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The Psychology of Poverty

Prof. Dr. Guilherme Finkelfarb Lichand

Inaugural Lecture, April 30th, 2018

HOW TO SCREW UP YOUR LIFE IN 6 SIMPLE STEPS

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6 THINGS THAT THE POOR DO

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A KEY QUESTION FOR SOCIAL SCIENCES

Are the poor the victims of their own bad decisions?

X

Or are they poor because they face constraints that keep them in poverty?

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A KEY QUESTION FOR SOCIAL SCIENCES

Are the poor the victims of their own bad decisions?

X

Or are they poor because they face constraints that keep them in poverty?

… or could it be that ***both are true, and interlinked***?

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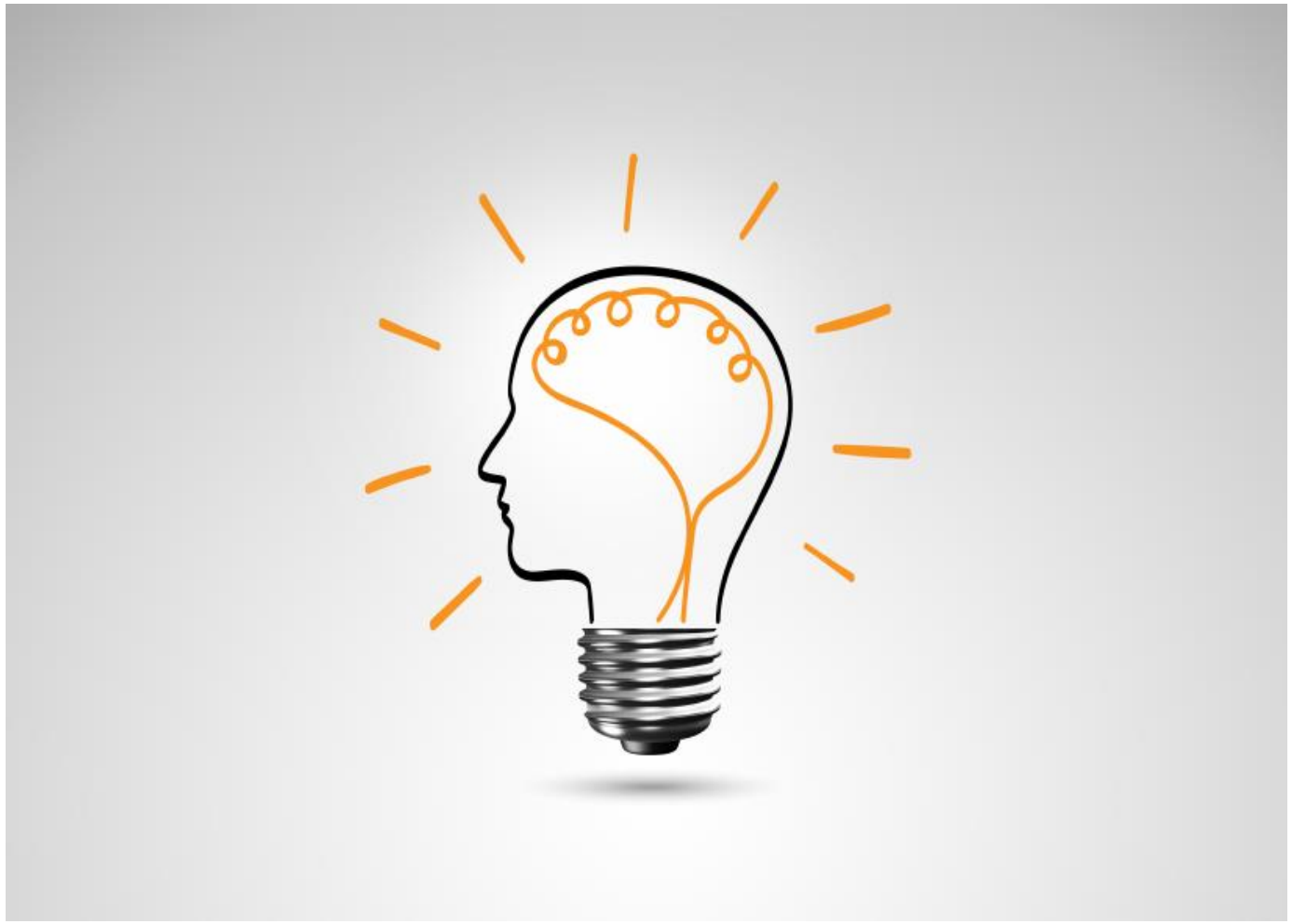

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THE PSYCHOLOGY OF POVERTY

- Lab evidence that poverty imposes a ***psychological tax*** on the foundations of decision-making (Mullainathan and Shafir, 2013)
  - ➢ Cognitive load
  - ➢ Focus

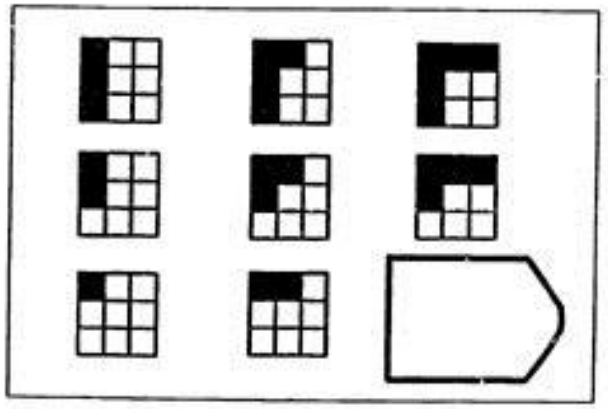
SUGARCANE FARMERS IN INDIA

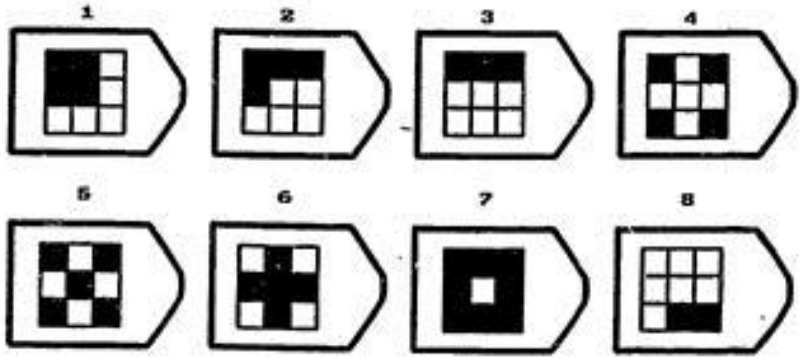
Mani et al. (2013) "Poverty impedes cognitive function"

- Sugarcane is harvested once a year
- Farmers are bad at smoothing consumption
- As a result:
  - ✓ Right before harvest is sold farmers are really poor
  - ✓ Right after, flush with cash

- Timing at which sugar mill purchases harvest is quasi-random
- Can compare farmers' IQ right before and right after harvest is sold

MEASURING IQ

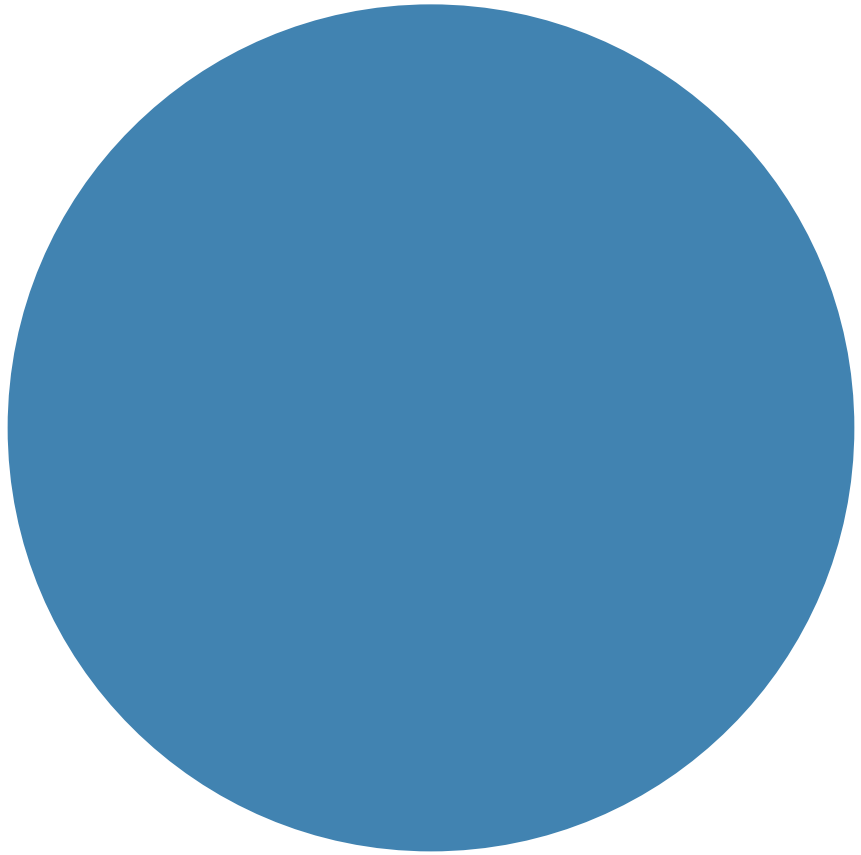




MEASURING IQ

- Raven's matrices
- Digit span
- Stroop

STROOP



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STROOP

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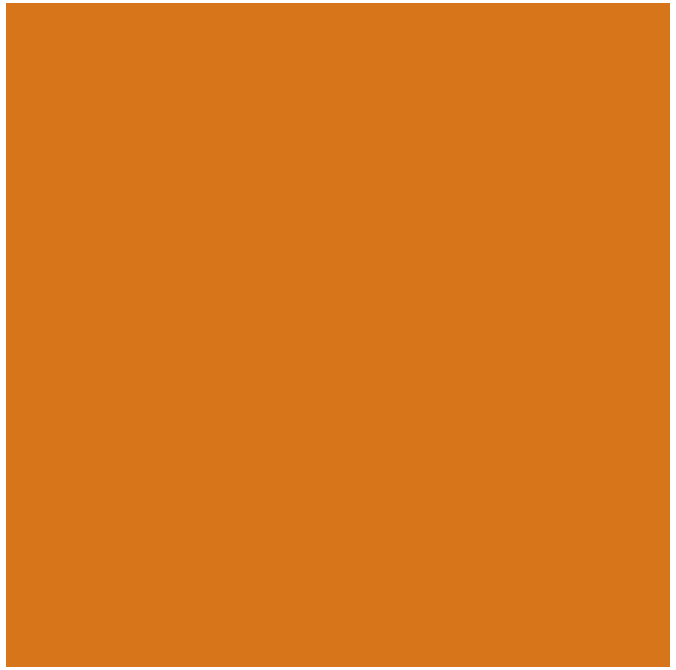

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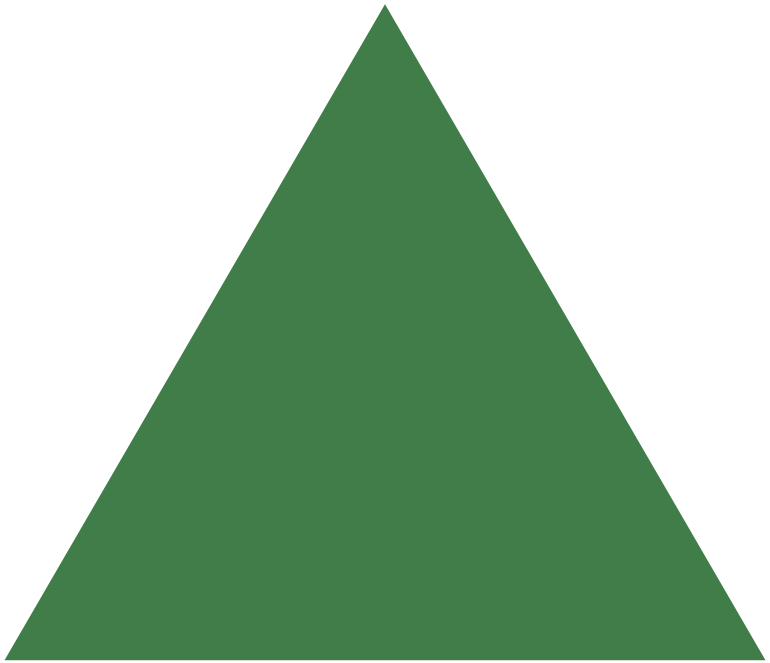

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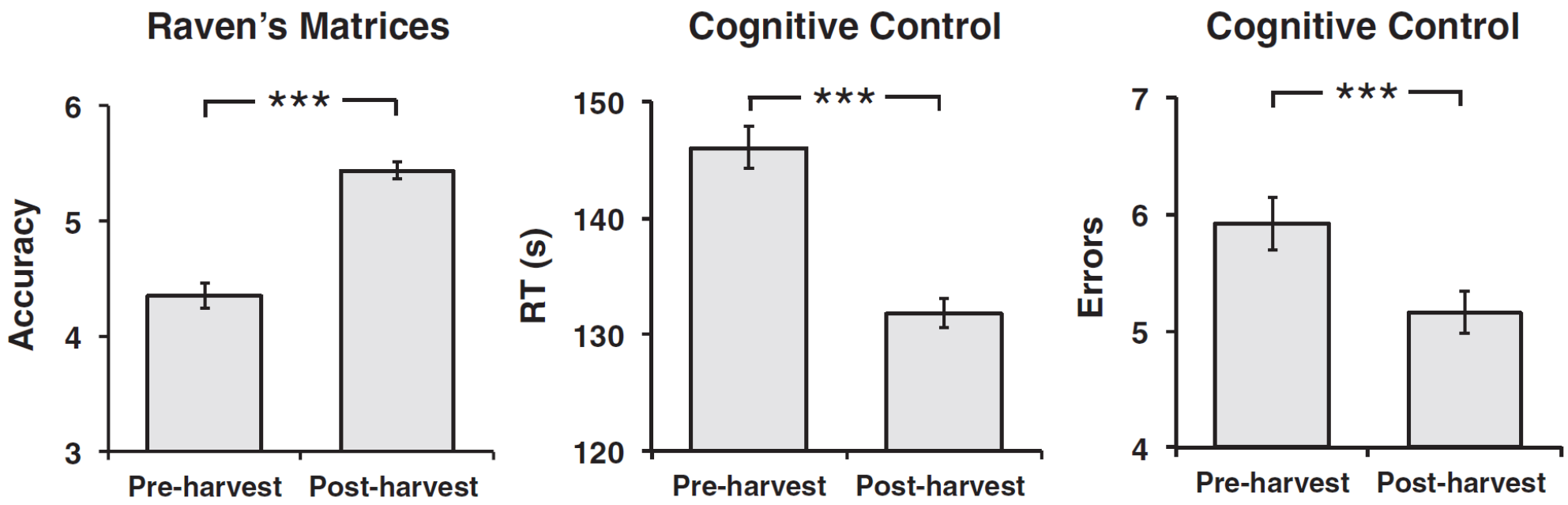
STROOP

RED

POVERTY IMPEDES COGNITIVE FUNCTION

Mani et al. (2013) "Poverty impedes cognitive function"



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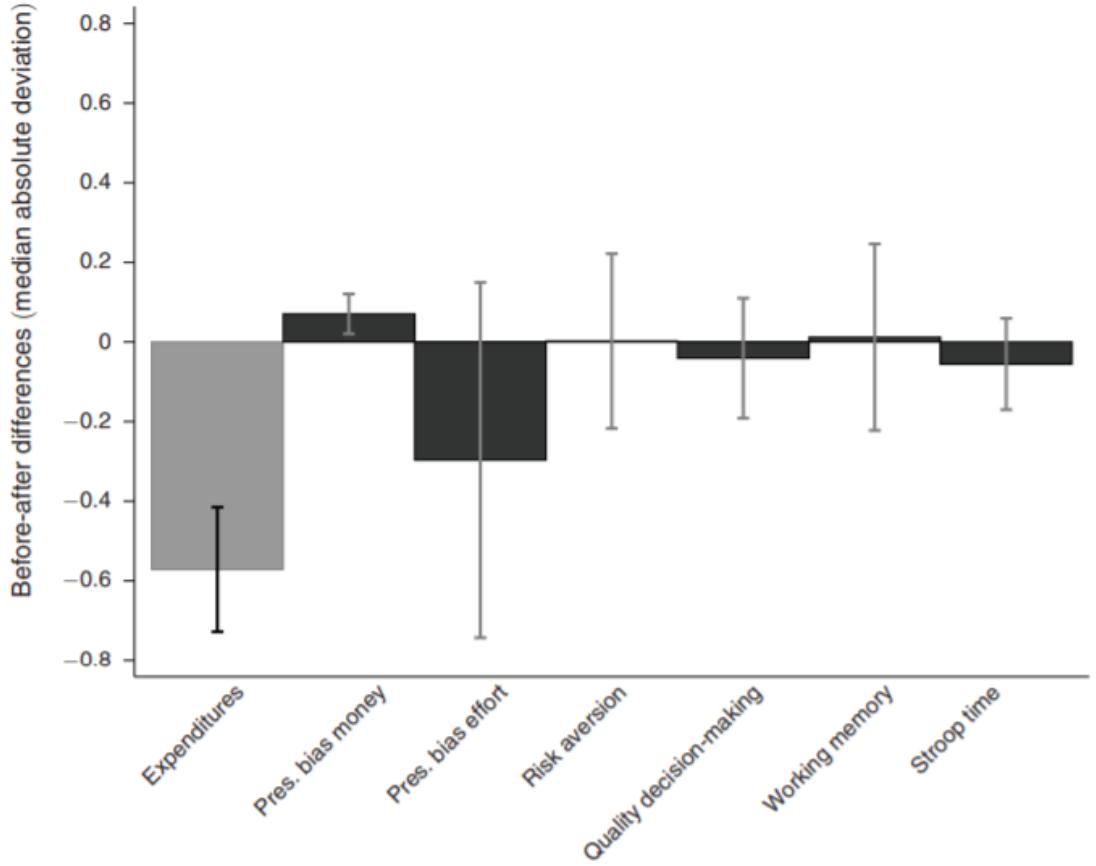
IS THAT REALLY SO?

Carvalho, Meyer and Wang (2016): "Poverty and Economic Decision-Making: Evidence from Changes in Financial Resources at Payday""



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LEVELS VS. RISK

Are those results inconsistent?

- Poverty is about both ***low levels and high risk***

LEVELS VS. RISK

Are those results inconsistent?

- Poverty is about both ***low levels and high risk***
- India experiment: low levels and high risk
  - Will the mill ever buy my harvest? Will it do so before I have to start skipping meals?
- US experiment: low levels ***but no risk***
  - If a US university tells me I will be paid… well, I believe it

- Is risk a key dimension behind cognitive load?

HOW TO TEST THIS HYPOTHESIS?

Lichand and Mani (2018) "Cognitive droughts"

- Survey experiment: threat of a drought amongst family farmers (low levels and high risk)
  - **Treatment (Priming):** "What would you do if there was a drought in your municipality this year?"
  - **Control:** "What would you do it the next soap opera was not good?"

A TRICK FROM COGNITIVE PSYCHOLOGY

- Priming tries to emulate the mental state that presumably affects the poor all the time

- A model of consciousness (or top-of-mind):

"To reach consciousness, this neuronal firing, or some higher representation of it, must ***cross a certain threshold of intensity and be maintained above it***; consciousness (…) is a threshold phenomenon."

-- Oliver Sacks, *The River of Consciousness*, p. 178

SHOULD YOU BELIEVE IT?

- Benchmark it to real shocks
  - ➢ Rainfall shocks: levels and risk
  - ➢ Payday variation: just levels

CHALLENGE

- Using rainfall variation requires many observations over time and across space
- At the same time, measuring psychological effects requires a lab setting…

SOLUTION

- Use cell phones!
  - ➢ High ownership (94% of Brazilian households)
  - ➢ Low cost for surveying across many regions and over time

- But… it is not that easy:
  - ➢ Requires adapting tests like Stroop to be ran on “dumb phones” (smartphone penetration is very low, still below 30% amongst the poor)

COGNITIVE TESTS ON THE PHONE

Lichand and Mani (2018) "Cognitive droughts"

- Audio versions of classical cognitive psychology tests, such as digit span, stroop and word search

➢ Stroop: "Answer as fast as you can: how many times do you hear the digit '4' in the following sequence: 4 4 4 4 4"

SEEMS AWFULLY COMPLICATED

- How was this made possible?

MGOV: EMPREENDEDORISMO DO BEM QUE TRANSFORMA VIDAS.

CONHEÇA A TRAJETÓRIA DO GUILHERME, O FINALISTA BRASILEIRO DE **CHIVAS THE VENTURE**.

Na **ESCOLA DE ECONOMIA DA FUNDAÇÃO GETULIO VARGAS** (SP), Guilherme já desenvolvia pesquisas de políticas públicas para o Banco Mundial.

Concluiu o mestrado na PUC-RIO em 2010 e foi para o escritório do Banco Mundial em **Brasília**, atuando no Departamento de Redução da Pobreza e Gestão Econômica.

Em um mundo digital, ele se voltou ao **analógico**. O motivo: 80% das linhas no Brasil são pré-pagas, o que torna SMS e chamadas de voz mais eficientes, alcançando mais pessoas.

Foi ali que entrou em contato, pela primeira vez, com o monitoramento de efeitos de políticas sociais via celular em **tribos isoladas na África**.

Em 2012, surgiu a **MGov**, criada ao lado de Rafael Vivolo, publicitário homenageado com o prêmio Trip Transformadores, e Marcos Lopes, doutor em Administração Pública e Governo pela FGV.

Projeto-piloto: avaliar a eficácia do **Leite Potiguar**, o maior programa social do **Rio Grande do Norte**, em áreas remotas e com sinal de telefonia precário. O lugar perfeito para provar o valor da metodologia da MGov.

Em 2014, as Universidades de **Harvard (EUA) e de Warwick (Reino Unido)** financiaram um projeto da MGov que impactou diretamente a vida de **pequenos produtores nas principais regiões de seca no Ceará.**

Resultado: o *feedback* do Guilherme mostrou a realidade do Leite Potiguar, o que foi fundamental para o governo do RN promover, em 2013, a descentralização do programa.

Chuva de prêmios: ainda em 2014, Guilherme foi eleito como um dos jovens inovadores mais promissores do Brasil pelo MIT (EUA). Depois, venceu a categoria Chivas do prêmio Jovens Inspiradores da revista Veja.

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EXEMPLO DE PROJETO: LEITE POTIGUAR

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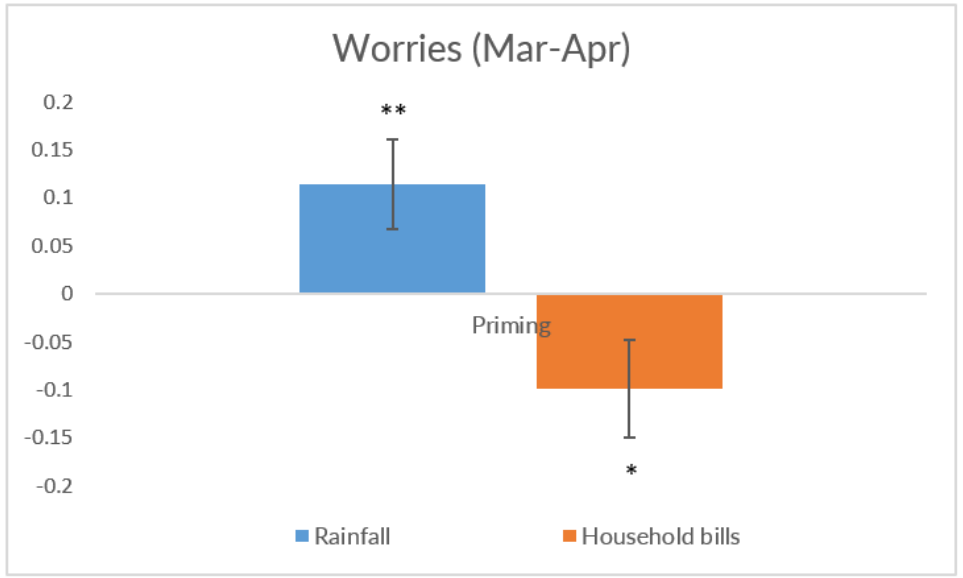
WORRIES ABOUT RAINFALL AND $

Manipulation checks:

"How much did you and your family worry last week about how much it will rain in the next month?"

"How much did you and your family worry last week about not having money to pay all household bills at the end of this month?"



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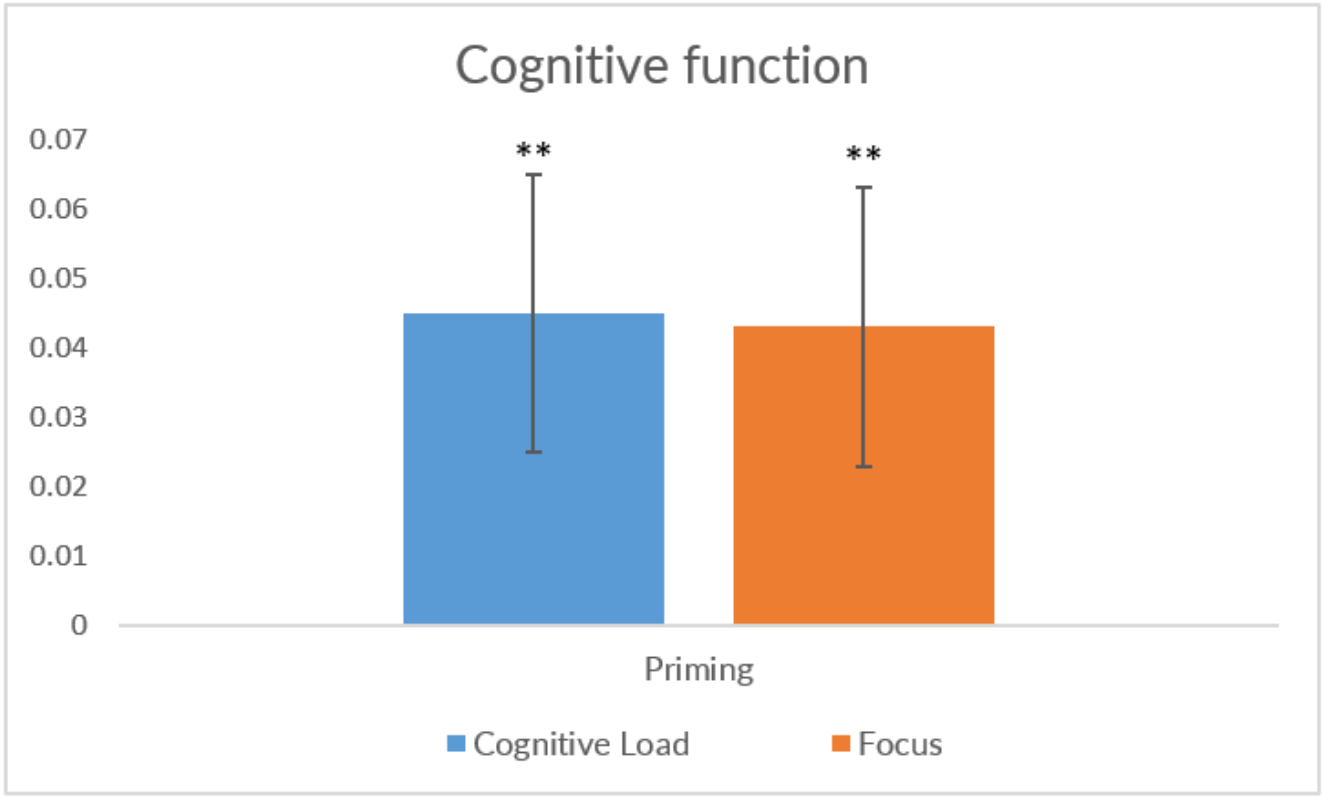

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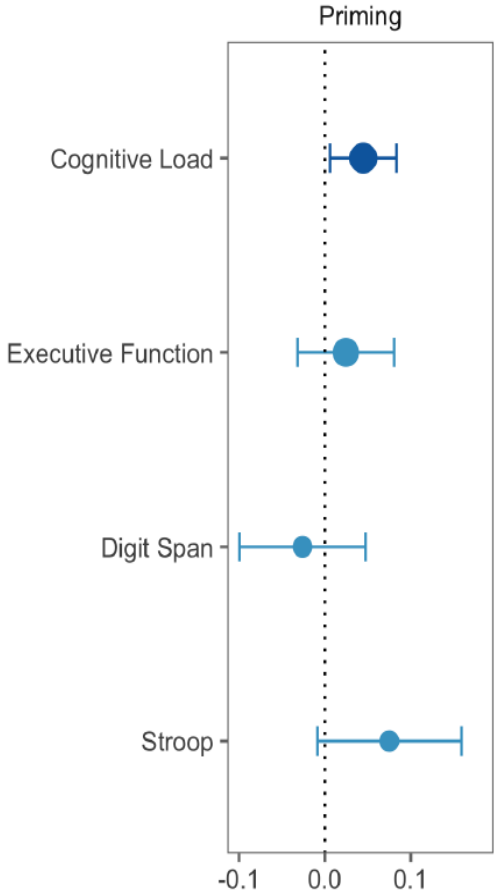

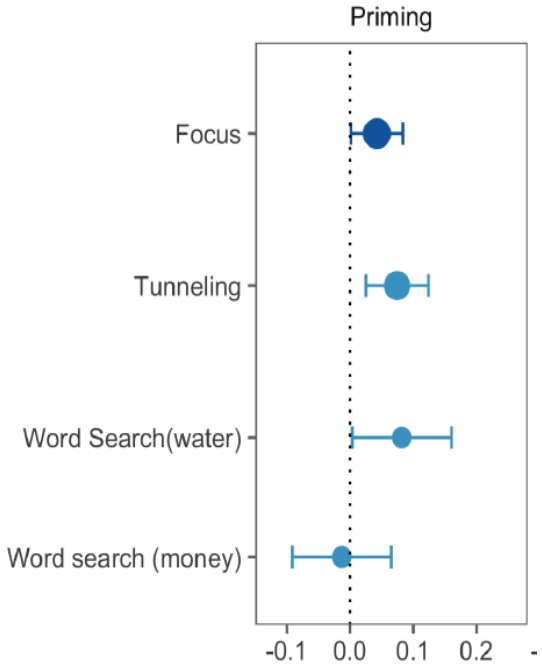

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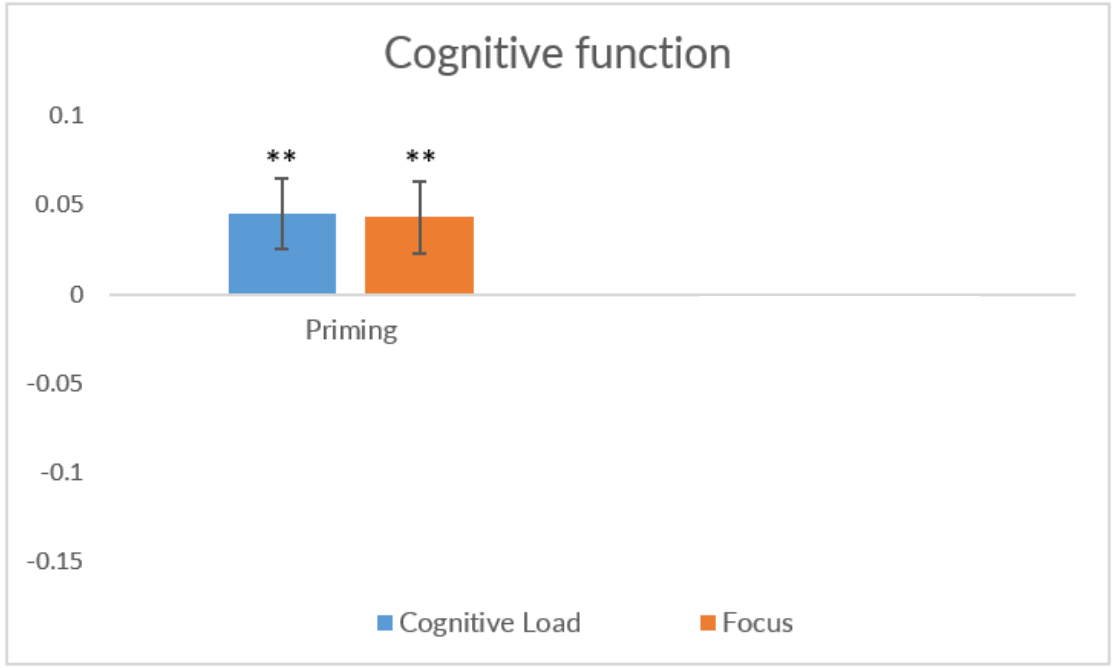
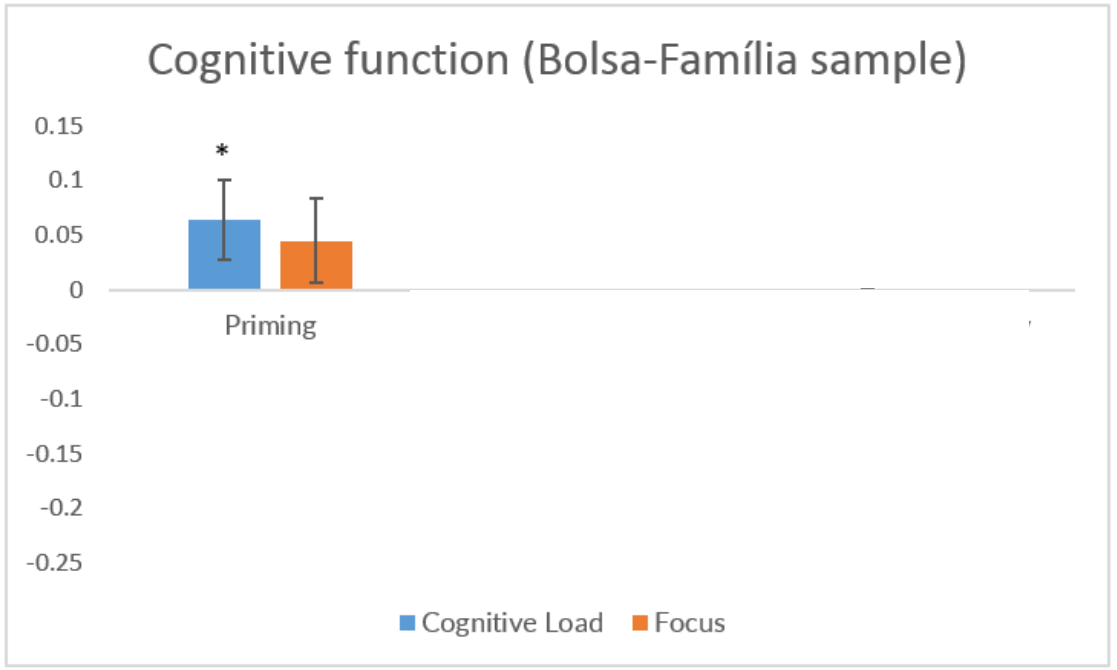
BENCHMARKING TO REAL SHOCKS





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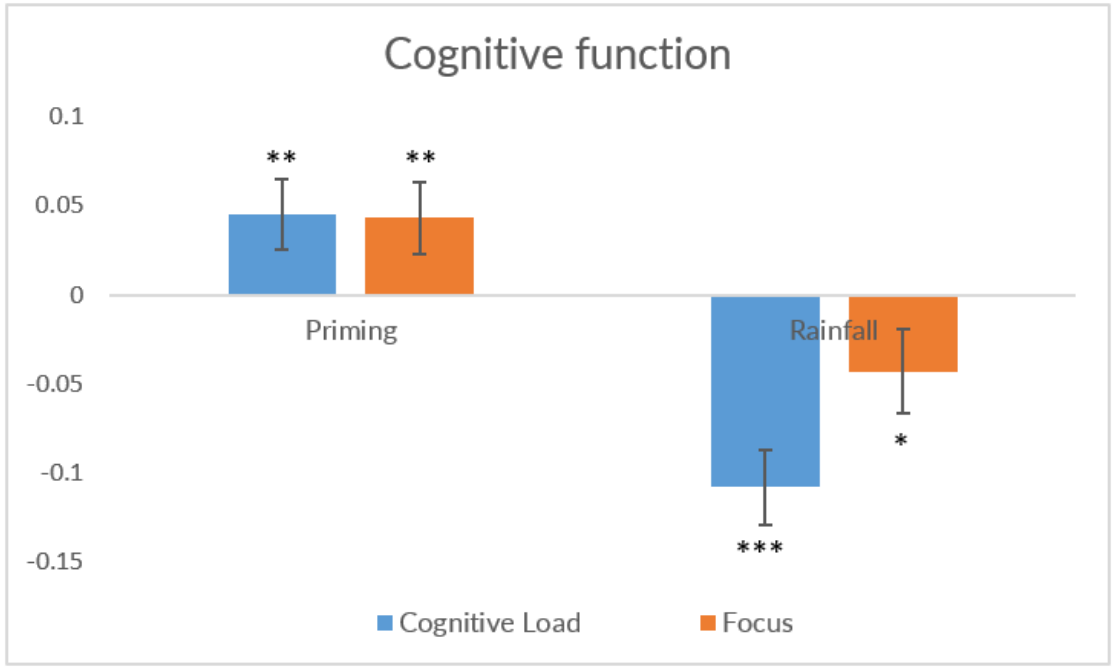

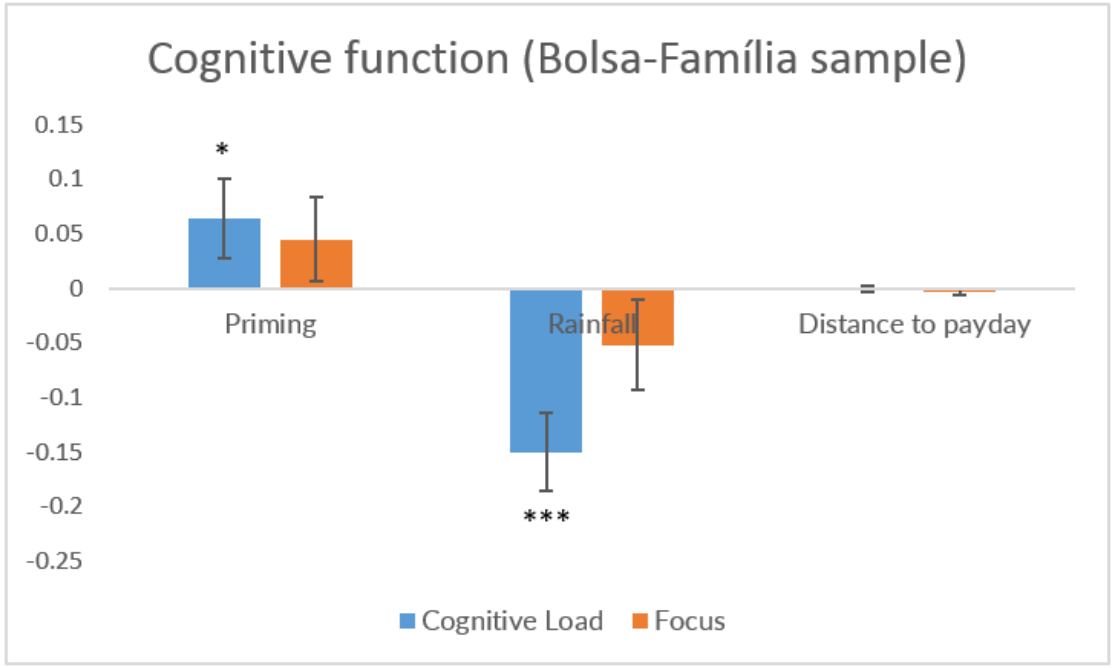

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IMPLICATIONS FOR INVESTMENTS IN CHILDREN'S HUMAN CAPITAL

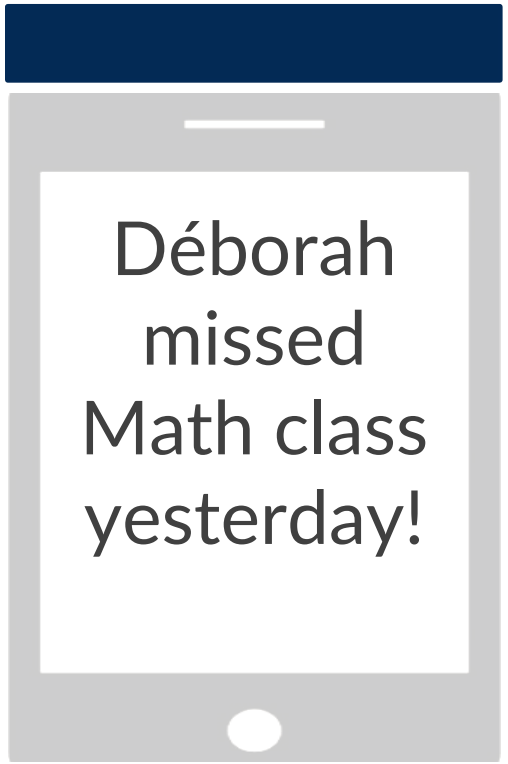
- **Intensive margin:** intensity of parental engagement in children's school life
- **Extensive margin:** undertaking of educational investments
- Since higher schooling maps into higher earnings in adult life, if poverty affects either or both margins, then **potential for poverty traps…**

INTENSIVE MARGIN

- **Hypothesis:** poor parents pay less attention to their children's school life

- In fact, systematic evidence that communicating with parents has strong effects on children's school performance
  - ➢ Presumably because parents' beliefs become more accurate, leading them to monitor more
  - ➢ Alternatively, could be because poverty captures parents attention, and informing them makes children's school life *top-of-mind*

THE ROLE OF INFORMATION



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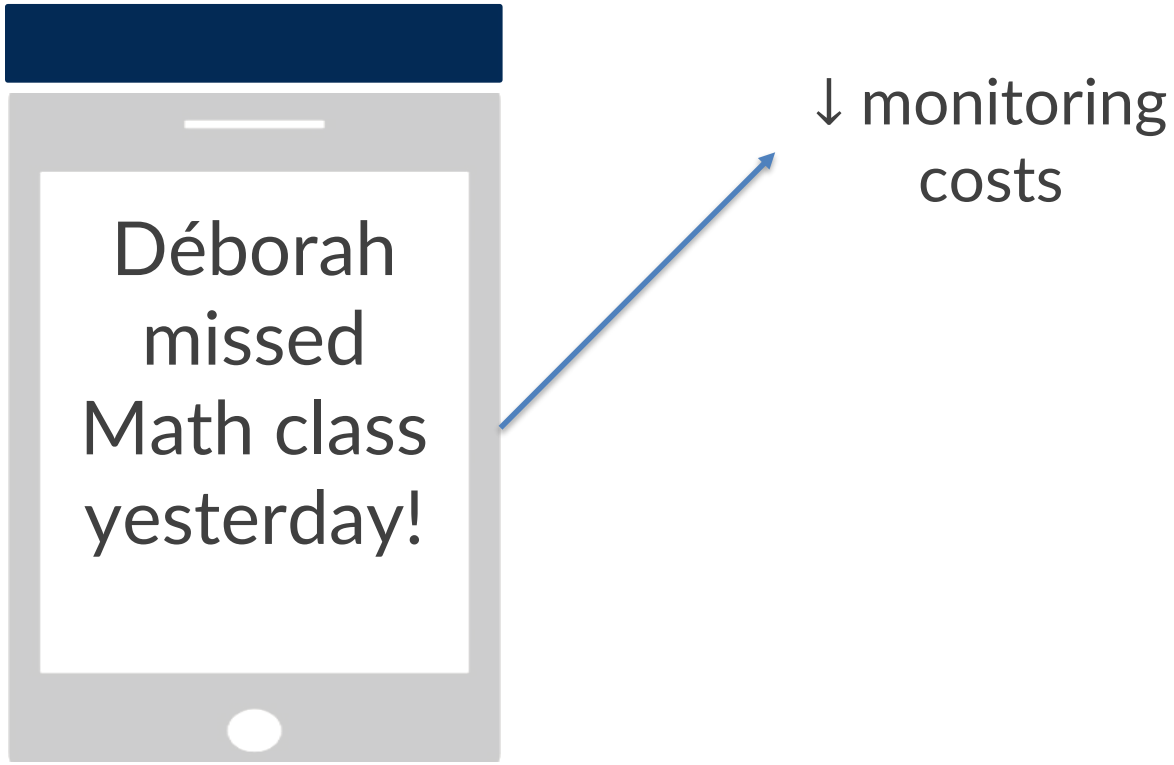
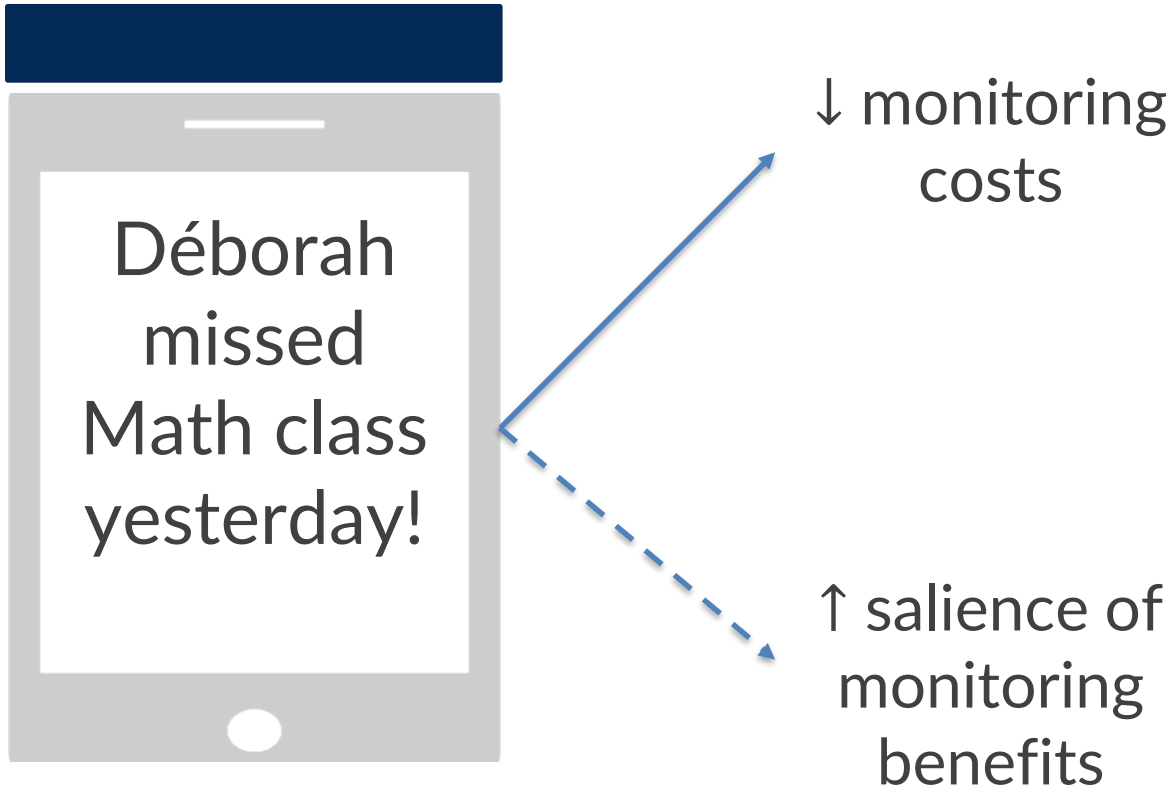
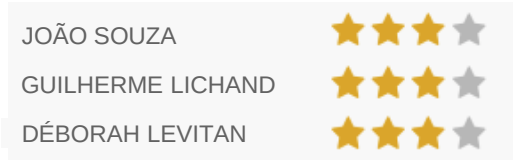


THE (DUAL) ROLE OF INFORMATION



HOW TO TEST THIS HYPOTHESIS?

Cunha, Lichand, Madeira and Bettinger (2018) "What Is It About Communicating With Parents?"



CONTROL	TOP-OF-MIND	INFORMATION
	Attending classes every day is important for Déborah's grades	João was absent less than 3 times in the previous 3 weeks

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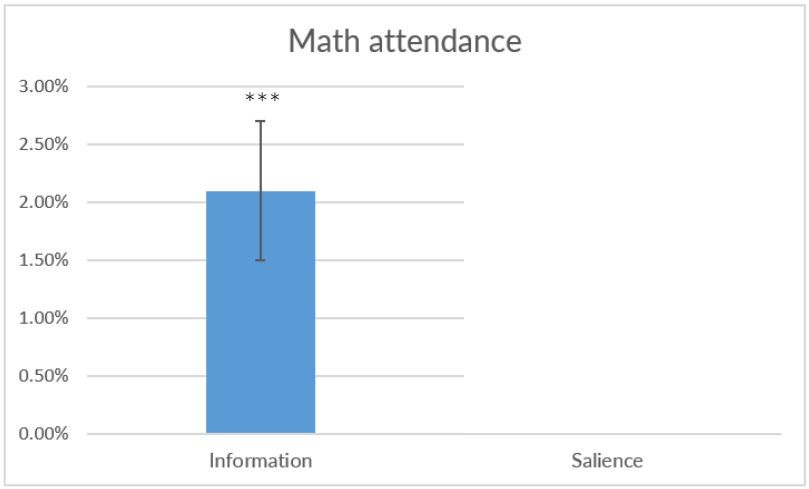

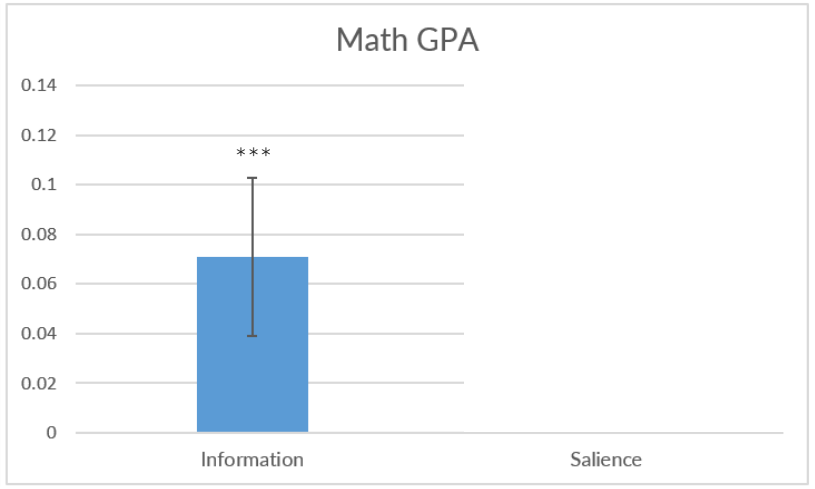

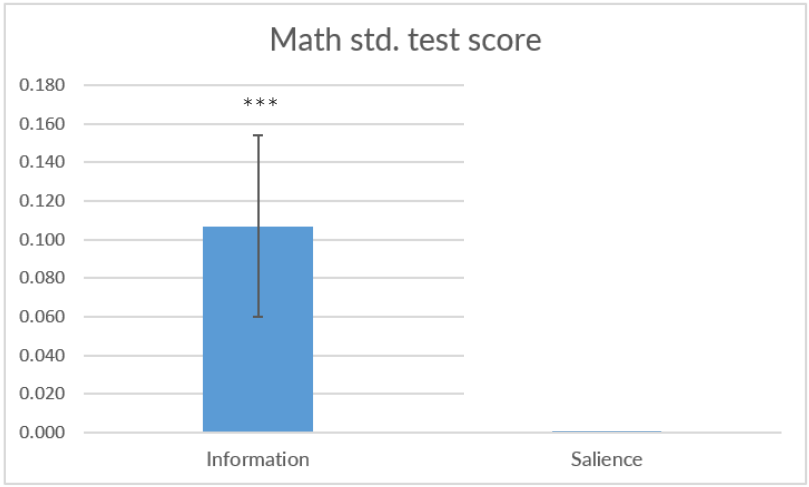

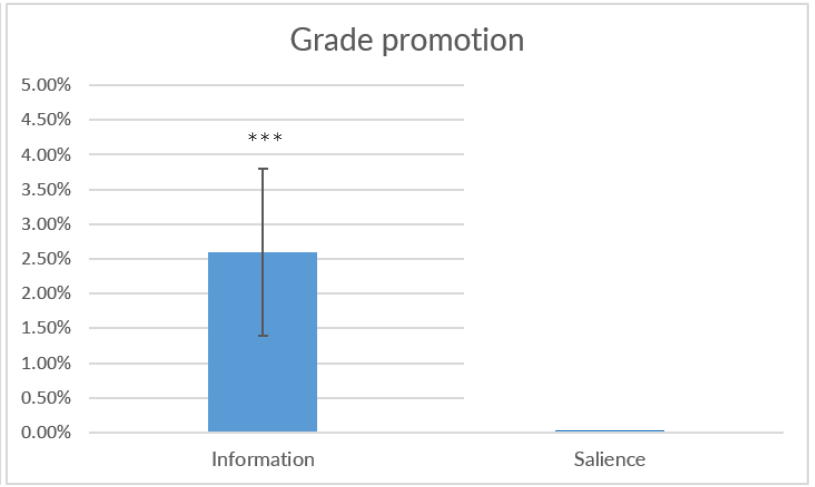

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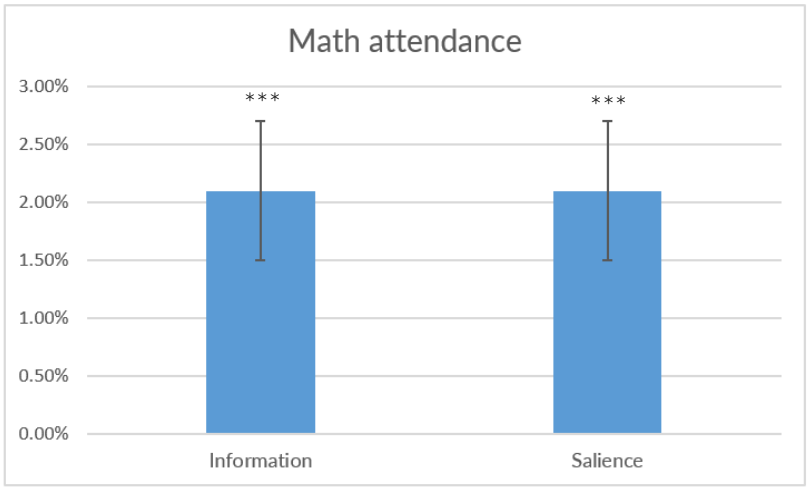

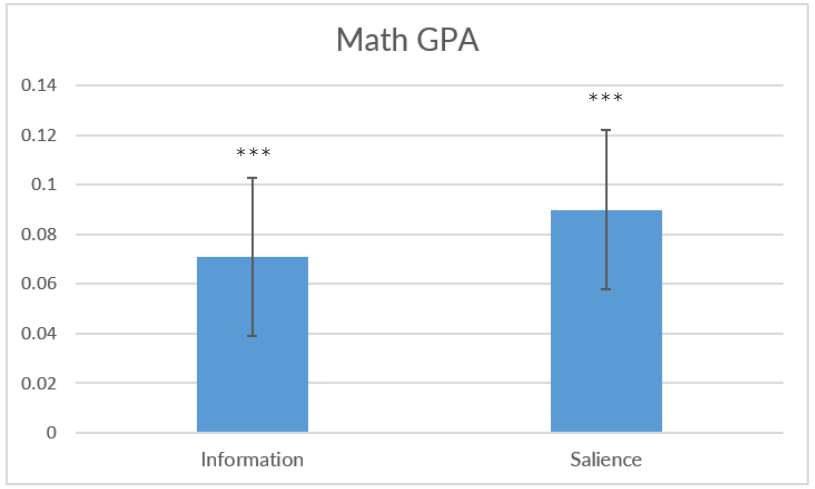

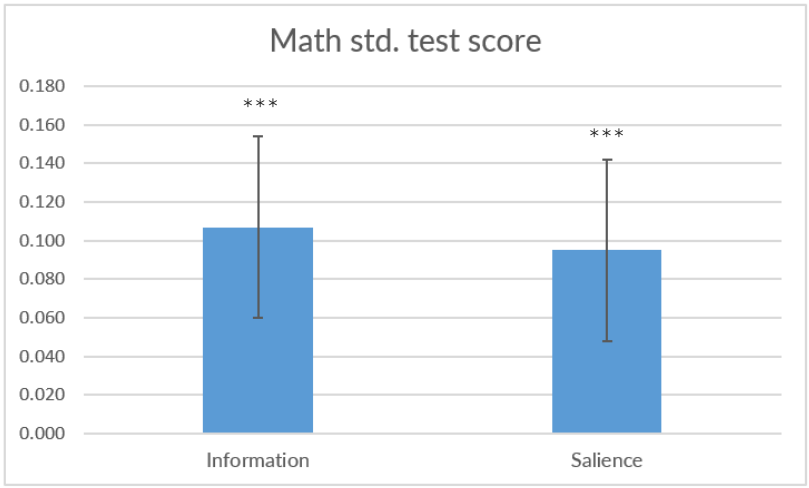

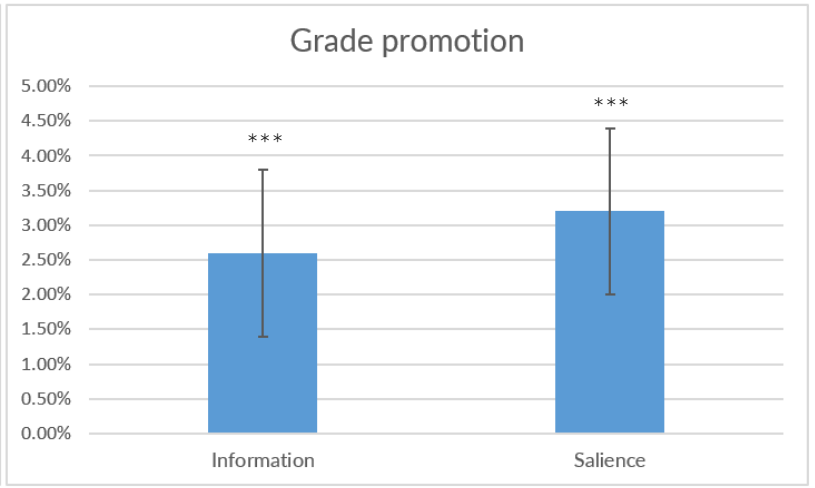

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EXTENSIVE MARGIN

- **Hypothesis:** poor parents' focus on short-term returns leads them to misevaluate long-term benefits

- In fact, poor parents often underinvest in their children's education and preventive health care in the presence of high returns
  - ➢ Presumably because of liquidity constraints, lack of information and risk aversion
  - ➢ Alternatively, could be because poverty induces poor parents to focus too narrowly on short-term returns, at the expense of long-term returns

AN EDUCATIONAL INVESTMENT

Lichand, Cunha, Madeira and Bettinger (2018) "The Psychological Effects of Poverty on Investments in Children's Human Capital"

- Endows parents with 3 CHF
- Offers them an opportunity to undertake a real educational investment:
  - SMS parental engagement program, over the course of 6 months, at the cost of 3 CHF

Eduqi+

WEEK 1

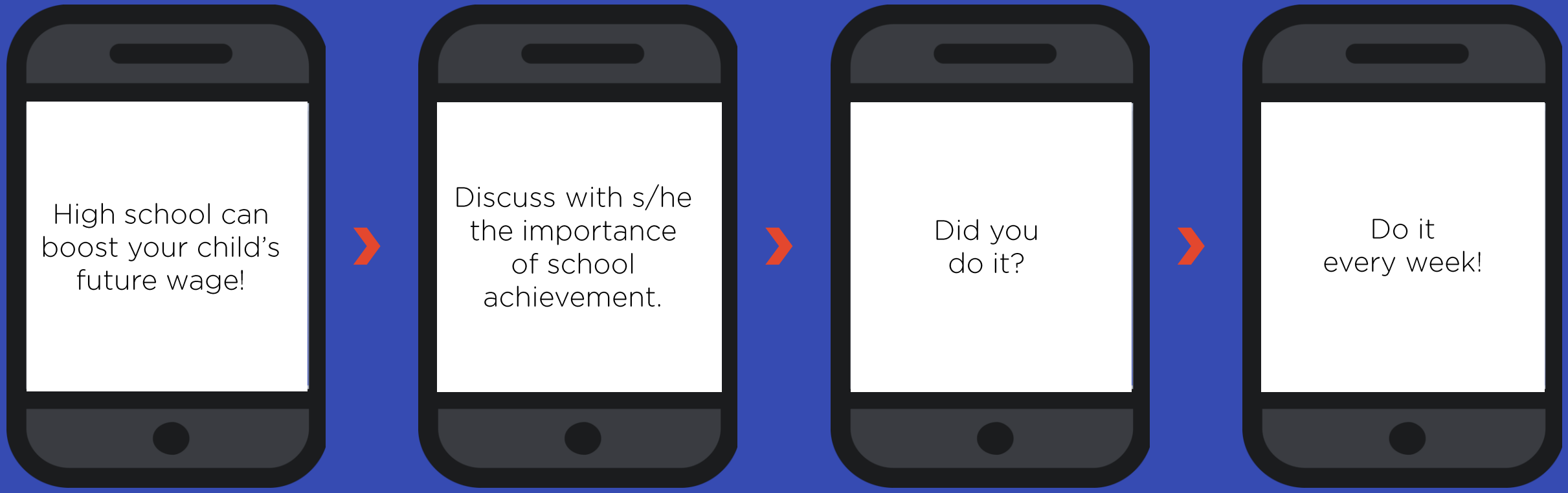
WEEK 2

Motivating fact

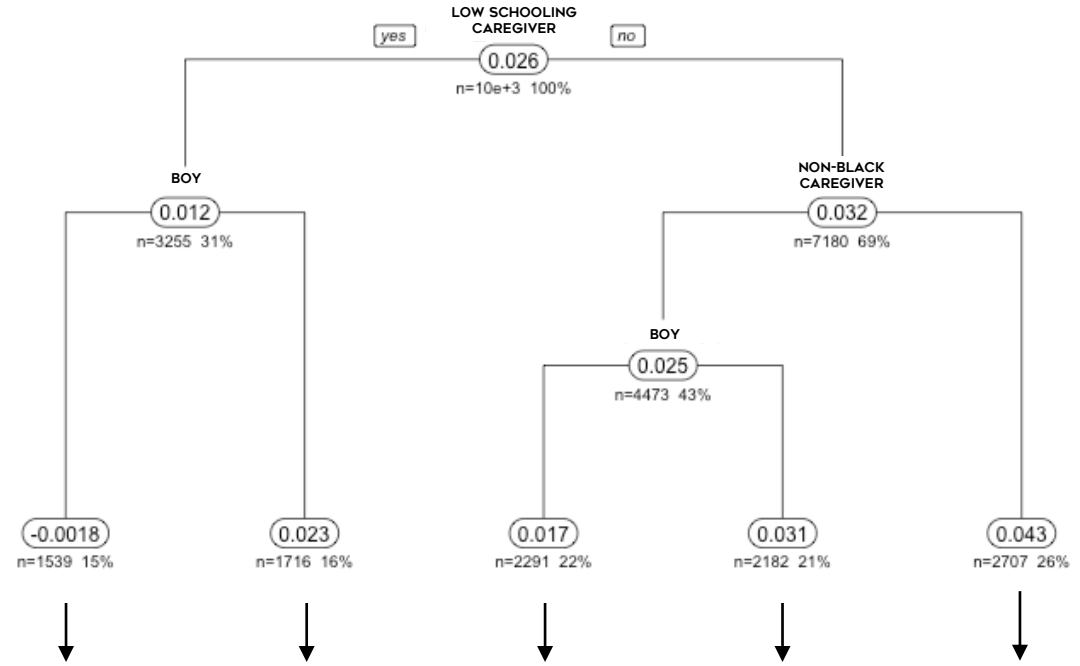
Suggested activity

Interactivity

Growth



PREDICTED RETURNS



Predicted ROI: 0% 2% 2% 3% 4%

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RESEARCH QUESTION

- Do poor parents' decision to invest in the program ***vary with returns*** the same way that it does for rich parents?

HOW TO TEST THIS HYPOTHESIS?

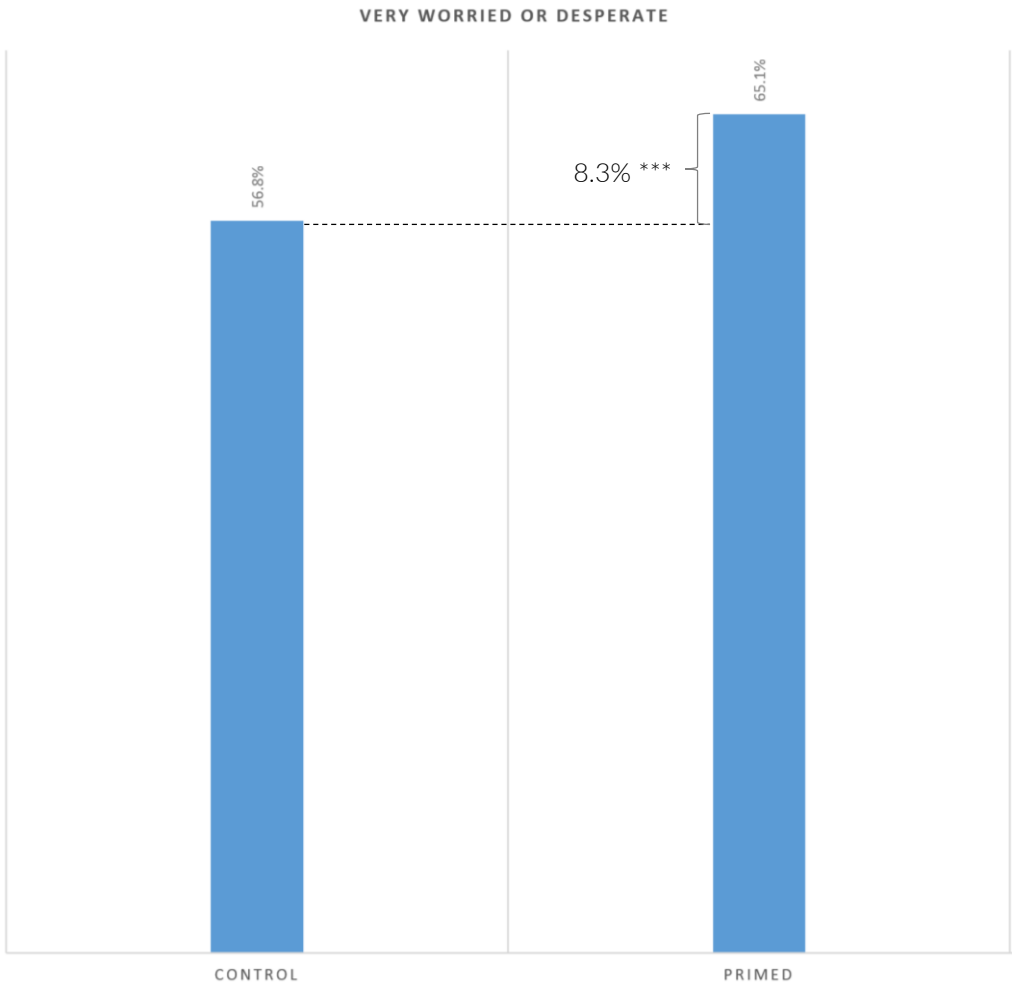
Lichand, Cunha, Madeira and Bettinger (2018) "The Psychological Effects of Poverty on Investments in Children's Human Capital"

- Survey experiment:
  - **Treatment (Priming):** "What would you do if your child's school started charging R$400 for school uniforms and you had to pay by the end of this month?"
  - **Control:** "What would you do if your child's school started charging R$20 for school uniforms and you had to pay by the end of this month?"

WORRIES ABOUT $

Manipulation check:

"How worried are you about not having money to pay all household bills at the end of this month?"



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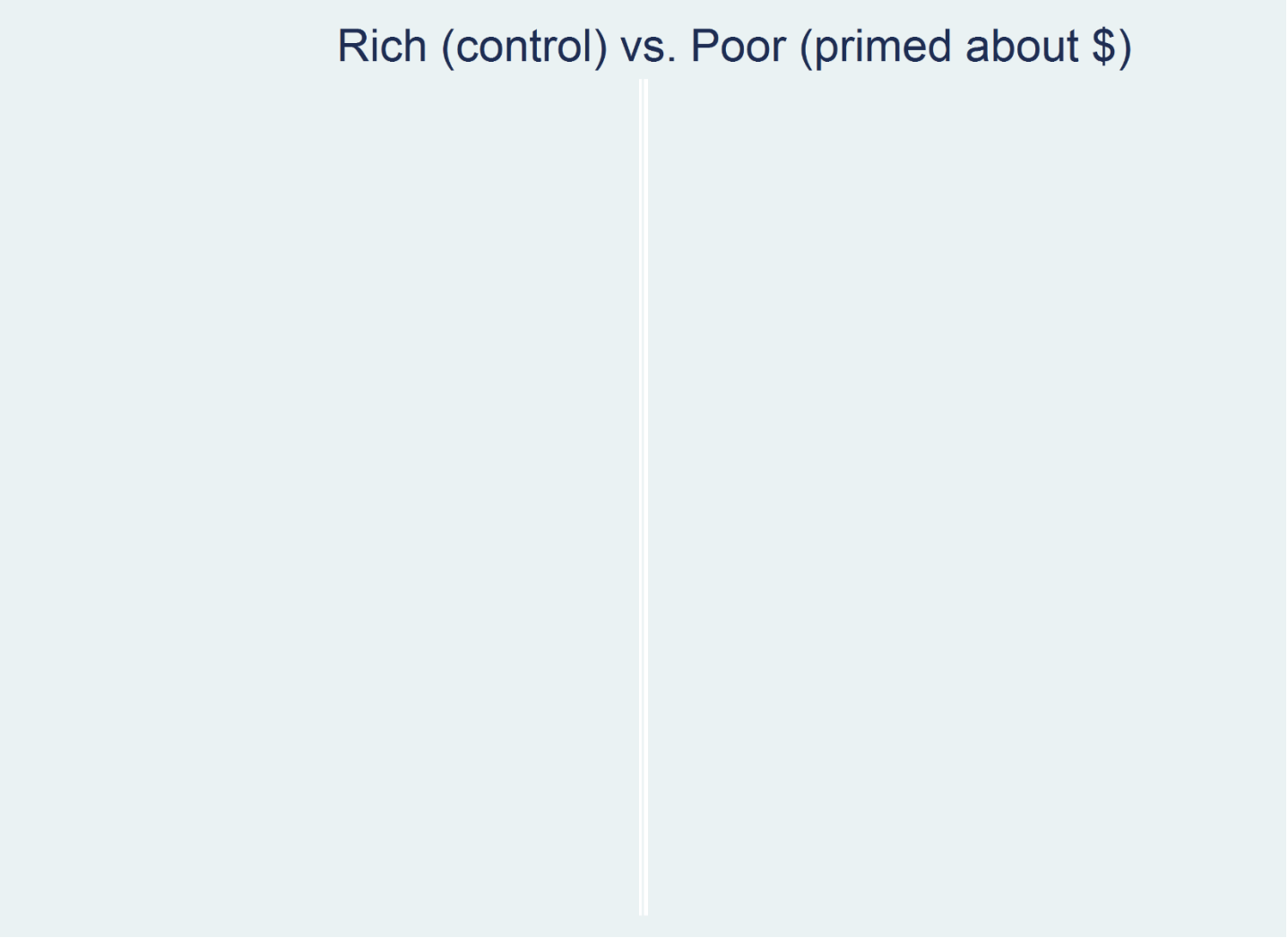
EXPERIMENTAL RESULTS



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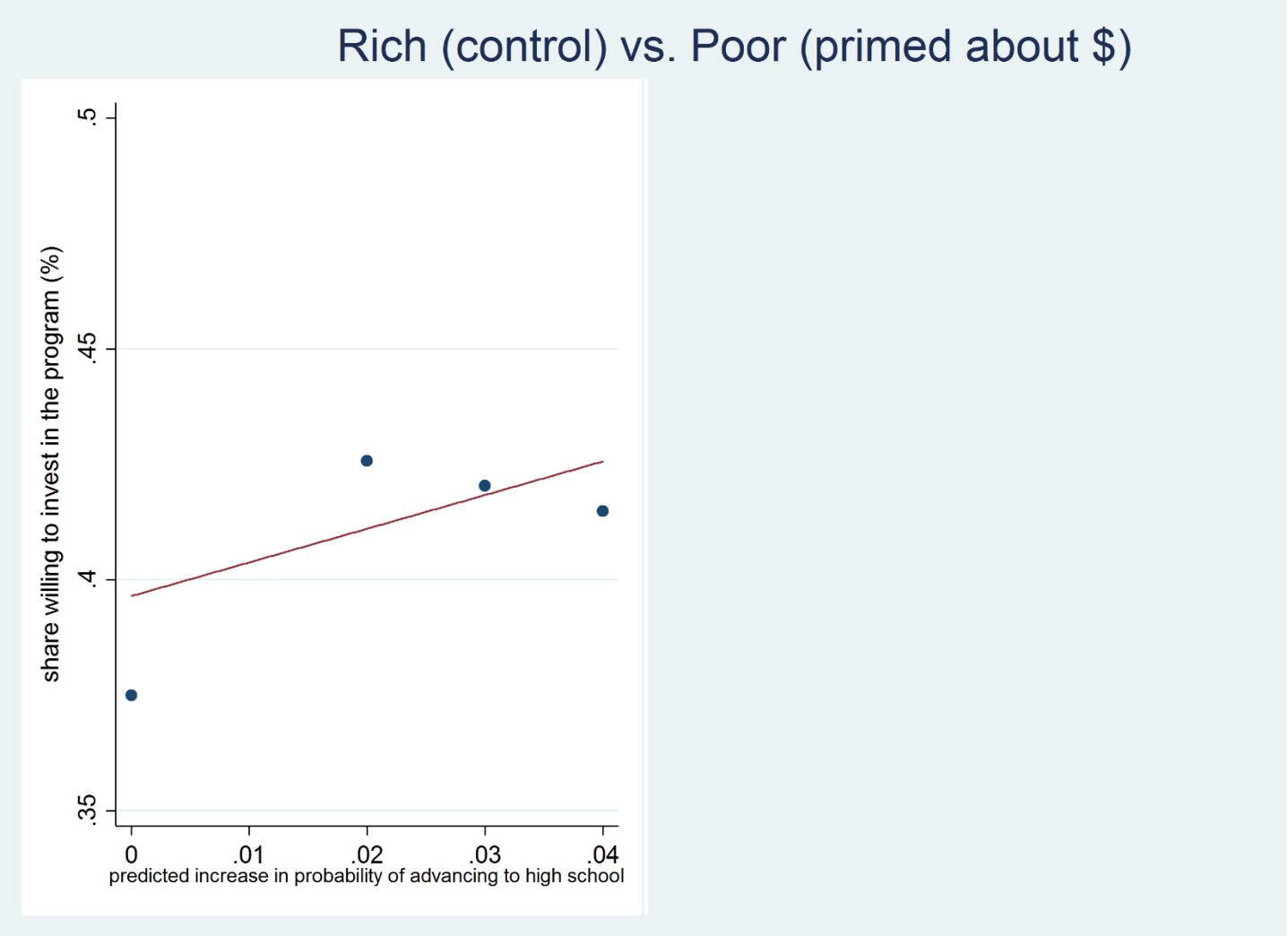
EXPERIMENTAL RESULTS



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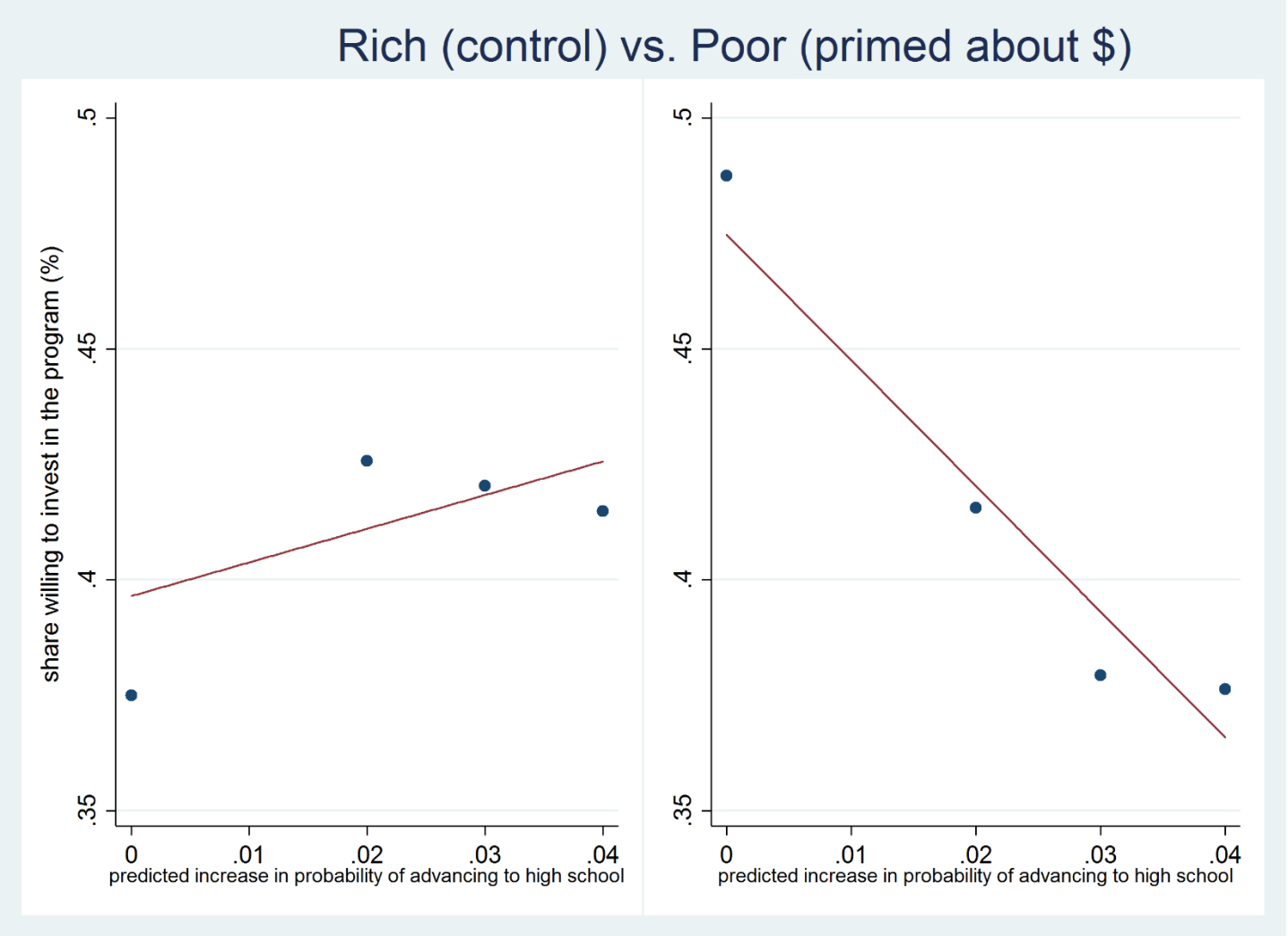
EXPERIMENTAL RESULTS



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COGNITIVE TESTS

- Audio versions of classical cognitive psychology for executive memory, attention and impulse control, based on Lichand and Mani (2018).

- ***Incentivized:*** top-performers granted ***extra R$2*** in airtime credit.
  - Digit span
  - Stroop

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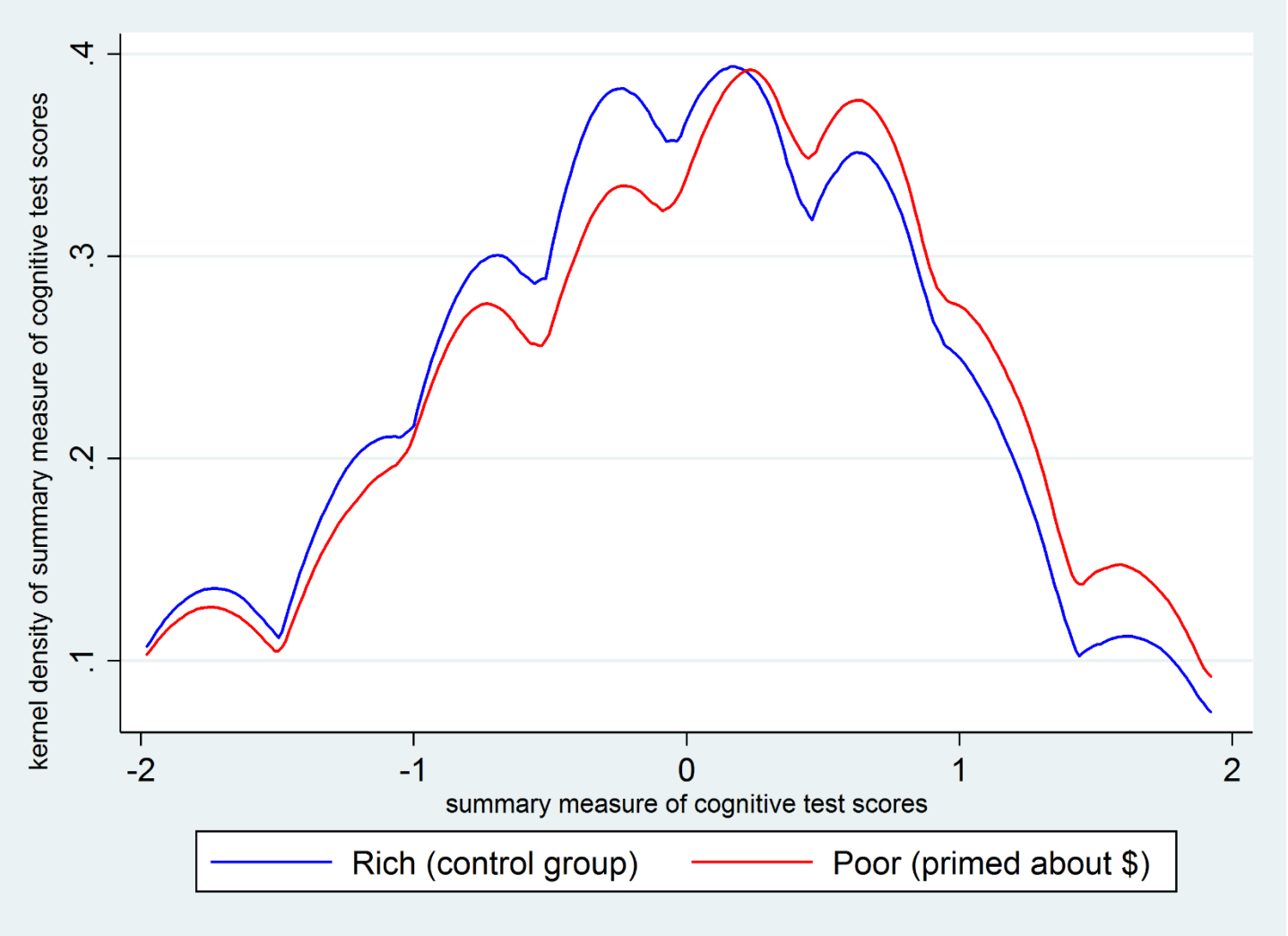
COGNITIVE TESTS



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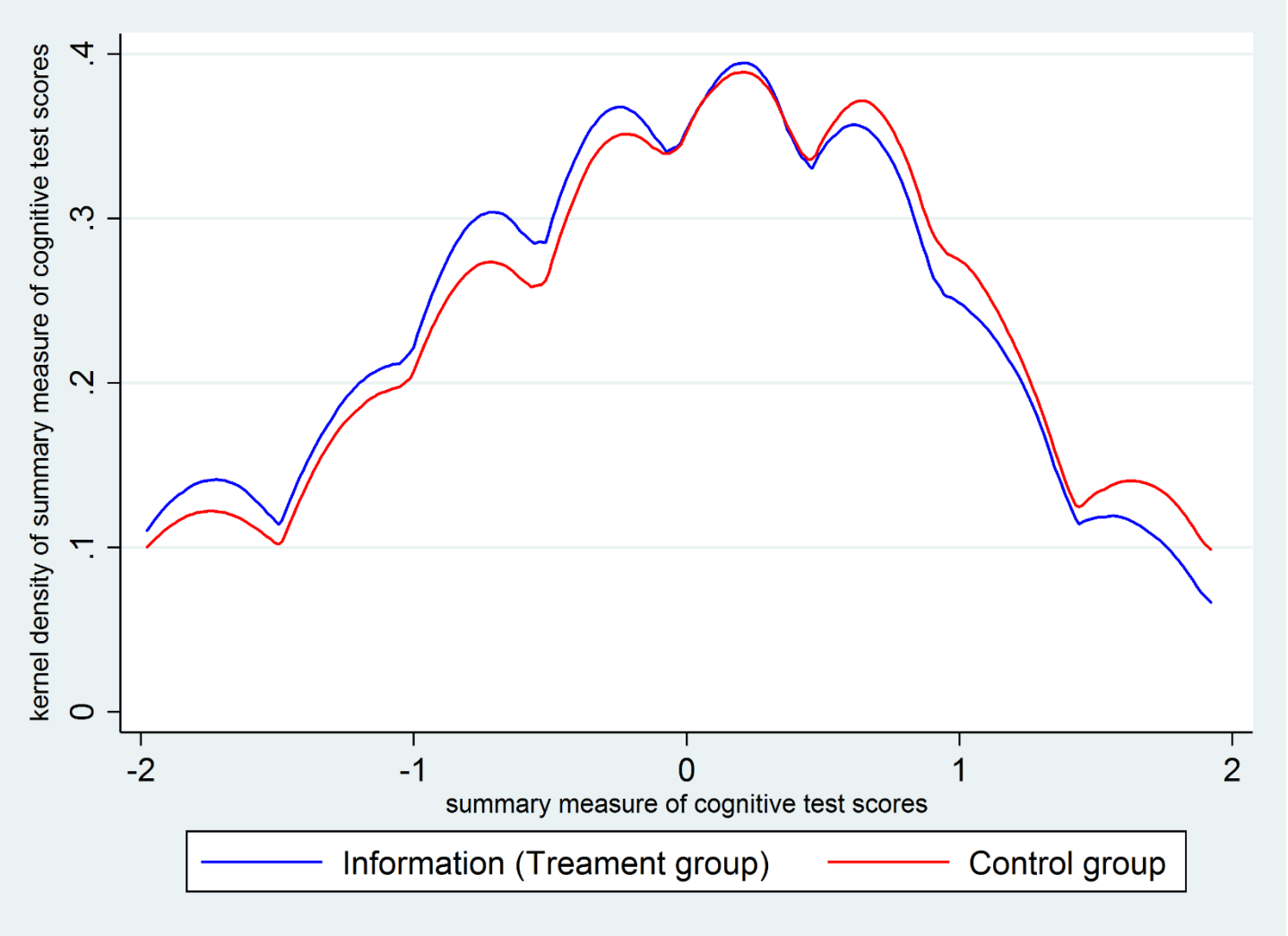
MAKING RETURNS TOP-OF-MIND

- Salience experiment:
  - **Treatment (Salience):** "Last year, we found out that sending messages about your child's school life has the potential to decrease his/her absences by 0/1/2/3 over the course of 6 months."
  - **Control:** "Last year, 19,000 families in the State of São Paulo participated in the project, receiving weekly text messages about their children's school life."

- **IMPORTANT:** predicted returns for absences ***uncorrelated*** with predicted returns for the likelihood of advancing to high-school
  - Treatment is ***not*** informative!

SALIENCE AFFECTS FOCUS



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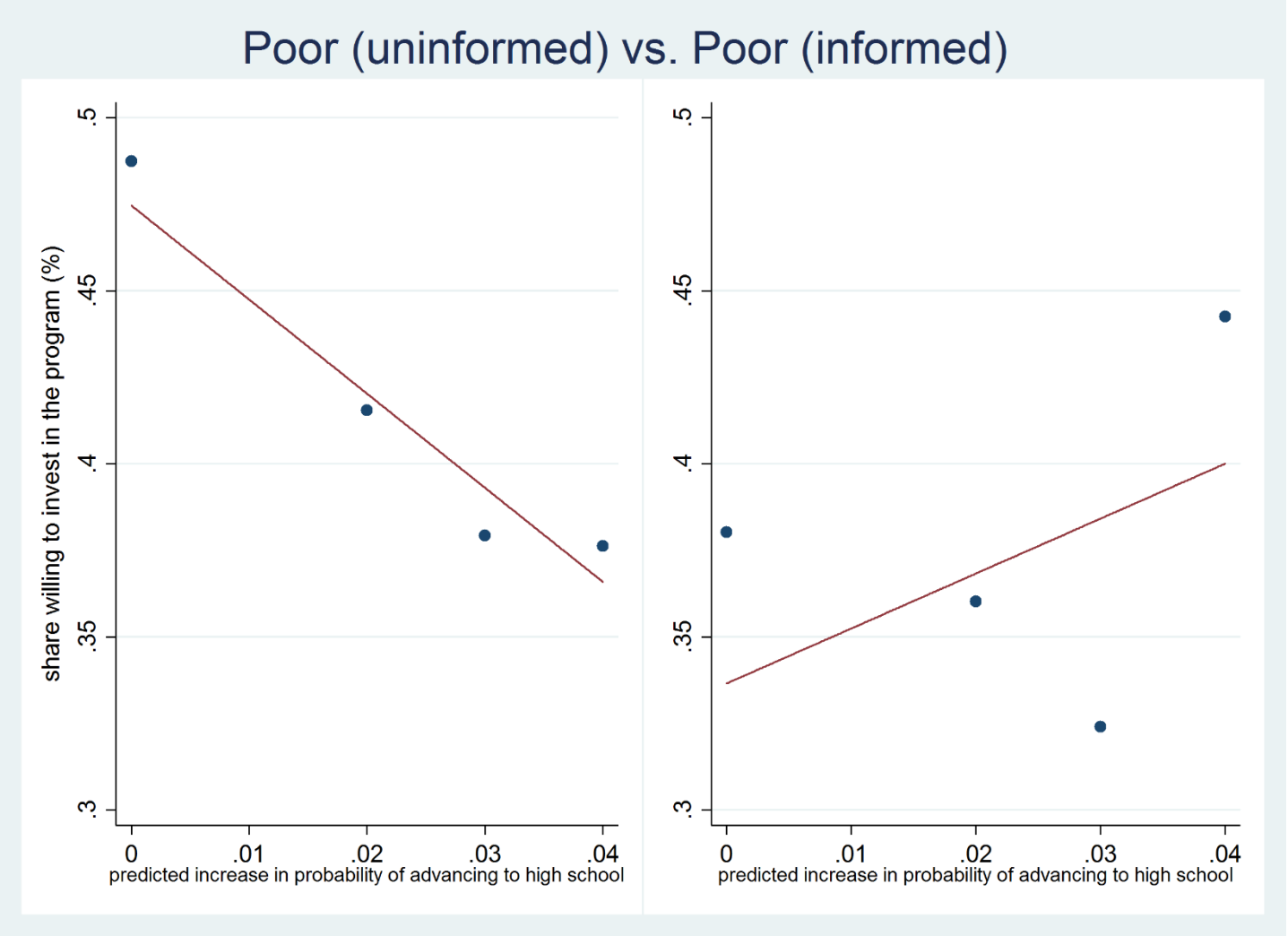
EFFECTS OF SALIENCE



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WHAT HAVE WE LEARNED?

- ***Poverty hurts decision-making***: shocks that induce ***low levels and high risk*** impede cognitive function.

- Psychological consequences of poverty affect ***real economic decisions***, with potential consequences for inter-generational transmission and ***poverty traps***.
  - Some progress can be made even in the presence of "fundamental constraints"
  - Alleviating some "fundamental constraints" may not be enough

- To mitigate psychological effects, need to ***modify the environment***:
  - Make returns top-of-mind
  - Make decisions automatic

WHEN RESEARCH MEETS POLICY

Eduq+ cost per student
in 2016
R$ 9,55

Decrease in grade repetition
in percentage points
3%

Annual cost per student
at the end of Middle School
R$ 3.957,11

EXPECTED GOVERNMENT SAVINGS PER R$ INVESTED

in Eduq+

R$ 12,44

1,000+

cities in Brazil

(across all States)

INTERNATIONAL

4 continents

(Germany, US, Dominican Republic and Ivory Coast)

250,000+

active users

1,000,000+

beneficiaries

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To support evidence-based program design

To promote equal basic opportunities for every child

To help children and young adults reach their full potential

HARMFUL PRACTICES AGAINST GIRLS AND TEENAGERS IN MALAWI

What is the prevalence of harmful traditional practices that negatively impact adolescent girls and what are their underlying behavioral determinants?

Read More

NUTRITION AND WASH LINKAGES IN MALAWI

What is the best combination of nutrition, sanitation, and hygiene interventions in a Social Network for improving nutrition status in Malawi?

Read More

HEALTH DELIVERY PLATFORMS IN MALAWI

What are the most cost-effective platforms to deliver sustainable take-up and usage of the essential health package in Malawi?

Read More

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CASH TRANSFER AND BASIC SERVICES LINKAGES IN MALAWI

Which services have the highest complementarities with the social cash transfer program to improve resilience in Malawi?

Read More

EDUCATION IN BRAZIL

What is it about communicating with parents that improves students' outcomes: limited information about students' behaviour at school, or parent's limited attention, particularly in developing countries where poverty taxes cognitive performance? Does poverty makes one more or less willing to invest in their children? What is the best way to use text messages (SMS) to foster parental e...

Read More

FEMALE GENITAL CUTTING IN SUDAN

Research Questions: Is Female Genital Cutting (FGM) a social norm that evolved culturally within the context of a coordination game? Is there a single threshold of prevalence below which all families would abandon the practice? Can communication for development (C4D) interventions deter FGM and, if so, which is the most effective: targeting extrinsic or intrinsic motivations?

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MY FAMILY

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Thank you!

You are now invited for an aperó at the Lichthof