

Early Education, Preferences and Decision-Making Abilities. Gender Differences in Social Preferences

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Question

- Public child care centres have dual role:
 - Provide education, socialization, nutrition for (poor) kids
 - Allow caregivers to participate in labor market
- Favourite policy option of many governments. Parents love them.
- But very expensive to build and run. Therefore, seldom offered at large scale for free, even in rich countries.
- What is the impact of providing public daycare services (in low and middle income countries)?

Look at day-care centers in Rio de Janeiro, Brazil

- Study impact of access to full day formal childcare (0-3):
- In a paper by Attanasio, Carneiro et al.:
 - Child development (4 and 7 years after the lottery) – nutrition, cognition, behaviour
 - Household work and income (1, 4 and 7 years after the lottery) – labor supply and income of household members
- Focus of this paper
 - Child preferences and decision making quality (9 years after the lottery) - aversion to risk, aversion to inequality, delayed gratification, transitivity in choices

In this paper:

- Experimental study in the favelas of Rio de Janeiro
 - Daycare centers run by the municipality (not small-scale intervention) – lottery will determine access
 - Poor urban area in middle income country
 - No new intervention, no additional program, no pilot study
 - Same centers that they had been running for years before and have been running since
 - Typical of daycare centers in middle income countries
 - What changed in the year of the evaluation was the mechanism for distributing slots to oversubscribed centers

What do Daycare Centres (Creches) offer?

- Full day care for children 0-3
- Integrated services: health, food, toys and materials, parental involvement
- When observed, a bit worse infrastructure, higher teacher student ratios, materials and quality of interactions than in typical US centres (as expected). But nothing extreme.

Research Design:

- Excess demand for childcare places
- In 2008 they were allocated using a lottery
 - 10000 new slots in 2008 / 25000 applicants
 - Lottery strong predictor of creche attendance
- Original and detailed data on:
 - child development
 - child preferences (Focus of today's presentation)
 - caregiver/household outcomes

Lottery – 2007/2008

- 11640 new slots in Creches divided across 4 age groups: 0-1, 1-2, 2-3, 3-4
 - 1600 for special needs
 - 10000 allocated through lottery
- 25000 applicants / 24000 eligible (poor)
- Apply for a slot in each creche - age group
 - The lottery is creche – age group specific
 - Not all groups are oversubscribed

Balance: differences between lottery winners and losers

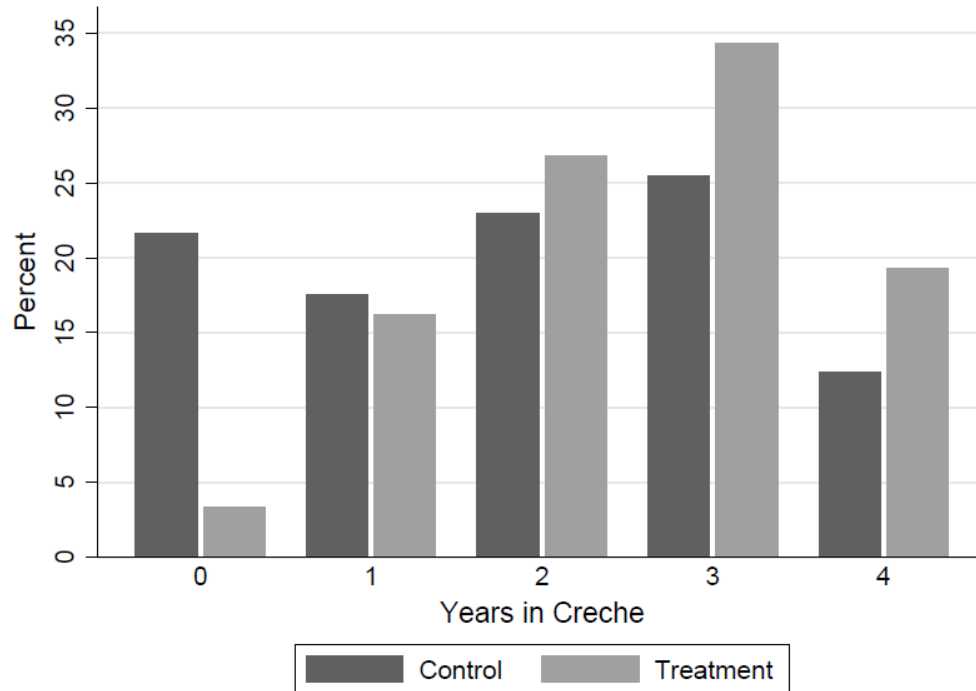
| Variable | Diff. W-L | Variable | Diff. W-L |
|---------------------|-----------|---------------------------|-----------|
| Male Child | 0.026 | Planned Pregnancy | 0.017 |
| | (0.017) | | (0.015) |
| White Child | 0.023 | First Child | -0.014 |
| | (0.015) | | (0.016) |
| Black Child | -0.017 | Pre-Natal Checks | -0.003 |
| | (0.010) | | (0.007) |
| Mixed Race Child | -0.002 | Pre-Term | 0.008 |
| | (0.016) | | (0.011) |
| Age of Child | -0.0532 | Breastfed | -0.022 |
| | (0.0328) | | (0.014) |
| Household pc income | 56.01 | Caregiver basic education | 0.034 |
| | (70.49) | | (0.015)** |

Lottery Status and Creche Enrolment

- 2007/2008 lottery affects enrolment in 2008.
 - 2008 enrolment affects subsequent enrolment
 - Compliance is imperfect – lottery as IV

Lottery and Day Care Attendance

Figure A.1: Years in Creche by Lottery Status



- Outside option: staying home with a carer
 - The mother is the named primary carer in 80% of cases
 - Others: fathers, uncles, brothers, grandparents

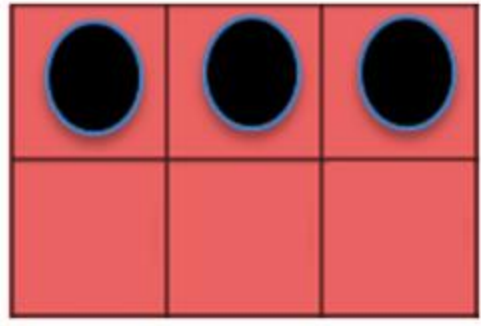
In this paper: Preferences and Decision Making Quality (DMQ)

- So much of modern behavioral economics is about this!
 - Need to understand formation of preferences and DMQ
 - Could be affected by daycare attendance because of curriculum or because of socialization
- Preferences
 - Risk aversion (choice between riskless and risky option)
 - Inequality aversion (sharing task)
 - Advantageous and disadvantageous inequality
 - Delayed gratification (Marshmallow)
- Decision making quality - transitivity
 - Choice between toys, Risk Task, Sharing Task

Lab in the field

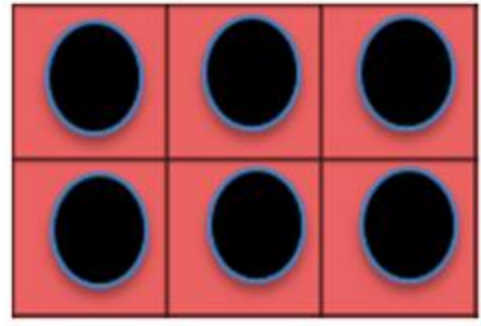
- Children between 9 and 13
- Preference tasks administered using a tablet
 - Risk, Sharing/Inequality, Decision Making Quality
- Children make choices over tokens which can be traded for toys
- Marshmallow test conducted inside a small foldable tent set up in the child's house
 - One *bonbon* offered immediately
 - A second one offered if child waited for 25 minutes

OUTRA CRIANÇA

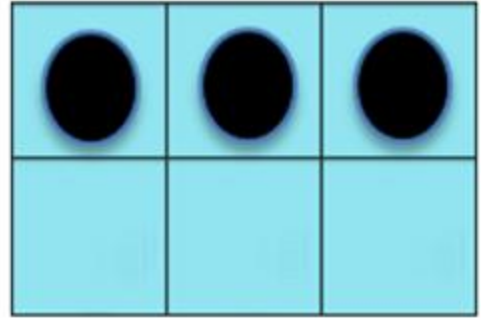


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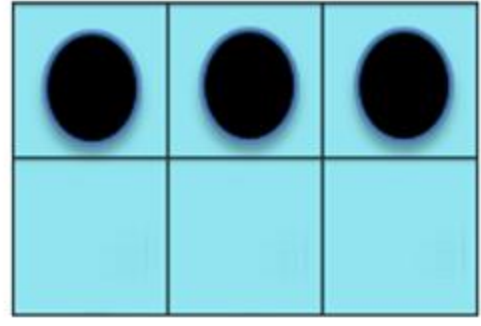
OUTRA CRIANÇA



LEANDRO



LEANDRO



Sharing Task

All Pairwise Comparisons between the Following 5 Allocations

| | A | B | C | D | E |
|-------------|---|---|---|---|---|
| Participant | 2 | 3 | 3 | 3 | 4 |
| Other Child | 0 | 1 | 3 | 6 | 6 |

Sharing Task

All Pairwise Comparisons between the Following 5 Allocations


| | A | B | C | D | E |
|-------------|---|---|---|---|---|
| Participant | 2 | 3 | 3 | 3 | 4 |
| Other Child | 0 | 1 | 3 | 6 | 6 |

Disadvantageous Inequality

Sharing Task

All Pairwise Comparisons between the Following 5 Allocations

| | A | B | C | D | E |
|-------------|---|---|---|---|---|
| Participant | 2 | 3 | 3 | 3 | 4 |
| Other Child | 0 | 1 | 3 | 6 | 6 |



Sharing Task

All Pairwise Comparisons between the Following 5 Allocations

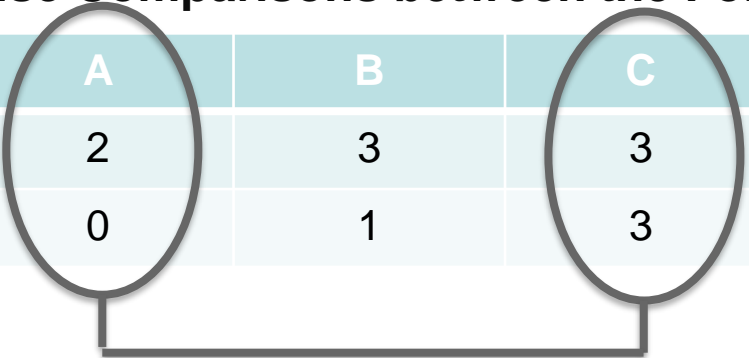
| | A | B | C | D | E |
|-------------|---|---|---|---|---|
| Participant | 2 | 3 | 3 | 3 | 4 |
| Other Child | 0 | 1 | 3 | 6 | 6 |

Advantageous Inequality

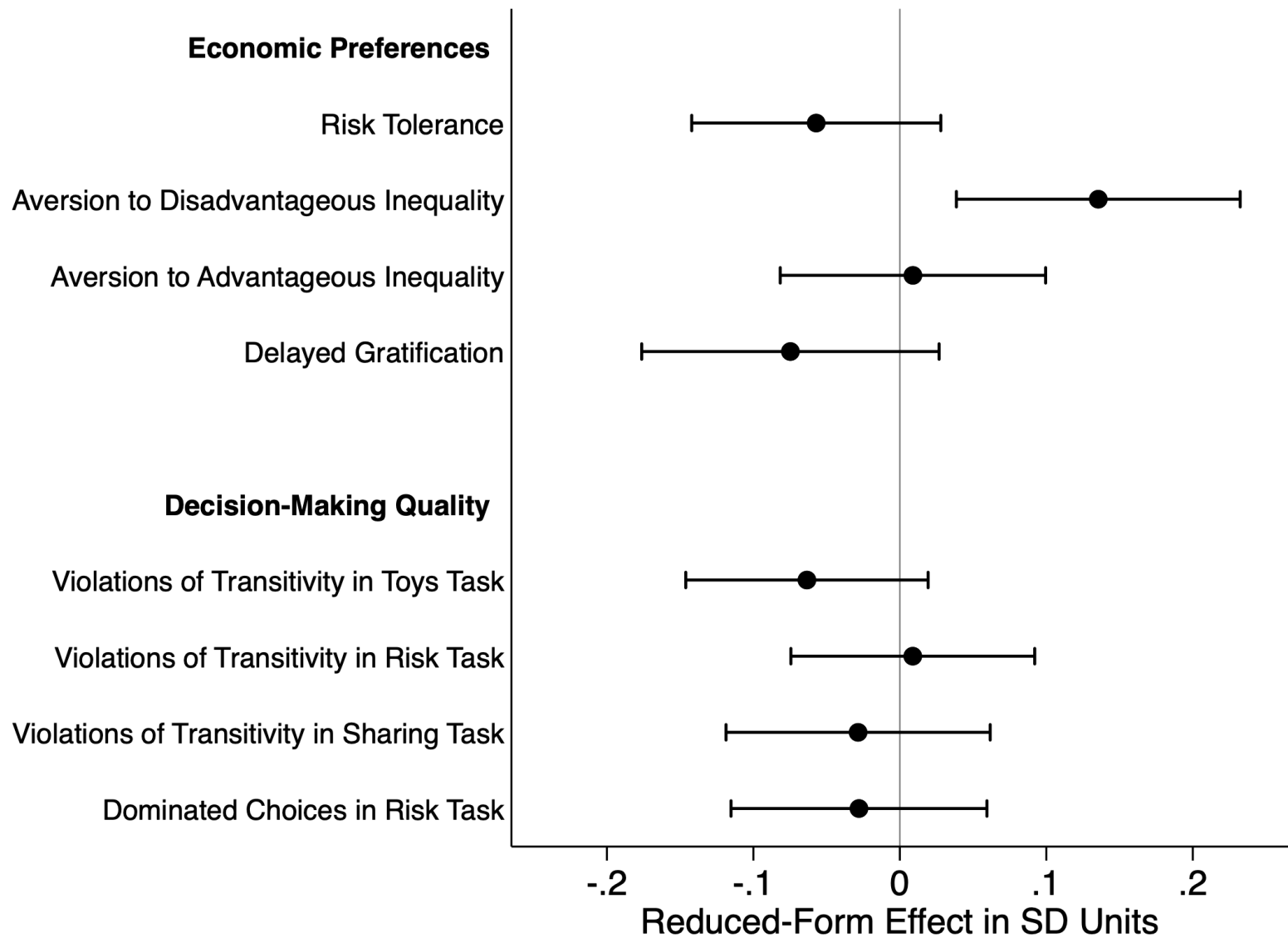
Sharing Task

All Pairwise Comparisons between the Following 5 Allocations

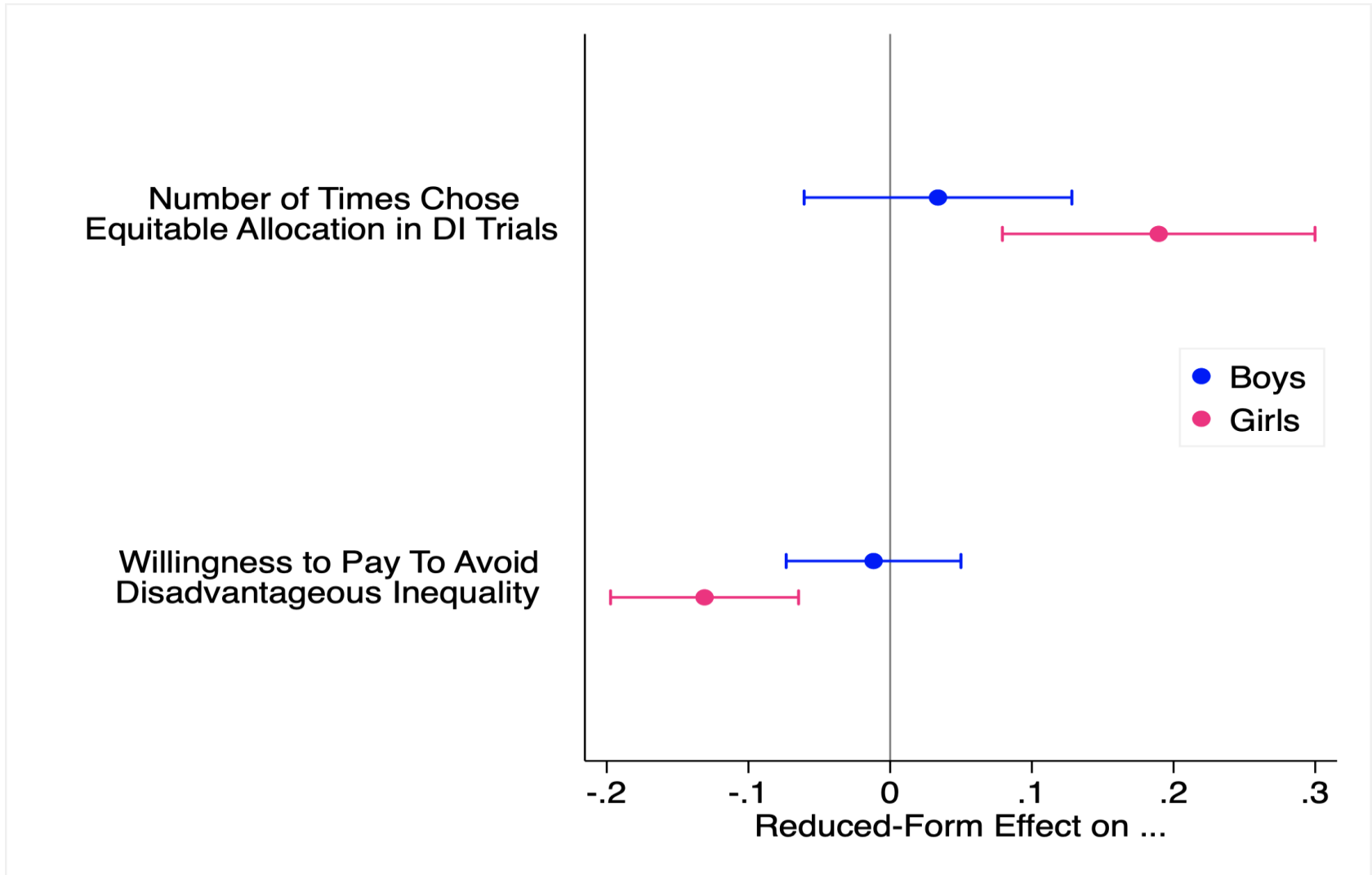
| | A | B | C | D | E |
|-------------|---|---|---|---|---|
| Participant | 2 | 3 | 3 | 3 | 4 |
| Other Child | 0 | 1 | 3 | 6 | 6 |



ITT – Preferences and Decision-Making Quality (after correction for multiple hypothesis testing)



Break impacts in Disadvantageous Inequality by gender



The top panel shows the effect on the number of times participants chose the equitable allocation in the two DI trials. The bottom panel shows the effect on the willingness to pay to avoid disadvantageous inequality, which is the number of tokens the participant was willing to give up to *reduce* the other child's payoff by 1 token

Results (Preferences and Decision Making Quality)

- No detectable (long run) impact of daycare attendance on child preferences and decision making quality with one exception
- The exception is inequality aversion
 - Daycare attendance leads to increase in aversion to disadvantageous inequality (“being left behind”), but not advantageous inequality.
 - Impact especially large for girls – they are less willing to be at the bottom
 - Cappelen et al. (2020), in a quite different environment - a lowperforming, urban school district in Chicago - also find that early education increases inequality aversion, reinforcing our confidence in our results. **We find that their results are mostly driven by girls.**

Potential mechanisms ? (Exploratory)

- Childcare center characteristics and quality
 - Fraction of boys in center, average age of classmates, acceptance rate (as a proxy for quality) do not seem to play a role in interaction analysis
- What happens in the family?
 - Attanasio et al. show that attendance to the daycare centers decreased the number of childcare hours and increased the number of hours worked by caregivers. Also increased household income. But no evidence in interaction analysis that they mediate the treatment effect on inequality aversion.
- Family characteristics?
 - Daycare attendance had the largest effects on girls of less educated mothers
 - At the same time, tolerance for inequality is highest in families with less educated mothers.
 - Gender norms in Brazil: while 81.4% of girls make their own bed, 76.8% wash dishes and 65.6% clean the house, only 11.6% of their brothers make their own bed, 12.5% wash the dishes and 11.4% clean the house (Plan Brasil, 2014).
- Potential channel: differences between gender expectations at home and the day care center

Neste jogo você vai escolher o brinquedo de que mais gosta. A tela mostra dois brinquedos. Clique no brinquedo que você gosta mais. Se você gosta igual dos dois brinquedos, clique no sinal de igual. Para confirmar sua escolha clique na seta.

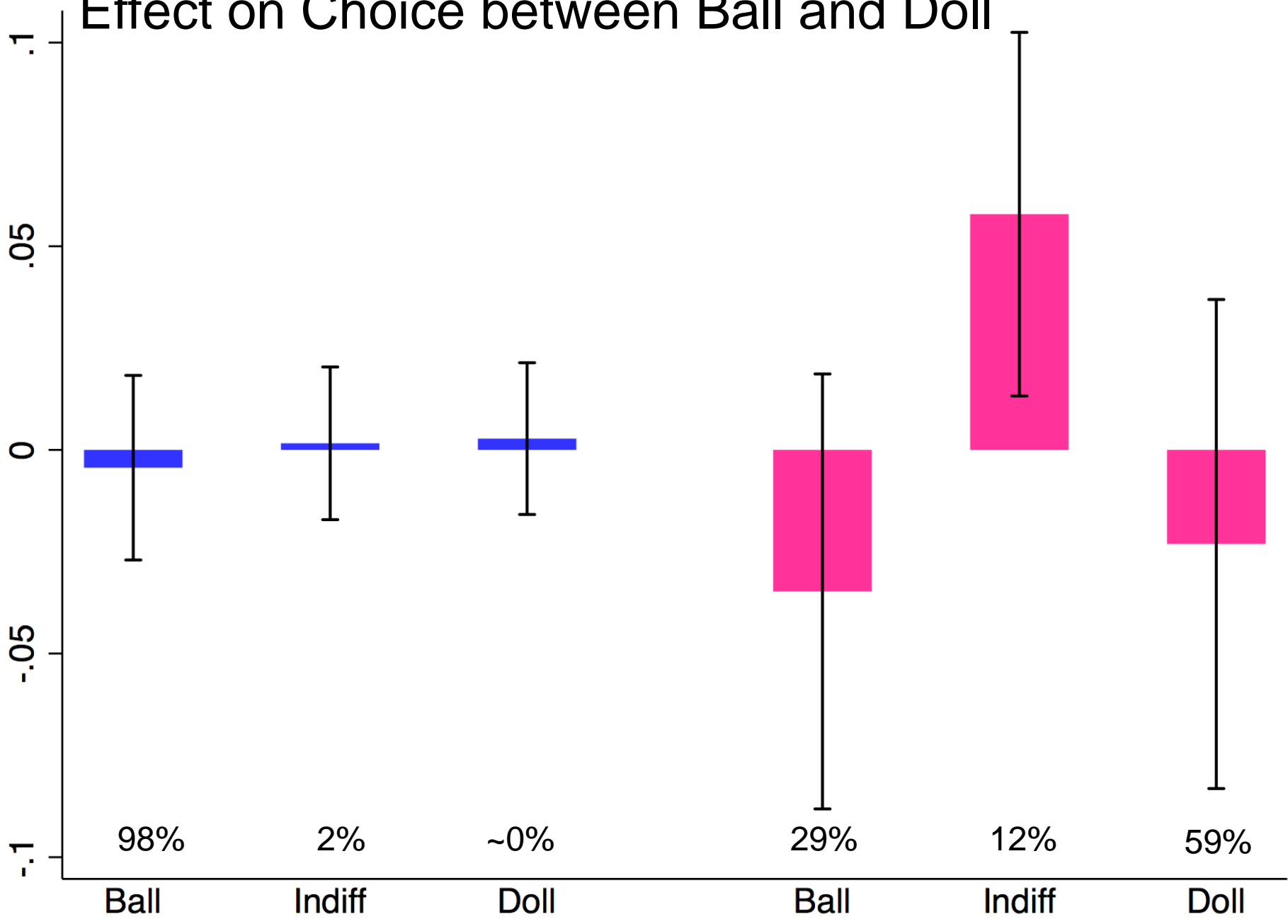
Vamos experimentar juntos. De qual brinquedo você gosta mais? Da bola ou da boneca?



B1



Effect on Choice between Ball and Doll



Summary

- Impact of free provision of full-time daycare (ages 0-3) on children and caregivers
- Lottery at the end of 2007 randomly assigned slots to children in oversubscribed centres
 - Imperfect compliance – IV estimates
 - In this paper, economic preferences and decision-making abilities of children measured through a lab-in-the field experiment in 2017
- No effect measured, with the exception of changes in aversion to disadvantageous inequality (driven by girls).
- Potential channel: differences between gender expectations at home and the day care center