment & control groups

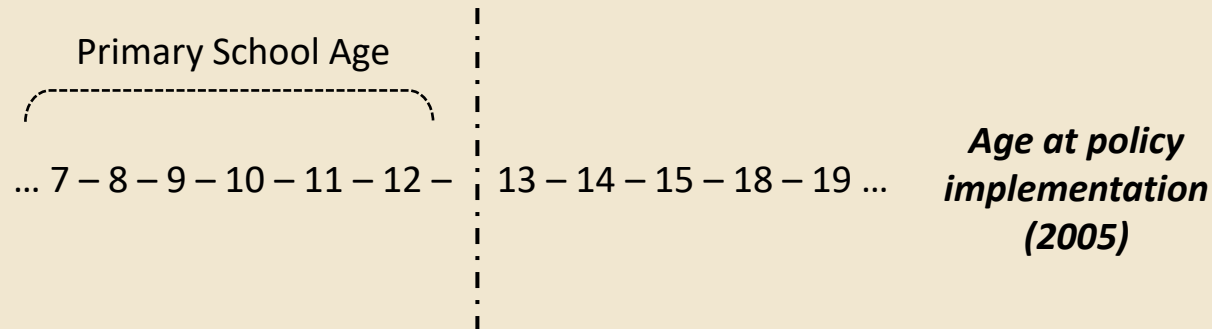
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Burundi – Primary School between the Ages 7-12



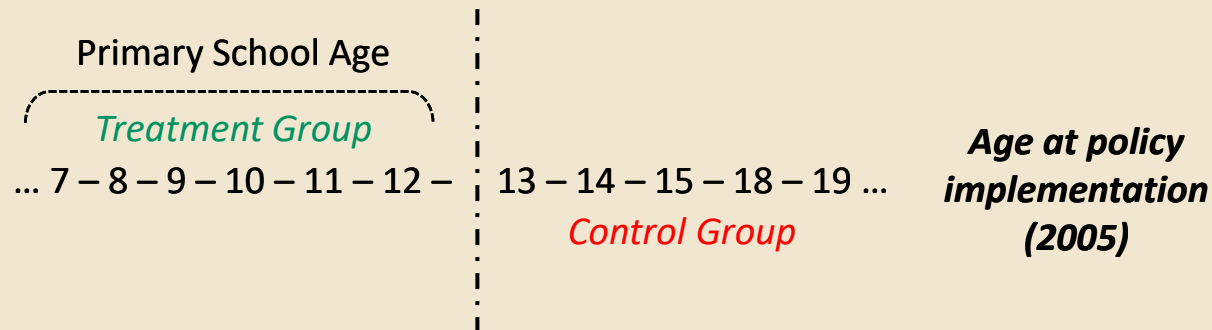
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$$Schooling_i = \alpha_0 + \alpha_1 Z_i + \alpha_2 (B_i - c) + \alpha_3 Z_i * (B_i - c) + e_i \quad (1)$$

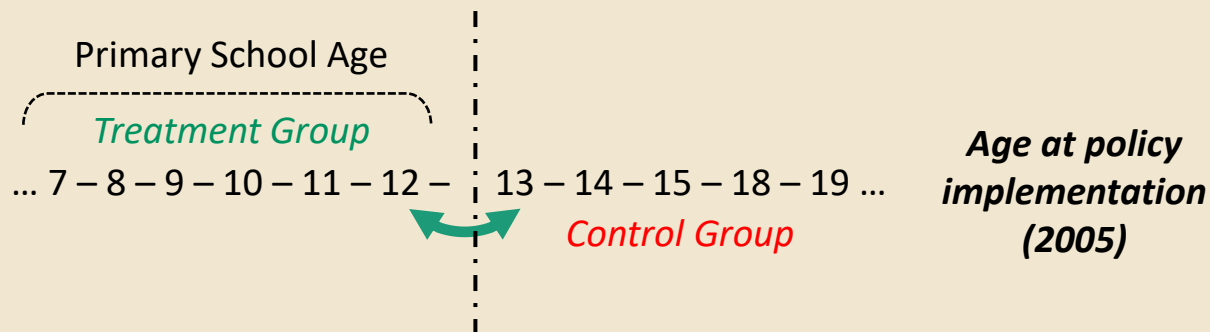
$$Y_i = \beta_0 + \beta_{1RD} \widehat{Schooling}_i + \beta_2 (B_i - c) + \beta_3 Z_i * (B_i - c) + u_i \quad (2)$$

$B_i = \text{year of birth}$

$Z_i = 1[\text{year of birth} \geq c (= 1993)]$

- We follow the literature and employ a fuzzy Regression Discontinuity Design (RDD) of “*just treated*” women (e.g. Behrman 2015; Keats 2018)
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Burundi – Primary School between the Ages 7-12



- **Demographic and Health Surveys (DHS) – Female recodes**
 - Pooling Burundi’s 2010/2011 and 2016/2017 survey waves
 - Information on education, fertility, family planning, employment, household wealth

- **Dependent variables**
 - Years of schooling
 - Literacy (0/1), Ideal # of children
 - Age at first birth, Had first [birth/marriage/sex] before 20 (0/1)
 - Is working (0/1), is working outside of the household for cash (0/1)

- **Control variables**
 - Religion, rural/urban, number of siblings, province- & survey fixed effects

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- **Dependent variables**

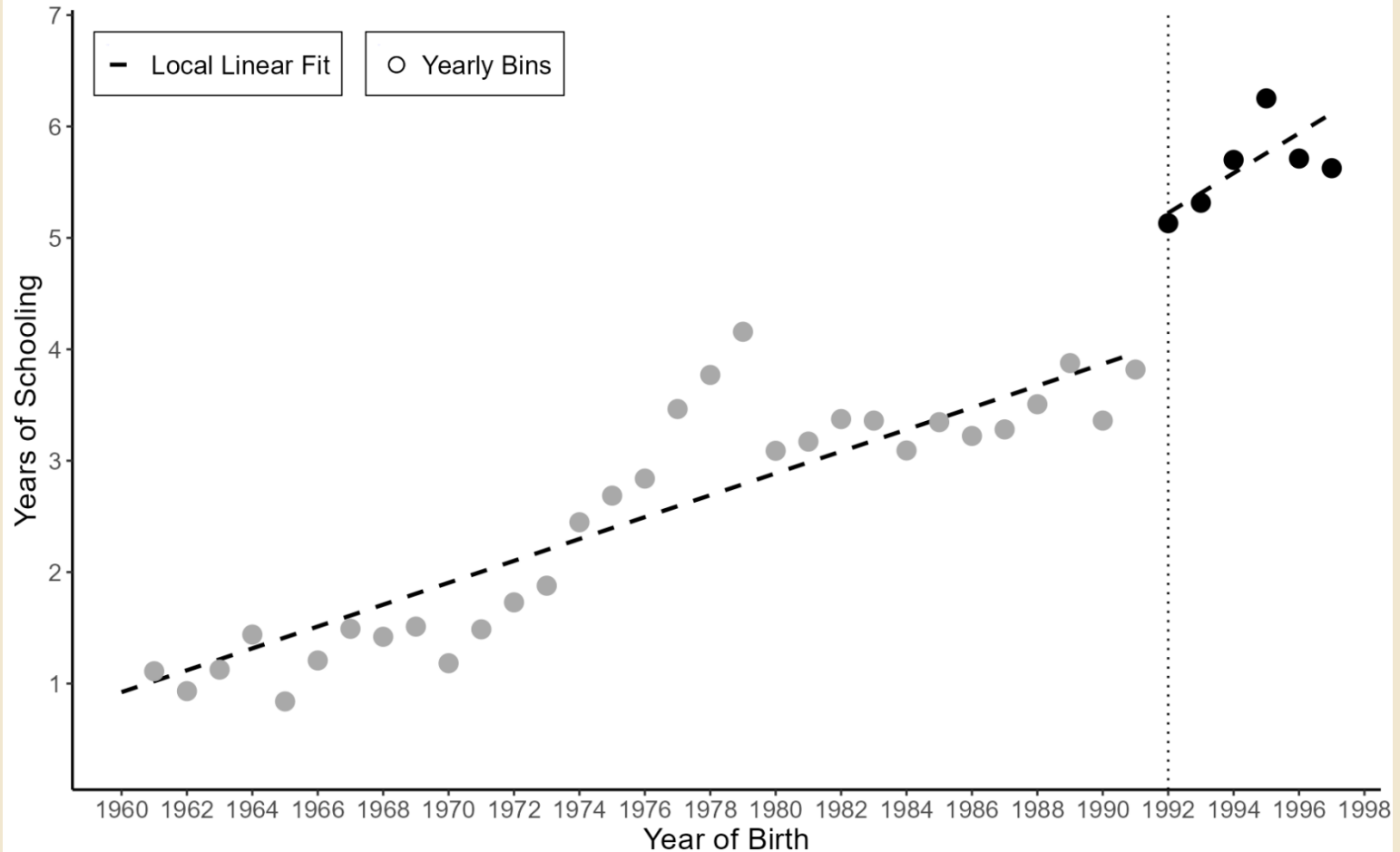
- Years of schooling
- Literacy (0/1), Ideal # of children **Pathway Learning**
- Age at first birth, Had first [birth/marriage/sex] before 20 (0/1)
- Is working (0/1), is working outside of the household for cash (0/1) **Pathway Income**

- **Control variables**

- Religion, rural/urban, number of siblings, province- & survey fixed effects

Results

Results



Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights.

Results – First Stage

	First Stage Discontinuity: Years of Schooling					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	1.344*** (0.255)	1.223*** (0.223)	0.849*** (0.228)	0.908*** (0.220)	1.356*** (0.397)	1.280*** (0.367)
Mean Ctrl. Group	[3.55]		[1.99]		[5.56]	
Interaction: 1*Year of Birth	0.135 (0.090)	0.164** (0.077)	0.378*** (0.081)	0.339*** (0.078)	-0.179 (0.141)	-0.099 (0.130)
Year of Birth	0.052 (0.054)	0.038 (0.047)	0.059 (0.046)	0.064 (0.044)	0.116 (0.090)	0.070 (0.085)
Effect on the second cohort treated by FPE						
1[YOB \geq 1992] + 1*YOB + YOB		1.426*** (0.197)		1.312*** (0.187)		1.250*** (0.338)
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Adj. R ²	0.054	0.263	0.099	0.183	0.041	0.187
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage

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Results – First Stage (1/3)

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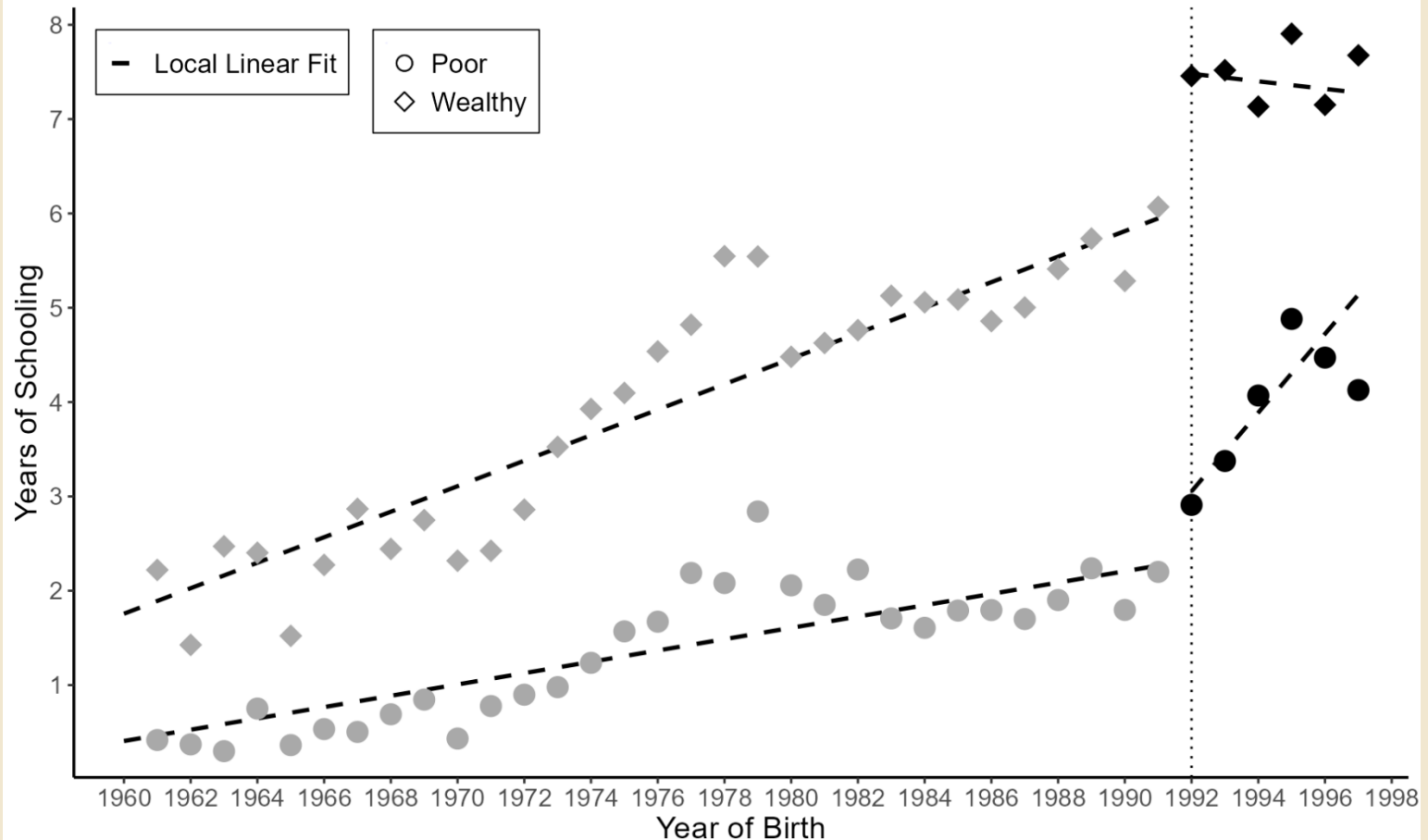
Results – First Stage (2/3)

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Results – First Stage (3/3)

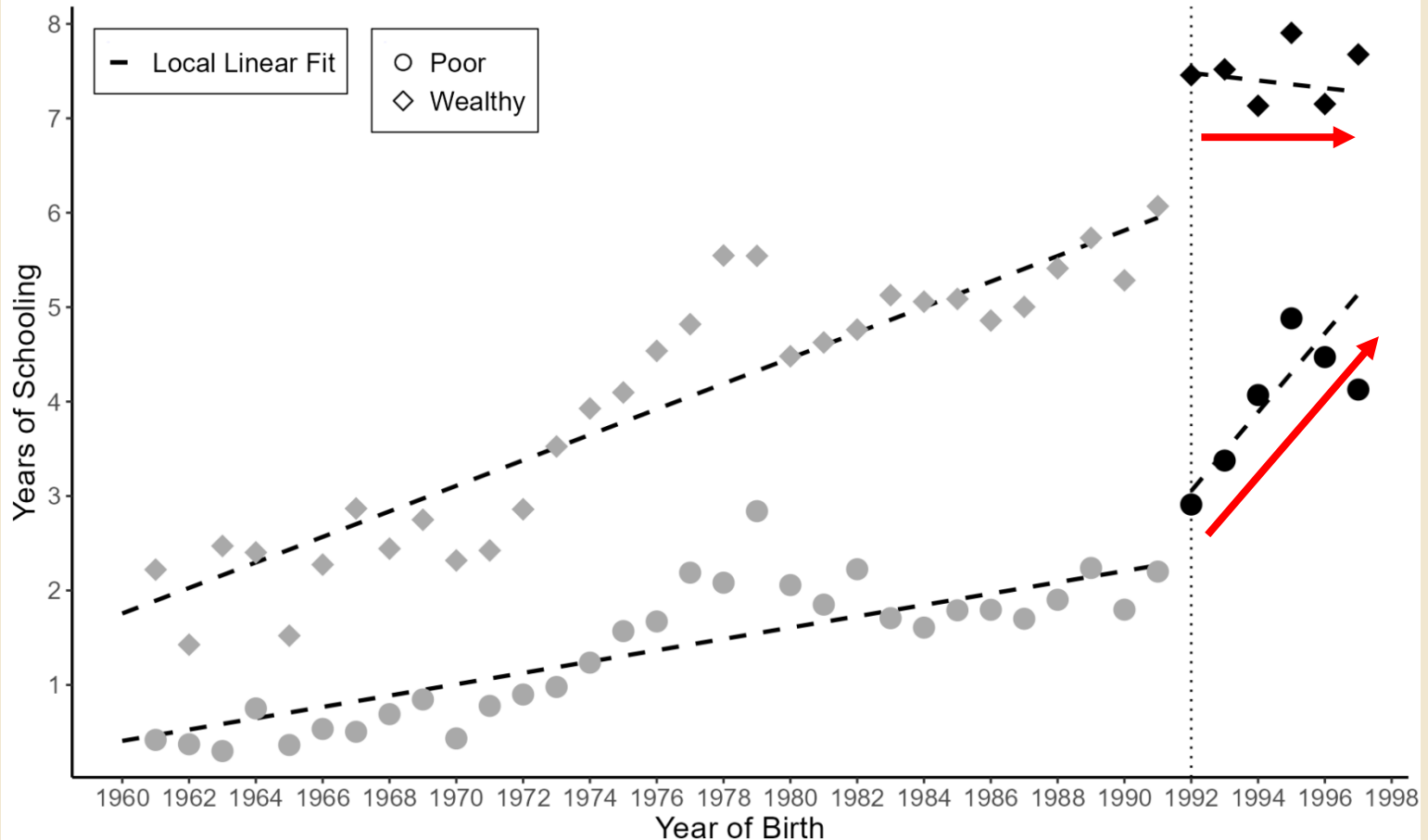
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Results – First Stage (3/3)



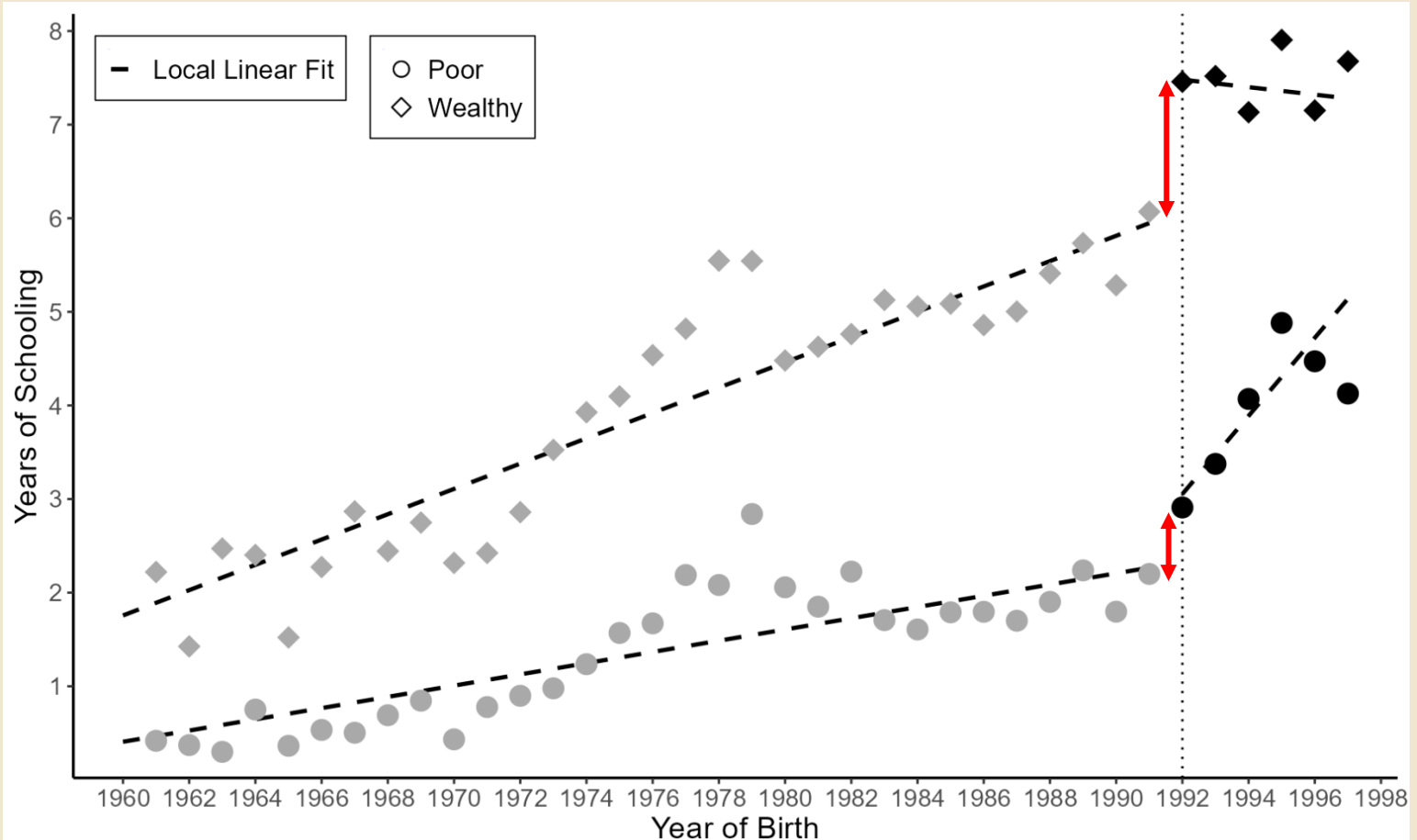
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Results – First Stage (3/3)



Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. Figures for the 'Poor' and 'Wealthy' come from separate regressions using subsamples split at the median household wealth level.

Results – First Stage (3/3)



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Results – First Stage (3/3)

	First Stage Discontinuity: Years of Schooling					
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Adj. R ²	0.054	0.263	0.099	0.183	0.041	0.187
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage

Results – Second Stage (1/4)

Second-Stage Results: Literacy and Desired Fertility

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Literacy (0/1)						
Schooling	0.054***	0.050***	0.067**	0.067**	0.033	0.027
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.017)	(0.033)	(0.030)	(0.022)	(0.024)
Mean Ctrl. Group	[0.56]		[0.43]		[0.73]	
F-Statistic	27.7	29.9	13.8	17.1	11.4	11.9
Observations	7,708	7,704	3,856	3,855	3,852	3,849
Panel B: Desired Number of Children						
Schooling	-0.144**	-0.151**	-0.307**	-0.261**	-0.093	-0.088
Instr. by 1[YOB ≥ 1992]	(0.060)	(0.063)	(0.136)	(0.118)	(0.086)	(0.086)
Mean Ctrl. Group	[4.01]		[4.05]		[3.96]	
F-Statistic	25.9	28.3	12.5	15.8	11.4	11.9
Observations	7,520	7,516	3,764	3,763	3,756	3,753
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (1/4)

Second-Stage Results: Literacy and Desired Fertility

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Literacy (0/1)						
Schooling	0.054***	0.050***	0.067**	0.067**	0.033	0.027
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.017)	(0.033)	(0.030)	(0.022)	(0.024)
Mean Ctrl. Group	[0.56]		[0.43]		[0.73]	
F-Statistic	27.7	29.9	13.8	17.1	11.4	11.9
Observations	7,708	7,704	3,856	3,855	3,852	3,849
Panel B: Desired Number of Children						
Schooling	-0.144**	-0.151**	-0.307**	-0.261**	-0.093	-0.088
Instr. by 1[YOB ≥ 1992]	(0.060)	(0.063)	(0.136)	(0.118)	(0.086)	(0.086)
Mean Ctrl. Group	[4.01]		[4.05]		[3.96]	
F-Statistic	25.9	28.3	12.5	15.8	11.4	11.9
Observations	7,520	7,516	3,764	3,763	3,756	3,753
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (1/4)

Second-Stage Results: Literacy and Desired Fertility

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Literacy (0/1)					
Schooling	0.054***	0.050***	0.067**	0.067**	0.033	0.027
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.017)	(0.033)	(0.030)	(0.022)	(0.024)
Mean Ctrl. Group	[0.56]		[0.43]		[0.73]	
F-Statistic	27.7	29.9	13.8	17.1	11.4	11.9
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Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (1/4)

Second-Stage Results: Literacy and Desired Fertility

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Literacy (0/1)					
Schooling	0.054***	0.050***	0.067**	0.067**	0.033	0.027
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Mean Ctrl. Group	[4.01]		[4.05]		[3.96]	
F-Statistic	25.9	28.3	12.5	15.8	11.4	11.9
Observations	7,520	7,516	3,764	3,763	3,756	3,753
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (2/4)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Age at first Birth						
Schooling	0.440**	0.468**	0.435	0.449*	0.640*	0.757
Instr. by 1[YOB ≥ 1992]	(0.179)	(0.204)	(0.274)	(0.263)	(0.381)	(0.564)
Mean Ctrl. Group	[19.7]		[19.6]		[19.8]	
F-Statistic	14.9	11.9	9.1	10.3	3.9	2.1
Observations	4,918	4,917	2,830	2,830	2,088	2,087
Panel B: First Birth before Age 20 (0/1)						
Schooling	-0.037**	-0.034*	-0.056	-0.069*	-0.026	-0.012
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.019)	(0.041)	(0.039)	(0.024)	(0.025)
Mean Ctrl. Group	[0.34]		[0.37]		[0.31]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (2/4)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Age at first Birth						
Schooling	0.440**	0.468**	0.435	0.449*	0.640*	0.757
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Observations	7,713	7,709	3,857	3,856	3,856	3,853
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (2/4)

Second-Stage Results: Fertility and Reproductive Behavior

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	(1)	(2)	(3)	(4)	(5)	(6)
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Observations	7,713	7,709	3,857	3,856	3,856	3,853
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (2/4)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Age at first Birth						
Schooling	0.440**	0.468**	0.435	0.449*	0.640*	0.757
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Mean Ctrl. Group	[0.34]		[0.37]		[0.31]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (3/4)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel C: Married before Age 20 (0/1)					
Schooling	-0.063***	-0.061***	-0.078**	-0.090**	-0.059**	-0.045*
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.018)	(0.039)	(0.037)	(0.025)	(0.025)
Mean Ctrl. Group	[0.48]		[0.54]		[0.41]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Panel D: Sex before Age 20 (0/1)						
Schooling	-0.044**	-0.042**	-0.047	-0.064*	-0.046*	-0.031
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.019)	(0.037)	(0.035)	(0.028)	(0.029)
Mean Ctrl. Group	[0.55]		[0.59]		[0.50]	
F-Statistic	28.5	29.9	14.8	17.9	11.2	11.4
Observations	7,623	7,619	3,807	3,806	3,816	3,813
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (3/4)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel C: Married before Age 20 (0/1)					
Schooling	-0.063***	-0.061***	-0.078**	-0.090**	-0.059**	-0.045*
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.018)	(0.039)	(0.037)	(0.025)	(0.025)
Mean Ctrl. Group	[0.48]		[0.54]		[0.41]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
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Observations	7,623	7,619	3,807	3,806	3,816	3,813
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (3/4)

	Second-Stage Results: Fertility and Reproductive Behavior					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Married before Age 20 (0/1)						
Schooling	-0.063***	-0.061***	-0.078**	-0.090**	-0.059**	-0.045*
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.018)	(0.039)	(0.037)	(0.025)	(0.025)
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Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (3/4)

	Second-Stage Results: Fertility and Reproductive Behavior					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Married before Age 20 (0/1)						
Schooling	-0.063***	-0.061***	-0.078**	-0.090**	-0.059**	-0.045*
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Observations	7,623	7,619	3,807	3,806	3,816	3,813
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (4/4)

	Second-Stage Results: Income					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Worked last Year (0/1)						
Schooling	-0.003	-0.002	0.017	0.005	0.000	-0.002
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.013)	(0.024)	(0.020)	(0.025)	(0.022)
Mean Ctrl. Group	[0.86]		[0.92]		[0.78]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Panel B: Works outside of the Household for Cash/Money (0/1)						
Schooling	0.023**	0.026**	0.058*	0.057**	0.007	0.008
Instr. by 1[YOB ≥ 1992]	(0.011)	(0.013)	(0.031)	(0.027)	(0.014)	(0.015)
Mean Ctrl. Group	[0.08]		[0.08]		[0.07]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (4/4)

Second-Stage Results: Income

	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Worked last Year (0/1)						
Schooling	-0.003	-0.002	0.017	0.005	0.000	-0.002
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.013)	(0.024)	(0.020)	(0.025)	(0.022)
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Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (4/4)

	Second-Stage Results: Income					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Worked last Year (0/1)						
Schooling	-0.003	-0.002	0.017	0.005	0.000	-0.002
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Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

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Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

- **Burundi's FPE of 2005 positively influenced educational attainment**
 - Both for poor as well as for wealthy subgroups

- **Policy-induced schooling...**
 - ...shows its expected effects on fertility outcomes
 - ...exerts its effect differentially, i.e. behavioral changes are mainly driven by the poor

- **We find evidence for both learning & income pathways**
 - Literacy and desired fertility was adjusted accordingly, particularly for the poor
 - Increased occurrence of working out of the hh. for cash reflects rising opportunity costs

Robustness

- **Local randomization & additional evidence**

- Smoothness test using Multiple Indicator Cluster Survey (MICS) dataset of 2005 ✓
- Difference-in-Difference-in-Differences using MICS data of 2000 and 2005 ✓
- Robust to a varying functional form and bandwidth ✓

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■ **Burundian Civil War**

- Treatment and control groups are equally affected, at least not distinctly from 1992...
- Removing high-intensity provinces does not alter main interpretation ✓
- There are no other “placebo” cut-offs showing effects ✓

■ Local randomization & additional evidence

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- Robust to a varying functional form and bandwidth ✓

■ Burundian Civil War

- Treatment and control groups are equally affected, at least not distinctly from 1992...
- Removing high-intensity provinces does not alter main interpretation ✓
- There are no other “placebo” cut-offs showing effects ✓

■ Wealth grouping

- Only 8% of women are head of the household and only 40% wife to the head
- Policy-induced schooling did not influence household wealth ✓
- Robust to alternative wealth categorization ✓
- Lower bound estimate ✓

Thank you!

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Extension

- **Based on others' as well as our findings...**
 - ...we have started to explore potential **cross-country** heterogeneities in and policy-induced schooling (Psaki et. al [2019](#))
- **We pool DHS data from all “FPE-countries” and...**
 - ...explore various potentially moderating factors systematically
- **Analyzing...**
 - ...a sample size of up to 272,774 women
 - ...19 FPE policies implemented between 1994 and 2008
 - ...countries include Burundi, Benin, Cameroon, Ethiopia, Kenya, Malawi, Uganda, ...

Results – First Stage

Results – First Stage (1/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.1682** (0.0545)	0.1731*** (0.0504)	0.1403* (0.0660)	0.1304* (0.0614)
Mean Ctrl. Group	5.66		3.25		7.94	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0241 (0.0198)	0.0323 (0.0183)	-0.0738** (0.0231)	-0.0622** (0.0216)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1507*** (0.0125)	0.1487*** (0.0117)	0.1286*** (0.0160)	0.1265*** (0.0150)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB	0.26705*** (0.04)		0.3541*** (0.05)		0.19475*** (0.06)	
Observations	143,750	143,750	69,886	69,886	73,864	73,864
Adj. R ²	0.08241	0.33213	0.16133	0.28785	0.12722	0.23103
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage (1/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.1682** (0.0545)	0.1731*** (0.0504)	0.1403* (0.0660)	0.1304* (0.0614)
Mean Ctrl. Group	5.66		3.25		7.94	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0241 (0.0198)	0.0323 (0.0183)	-0.0738** (0.0231)	-0.0622** (0.0216)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1507*** (0.0125)	0.1487*** (0.0117)	0.1286*** (0.0160)	0.1265*** (0.0150)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB		0.26705*** (0.04)		0.3541*** (0.05)		0.19475*** (0.06)
Observations	143,750	143,750	69,886	69,886	73,864	73,864
Adj. R ²	0.08241	0.33213	0.16133	0.28785	0.12722	0.23103
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage (2/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Low GDP		High GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.4564*** (0.0701)	0.3786*** (0.0620)	-0.1101 (0.0758)	0.0003 (0.0602)
Mean Ctrl. Group	[5.66]		[3.25]		[6.52]	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0519* (0.0251)	0.0521* (0.0220)	-0.1259*** (0.0263)	-0.0649** (0.0212)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1092*** (0.0166)	0.1032*** (0.0144)	0.1923*** (0.0182)	0.1644*** (0.0148)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB		0.26705*** (0.04)		0.53392*** (0.06)		0.09977* 0.05
Observations	143,750	143,750	62,570	62,570	81,180	81,180
Adj. R ²	0.08241	0.33213	0.06628	0.26589	0.04630	0.36838
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage (2/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Low GDP		High GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.4564*** (0.0701)	0.3786*** (0.0620)	-0.1101 (0.0758)	0.0003 (0.0602)
Mean Ctrl. Group	[5.66]		[3.25]		[6.52]	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0519* (0.0251)	0.0521* (0.0220)	-0.1259*** (0.0263)	-0.0649** (0.0212)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1092*** (0.0166)	0.1032*** (0.0144)	0.1923*** (0.0182)	0.1644*** (0.0148)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB		0.26705*** (0.04)		0.53392*** (0.06)		0.09977* 0.05
Observations	143,750	143,750	62,570	62,570	81,180	81,180
Adj. R ²	0.08241	0.33213	0.06628	0.26589	0.04630	0.36838
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage (3/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Low Edu		High Edu	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.4664*** (0.0730)	0.4046*** (0.0647)	-0.1021 (0.0735)	0.0039 (0.0578)
Mean Ctrl. Group	[5.66]		[4.31]		[6.77]	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0164 (0.0257)	0.0190 (0.0226)	-0.0827** (0.0257)	-0.0322 (0.0206)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1386*** (0.0171)	0.1386*** (0.0149)	0.1592*** (0.0177)	0.1328*** (0.0143)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB		0.26705*** (0.04)		0.56217*** (0.06)		0.10443** (0.05)
Observations	143,750	143,750	61,405	61,405	82,345	82,345
Adj. R ²	0.08241	0.33213	0.05200	0.24757	0.02056	0.36000
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – First Stage (3/3)

	First Stage Discontinuity: Years of Schooling					
	Full		Low Edu		High Edu	
	(1)	(2)	(3)	(4)	(5)	(6)
1[Year of Birth \geq 1992]	0.1438** (0.0523)	0.1443** (0.0439)	0.4664*** (0.0730)	0.4046*** (0.0647)	-0.1021 (0.0735)	0.0039 (0.0578)
Mean Ctrl. Group	[5.66]		[4.31]		[6.77]	
Interaction: 1*Year of Birth	-0.0394* (0.0182)	-0.0170 (0.0155)	0.0164 (0.0257)	0.0190 (0.0226)	-0.0827** (0.0257)	-0.0322 (0.0206)
Year of Birth	0.1465*** (0.0123)	0.1398*** (0.0104)	0.1386*** (0.0171)	0.1386*** (0.0149)	0.1592*** (0.0177)	0.1328*** (0.0143)
Effect on the second cohort treated by FPE						
Z + 1*YOB + YOB		0.26705*** (0.04)		0.56217*** (0.06)		0.10443** (0.05)
Observations	143,750	143,750	61,405	61,405	82,345	82,345
Adj. R ²	0.08241	0.33213	0.05200	0.24757	0.02056	0.36000
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (Poor vs. Wealthy)

Results – Second Stage (Poor vs. Wealthy) (1/3)

	Second-Stage Results					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Literacy (0/1)						
Schooling	0.1412***	0.1375***	0.1430***	0.1400***	0.1023**	0.1042*
Instr. by Z	(0.0392)	(0.0336)	(0.0344)	(0.0318)	(0.0397)	(0.0424)
Mean Ctrl. Group	[0.61]		[0.41]		[0.79]	
Kleibergen-Paap rk Wald F-Statistic	5.4	8.6	8.4	10.1	3.7	3.8
Observations	137,483	137,483	66,899	66,899	70,584	70,584
Adj. R ²	0.22114	0.35025	0.51496	0.54732	0.28425	0.28499
Panel B: Ideal Number of Children						
Schooling	0.1601	0.0825	-0.2377	-0.2891	0.3180	0.3910
Instr. by Z	(0.2746)	(0.1942)	(0.2995)	(0.2510)	(0.3020)	(0.3210)
Mean Ctrl. Group	[4.74]		[5.41]		[4.13]	
F-Statistic	4.2	8.1	5.3	8.6	3.9	4.0
Observations	137,435	137,435	65,820	65,820	71,615	71,615
Adj. R ²	-0.10929	0.23384	0.31783	0.32248	-0.69486	-0.70684

Results – Second Stage (Poor vs. Wealthy) (2/3)

	Second-Stage Results					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Age First Birth						
Schooling	0.1699	0.2368	0.3180	0.3148	0.2267	0.2071
Instr. by Z	(0.6105)	(0.3763)	(0.4199)	(0.3393)	(0.7252)	(0.7390)
Mean Ctrl. Group	[19.12]		[18.53]		[19.79]	
F-Statistic	1.2	4.1	3.9	7.0	1.0	1.1
Observations	114,420	114,420	61,607	61,607	52,813	52,813
Adj. R ²	0.19215	0.21384	0.10914	0.11046	0.24071	0.24308
Panel D: First Birth Before 20 (0/1)						
Schooling	-0.0604	-0.0525	-0.0497	-0.0467	-0.0802	-0.0803
Instr. by Z	(0.0974)	(0.0599)	(0.0694)	(0.0558)	(0.1162)	(0.1182)
Mean Ctrl. Group	[0.60]		[0.66]		[0.52]	
F-Statistic	1.2	4.1	3.9	7.0	1.0	1.1
Observations	114,420	114,420	61,607	61,607	52,813	52,813
Adj. R ²	0.08542	0.11773	0.06196	0.07049	0.03995	0.04675
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (Poor vs. Wealthy) (3/3)

	Second-Stage Results					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Marriage Before 20 (0/1)						
Schooling	0.0297	0.0141	-0.0113	-0.0176	0.0094	0.0191
Instr. by Z	(0.0883)	(0.0642)	(0.0664)	(0.0554)	(0.0850)	(0.0983)
Mean Ctrl. Group	[0.67]		[0.76]		[0.58]	
F-Statistic	1.75608	3.50672	3.47724	5.65817	1.86564	1.62271
Observations	114,710	114,710	61,694	61,694	53,016	53,016
Adj. R ²	-0.20934	0.04076	0.10020	0.11762	0.02596	-0.00145
Panel F: Works outside of the Household for Cash/Money (0/1)						
Schooling	0.0185	0.0189	0.0047	0.0056	0.0197	0.0201
Instr. by Z	(0.0226)	(0.0223)	(0.0246)	(0.0233)	(0.0376)	(0.0395)
Mean Ctrl. Group	[0.18]		[0.10]		[0.26]	
F-Statistic	11.1	15.8	11.7	14.7	6.4	6.3
Observations	95,558	95,558	47,583	47,583	47,975	47,975
Adj. R ²	0.14152	0.16631	0.10331	0.10613	0.14924	0.17263
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (GDP)

Results – Second Stage (GDP) (1/3)

	Second-Stage Results					
	Full		Low GDP		High GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Literacy (0/1)						
Schooling	0.1412***	0.1375***	0.0815***	0.0804***	-0.0283	-2.579
Instr. by Z	(0.0392)	(0.0336)	(0.0120)	(0.0147)	(0.0726)	(32.35)
Mean Ctrl. Group	[0.61]		[0.60]		[0.62]	
Kleibergen-Paap rk Wald F-Statistic	5.4	8.6	39.8	33.5	2.6	0.0
Observations	137,483	137,483	57,132	57,132	80,351	80,351
Adj. R ²	0.22114	0.35025	0.55165	0.55371	-0.41014	-477.19
Panel B: Ideal Number of Children						
Schooling	0.1601	0.0825	-0.2007**	-0.1707*	-0.6247*	-1.577
Instr. by Z	(0.2746)	(0.1942)	(0.0726)	(0.0835)	(0.2651)	(3.041)
Mean Ctrl. Group	[4.74]		[4.21]		[5.19]	
F-Statistic	4.2	8.1	37.7	34.6	4.8	0.2
Observations	137,435	137,435	60,213	60,213	77,222	77,222
Adj. R ²	-0.10929	0.23384	0.12470	0.15959	-0.13400	-3.9398
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (GDP) (2/3)

	Second-Stage Results					
	Full		Low GDP		High GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Age First Birth						
Schooling	0.1699	0.2368	0.5602**	0.6073**	1.033	-0.7880
Instr. by Z	(0.6105)	(0.3763)	(0.2023)	(0.2345)	(0.8614)	(1.706)
Mean Ctrl. Group	[19.12]		[18.88]		[19.32]	
F-Statistic	1.2	4.1	14.6	13.2	1.2	0.6
Observations	114,420	114,420	48,166	48,166	66,254	66,254
Adj. R ²	0.19215	0.21384	-0.02799	-0.04053	-0.65003	-1.1101
Panel D: First Birth Before 20 (0/1)						
Schooling	-0.0604	-0.0525	-0.0829*	-0.0914*	-0.1328	0.1165
Instr. by Z	(0.0974)	(0.0599)	(0.0342)	(0.0398)	(0.1206)	(0.2426)
Mean Ctrl. Group	[0.60]		[0.62]		[0.58]	
F-Statistic	1.2	4.1	14.6	13.2	1.2	0.6
Observations	114,420	114,420	48,166	48,166	66,254	66,254
Adj. R ²	0.08542	0.11773	-0.06157	-0.07701	-0.68539	-1.2052
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (GDP) (3/3)

	Second-Stage Results					
	Full		Low GDP		High GDP	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Marriage Before 20 (0/1)						
Schooling	0.0297	0.0141	-0.0418	-0.0441	-0.1251	0.7807
Instr. by Z	(0.0883)	(0.0642)	(0.0214)	(0.0271)	(0.0773)	(5.116)
Mean Ctrl. Group	[0.67]		[0.71]		[0.65]	
F-Statistic	1.75608	3.50672	23.8	18.1	2.4	0.0
Observations	114,710	114,710	48,819	48,819	65,891	65,891
Adj. R ²	-0.20934	0.04076	0.15688	0.15405	-0.47485	-44.550
Panel F: Works outside of the Household for Cash/Money (0/1)						
Schooling	0.0185	0.0189	0.0239	0.0215	0.0766	0.4002
Instr. by Z	(0.0226)	(0.0223)	(0.0127)	(0.0135)	(0.1251)	(3.083)
Mean Ctrl. Group	[0.18]		[0.17]		[0.18]	
F-Statistic	11.1	15.8	44.9	47.0	0.5	0.0
Observations	95,558	95,558	43,025	43,025	52,533	52,533
Adj. R ²	0.14152	0.16631	0.08884	0.12273	-0.21805	-14.935
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (Education Level)

Results – Second Stage (Education Level) (1/3)

	Second-Stage Results					
	Full		Low Edu		High Edu	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Literacy (0/1)						
Schooling	0.1412***	0.1375***	0.0913***	0.0917***	-0.0085	-5.451
Instr. by Z	(0.0392)	(0.0336)	(0.0119)	(0.0138)	(0.0648)	(179.1)
Mean Ctrl. Group	[0.61]		[0.56]		[0.65]	
Kleibergen-Paap rk Wald F-Statistic	5.4	8.6	38.6	36.0	2.4	0.0
Observations	137,483	137,483	55,980	55,980	81,503	81,503
Adj. R ²	0.22114	0.35025	0.56268	0.56516	-0.05232	-2,060.9
Panel B: Ideal Number of Children						
Schooling	0.1601	0.0825	-0.1710*	-0.1404	-0.6044*	-1.448
Instr. by Z	(0.2746)	(0.1942)	(0.0723)	(0.0799)	(0.2605)	(2.803)
Mean Ctrl. Group	[4.74]		[4.20]		[5.18]	
F-Statistic	4.2	8.1	36.5	36.2	4.8	0.2
Observations	137,435	137,435	59,148	59,148	78,287	78,287
Adj. R ²	-0.10929	0.23384	0.13294	0.16570	-0.07542	-3.1204
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (Education Level) (2/3)

	Second-Stage Results					
	Full		Low Edu		High Edu	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Age First Birth						
Schooling	0.1699	0.2368	0.6736**	0.7018**	1.703	-0.9503
Instr. by Z	(0.6105)	(0.3763)	(0.2340)	(0.2511)	(1.900)	(1.485)
Mean Ctrl. Group	[19.12]		[18.94]		[19.27]	
F-Statistic	1.2	4.1	11.8	11.1	0.6	1.0
Observations	114,420	114,420	47,040	47,040	67,380	67,380
Adj. R ²	0.19215	0.21384	-0.17952	-0.15959	-3.0070	-1.4992
Panel D: First Birth Before 20 (0/1)						
Schooling	-0.0604	-0.0525	-0.0888*	-0.0933*	-0.1778	0.0931
Instr. by Z	(0.0974)	(0.0599)	(0.0378)	(0.0408)	(0.2110)	(0.1746)
Mean Ctrl. Group	[0.60]		[0.60]		[0.59]	
F-Statistic	1.2	4.1	11.8	11.1	0.6	1.0
Observations	114,420	114,420	47,040	47,040	67,380	67,380
Adj. R ²	0.08542	0.11773	-0.09754	-0.08691	-1.6313	-0.78881
Controls	NO	YES	NO	YES	NO	YES
Country Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Results – Second Stage (Education Level) (3/3)

		Second-Stage Results					
		Full		Low Edu		High Edu	
		(1)	(2)	(3)	(4)	(5)	(6)
Panel E: Marriage Before 20 (0/1)							
Schooling		0.0297	0.0141	-0.0374	-0.0377	-0.1416	0.2801
	Instr. by Z	(0.0883)	(0.0642)	(0.0232)	(0.0274)	(0.1063)	(0.8591)
Mean Ctrl. Group		[0.67]		[0.70]		[0.65]	
F-Statistic		1.75608	3.50672	19.2	16.6	1.5	0.2
Observations		114,710	114,710	47,964	47,964	66,746	66,746
Adj. R ²		-0.20934	0.04076	0.16724	0.16704	-0.76250	-6.2985
Panel F: Works outside of the Household for Cash/Money (0/1)							
Schooling		0.0185	0.0189	0.0321*	0.0302*	0.1432	-0.8039
	Instr. by Z	(0.0226)	(0.0223)	(0.0127)	(0.0136)	(0.2098)	(7.191)
Mean Ctrl. Group		[0.18]		[0.17]		[0.19]	
F-Statistic		11.1	15.8	43.4	44.8	0.4	0.0
Observations		95,558	95,558	42,549	42,549	53,009	53,009
Adj. R ²		0.14152	0.16631	0.07497	0.09835	-1.8577	-68.710
Controls		NO	YES	NO	YES	NO	YES
Country Fixed Effects		NO	YES	NO	YES	NO	YES
Survey Fixed Effects		YES	YES	YES	YES	YES	YES

- **First results mimic our country-specific evidence from Burundi**
 - But do elicit differences in some of the downstream effects
- **We aim to further analyze...**
 - ...different moderating factors such as institutions, curricula, women's rights, gender, etc.
 - ...regional variation in exposure as well as moderating factors to
- **Suggestions?!**

Thank you!

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Summary Statistics

Extensions

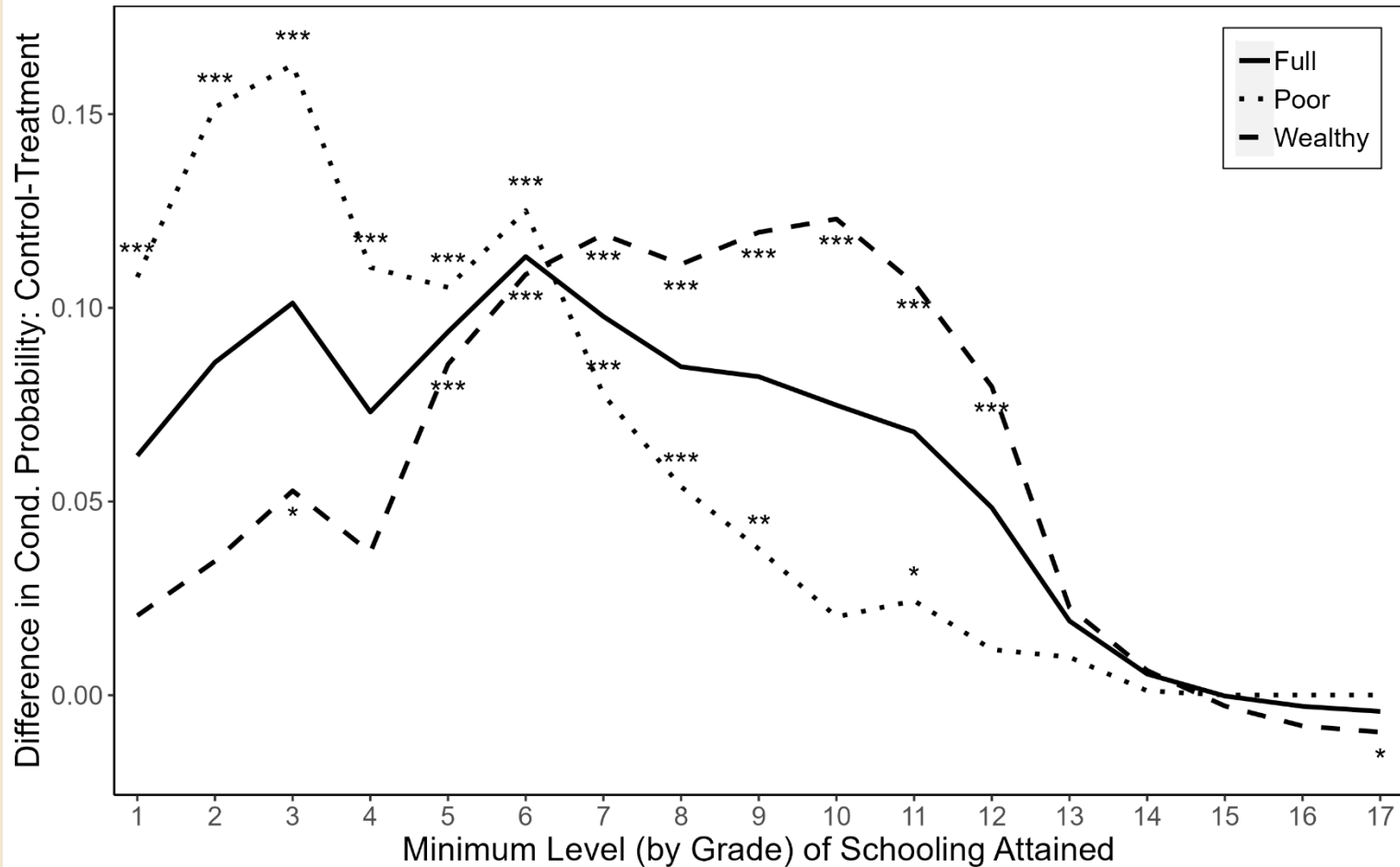
		Summary Statistics					
		Full Sample		Poor		Wealthy	
		Control	Treatment	Control	Treatment	Control	Treatment
Number of Observations		4476	3238	2302	1556	2174	1682
Age at Survey		24.19 [3.05]	21.96 [1.46]	24.16 [3.03]	21.93 [1.47]	24.23 [3.08]	21.99 [1.45]
Education (completed schooling years)		3.55 [4.18]	5.60 [4.30]	1.99 [2.79]	3.98 [3.60]	5.56 [4.77]	7.45 [4.29]
Never received schooling (0/1)		0.44	0.23	0.57	0.32	0.26	0.13
Residence: Rural (0/1)		0.87	0.85	0.99	0.99	0.73	0.69
Number of Siblings		6.20 [2.47]	5.91 [2.42]	6.18 [2.45]	5.95 [2.33]	6.22 [2.51]	5.86 [2.53]
<i>Religion</i>							
	Catholic (0/1)	0.59	0.55	0.62	0.61	0.54	0.49
	Protestant (0/1)	0.34	0.36	0.31	0.31	0.38	0.42
	Muslim (0/1)	0.03	0.04	0.01	0.02	0.05	0.05
Wealth Quintile (1-5)		3.01	3.09	1.94	1.97	4.38	4.38
<i>Dwelling</i>							
	Electricity (0/1)	0.10	0.12	0.00	0.00	0.22	0.26
	Wood Fuel (0/1)	0.85	0.81	0.99	0.98	0.66	0.61
	Piped Water (0/1)	0.32	0.37	0.17	0.17	0.53	0.60
	Flush Toilet (0/1)	0.04	0.06	0.00	0.00	0.10	0.13

	Summary Statistics					
	Full Sample		Poor		Wealthy	
	Control	Treatment	Control	Treatment	Control	Treatment
<i>Fertility</i>						
Age at first Birth	19.67 [2.55]	18.98 [2.06]	19.59 [2.43]	18.99 [1.98]	19.80 [2.72]	18.97 [2.20]
Has given Birth before Age 20 (0/1)	0.34	0.32	0.37	0.39	0.31	0.25
<i>Reproductive Behavior</i>						
Age first Marriage	18.78 [2.72]	18.17 [2.19]	18.60 [2.52]	18.03 [2.09]	19.07 [2.98]	18.42 [2.34]
Married before Age 20 (0/1)	0.48	0.39	0.54	0.49	0.41	0.28
Age at first Sex	13.63 [8.62]	11.55 [8.74]	14.28 [8.08]	12.88 [8.21]	12.85 [9.16]	10.04 [9.07]
Has had Sex before Age 20 (0/1)	0.55	0.51	0.59	0.58	0.50	0.42
<i>Pathway: Learning</i>						
Literacy: Able to read sentence (0/1)	0.56	0.71	0.43	0.60	0.73	0.84
Desired Number of Children	4.01 [1.42]	3.67 [1.33]	4.05 [1.43]	3.63 [1.30]	3.96 [1.41]	3.72 [1.37]
<i>Pathway: Income</i>						
Worked Last Year (0/1)	0.86	0.81	0.92	0.90	0.78	0.71
Works outside of the Household for Cash/Money (0/1)	0.08	0.09	0.08	0.10	0.07	0.08

Heterogenous Schooling

- **The IV-estimates between poor and wealthy differ substantially...**
 - ...and so does the level of schooling at which policy-induced schooling is realized
- **We note that our estimates are LATE (local average treatment effects)**
 - Which are driven by “compliers”, i.e. those who get treated because of their eligibility (Angrist and Pischke [2009](#))
- **We investigate the levels at which policy-induced schooling is added**
- **Diminishing marginal returns to schooling?**

Heterogenous Schooling (2/2)



Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. ***, **, * represents significance at the 1, 5, and 10 percent level, respectively.

Robustness Tests

Wealth Grouping

Wealth Grouping (1/2)

Education and Women's Household Wealth

	DHS Wealth Score		<i>Dwelling:</i> Electricity (0/1)		<i>Dwelling:</i> Piped Water (0/1)		<i>Dwelling:</i> Flush Toilet (0/1)		Radio (0/1)		TV (0/1)		Bicycle (0/1)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Schooling Instr. by 1[YOB ≥ 1992]	5755.257 (3913.7)	3142.718 (2463.7)	0.016 (0.013)	0.007 (0.011)	0.018 (0.022)	0.016 (0.019)	0.007 (0.011)	0.002 (0.008)	0.050*** (0.019)	0.051** (0.021)	0.006 (0.010)	0.000 (0.009)	0.020 (0.019)
Mean Ctrl. Group	-[4444.59]		[0.10]		[0.32]		[0.04]		[0.46]		[0.06]		[0.22]	
F-Statistic	27.9	30.0	25.8	27.5	25.2	27.2	25.7	27.5	25.7	27.5	25.7	27.5	25.7	27.5
Observations	7,713	7,709	7,612	7,609	7,568	7,565	7,614	7,611	7,614	7,611	7,614	7,611	7,610	7,607
Controls	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The results in each column are produced by a separate regression. The IV-estimate and key explanatory variable 'Schooling' is instrumented by the binary indicator of being born in or after the cut-off year '1[Year of Birth (YOB) ≥ 1992]'. The strength of the excluded instrument is given by the reported Kleibergen-Paap rk Wald F-Statistic. The standard errors reported are clustered at the survey-cluster level. ***, **, * represents significance at the 1, 5 and 10 percent level, respectively. See full notes below Table 1.

Difference-in-Difference-in-Differences

- We merge MICS data from 2000 as well as 2005 with the 2010 DHS and compare... (Keats 2018)
 - ...outcomes of policy-eligible individuals (15-19) against in-eligible individuals (20-24)
 - ...both before and after 2005 as well as between poor and wealthy individuals

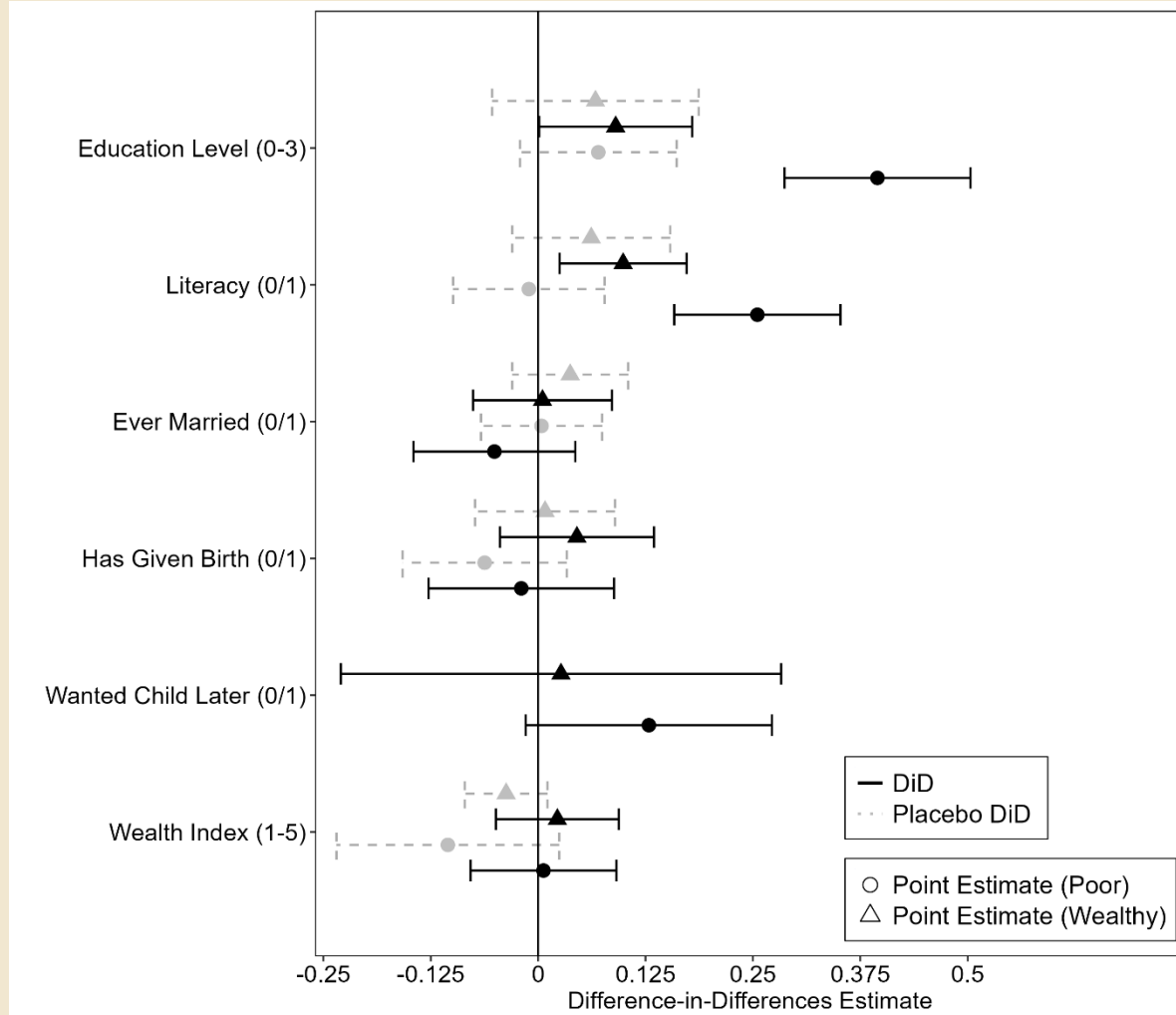
$$Y_{i,t} = \beta_0 + \beta_1(Treated_i * Post_t) + \beta_2(Treated_i * Post_t * Poor_i) + \beta_3(Treated_i * Poor_i) + \beta_k(Post_t * Poor_i) + \beta_5 Treated_i + \beta_6 Poor_i + \beta_k X_i + \gamma_t + \delta_i + u_{i,t}$$

Treated_i = Aged between 15 – 19

Post_t = Surveyed in 2010

Poor_i = Below median wealth score

Difference-in-Differences (2/3)



- We merge MICS data from 2000 as well as 2005 with the 2010 DHS and compare...
 - ...outcomes of policy-eligible individuals (15-19) against in-eligible individuals (20-24)
 - ...both before and after 2005 as well as between poor and wealthy individuals

$$Y_{i,t} = \beta_0 + \beta_1(Treated_i * Post_t) + \beta_2(Treated_i * Post_t * Poor_i) + \beta_3(Treated_i * Poor_i) + \beta_k(Post_t * Poor_i) + \beta_5 Treated_i + \beta_6 Poor_i + \beta_k X_i + \gamma_t + \delta_i + u_{i,t}$$

Treated_i = Aged between 15 – 19

Post_t = Surveyed in 2010

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- We merge MICS data from 2000 as well as 2005 with the 2010 DHS and compare...
 - ...outcomes of policy-eligible individuals (15-19) against in-eligible individuals (20-24)
 - ...both before and after 2005 as well as between poor and wealthy individuals

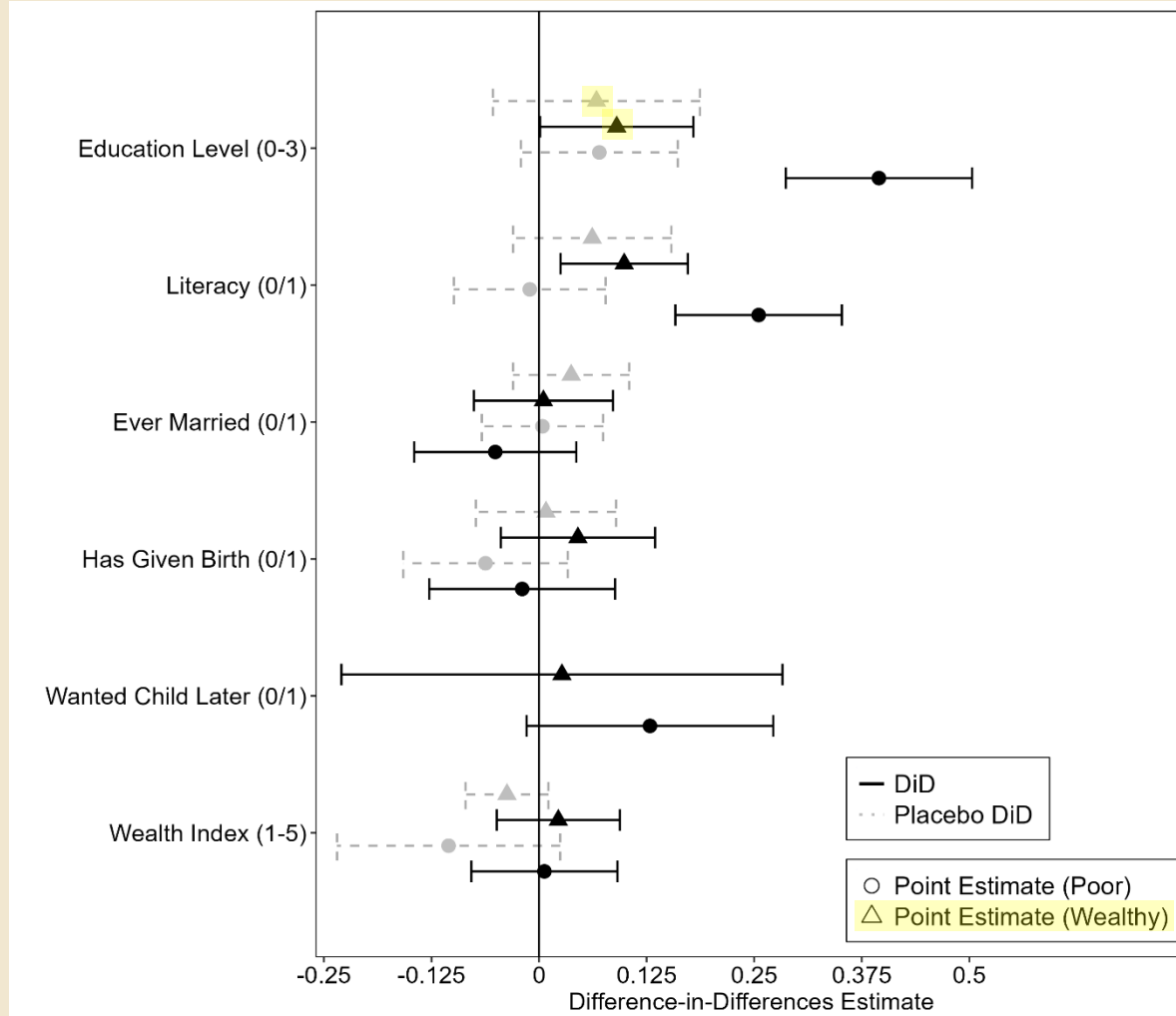
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Treated_i = Aged between 15 – 19

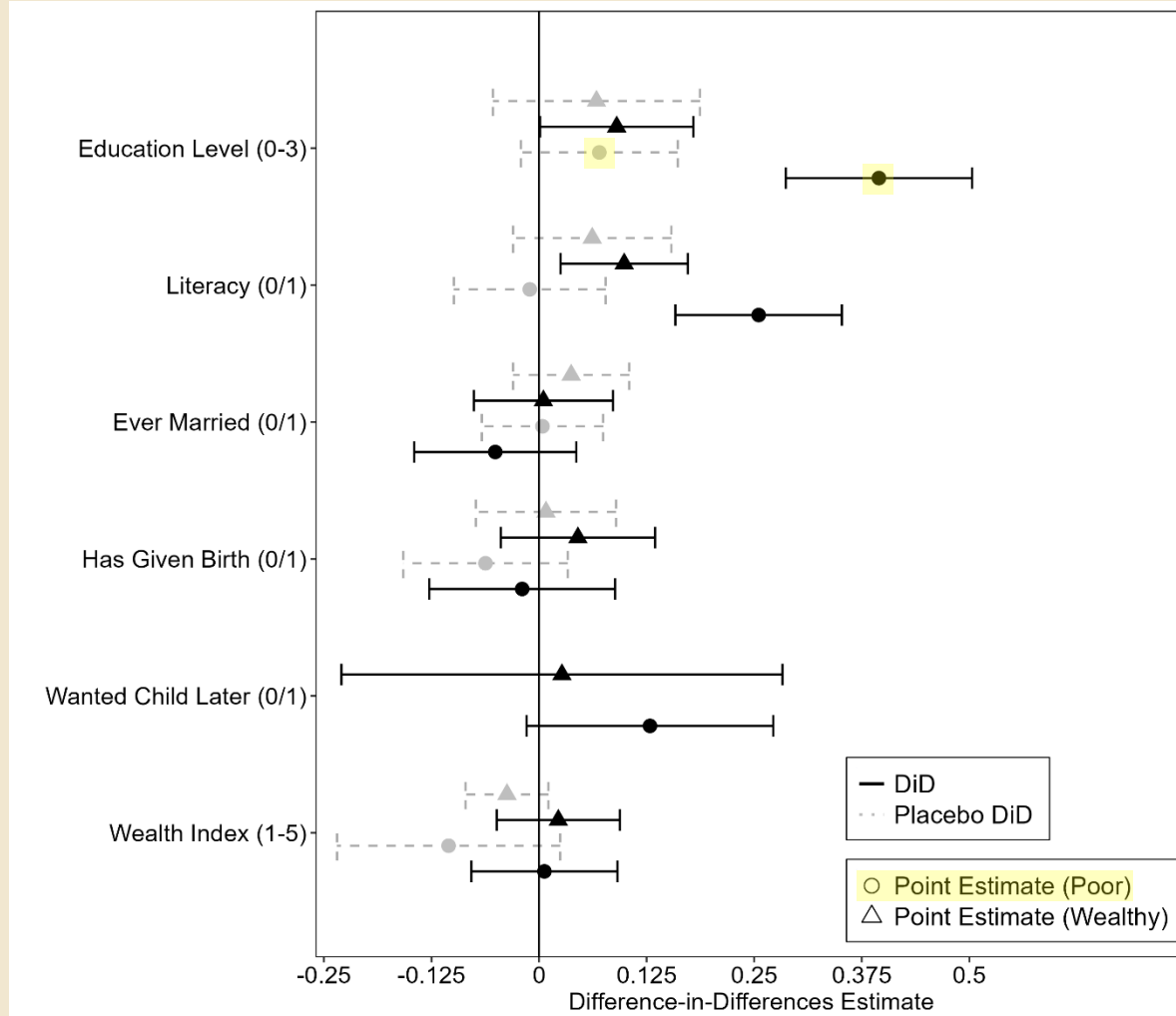
Post_t = Surveyed in 2010

Poor_i = Below median wealth score

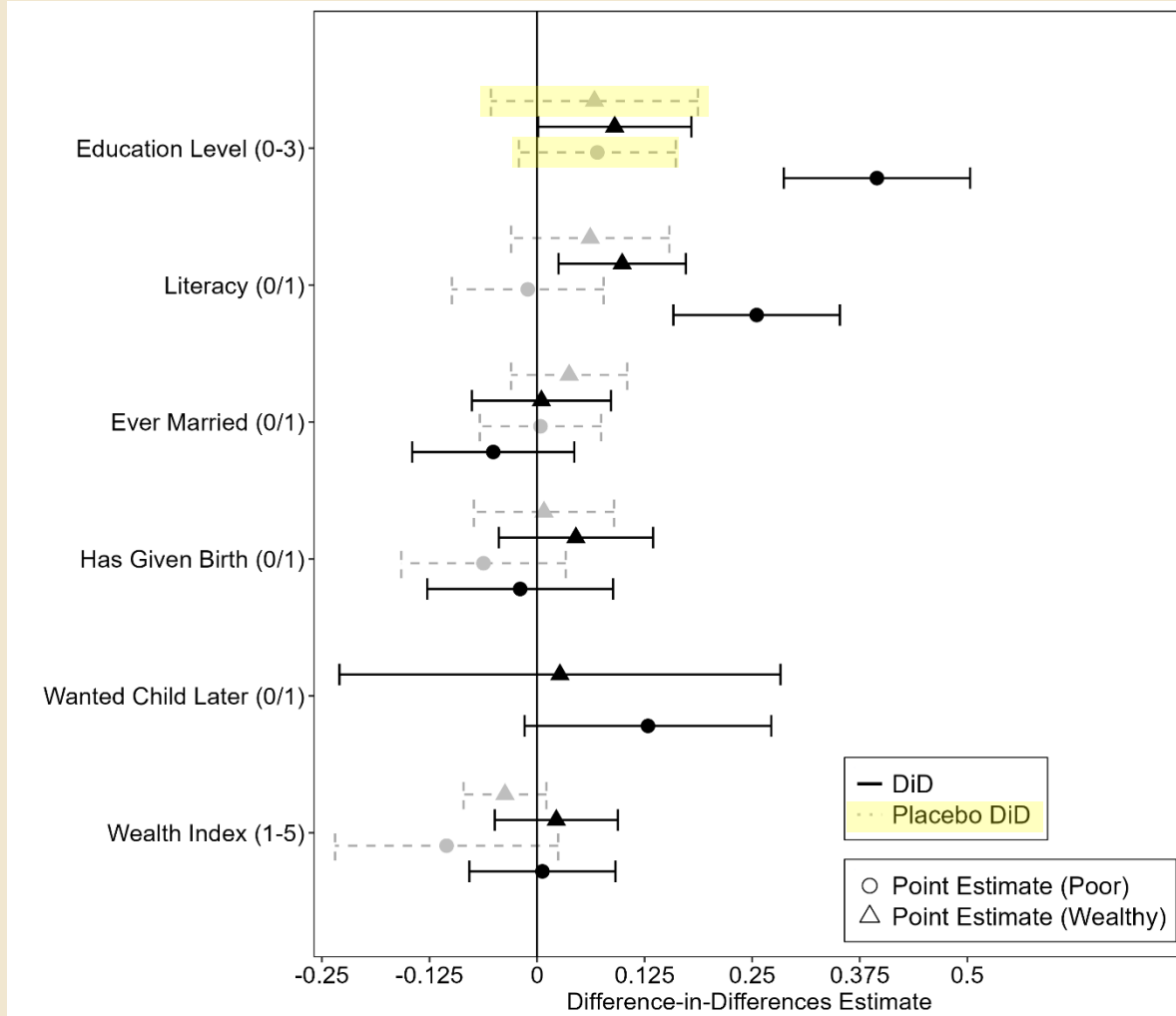
Difference-in-Differences (3/3)



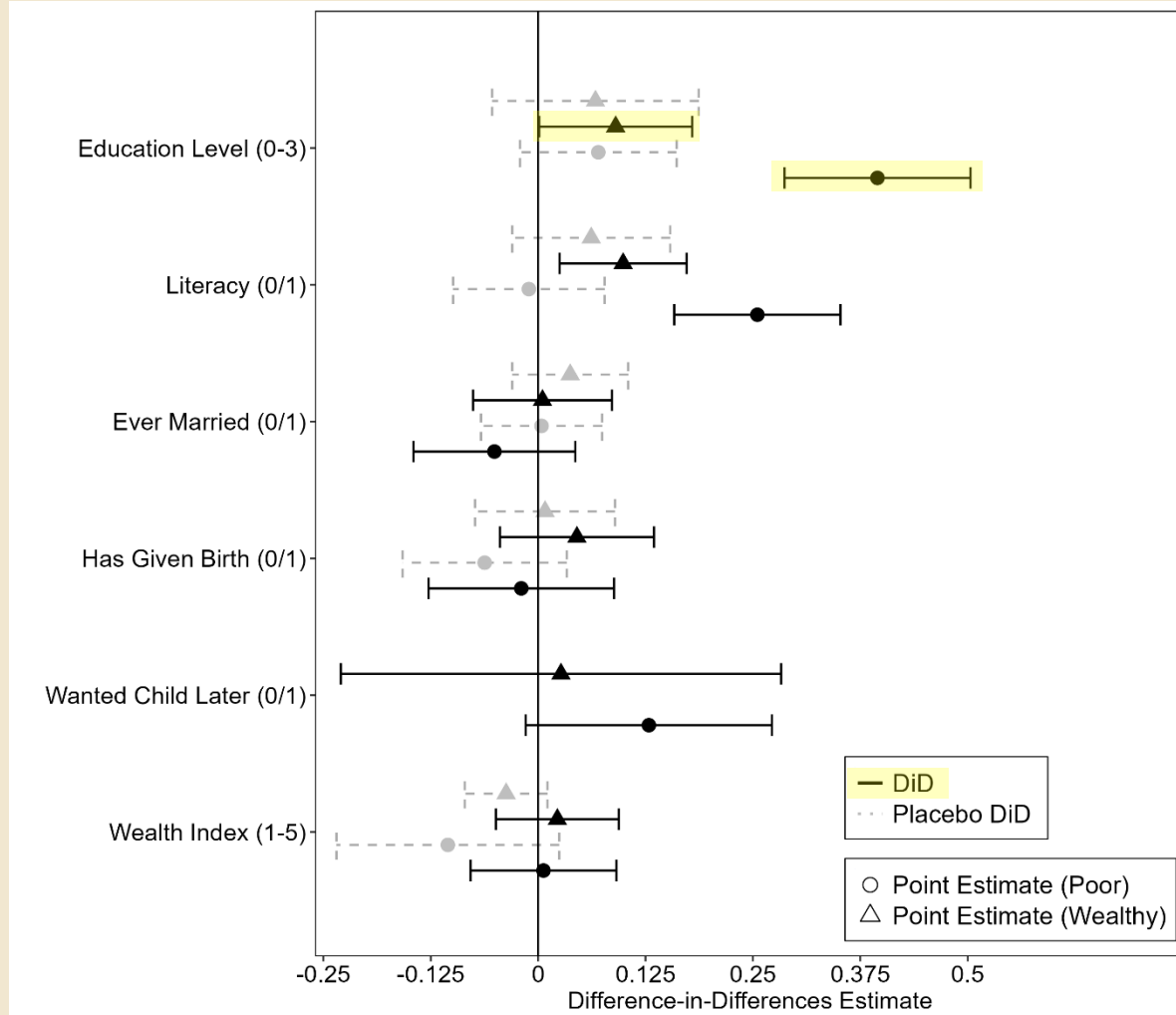
Difference-in-Differences (3/3)



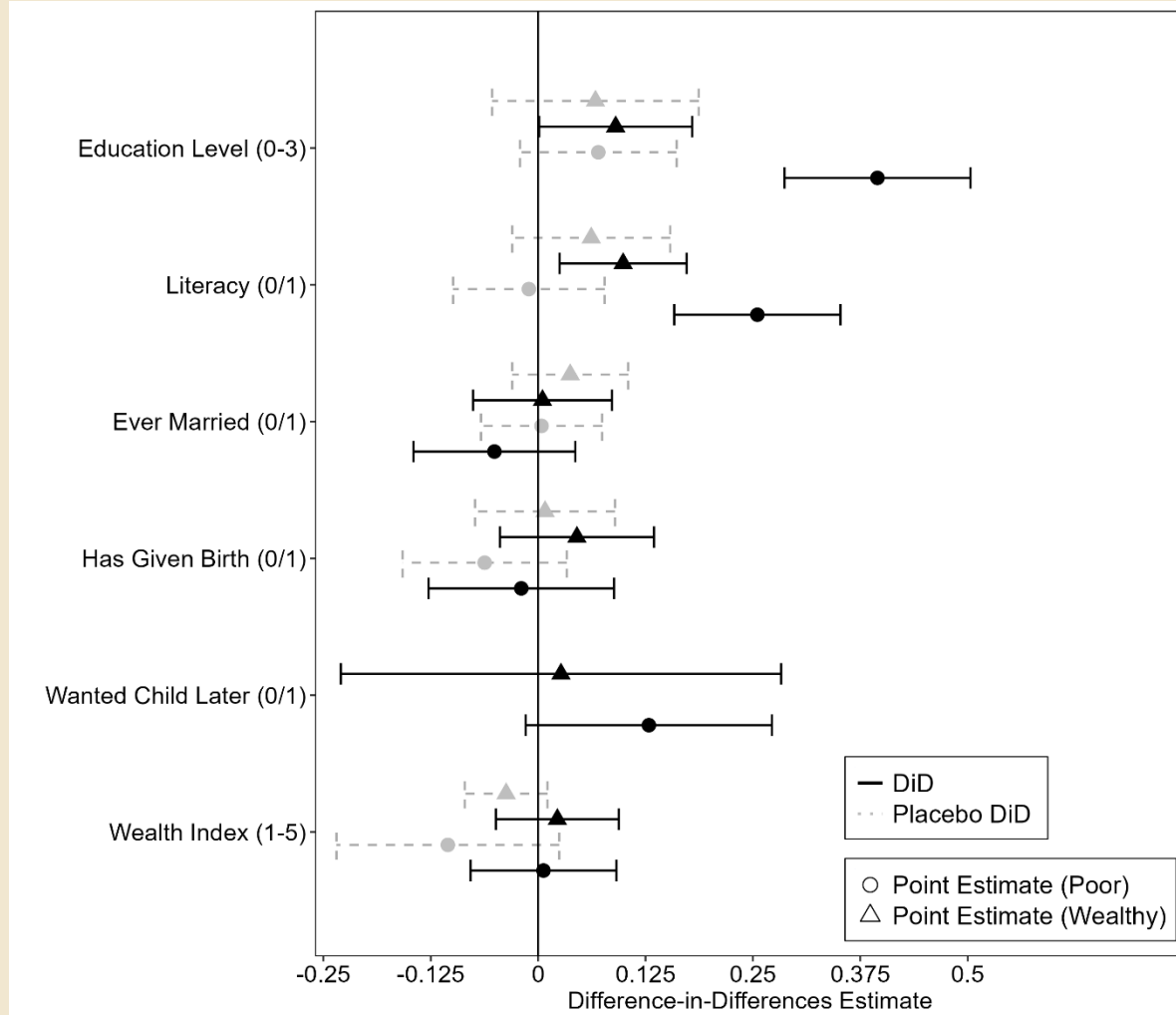
Difference-in-Differences (3/3)



Difference-in-Differences (3/3)



Difference-in-Differences (3/3)



Post Double Selection Controls

PDS' Controls (1/5)

First Stage Discontinuity: Years of Schooling

	Full			Poor			Wealthy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1[Year of Birth \geq 1992]	1.344*** (0.255)	1.223*** (0.223)	1.266*** (0.211)	0.849*** (0.228)	0.908*** (0.220)	0.893*** (0.210)	1.356*** (0.397)	1.280*** (0.367)	1.357*** (0.362)
Mean Ctrl. Group		[3.55]			[1.99]			[5.56]	
Interaction: 1*Year of Birth	0.135 (0.090)	0.164** (0.077)	0.081 (0.073)	0.378*** (0.081)	0.339*** (0.078)	0.196*** (0.073)	-0.179 (0.141)	-0.099 (0.130)	-0.123 (0.121)
Year of Birth	0.052 (0.054)	0.038 (0.047)	-0.530** (0.226)	0.059 (0.046)	0.064 (0.044)	0.098 (0.228)	0.116 (0.090)	0.070 (0.085)	-0.882** (0.360)
Effect on the second cohort treated by FPE									
1[YOB \geq 1992] + 1*YOB + YOB		1.426*** (0.197)			1.312*** (0.187)			1.250*** (0.338)	
Observations	7,713	7,709	7,263	3,857	3,856	3,783	3,856	3,853	3,480
Adj. R ²	0.054	0.263	-	0.099	0.183	-	0.041	0.187	-
Controls	NO	YES	PDS (28)	NO	YES	PDS (25)	NO	YES	PDS (23)
Province Fixed Effects	NO	YES	PDS	NO	YES	PDS	NO	YES	PDS
Survey Fixed Effects	YES	YES	PDS	YES	YES	PDS	YES	YES	PDS

PDS' Controls (2/5)

Second-Stage Results: Literacy and Desired Fertility

	Full			Poor			Wealthy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Panel A: Literacy (0/1)

Schooling	0.054***	0.050***	0.059***	0.067**	0.067**	0.072**	0.033	0.027	0.037
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.017)	(0.016)	(0.033)	(0.030)	(0.029)	(0.022)	(0.024)	(0.023)
Mean Ctrl. Group		[0.56]			[0.43]			[0.73]	
F-Statistic	27.7	29.9	35.5	13.8	17.1	18.7	11.4	11.9	13.9
Observations	7,708	7,704	7,258	3,856	3,855	3,782	3,852	3,849	3,476

Panel B: Desired Number of Children

Schooling	-0.144**	-0.151**	-0.153**	-0.307**	-0.261**	-0.281**	-0.093	-0.088	-0.079
Instr. by 1[YOB ≥ 1992]	(0.060)	(0.063)	(0.061)	(0.136)	(0.118)	(0.119)	(0.086)	(0.086)	(0.079)
Mean Ctrl. Group		[4.01]			[4.05]			[3.96]	
F-Statistic	25.9	28.3	34.9	12.5	15.8	17.5	11.4	11.9	14.7
Observations	7,520	7,516	7,087	3,764	3,763	3,691	3,756	3,753	3,396
Controls	NO	YES	PDS (34,36)	NO	YES	PDS (27,27)	NO	YES	PDS (23,26)
Province Fixed Effects	NO	YES	PDS	NO	YES	PDS	NO	YES	PDS
Survey Fixed Effects	YES	YES	PDS	YES	YES	PDS	YES	YES	PDS

PDS' Controls (3/5)

	Second-Stage Results: Fertility and Reproductive Behavior								
	Full			Poor			Wealthy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Age at first Birth									
Schooling	0.440**	0.468**	0.511***	0.435	0.449*	0.516**	0.640*	0.757	0.686
Instr. by 1[YOB ≥ 1992]	(0.179)	(0.204)	(0.198)	(0.274)	(0.263)	(0.245)	(0.381)	(0.564)	(0.465)
Mean Ctrl. Group		[19.7]			[19.6]			[19.8]	
F-Statistic	14.9	11.9	14.1	9.1	10.3	12.6	3.9	2.1	2.0
Observations	4,918	4,917	4,769	2,830	2,830	2,800	2,088	2,087	2,087
Panel B: First Birth before Age 20 (0/1)									
Schooling	-0.037**	-0.034*	-0.049***	-0.056	-0.069*	-0.086**	-0.026	-0.012	-0.020
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.019)	(0.019)	(0.041)	(0.039)	(0.040)	(0.024)	(0.025)	(0.024)
Mean Ctrl. Group		[0.34]			[0.37]			[0.31]	
F-Statistic	27.9	30.0	36.7	13.8	17.0	18.5	11.7	12.2	14.1
Observations	7,713	7,709	7,263	3,857	3,856	3,783	3,856	3,853	3,480
Controls	NO	YES	(24,47,43,46)	NO	YES	(19,33,35,37)	NO	YES	(47,28,28,23)
Province Fixed Effects	NO	YES	PDS	NO	YES	PDS	NO	YES	PDS
Survey Fixed Effects	YES	YES	PDS	YES	YES	PDS	YES	YES	PDS

PDS' Controls (4/5)

Second-Stage Results: Fertility and Reproductive Behavior

	Full		Poor			Wealthy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel C: Married before Age 20 (0/1)									
Schooling	-0.063***	-0.061***	-0.081***	-0.078**	-0.090**	-0.113***	-0.059**	-0.045*	-0.064**
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.018)	(0.020)	(0.039)	(0.037)	(0.040)	(0.025)	(0.025)	(0.025)
Mean Ctrl. Group		[0.48]			[0.54]			[0.41]	
F-Statistic	27.9	30.0	35.5	13.8	17.0	18.4	11.7	12.2	13.7
Observations	7,713	7,709	7,263	3,857	3,856	3,783	3,856	3,853	3,480
Panel D: Sex before Age 20 (0/1)									
Schooling	-0.044**	-0.042**	-0.063***	-0.047	-0.064*	-0.082**	-0.046*	-0.031	-0.052**
Instr. by 1[YOB ≥ 1992]	(0.018)	(0.019)	(0.019)	(0.037)	(0.035)	(0.037)	(0.028)	(0.029)	(0.026)
Mean Ctrl. Group		[0.55]			[0.59]			[0.50]	
F-Statistic	28.5	29.9	36.1	14.8	17.9	19.1	11.2	11.4	13.6
Observations	7,623	7,619	7,180	3,807	3,806	3,733	3,816	3,813	3,447
Controls	NO	YES	(24,47,43,46)	NO	YES	(19,33,35,37)	NO	YES	(47,28,28,23)
Province Fixed Effects	NO	YES	PDS	NO	YES	PDS	NO	YES	PDS
Survey Fixed Effects	YES	YES	PDS	YES	YES	PDS	YES	YES	PDS

PDS' Controls (5/5)

	Second-Stage Results: Income								
	Full			Poor			Wealthy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Worked Last Year (0/1)									
Schooling	-0.003	-0.002	0.003	0.017	0.005	0.002	0.000	-0.002	0.004
Instr. by 1[YOB ≥ 1992]	(0.015)	(0.013)	(0.014)	(0.024)	(0.020)	(0.020)	(0.025)	(0.022)	(0.021)
Mean Ctrl. Group		[0.86]			[0.92]			[0.78]	
F-Statistic	27.9	30.0	34.5	13.8	17.0	18.8	11.7	12.2	13.5
Observations	7,713	7,709	7,263	3,857	3,856	3,783	3,856	3,853	3,480
Panel B: Works outside of the Household for Cash/Money (0/1)									
Schooling	0.023**	0.026**	0.024**	0.058*	0.057**	0.052**	0.007	0.008	0.003
Instr. by 1[YOB ≥ 1992]	(0.011)	(0.013)	(0.012)	(0.031)	(0.027)	(0.025)	(0.014)	(0.015)	(0.014)
Mean Ctrl. Group		[0.08]			[0.08]			[0.07]	
F-Statistic	27.9	30.0	35.1	13.8	17.0	18.7	11.7	12.2	13.3
Observations	7,713	7,709	7,263	3,857	3,856	3,783	3,856	3,853	3,480
Controls	NO	YES	PDS (44,39)	NO	YES	PDS (33,29)	NO	YES	PDS (28,29)
Province Fixed Effects	NO	YES	PDS	NO	YES	PDS	NO	YES	PDS
Survey Fixed Effects	YES	YES	PDS	YES	YES	PDS	YES	YES	PDS

Birth, Marriage and Sex – By Age

Second Stage – Further Outcomes

Second Stage – Further Outcomes (1/3)

	Second-Stage Results: Contraceptive Knowledge and Use of Condoms					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Knows Condom as contr. Method (0/1)						
Schooling	0.010	0.010	0.011	0.012	0.010	0.011
Instr. by 1[YOB ≥ 1992]	(0.009)	(0.009)	(0.020)	(0.019)	(0.011)	(0.011)
Mean Ctrl. Group	[0.94]		[0.92]		[0.96]	
F-Statistic	27.9	30.0	13.8	17.0	11.7	12.2
Observations	7,713	7,709	3,857	3,856	3,856	3,853
Panel B: Used Condom with last sex. Partner (0/1)						
Schooling	0.040**	0.042*	0.033*	0.031*	0.070	0.090
Instr. by 1[YOB ≥ 1992]	(0.020)	(0.025)	(0.019)	(0.018)	(0.071)	(0.126)
Mean Ctrl. Group	[0.02]		[0.01]		[0.04]	
F-Statistic	10.7	8.5	8.4	9.8	1.6	0.7
Observations	4,801	4,799	2,703	2,702	2,098	2,097
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Second Stage – Further Outcomes (2/3)

	Second-Stage Results: Engagement with Mass Media					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Reads Newspaper at least once per Week (0/1)						
Schooling	-0.011	-0.013	-0.003	-0.003	-0.025	-0.026
Instr. by 1[YOB ≥ 1992]	(0.008)	(0.008)	(0.011)	(0.011)	(0.015)	(0.016)
Mean Ctrl. Group	[0.06]		[0.03]		[0.10]	
F-Statistic	27.9	30.0	13.9	17.1	11.7	12.2
Observations	7,712	7,708	3,856	3,855	3,856	3,853
Panel B: Listens to Radio at least once per Week (0/1)						
Schooling	0.029*	0.025	0.015	0.014	0.023	0.019
Instr. by 1[YOB ≥ 1992]	(0.017)	(0.019)	(0.034)	(0.032)	(0.026)	(0.027)
Mean Ctrl. Group	[0.42]		[0.30]		[0.58]	
F-Statistic	27.8	29.8	13.8	17.0	11.6	12.1
Observations	7,712	7,708	3,857	3,856	3,855	3,852
Panel C: Watches TV at least once per Week (0/1)						
Schooling	0.014	0.010	0.007*	0.007*	0.013	0.012
Instr. by 1[YOB ≥ 1992]	(0.009)	(0.008)	(0.004)	(0.004)	(0.019)	(0.017)
Mean Ctrl. Group	[0.06]		[0.003]		[0.14]	
F-Statistic	28.0	30.2	13.9	17.1	11.7	12.2
Observations	7,710	7,706	3,856	3,855	3,854	3,851
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Second Stage – Further Outcomes (3/3)

	Second-Stage Results: Husband's Characteristics					
	Full		Poor		Wealthy	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Husband's Age						
Schooling	-1.183	-1.411	-1.402	-1.177	-2.093	-4.269
Instr. by 1[YOB ≥ 1992]	(0.854)	(0.994)	(1.148)	(0.990)	(3.407)	(10.813)
Mean Ctrl. Group	[29.8]		[29.4]		[30.4]	
F-Statistic	6.3	5.2	5.7	7.3	0.6	0.2
Observations	4,430	4,430	2,576	2,576	1,854	1,854
Panel B: Husband's Education						
Schooling	0.593	0.591	0.115	0.164	1.575	2.322
Instr. by 1[YOB ≥ 1992]	(0.392)	(0.441)	(0.451)	(0.399)	(2.225)	(4.940)
Mean Ctrl. Group	[3.59]		[2.49]		[5.30]	
F-Statistic	5.9	5.1	5.7	7.2	0.4	0.2
Observations	4,485	4,485	2,606	2,606	1,879	1,879
Panel C: Husband's Ideal Number of Children: Same? (0/1)						
Schooling	0.065	0.078	0.078	0.071	0.102	0.134
Instr. by 1[YOB ≥ 1992]	(0.054)	(0.065)	(0.080)	(0.073)	(0.156)	(0.262)
Mean Ctrl. Group	[0.63]		[0.62]		[0.63]	
F-Statistic	9.7	7.6	7.5	8.7	1.2	0.5
Observations	3,899	3,899	2,240	2,240	1,659	1,659
Controls	NO	YES	NO	YES	NO	YES
Province Fixed Effects	NO	YES	NO	YES	NO	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES

Smoothness Test – MICS 2005

Smoothness Test – MICS 2005

Smoothness Test of Covariates: Multiple Indicator Cluster Survey (MICS)

Panel A: Household Characteristics

	Ever Attended School (0/1)	Wealth Index (1-5)	Urban (0/1)	Household Size (1-14)	Mother Alive (0/1)	Father Alive (0/1)	Religion (HH Head) (1-6)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1[Year of Birth \geq 1992]	-0.032 (0.046)	0.018 (0.144)	-0.016 (0.014)	-0.298 (0.204)	0.003 (0.041)	-0.068 (0.055)	0.038 (0.093)
Mean Ctrl. Group	[0.79]	[3.01]	[0.07]	[5.61]	[0.82]	[0.65]	[1.40]
Observations	2,518	2,523	2,523	2,523	2,205	2,196	2,523
Adj. R ²	(0.001)	0.002	0.001	0.012	0.023	0.036	0.000

Panel B: Mothers' & Children's Characteristics

	Education Level (0-3)	Literacy (0/1)	Ever Married (0/1)	Children Born (1-13)	Last Born Child		
	(1)	(2)	(3)	(4)	Height at Birth (1-5)	Has been Breastfeeding (0/1)	Received Vitamin A (0/1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1[Children's Year of Birth \geq 1992]	-0.048 (0.088)	-0.031 (0.064)	0.014 (0.044)	-0.351* (0.185)	0.064 (0.159)	0.032 (0.029)	0.047 (0.088)
Mean Ctrl. Group	[0.42]	[0.29]	[0.77]	[5.92]	[3.24]	[0.97]	[0.39]
Observations	1,124	1,792	1,913	1,913	857	875	874
Adj. R ²	0.043	0.027	0.022	0.232	0.002	0.002	(0.000)

Dropping Provinces – High Civil War Intensity

Dropping Provinces – High Civil War Intensity

Second-Stage Results: Dropping Provinces with above-median Conflict Intensity								
	Literacy (0/1)	Ideal Number of Children	Age at first Birth	First Birth before Age 20 (0/1)	Married before Age 20 (0/1)	Sex before Age 20 (0/1)	Worked last Year (0/1)	Works outside of the HH for Cash/Money (0/1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Schooling	0.078***	-0.166**	0.448**	-0.043**	-0.062***	-0.038*	-0.016	0.019
Instr. by 1[YOB ≥ 1992]	(0.017)	(0.076)	(0.206)	(0.020)	(0.022)	(0.021)	(0.016)	(0.013)
Mean Ctrl. Group	[0.54]	[4.27]	[19.46]	[0.37]	[0.51]	[0.56]	[0.85]	[0.07]
F-Statistic	22.59	20.82	9.85	22.60	22.60	22.78	22.60	22.60
Observations	3,823	3,692	2,471	3,824	3,824	3,772	3,824	3,824
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Province Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The results in each column are produced by a separate regression. The sample is comprised of provinces with below median conflict intensities. The IV-estimate and key explanatory variable 'Schooling' is instrumented by the binary indicator of being born in or after the cut-off year '1[Year of Birth (YOB) ≥ 1992]'. The strength of this excluded instrument is given by the reported Kleibergen-Paap rk Wald F-Statistic. The standard errors reported are clustered at the survey-cluster level. ***, **, * represents significance at the 1, 5 and 10 percent level, respectively. See full notes below Table 1.

Varying Functional Form

Varying Functional Form (1/2)

First-Stage Discontinuity in Schooling: Varying Functional Form

	(a)			(b)			(c)			(d)			(e)			(f)		
	Linear			Linear Interaction			Quadratic			Quadratic Interaction			Cubic			Cubic Interaction		
	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
1[Year of Birth ≥ 1992]	1.234*** (0.223)	0.956*** (0.220)	1.284*** (0.366)	1.223*** (0.223)	0.908*** (0.220)	1.280*** (0.367)	1.170*** (0.228)	0.772*** (0.230)	1.348*** (0.365)	1.498*** (0.365)	0.843** (0.355)	1.787*** (0.619)	1.228*** (0.296)	0.683** (0.296)	1.526*** (0.477)	0.413 (0.731)	-0.510 (0.717)	0.569 (1.283)
Interaction: 1*Year of Birth				0.164** (0.077)	0.339*** (0.078)	-0.099 (0.130)				0.428** (0.169)	0.193 (0.141)	0.647** (0.286)				-1.385 (0.959)	-1.832* (1.000)	-1.698 (1.596)
Interaction: 1*(Year of Birth)^2										0.965*** (0.302)	0.922*** (0.328)	0.706 (0.484)				-1.385 (0.959)	-0.294 (0.449)	-0.182 (0.696)
Interaction: 1*(Year of Birth)^3																-0.116 (0.408)	-0.170*** (0.063)	-0.147* (0.085)
Year of Birth	0.105*** (0.037)	0.200*** (0.038)	0.028 (0.058)	0.038 (0.047)	0.064 (0.044)	0.070 (0.085)	0.127*** (0.040)	0.257*** (0.043)	0.004 (0.060)	-0.370 (0.241)	-0.081 (0.236)	-0.466 (0.415)	0.103 (0.095)	0.295*** (0.097)	-0.069 (0.148)	1.252 (0.874)	1.919** (0.881)	1.301 (1.523)
Year of Birth^2							0.011 (0.007)	0.028*** (0.007)	-0.013 (0.013)	-0.066* (0.039)	-0.024 (0.038)	-0.086 (0.066)	0.013 (0.009)	0.026*** (0.010)	-0.008 (0.015)	0.535* (0.315)	0.718** (0.322)	0.568 (0.549)
Year of Birth^3													0.001 (0.004)	-0.002 (0.004)	0.003 (0.006)	0.066* (0.034)	0.081** (0.036)	0.072 (0.060)
Intercept	6.497*** (0.436)	3.238*** (0.788)	7.135*** (0.596)	6.288*** (0.442)	2.804*** (0.779)	7.258*** (0.622)	6.440*** (0.436)	3.099*** (0.780)	7.197*** (0.601)	5.753*** (0.518)	2.601*** (0.854)	6.559*** (0.812)	##### (0.284)	3.172*** (0.811)	7.051*** (0.659)	7.023*** (0.830)	4.172*** (0.986)	7.933*** (1.403)
Observations	7709	3856	3853	7709	3856	3853	7709	3856	3853	7709	3856	3853	7709	3856	3853	7709	3856	3853
Adj. R ²	0.262	0.179	0.187	0.263	0.183	0.187	0.263	0.182	0.187	0.264	0.184	0.187	0.263	0.182	0.187	0.264	0.185	0.187
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Province Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The results in each column are produced by a separate regression. The estimate in row one '1[Year of Birth ≥ 1992]' represents the discontinuous increase in schooling by women just-treated by the policy (13 years old), compared to women just too old to benefit from free schooling (14 years old). The standard errors reported are clustered at the survey-cluster level. ***, **, * represents significance at the 1, 5 and 10 percent level, respectively. See full notes below Table 1.

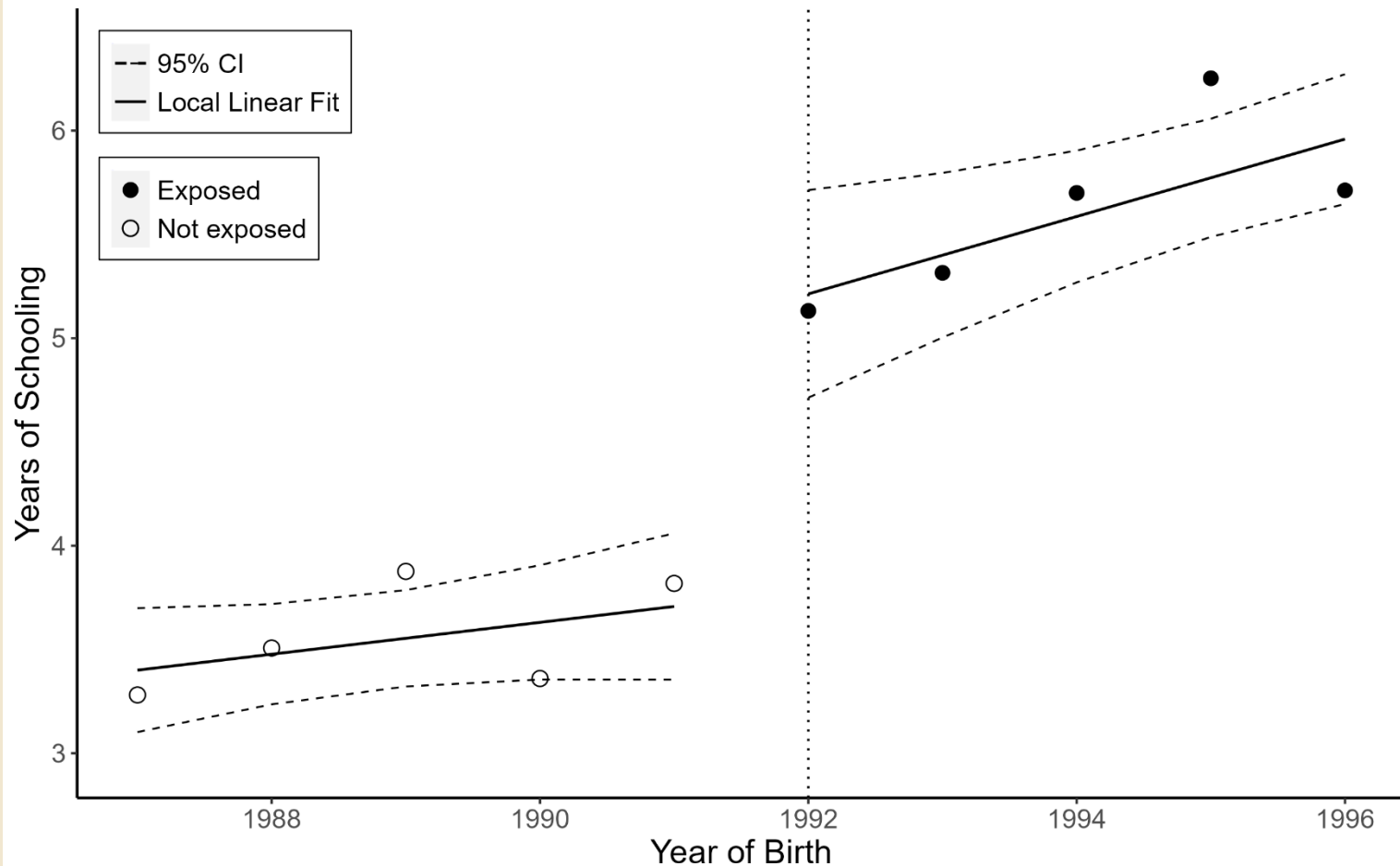
Varying Functional Form (2/2)

	Second-Stage Results: Varying Functional Form																	
	(a)			(b)			(c)			(d)			(e)			(f)		
	Linear			Linear Interaction			Quadratic			Quadratic Interaction			Cubic			Cubic Interaction		
	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy	Full	Poor	Wealthy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
Literacy (0/1)																		
Schooling	0.051***	0.070**	0.027	0.050***	0.067**	0.027	0.043**	0.057	0.025	0.066***	0.081	0.041	0.052**	0.052	0.039	0.043	0.143	0.043
Instr. by I[YOB ≥ 1992]	(0.017)	(0.028)	(0.024)	(0.017)	(0.030)	(0.024)	(0.018)	(0.035)	(0.022)	(0.023)	(0.055)	(0.030)	(0.023)	(0.058)	(0.027)	(0.203)	(0.204)	(0.216)
F-Statistic	[30.4]	[19.0]	[12.0]	[29.9]	[17.1]	[11.9]	[26.2]	[11.3]	[13.4]	[16.7]	[5.6]	[8.0]	[17.0]	[5.3]	[10.0]	[0.3]	[0.5]	[0.1]
Ideal Number of Children																		
Schooling	-0.150**	-0.248**	-0.088	-0.151**	-0.261**	-0.088	-0.153**	-0.306**	-0.076	-0.035	-0.091	-0.027	-0.063	-0.177	-0.025	-1.233	0.759	-0.657
Instr. by I[YOB ≥ 1992]	(0.063)	(0.112)	(0.086)	(0.063)	(0.118)	(0.086)	(0.066)	(0.148)	(0.079)	(0.079)	(0.205)	(0.093)	(0.075)	(0.207)	(0.084)	(2.850)	(1.049)	(1.416)
F-Statistic	[28.9]	[17.5]	[11.9]	[28.3]	[15.8]	[11.9]	[24.4]	[10.5]	[12.8]	[17.4]	[5.7]	[9.1]	[17.8]	[5.2]	[11.2]	[0.2]	[0.8]	[0.2]
Age at first Birth																		
Schooling	0.401**	0.367	0.710	0.468**	0.449*	0.757	0.632**	0.676**	0.837	0.225	0.433	0.115	0.324	0.566	0.238	1.942	8.224	11.278
Instr. by I[YOB ≥ 1992]	(0.191)	(0.245)	(0.554)	(0.204)	(0.263)	(0.564)	(0.256)	(0.342)	(0.607)	(0.215)	(0.421)	(0.319)	(0.205)	(0.415)	(0.273)	(3.569)	(139.187)	(160.028)
F-Statistic	[12.9]	[11.6]	[2.1]	[11.9]	[10.3]	[2.1]	[9.5]	[7.6]	[2.0]	[10.3]	[5.0]	[3.0]	[11.0]	[5.2]	[4.0]	[0.3]	[0.0]	[0.0]
First Birth before Age 20 (0/1)																		
Schooling	-0.033*	-0.066*	-0.013	-0.034*	-0.069*	-0.012	-0.038**	-0.083*	-0.016	-0.038	-0.122	0.003	-0.037	-0.125	0.003	-0.251	0.167	-0.176
Instr. by I[YOB ≥ 1992]	(0.019)	(0.037)	(0.025)	(0.019)	(0.039)	(0.025)	(0.020)	(0.047)	(0.023)	(0.029)	(0.079)	(0.035)	(0.027)	(0.080)	(0.032)	(0.454)	(0.370)	(0.419)
F-Statistic	[30.5]	[19.0]	[12.3]	[30.0]	[17.0]	[12.2]	[26.3]	[11.3]	[13.6]	[16.9]	[5.6]	[8.3]	[17.2]	[5.3]	[10.2]	[0.3]	[0.5]	[0.2]
Married before Age 20 (0/1)																		
Schooling	-0.062***	-0.088**	-0.044*	-0.061***	-0.090**	-0.045*	-0.059***	-0.099**	-0.037	-0.082***	-0.180**	-0.039	-0.074***	-0.179**	-0.027	-0.226	-0.030	-0.364
Instr. by I[YOB ≥ 1992]	(0.018)	(0.035)	(0.025)	(0.018)	(0.037)	(0.025)	(0.019)	(0.044)	(0.023)	(0.030)	(0.090)	(0.034)	(0.027)	(0.087)	(0.031)	(0.399)	(0.239)	(0.763)
F-Statistic	[30.5]	[19.0]	[12.3]	[30.0]	[17.0]	[12.2]	[26.3]	[11.3]	[13.6]	[16.9]	[5.6]	[8.3]	[17.2]	[5.3]	[10.2]	[0.3]	[0.5]	[0.2]
Sex before Age 20 (0/1)																		
Schooling	-0.042**	-0.063*	-0.031	-0.042**	-0.064*	-0.031	-0.039**	-0.067	-0.025	-0.042	-0.110	-0.008	-0.043	-0.112	-0.011	-0.115	0.083	-0.037
Instr. by I[YOB ≥ 1992]	(0.019)	(0.033)	(0.028)	(0.019)	(0.035)	(0.029)	(0.020)	(0.041)	(0.027)	(0.029)	(0.077)	(0.037)	(0.028)	(0.076)	(0.035)	(0.250)	(0.276)	(0.223)
F-Statistic	[30.3]	[19.8]	[11.6]	[29.9]	[17.9]	[11.4]	[26.5]	[12.0]	[13.0]	[17.3]	[5.8]	[8.2]	[17.4]	[5.5]	[9.8]	[0.4]	[0.5]	[0.3]
Worked Last Year (0/1)																		
Schooling	-0.002	0.003	-0.002	-0.002	0.005	-0.002	0.000	0.015	-0.004	0.003	0.005	0.005	0.009	0.010	0.013	-0.183	0.080	-0.209
Instr. by I[YOB ≥ 1992]	(0.013)	(0.019)	(0.022)	(0.013)	(0.020)	(0.022)	(0.015)	(0.026)	(0.021)	(0.021)	(0.039)	(0.034)	(0.021)	(0.040)	(0.031)	(0.320)	(0.181)	(0.444)
F-Statistic	[30.5]	[19.0]	[12.3]	[30.0]	[17.0]	[12.2]	[26.3]	[11.3]	[13.6]	[16.9]	[5.6]	[8.3]	[17.2]	[5.3]	[10.2]	[0.3]	[0.5]	[0.2]
Works outside of the Household for Cash/Money (0/1)																		
Schooling	0.026**	0.055**	0.008	0.026**	0.057**	0.008	0.024*	0.061*	0.006	0.058***	0.124*	0.038	0.063***	0.140*	0.036	0.054	-0.021	0.087
Instr. by I[YOB ≥ 1992]	(0.012)	(0.026)	(0.015)	(0.013)	(0.027)	(0.015)	(0.013)	(0.033)	(0.015)	(0.023)	(0.073)	(0.024)	(0.023)	(0.078)	(0.024)	(0.166)	(0.145)	(0.245)
F-Statistic	[30.5]	[19.0]	[12.3]	[30.0]	[17.0]	[12.2]	[26.3]	[11.3]	[13.6]	[16.9]	[5.6]	[8.3]	[17.2]	[5.3]	[10.2]	[0.3]	[0.5]	[0.2]
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Province Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Survey Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The results in each panel and in each column are produced by a separate regression. The estimate 'Schooling' represents the causal effect of education, the IV-estimate, instrumented by the dichotomous indicator 'I[Year of Birth ≥ 1992]'. The strength of this excluded instrument is given by the reported Kleibergen-Paap rk Wald F-Statistic. The standard errors reported are clustered at the survey-cluster level. ***, **, * represents significance at the 1, 5 and 10 percent level, respectively. See full notes below Table 1.

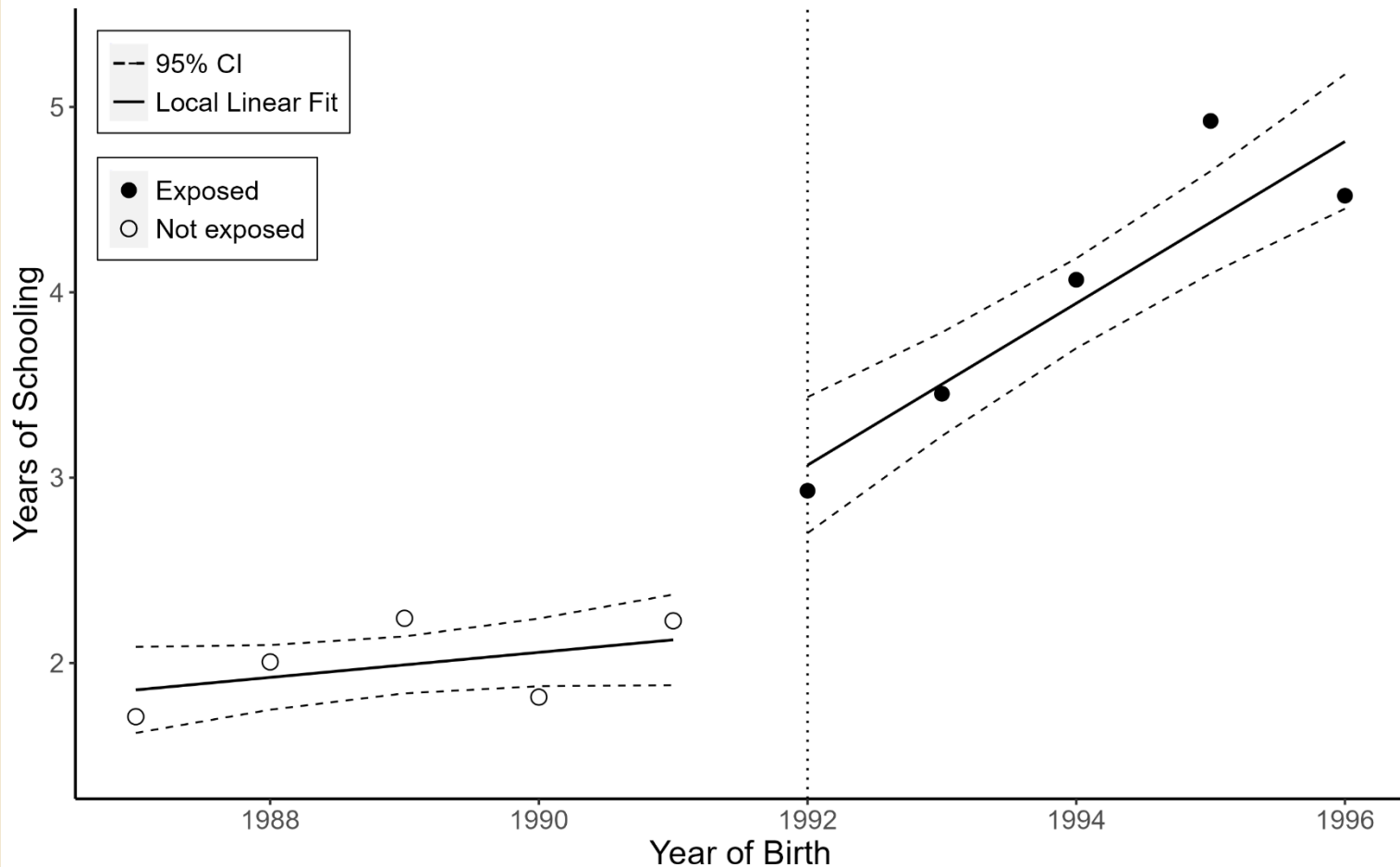
Figures – First Stage

Figures – First Stage (1/3)



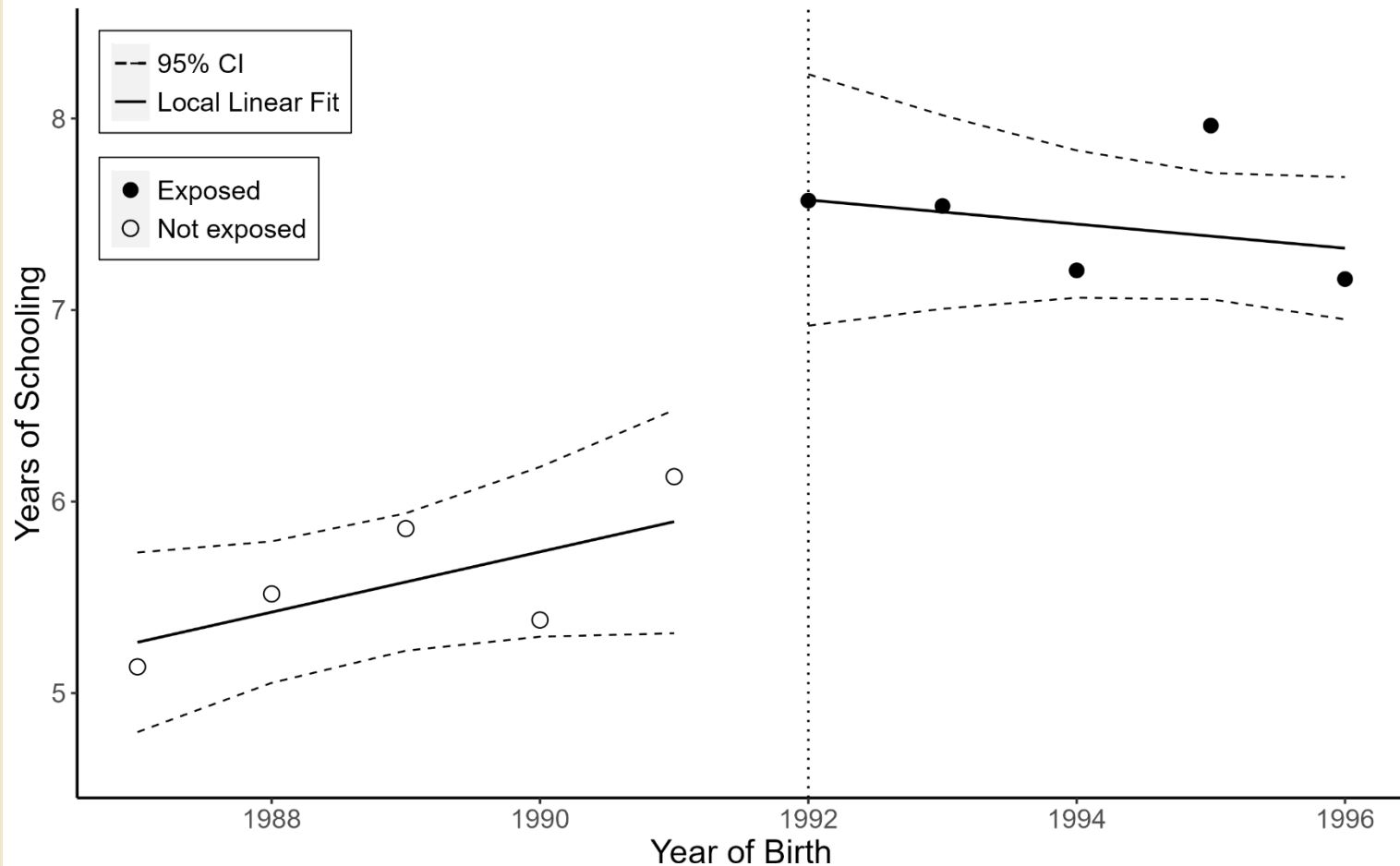
Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The local linear fit represents the predicted regression line as specified in equation (1).

Figures – First Stage (2/3)



Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The local linear fit represents the predicted regression line as specified in equation (1).

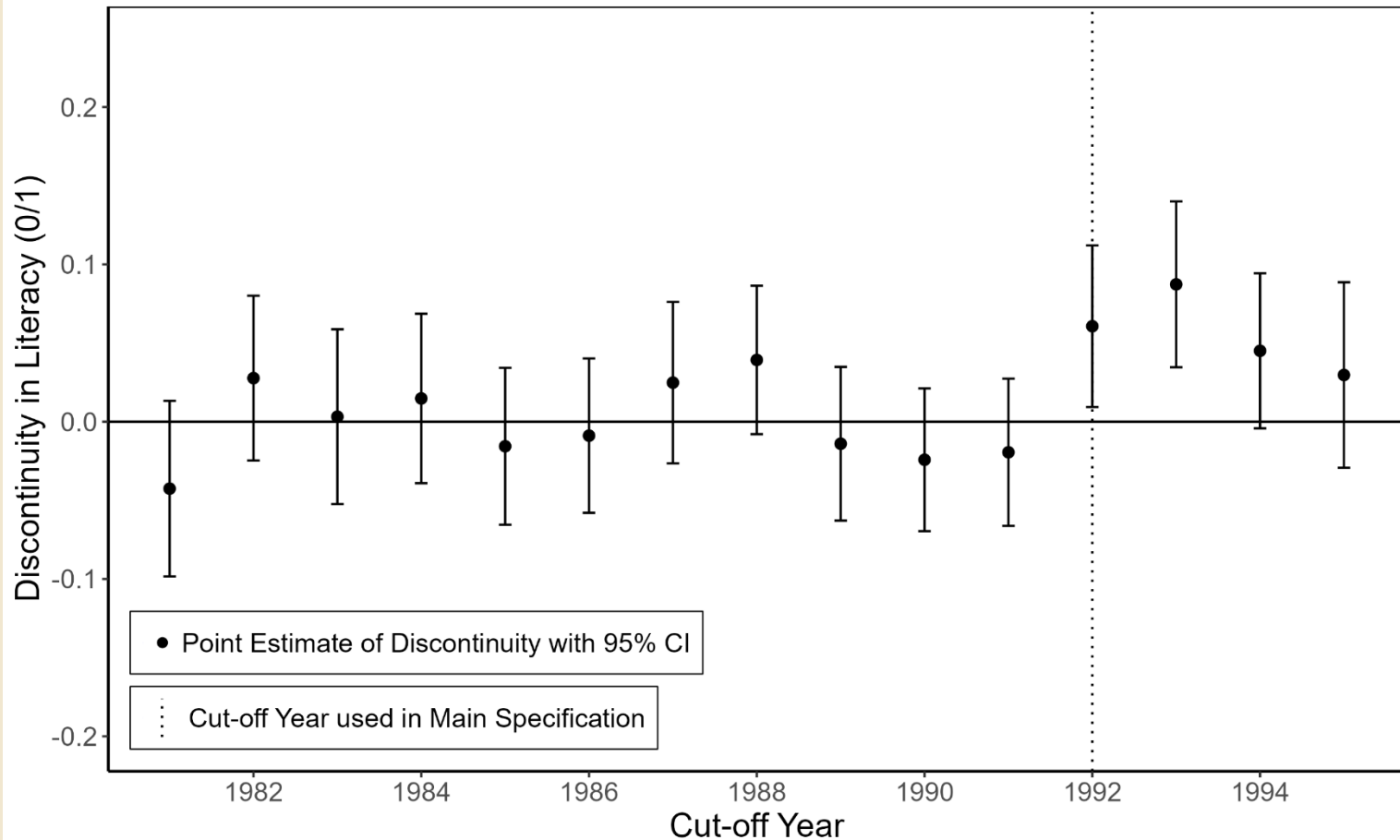
Figures – First Stage (3/3)



Notes: Data from the 2010/2011 and the 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The local linear fit represents the predicted regression line as specified in equation (1).

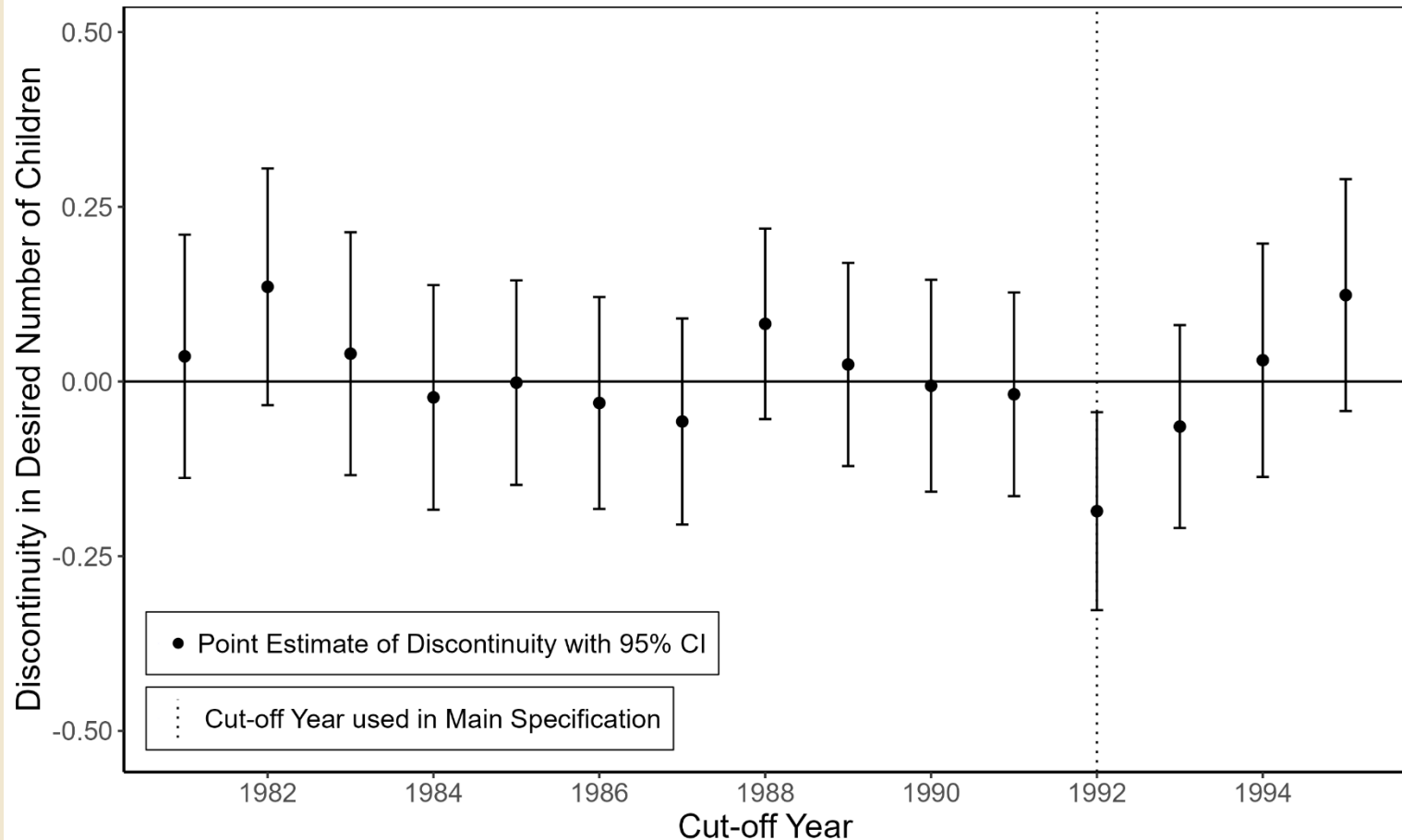
Placebo Discontinuity

Placebo Discontinuity (1/8)



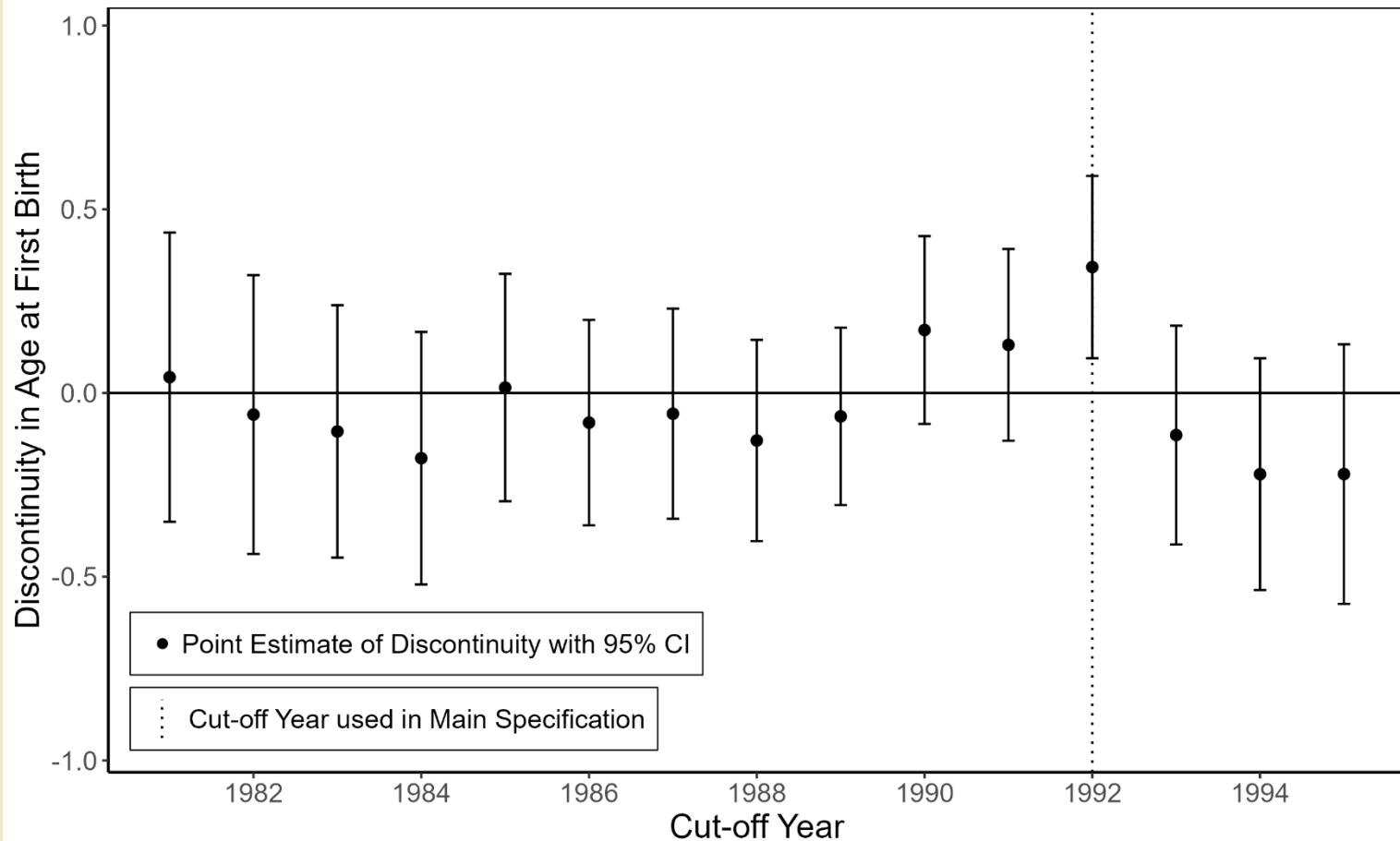
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.

Placebo Discontinuity (2/8)



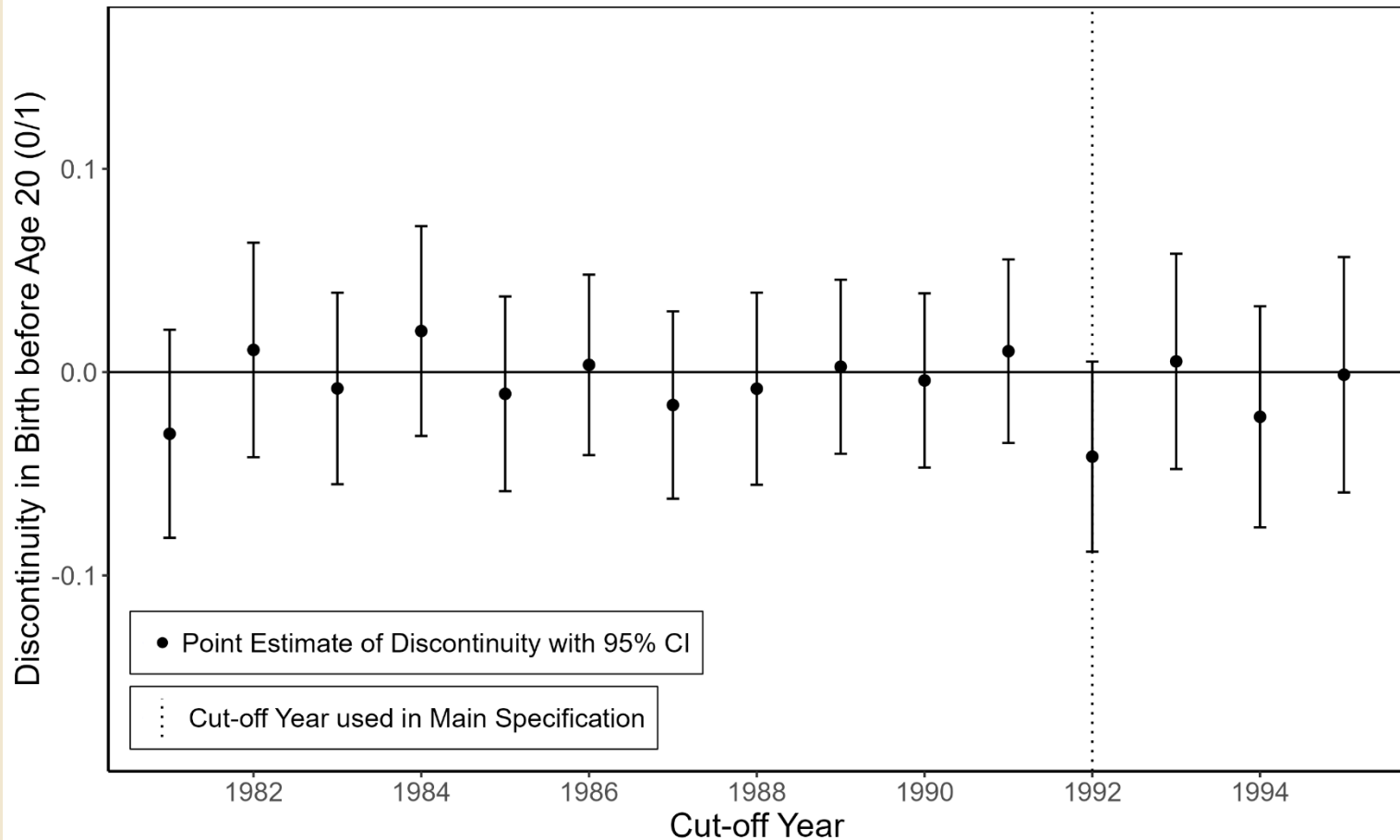
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.

Placebo Discontinuity (3/8)



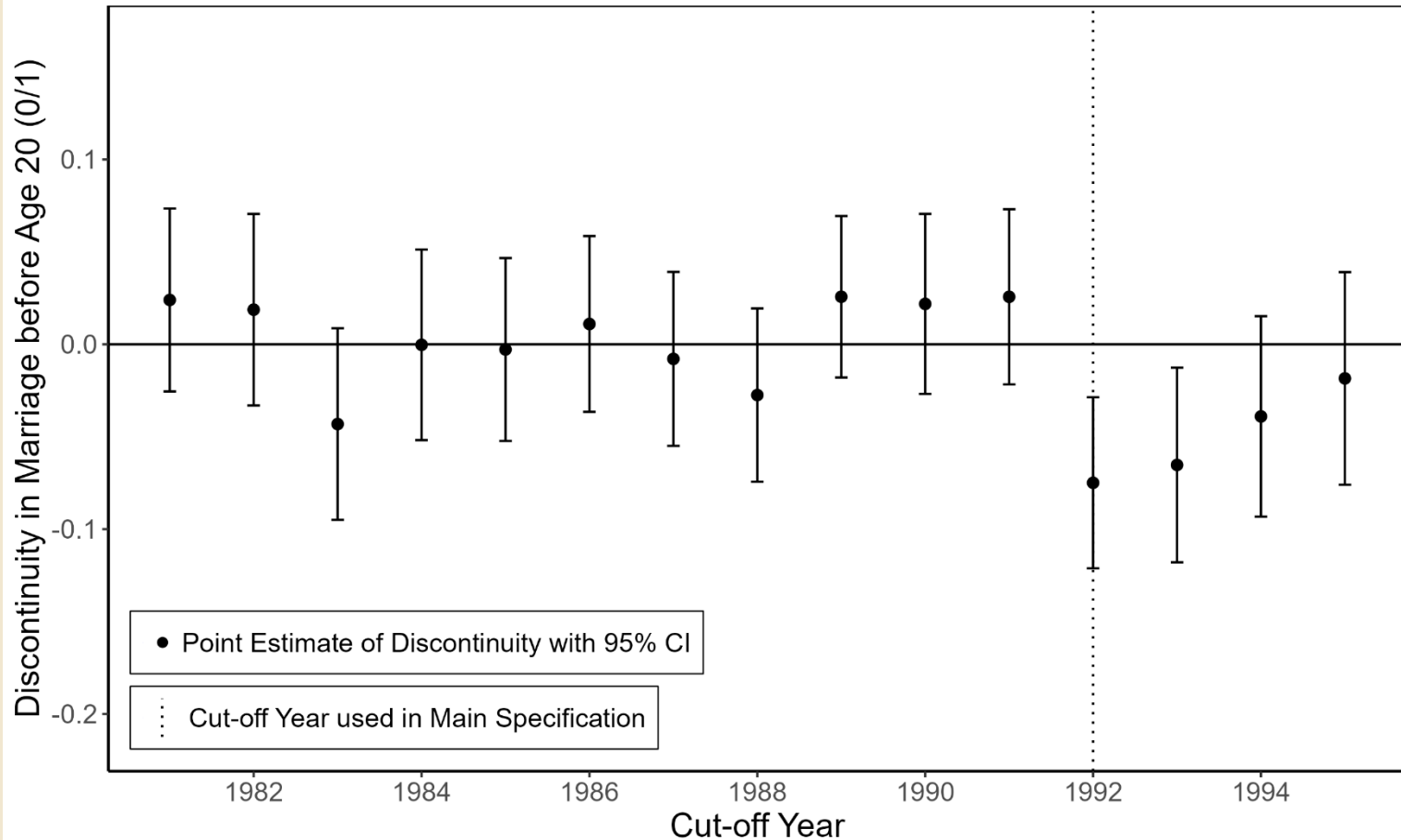
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.

Placebo Discontinuity (4/8)



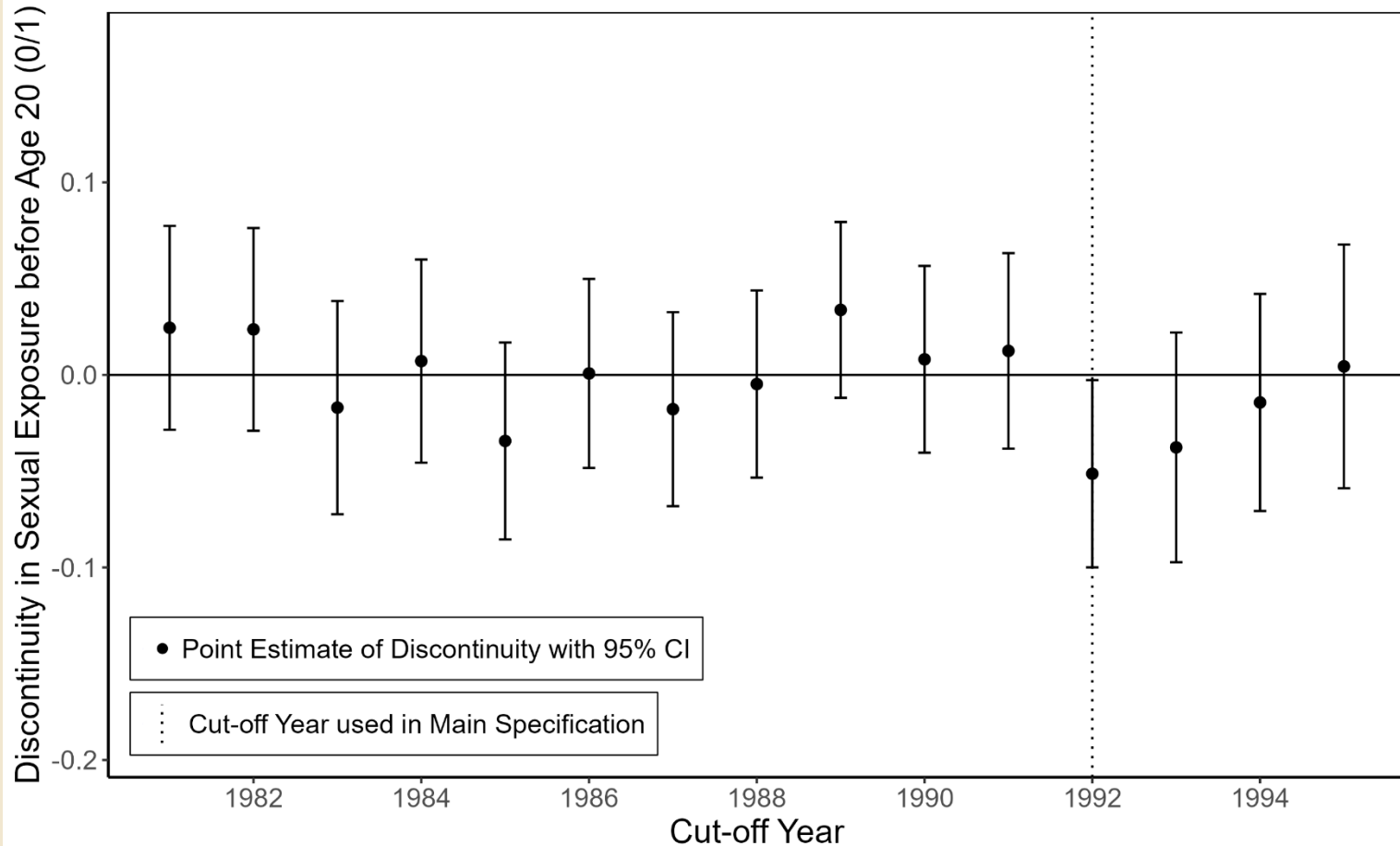
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'. The vertical dotted line indicates the cut-off year used in the main specification.

Placebo Discontinuity (5/8)



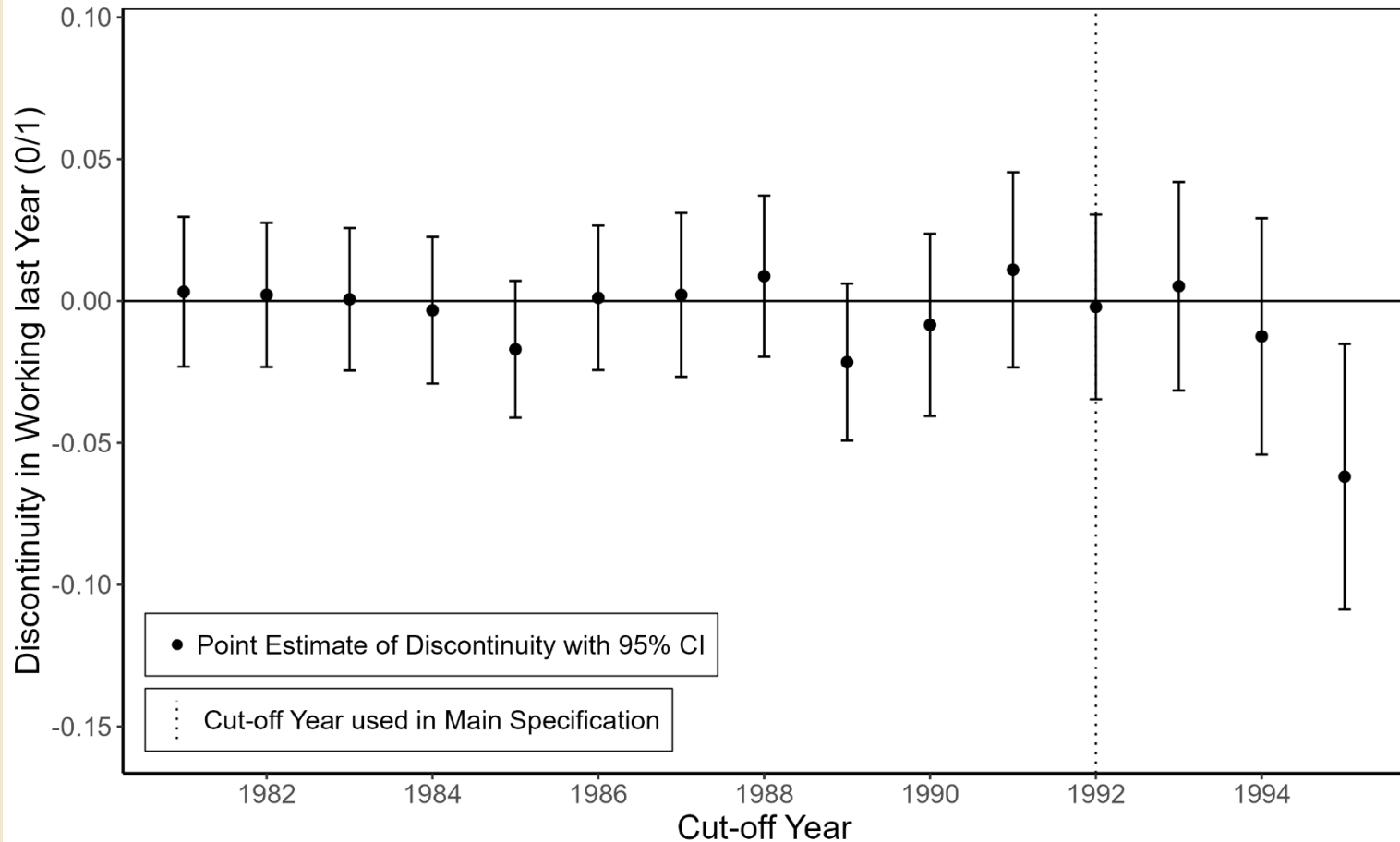
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'. The vertical dotted line at 1992 indicates the cut-off year used in the main specification.

Placebo Discontinuity (6/8)



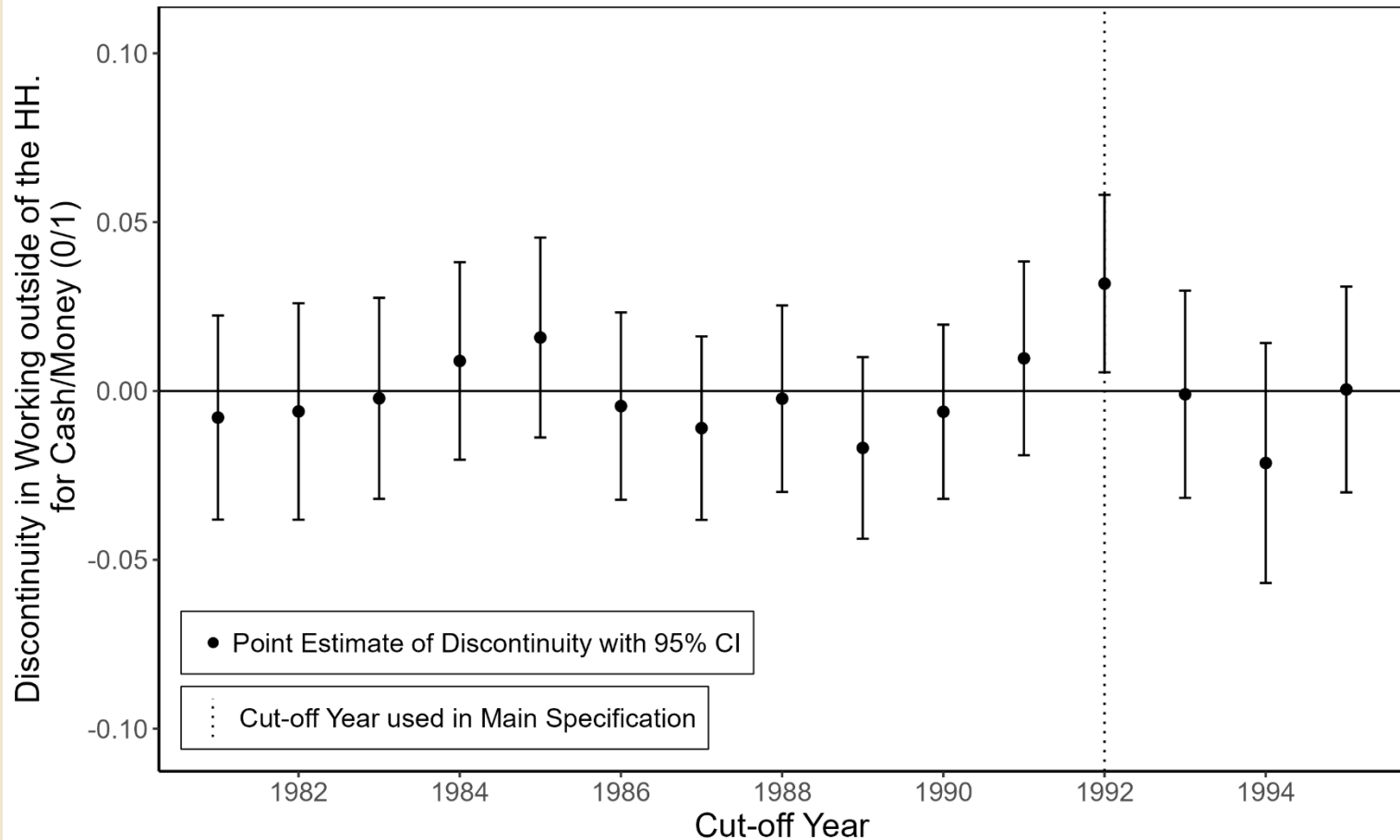
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.

Placebo Discontinuity (7/8)



Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.
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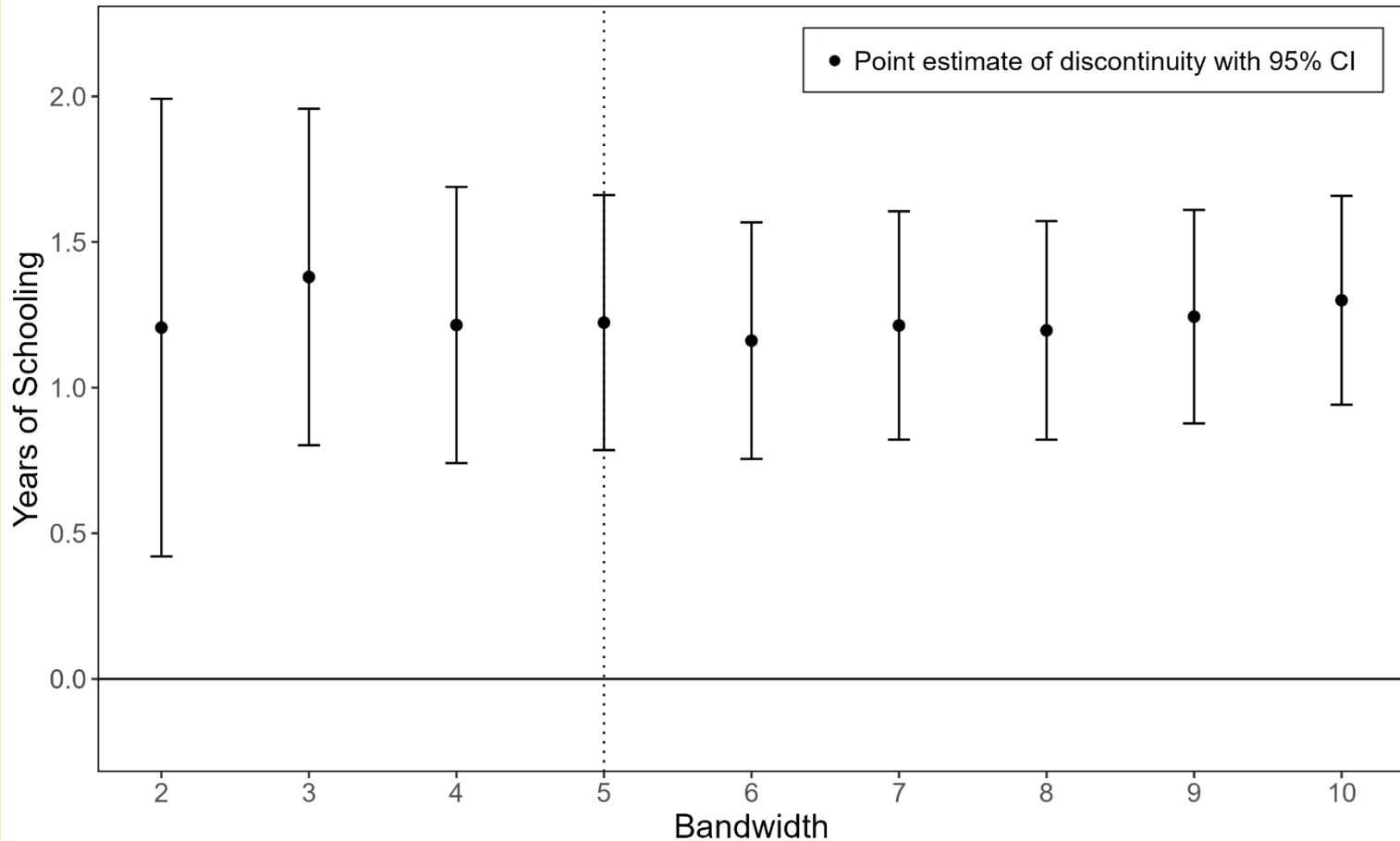
Placebo Discontinuity (8/8)



Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'.

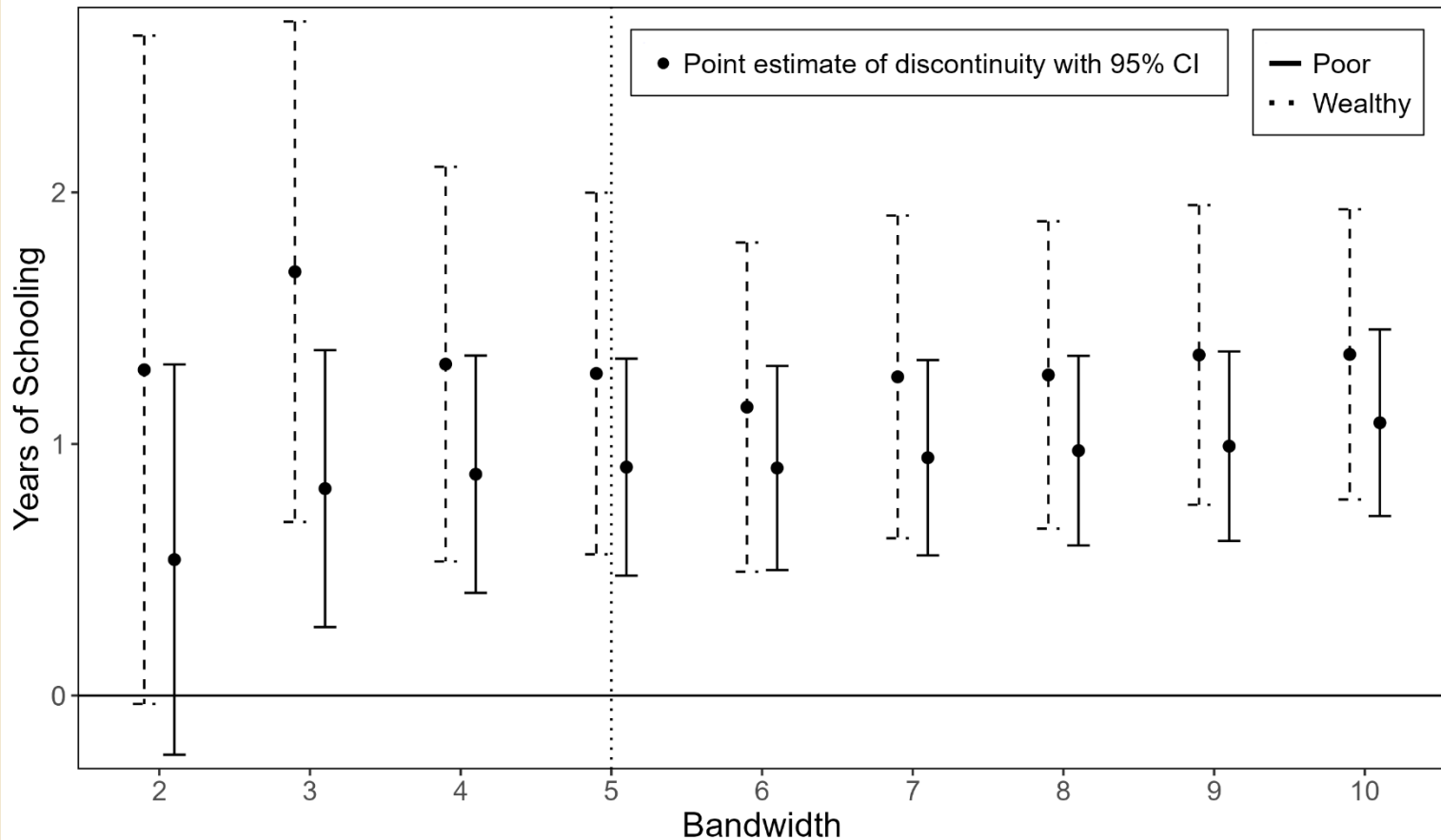
Varying Bandwidth

Varying Bandwidth (1/10)



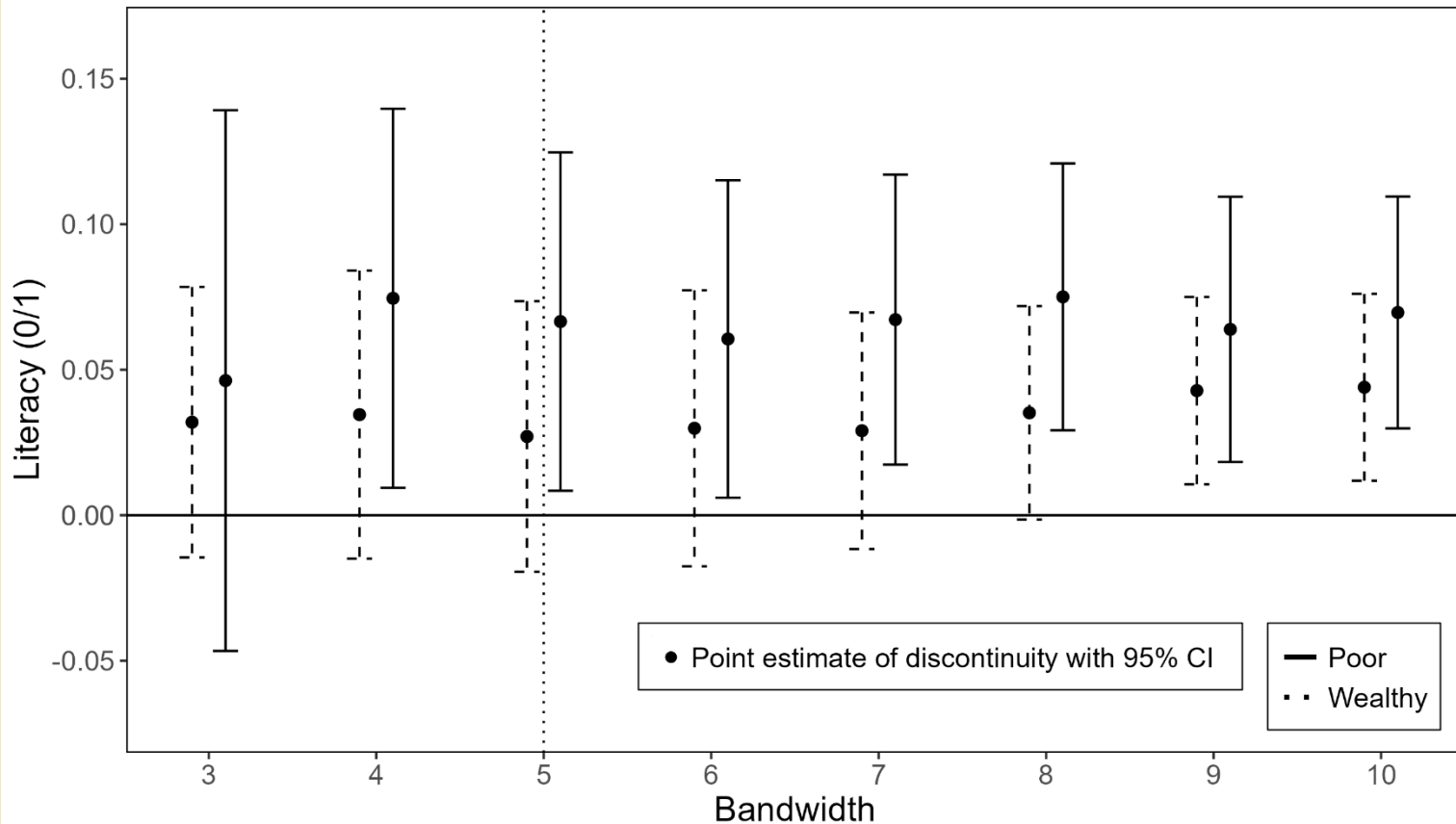
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (on the Y-axis, i.e. the dichotomous indicator '1[Year of Birth \geq 1992]').

Varying Bandwidth (2/10)



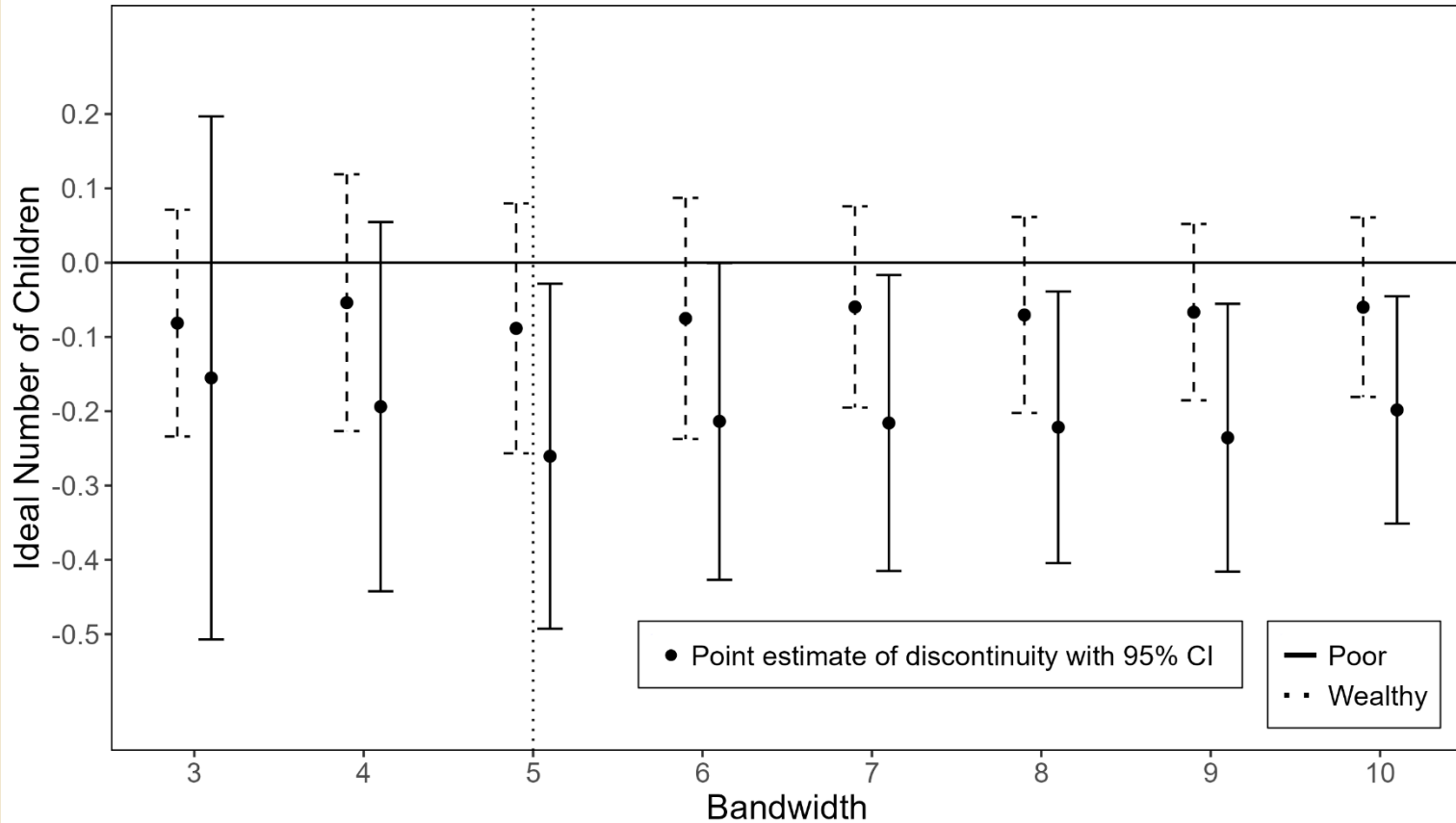
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the coefficient on the discontinuity of the respective dependent variable (on the Y-axis), i.e. the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (3/10)



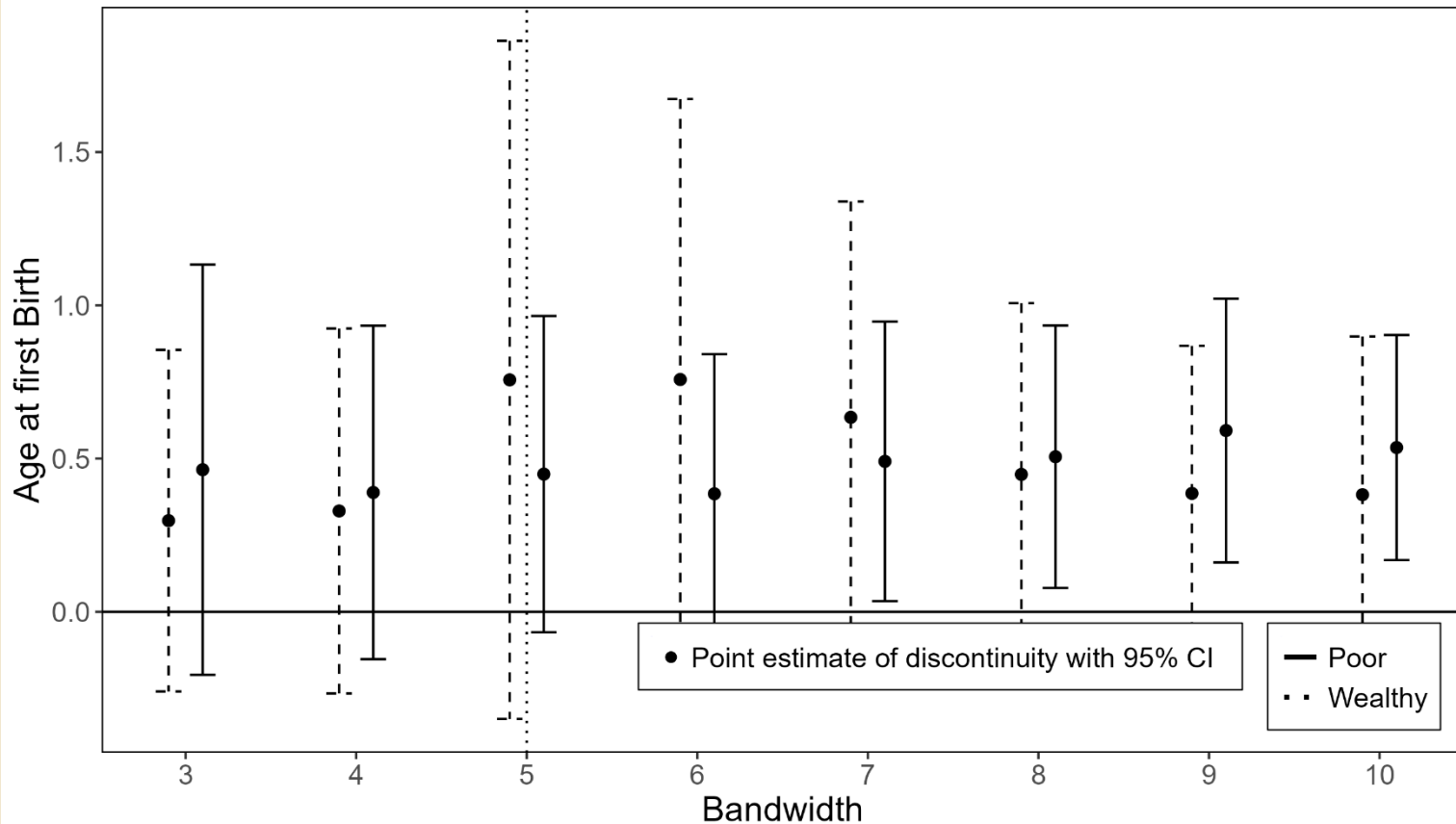
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (4/10)



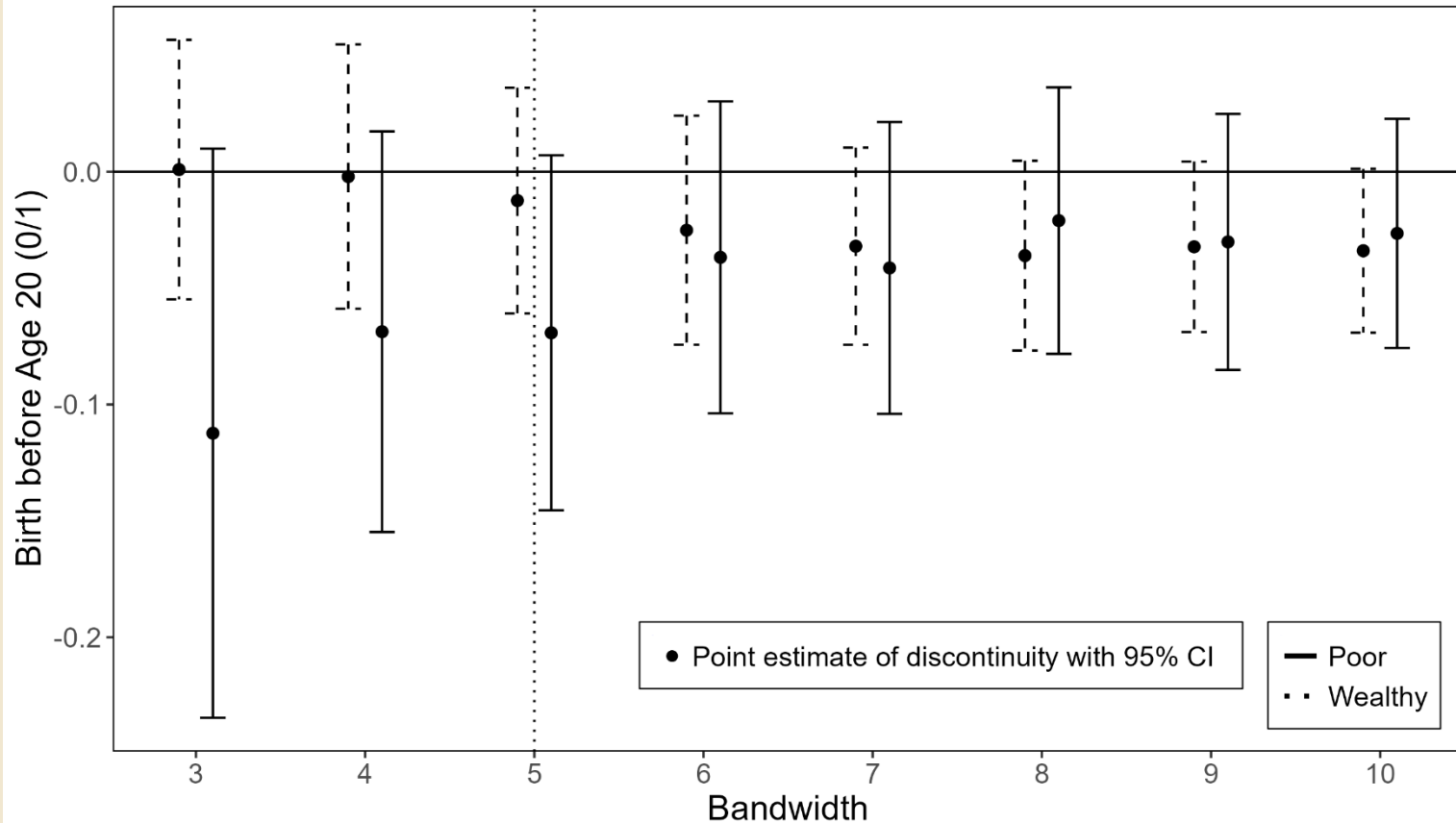
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (5/10)



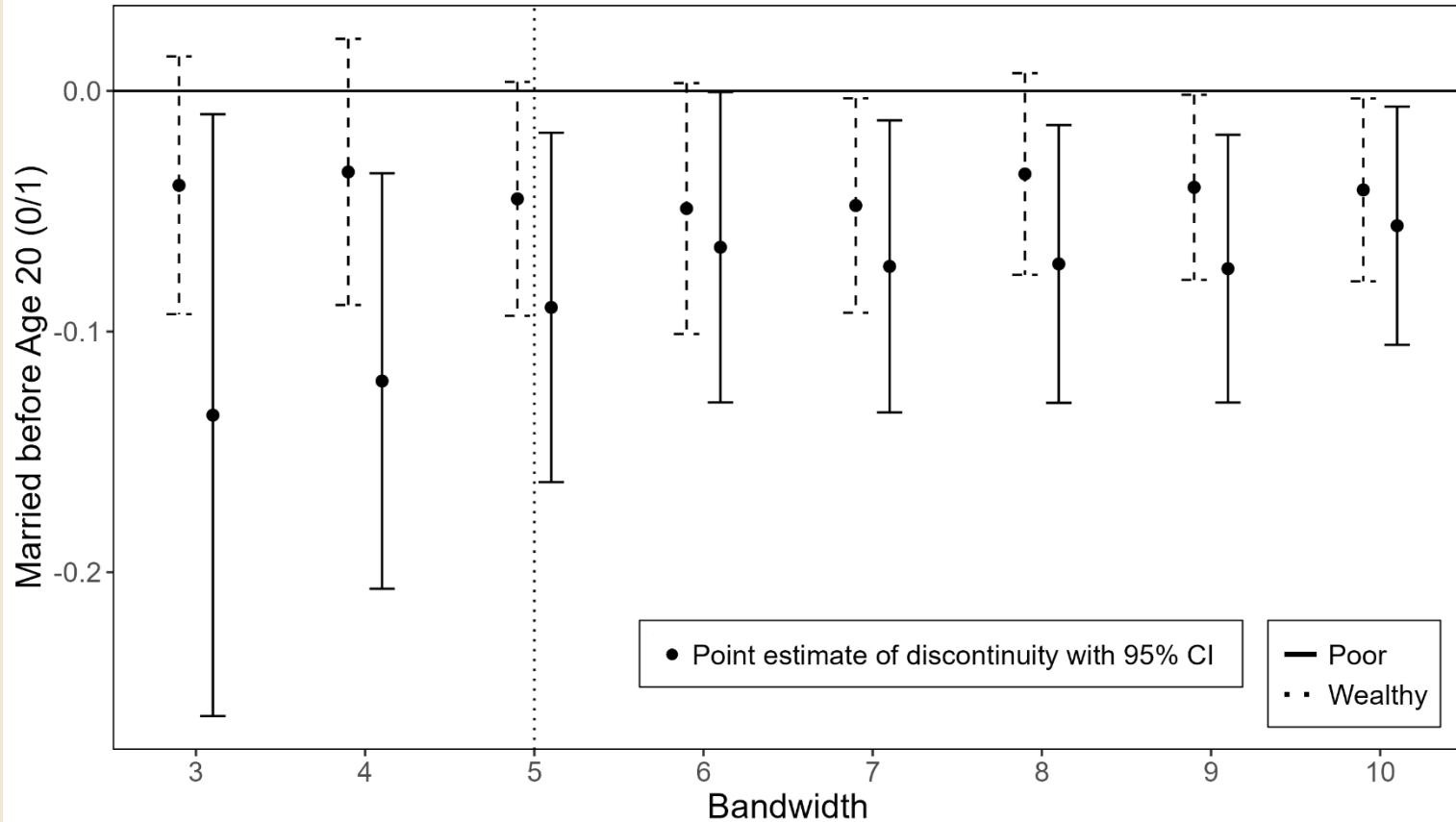
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (6/10)



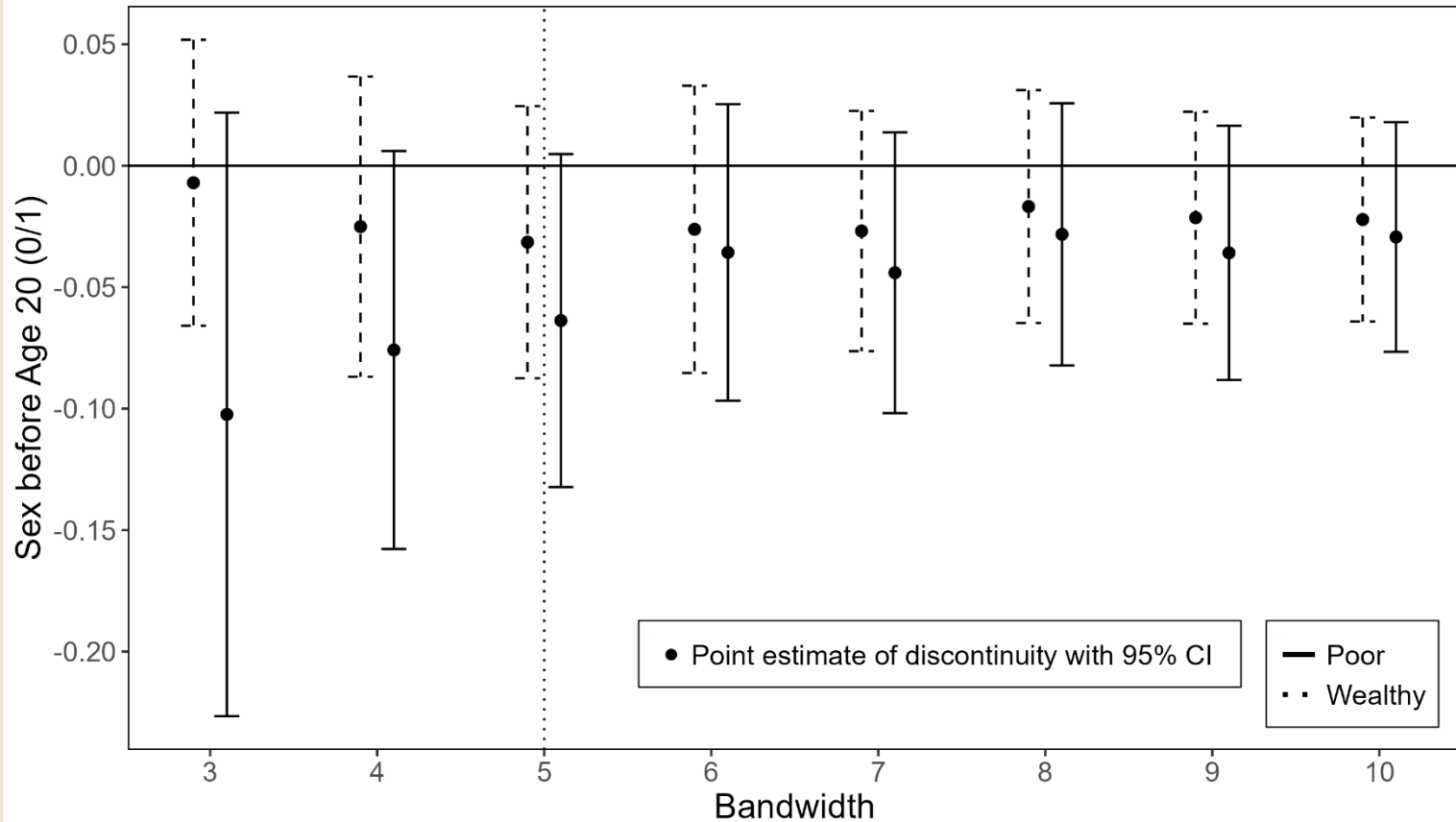
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (7/10)



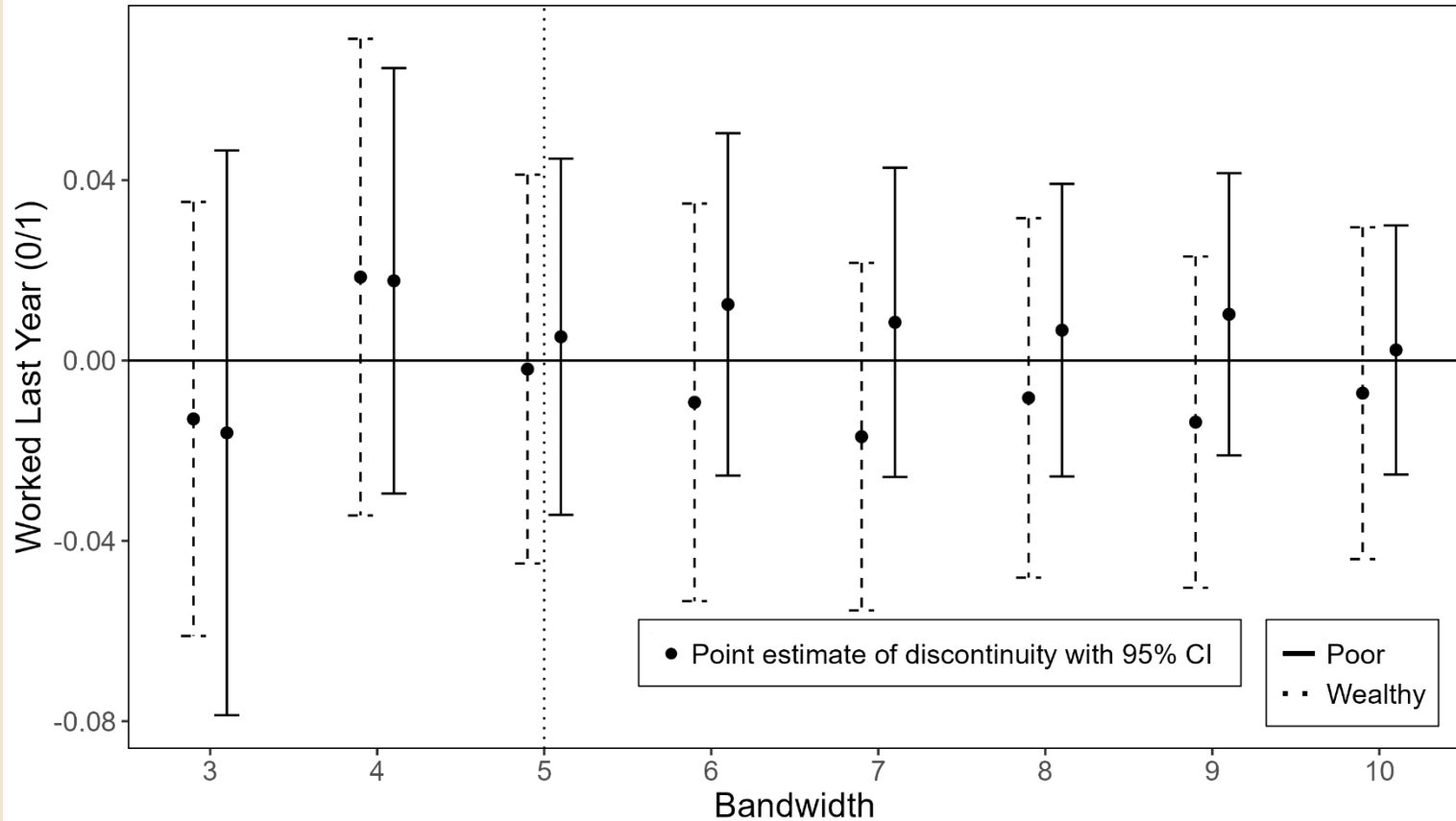
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (8/10)



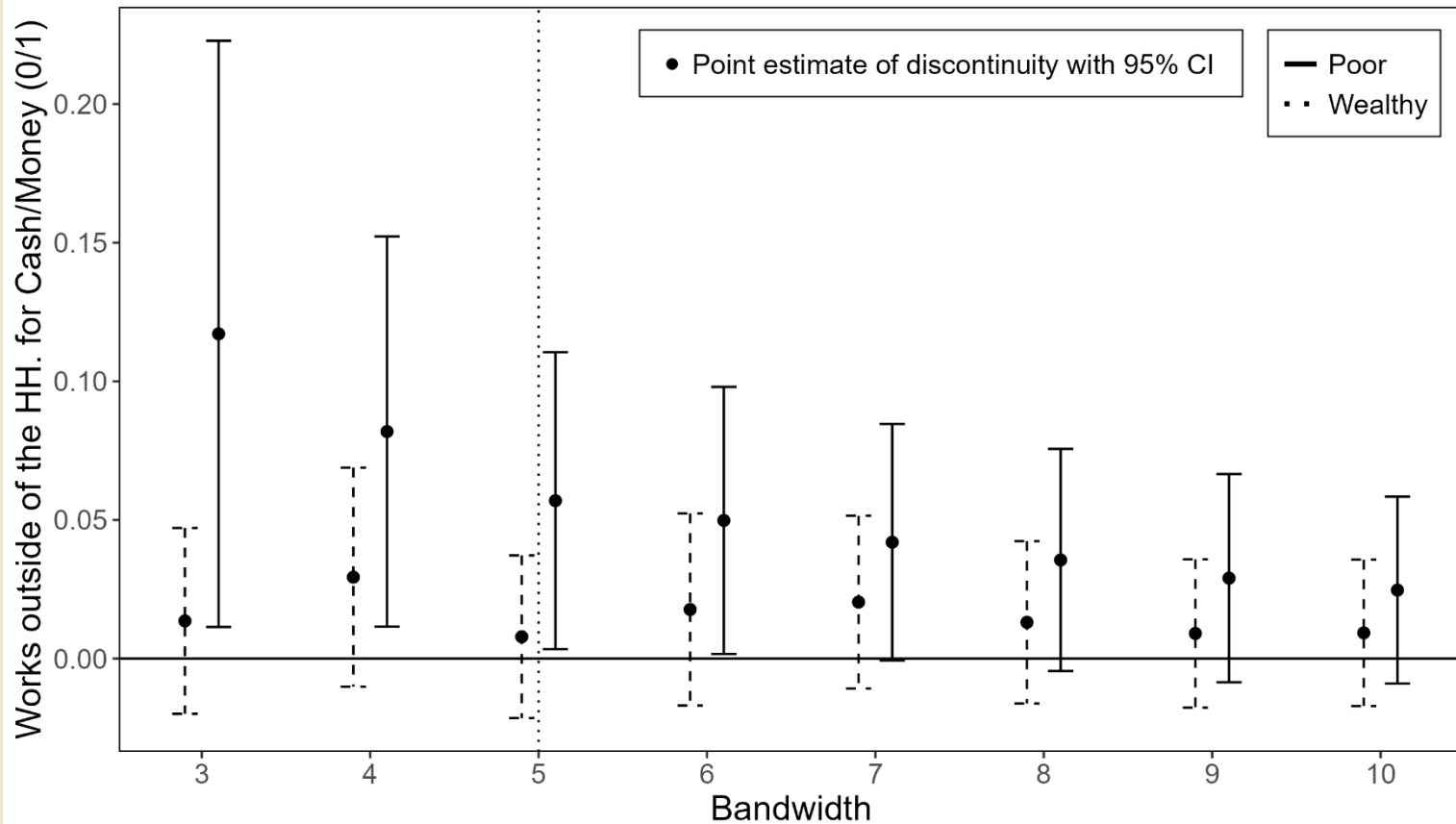
Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (9/10)



Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.

Varying Bandwidth (10/10)



Notes: Data from the 2010/2011 and 2016/2017 Burundi DHS Female Surveys. Respondents are restricted to age 20 and older. Weighted using DHS sample weights. The point estimate represents the IV-estimate of education on the respective dependent variable (Y-axis), instrumented by the coefficient on the discontinuity, the dichotomous indicator '1[Year of Birth \geq 1992]'. Estimates for the 'Poor' and 'Wealthy' coefficients come from separate regressions using subsamples split at the median household wealth level.