# Conditional Cash Transfers and Gender Norms: The Role of Policy Design*

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*Previous version titled *"Unintended Consequences of CCT Programs on Gender Role Attitudes."*

# Motivation

- Gender norms pose significant challenges to gender equality
  - Limit women's access to education, health, and labor markets (Fortin, 2005; Bertrand et al., 2015; Field et al., 2021)
  - Reduce protection against violence against women (Herrero et al., 2017)
- Gender norms are persistent and resistant to change (Fernandez et al., 2004; Alesina et al., 2013; Farre & Vella, 2013)

  $\longrightarrow$ Understanding the *drivers of gender norms* is crucial
- Policies can shift gender norms in developed countries (Bastian, 2020; Farre et al., 2022; Tavits et al., 2023)
- Little is known about *how* policies affect gender norms in developing countries *and* through which mechanisms

# This Paper

- This paper studies the effects of a large-scale policy intervention on gender norms and the underlying mechanisms

- **Setting**: *Juntos*, Peru's largest CCT program (since 2005)
  - Provides financial support to poor households
  - Mothers are the primary recipients and responsible for health and education conditionalities

  $\longrightarrow$ **Hypothesis**: Cash transfers may shape children's gender attitudes by changing intra-household gender roles

- **Empirical Design:** Fuzzy Regression Discontinuity Design (FRD)
  - Compare children from households just *above* and just *below* the eligibility threshold

▸ Related Literature

# Setting and Data

# Juntos Program

- **Objectives**: alleviate poverty and reduce intergenerational transmission of poverty through human capital investments
- **Fixed amount**: 100 S/. $\approx$ US$30/month (21.7% of minimum wage in 2005)
- **Conditions**:
  - children up to 59 months old (health and nutrition care)
  - children above 6 years old (85% school attendance)
  - pregnant women (health care)
- Mothers are the primary recipients (96%) and sign an agreement to fulfill conditions
- **Selection Process**
  - district level
  - household level: within eligible district (with pregnant women or children up to 19 years old, poverty score exceeding a cutoff)

# Data and Measurement

- **Analysis Sample**: 1,119 children ($\approx$ 15 years old in 2016) from households in *eligible* districts in the **Peruvian Young Lives Study**.
- **Gender Attitude Index**: Attitudes Toward Women Scale for Adolescents (AWSA) (Juraseviciene et al., 2014)

| **Behavior** | **Equality** | **Power** |
|---|---|---|
| No swearing for women | Women less smart | Sons' education prioritized |
| Men pay on dates | No rough sports | Fathers' decision authority |
| Women can't ask men out | No shared chores | Men's success prioritized |
| | Less freedom for women | Men = better leaders |
| | | Women = homemakers |

  - Each statement $\rightarrow$ dummy (1 = agrees with traditional roles, 0 = otherwise)
  - Index: mean of 12 dummies
  - Interpretation: **Higher** index = **more traditional** gender attitudes

# Empirical Strategy

# Empirical Approach: Household Poverty Score

- Compute household poverty score using household surveys based on official algorithms ▸ Algorithms to compute poverty score

- Center poverty scores with corresponding eligibility cutoff values
  $\longrightarrow$ **Threshold: 0**

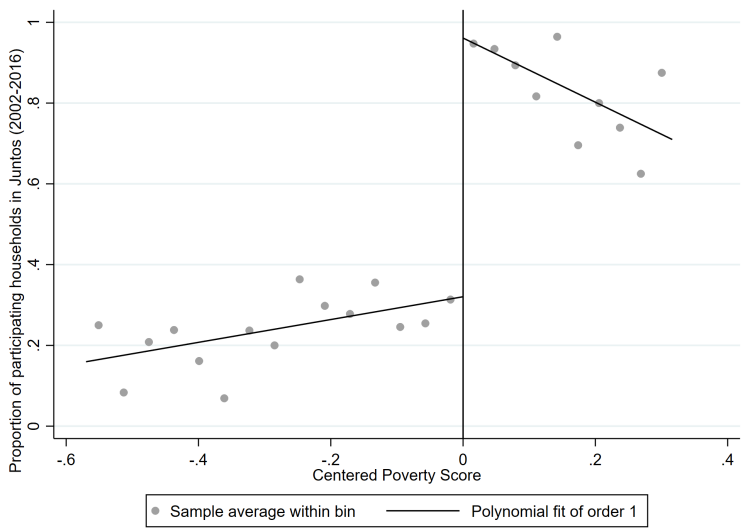



Figure: Discontinuity in Household Participation at the Eligibility Threshold

# Identification Strategy: FRD

## First Stage

$$Juntos_{ij} = \alpha + \beta \mathbb{1}_{[X_{ij} \geq 0]} + h(X_{ij}) + \lambda_j + \epsilon_{ij}$$

## Reduced Form

$$Y_{ij} = \mu + \gamma \mathbb{1}_{[X_{ij} \geq 0]} + h(X_{ij}) + \kappa_j + \upsilon_{ij}$$

- $\tau_{FRD} = \frac{\hat{\gamma}}{\hat{\beta}}$: local average treatment effect (LATE)
- $Juntos_{ij}$: Program participation indicator for child $i$ in district $j$
- $Y_{ij}$: child gender attitudes index
- $X_{ij}$: centered household poverty score; $\mathbb{1}[X_{ij} \geq 0]$: eligibility indicator
- $\lambda_j$ and $\kappa_j$: district fixed effects
- **Estimation**: Nonparametric RD following Calonico et al. (2014, 2019)

▸ Manipulation Test ▸ Covariate Discontinuity Test

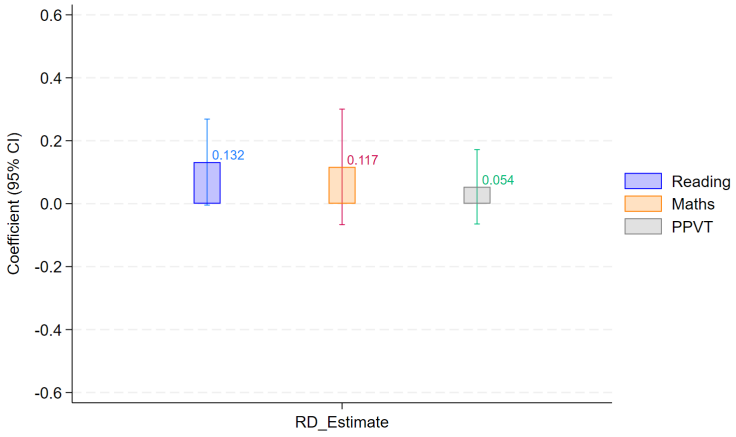
# Results

# Effects on Gender Attitudes

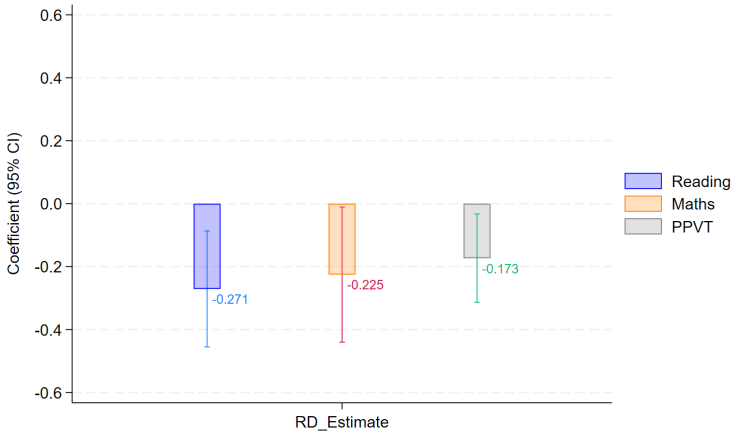
| | Gender Attitude Index | | Dimension | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Power | | Equality | | Behavior | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| LATE ($\tau_{FRD}$) | 0.142 | 0.133 | 0.163 | 0.152 | 0.175 | 0.164 | 0.054 | 0.048 |
| | (0.050) | (0.041) | (0.086) | (0.069) | (0.071) | (0.064) | (0.112) | (0.106) |
| Robust p-value | 0.020 | 0.010 | 0.112 | 0.079 | 0.036 | 0.033 | 0.816 | 0.824 |
| District FEs | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | No | Yes | No | Yes | No | Yes | No | Yes |
| *Control Group Mean* | *0.321* | *0.321* | *0.323* | *0.323* | *0.155* | *0.155* | *0.537* | *0.537* |
| Observations | 586 | 579 | 586 | 579 | 586 | 579 | 586 | 579 |

- Interpretation: Exposure to Juntos increases traditional gender attitudes, particularly along the **power** and **equality** dimensions

# Effects on Cognitive Tests




Panel A: Boys




Panel B: Girls

- Beneficiary girls score significantly lower across all three tests: reading, mathematics, and the Peabody Picture Vocabulary Test (PPVT)
- Beneficiary boys show a 13.2% increase in reading scores

# Effects on Time Use and Higher Education Enrollment

## Table: Effects on Time Allocation and Higher Education Enrollment

| | Time Allocation (hours) | | | | | Higher Education |
|---|---|---|---|---|---|---|
| | Caring | Household Chores | School | Study (after school) | Leisure | Enrollment |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Panel A: Boys** | | | | | | |
| LATE ($\tau_{FRD}$) | -0.306 | 0.154 | -0.400 | 1.071 | -1.015 | 0.192 |
| | (0.334) | (0.203) | (0.388) | (0.237) | (0.456) | (0.241) |
| Robust p-value | 0.374 | 0.468 | 0.557 | 0.000 | 0.038 | 0.269 |
| *Control mean* | *0.537* | *0.960* | *6.228* | *1.636* | *4.062* | *0.247* |
| Observations | 664 | 664 | 664 | 664 | 664 | 248 |
| **Panel B: Girls** | | | | | | |
| LATE ($\tau_{FRD}$) | 0.381 | 0.694 | -0.553 | -0.780 | 0.718 | -0.397 |
| | (0.309) | (0.173) | (0.418) | (0.247) | (0.370) | (0.176) |
| Robust p-value | 0.153 | 0.000 | 0.155 | 0.001 | 0.084 | 0.028 |
| *Control mean* | *0.642* | *1.011* | *6.234* | *1.962* | *3.785* | *0.312* |
| Observations | 683 | 683 | 683 | 683 | 683 | 244 |
| District FEs | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FEs | Yes | Yes | Yes | Yes | Yes | No |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |

*Note*: Data are from the YLS Panel. *Caring* includes caregiving activities for younger siblings, or ill household members. *Household chores* consist of fetching water, firewood, cleaning, cooking, washing, shopping, etc. *School* includes time at school and traveling time to school. *Study* contains studying outside of school time (at home, extra tuition). *Leisure* includes time spent eating, drinking and bathing. Standard errors are clustered at the child level for columns 1–5 and at the district level for column 6.

# Mechanisms

# Mechanism I: Maternal Time Allocation

- **Data**: Round 4 of the Young Lives household survey
- **Finding**: Mothers shift time from working to homemaking

Table: Effects on Maternal Time Priority

| | **Household chores** | **Self-employment** | **Wage employment** | **Other jobs** |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| LATE ($\tau_{FRD}$) | 0.417 | -0.327 | 0.016 | -0.320 |
| | (0.192) | (0.192) | (0.119) | (0.113) |
| Robust p-value | 0.024 | 0.089 | 0.839 | 0.003 |
| District FEs | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes |
| *Control Group Mean* | *0.392* | *0.066* | *0.223* | *0.223* |
| Observations | 511 | 511 | 511 | 511 |

*Note*: *Household chores* equals 1 if the mother selects household chores or being a housewife as the most time-priority activity, and 0 otherwise. *Self-employment* equals 1 if the mother selects self-employment in agriculture, animal husbandry, fishing, forestry, manufacturing, or services, and 0 otherwise. *Wage employment* equals 1 if the mother selects regular salaried or wage work, and 0 otherwise. *Other jobs* equals 1 if the mother selects part-time, irregular, or non-salaried jobs as the main time priority, and 0 otherwise. Controls include the mother's age, an education dummy (equals 1 if education is below secondary), marital status, and presence of long-term health conditions.

# Mechanism I: Maternal Time Allocation

- **Data**: 2010 Peruvian Time Use Survey - TUS (1,800 ever married women)
- **Finding**: ↑ women's time burden, particularly for childcare and household organization

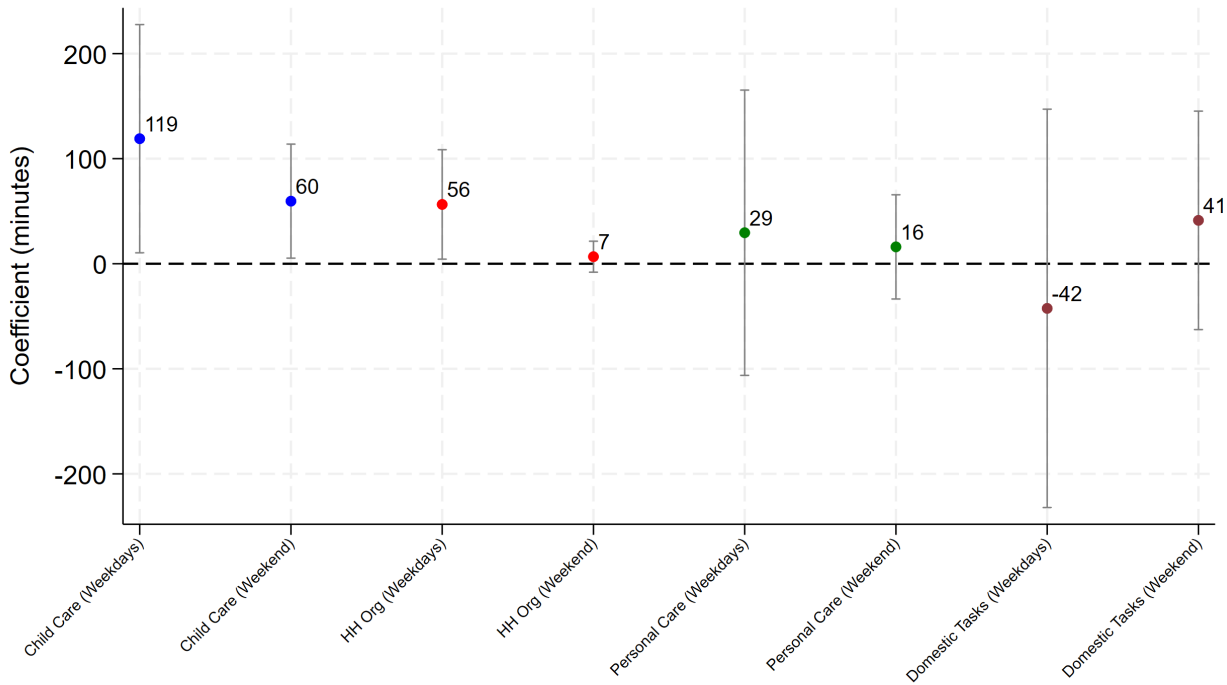



Figure: Juntos and Women's Time Use

# Mechanism II: Mothers' Labor Force Participation

- **Data**: Peru Continuous DHS (2004-2016) linked to district-level administrative data on geographical roll-out
- **Method**: DiD (Sun and Abraham, 2021)

Table: Effects on Mothers' Labor Force Participation

| | **Workforce Part. (Y=1)** | **Agr. self-employment (Y=1)** | **White-collar (Y=1)** | **Services & Manual (Y=1)** |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Average Effect | -0.039** | -0.015 | -0.009 | -0.016 |
| | (0.019) | (0.023) | (0.013) | (0.013) |
| Individual Characteristics | Yes | Yes | Yes | Yes |
| District FEs | Yes | Yes | Yes | Yes |
| Year FEs | Yes | Yes | Yes | Yes |
| *Mean Dep Var* | 0.783 | 0.564 | 0.134 | 0.086 |
| Observations | 66,795 | 66,795 | 66,795 | 66,795 |

*Note*: *Workforce Participation* equals 1 if a mother has worked in the past 12 months, and 0 otherwise. *Agricultural self-employment* equals 1 if a mother is self-employed in agriculture, and 0 otherwise. *White-collar* equals 1 if a mother works in professional, technical, managerial, clerical, or sales occupations, and 0 otherwise. *Service & Manual* equals 1 if a mother works in household and domestic, services or in skilled or unskilled manual labor, and 0 otherwise. Individual characteristics include the mother's age, age squared, household size, an indicator for residence in a rural area, and dummy variables for educational attainment and wealth index. Asterisks denote significance: $*p < 0.1$, $**p < 0.05$, $***p < 0.01$.

# Conclusion

# Conclusion

- Exposure to Juntos leads to more traditional gender attitudes
- Gender-differentiated learning outcomes:
  - Girls: lower PPVT, math, and reading scores
  - Boys: improved reading performance
- Attitudes align with behaviors:
  - Boys: $\uparrow$ study time
  - Girls: $\uparrow$ household chores, $\downarrow$ study time, $\downarrow$ enrollment for higher education

# Mechanisms and Policy Implications

- Mechanisms:
  - $\downarrow$ maternal labor force participation
  - Shift in time allocation toward homemaking
  - Suggestive evidence of conditionality-related time burdens

- Policy Implications:
  - Policies can shape gender norms in developing countries
  - Using mothers as policy instruments may generate unintended effects on children's gender attitudes

# Thank you!

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# Related Literature

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1. **Policy and Cultural Practices/Attitudes**: Beaman et al., 2009; Bastian, 2020; Bau, 2021 ; Farre et al., 2022; Tavits et al., 2023

   Contribution: new causal evidence on how policies shape gender norms in a developing-country context

2. **CCT Programs and Adult Labor Supply Responses**: Rubio-Codina, 2010; Fernandez & Saldarriaga, 2014; De Brauw et al., 2015; Banerjee et al., 2017; Bosch and Schady, 2019

   Contribution: evidence that program participation reshapes women's time allocation beyond labor supply responses

3. **Women's participation burden in development programs**: Nagels, 2016; Cookson, 2018; Margolies et al., 2023

   Contribution: quantitative evidence on women's time spent on childcare, household tasks, and compliance

4. **Maternal Influences on Children's Gender Role Attitudes**: Cunningham, 2001; Dhar et al., 2019; Leight, 2021

   Contribution: evidence linking maternal time use and role specialization to children's gender attitudes

# Household Poverty Score

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1. **2005 to 2011**:
   - Poverty Score $= \hat{\alpha} + \hat{\beta}X$. X includes:
     - percentage of illiterate women (out of all adults)
     - percentage of minors that attend regularly a school program (out of all minors)
     - access to basic services
     - number of missing household assets
     - housing types (materials of roof, floor and wall)
   - Universal Cutoff: 0.7567
2. **2012-present**:
   - New Household Poverty Score (IFH) with some adjustments and additional components
   - 15 clusters and 15 regional cutoffs

# Threats to Identification

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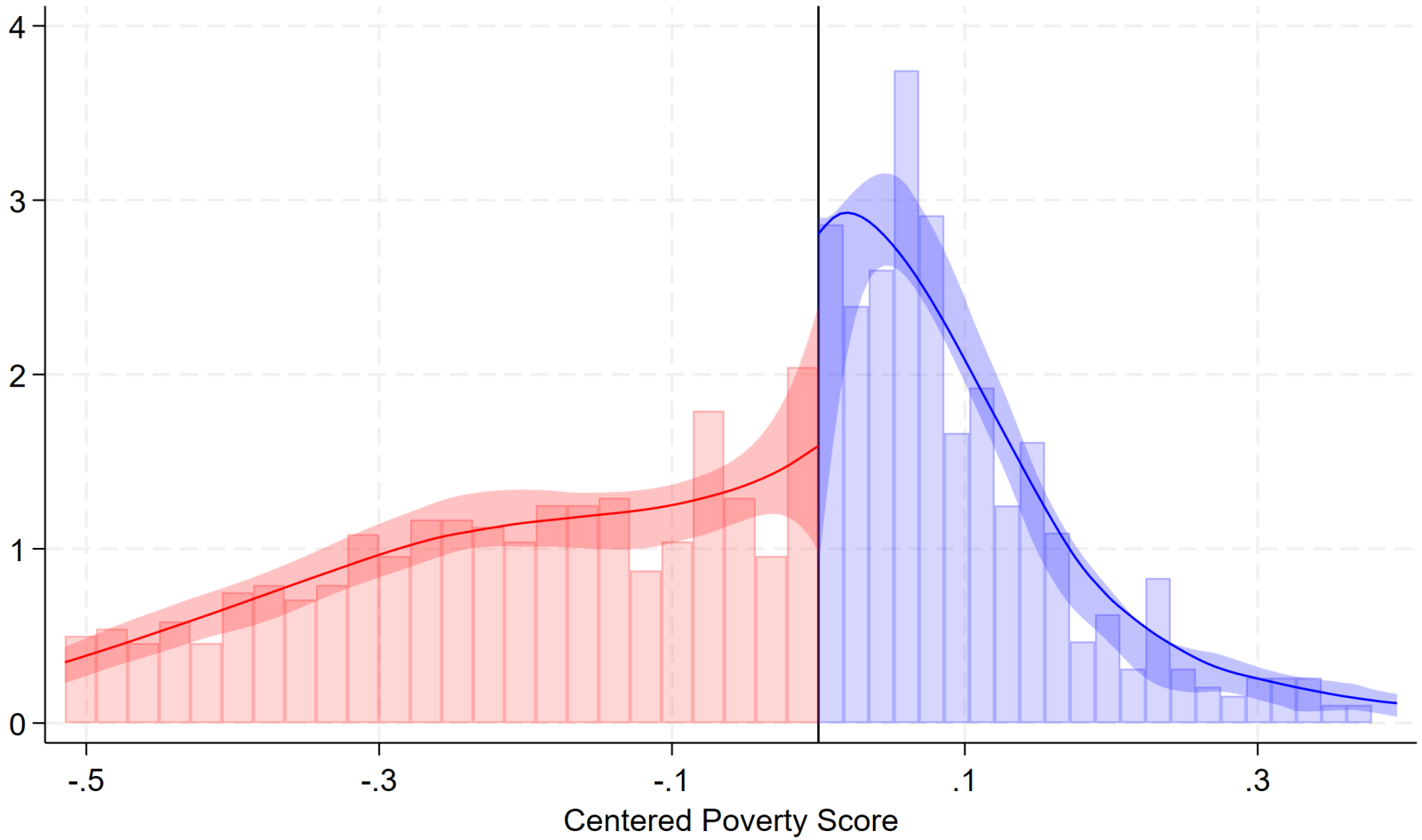
Figure: Manipulation Testing Plot (robust p-value = 0.7475)



# Threats to Identification

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## Table: Covariate Discontinuity Test Around the Threshold

| Variable | MSE-Optimal Bandwidth | RD Estimator | Robust Inference p-value | Robust Inference Conf. Int. | Eff.Number Observations |
|---|---|---|---|---|---|
| **Child characteristics** | | | | | |
| Female | 0.124 | -0.029 | 0.744 | [-0.390, 0.278] | 538 |
| Weight-for-age z-score | 0.132 | -0.373 | 0.399 | [-1.621, 0.645] | 560 |
| Height-for-age z-score | 0.143 | 0.394 | 0.516 | [-0.778, 1.549] | 601 |
| Age of child (months, 2002) | 0.138 | -2.074 | 0.392 | [-5.452, 2.136] | 577 |
| Polio vaccination (Yes=1) | 0.132 | 0.053 | 0.384 | [-0.096, 0.250] | 557 |
| BCG Vaccination | 0.124 | 0.037 | 0.530 | [-0.134, 0.260] | 537 |
| Health long term issues (Yes=1, 2002) | 0.151 | 0.167 | 0.295 | [-0.158, 0.521] | 623 |
| Mestizo (Yes = 1) | 0.150 | -0.038 | 0.803 | [-0.243, 0.188] | 620 |
| Catholic (Yes =1) | 0.120 | 0.038 | 0.397 | [-0.131, 0.330] | 529 |
| **Household characteristics** | | | | | |
| Age of mom (years, 2002) | 0.147 | -2.745 | 0.397 | [-9.757, 3.869] | 604 |
| Age of dad (years, 2002) | 0.123 | -2.413 | 0.549 | [-9.963, 5.297] | 463 |
| Household size (members, in 2002) | 0.130 | -0.820 | 0.401 | [-3.810, 1.524] | 552 |
| Mother education (<secondary school = 1) | 0.127 | -0.105 | 0.496 | [-0.694, 0.336] | 545 |
| Caregiver's gender preference (Girl = 1) | 0.148 | 0.057 | 0.709 | [-0.371, 0.546] | 609 |
| Caregiver's gender preference (Boy = 1) | 0.126 | 0.266 | 0.223 | [-0.199, 0.854] | 538 |

*Note*: Data are from the YLS. This table presents the LATE estimates when I replace the main dependent variable by the characteristics of interest. The estimates are obtained by utilizing the MSE optimal bandwidth, triangular weights and linear local polynomial.