



# The Effects of WhatsApp on Politics: Evidence From a Deactivation Experiment

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# Motivation

*Disinformation Spreads on WhatsApp  
Ahead of Brazilian Election*



**Fake News Is Poisoning Brazilian Politics. WhatsApp Can Stop It.**

Oct. 17, 2018



# Research Goal

Provide causal estimates for the effects of exposure to misinformation on WhatsApp on political outcomes.

# WhatsApp Multimedia Deactivation Field Experiment during the weeks leading up to the 2022 Presidential Election in Brazil

# Deactivation Studies

American Economic Review 2020, 110(3): 629–676  
<https://doi.org/10.1257/aer.20190658>

## The Welfare Effects of Social Media<sup>†</sup>

By HUNT ALLCOTT, LUCA BRAGHIERI, SARAH EICHMEYER,  
AND MATTHEW GENTZKOW\*

*The rise of social media has provoked both optimism about potential societal benefits and concern about harms such as addiction, depression, and political polarization. In a randomized experiment, we find that deactivating Facebook for the four weeks before the 2018 US midterm election (i) reduced online activity, while increasing offline activities such as watching TV alone and socializing with family and friends; (ii) reduced both factual news knowledge and political polarization; (iii) increased subjective well-being; and (iv) causes a large persistent reduction in post-experiment Facebook use. Deactivation reduced post-experiment valuations of Facebook, suggesting that traditional metrics may overstate consumer surplus.* (JEL D12, D72, D90, I31, L82, L86, Z13)

Social media have had profound impacts on the modern world. Facebook, which remains by far the largest social media company, has 2.3 billion monthly active users worldwide (Facebook 2018). As of 2016, the average user was spending 50 minutes per day on Facebook and its sister platforms Instagram and Messenger (Facebook 2016). There may be no technology since television that has so dramatically reshaped the way people get information and spend their time.

Speculation about social media's welfare impact has followed a familiar trajectory, with early optimism about potential benefits giving way to widespread concern about possible harms. At a basic level, social media dramatically reduce the cost of connecting, communicating, and sharing information with others. Given that interpersonal connections are among the most important drivers of happiness and



## Testing the effects of Facebook usage in an ethnically polarized setting

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Despite the belief that social media is altering intergroup dynamics—bringing people closer or further alienating them from one another—the impact of social media on interethnic attitudes has yet to be rigorously evaluated, especially within areas with tenuous interethnic relations. We report results from a randomized controlled trial conducted in New York City (NYC) during the effects of exposure to social media during 1 wk around genocide remembrance in July 2019 on a set of interethnic attitudes of Facebook users. We find evidence that, counter to preregistered expectations, people who deactivated their Facebook profiles report lower regard for ethnic outgroups than those who remained active. Moreover, we present additional evidence suggesting that this effect is likely conditional on the level of ethnic heterogeneity of respondents' residence. We also extend the analysis to subjective well-being and knowledge of news. Here, we find that Facebook deactivation leads to suggestive improvements in subjective well-being and a decrease in knowledge of current events, replicating results from recent research in the United States in a very different context, thus increasing our confidence in the generalizability of these effects.

spaces can help or hinder the goal of transforming relations from antagonistic to constructive, social media should be considered and studied as one of the forces influencing the direction of countries' postconflict paths.

Importantly, both ethnicity and partisanship are potential markers of group identity. Given that partisanship is required by choice, however, it is a more informative measure of one's worldview than group membership based on more immutable characteristics such as ethnicity or race (10). As such, some propose that people may assign larger blame and responsibility to others for their partisanship than for their inborn group affiliations (11). The differences between partisan and other social identities have recently been discussed as a potential explanation of why intergroup contact, which tends to be associated with positive outcomes (12), may not be as effective at mitigating outgroup hostility in the context of partisanship (13). This, however, remains an open question requiring studies that go beyond partisan affiliation, in particular addressing attitudes toward ethnic outgroups and especially in an online context.

POLITICAL SCIENCES

④ **Our Solution:** Cut the primary channels through which users are exposed to misinformation and polarizing content: videos, images and audios (Machado et al., 2019; Resende et al., 2019; Garimella and Tyson, 2018; Garimella and Eckles, 2020; Batista Pereira et al., 2023).

④ **Experiment:** Offer respondents a monetary incentive to

- Disable their automatic download of media on WhatsApp
- Do not purposefully click and watch any media on WhatsApp

④ **Treatment Period:** Three weeks:

- **Start:** Three weeks before general election in Brazil
- **End:** three days after the voting day

# Overview of the Experiment

Recruitment

- Facebook Ads targeting adults Brazil
- Started on September 8th
- Number of respondents: 1,947
- Participants willing to join the deactivation: 1,8861

Deactivation

Compliance  
Checks

Post-Treatment  
Survey

# Overview of the Experiment

Recruitment

- Started the experiment on September 15
- Treatment:
  - Turn off the automatic download of all multimedia
  - Three weeks without consuming images, videos, and audio on WhatsApp
- Control:
  - Three days without consuming images, videos, and audio on WhatsApp
- Invited: 1,135 respondents
- Completed: 773 respondents

Treatment Assignment

Deactivation

Compliance Checks

Post-Treatment Survey

# Overview of the Experiment

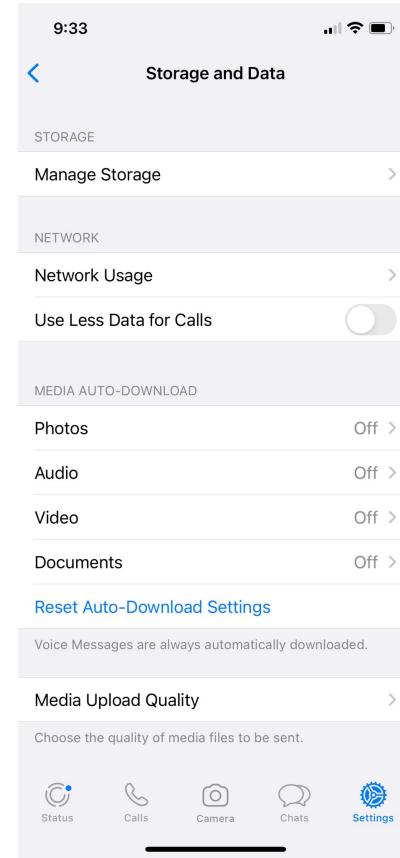
Recruitment

Treatment Assignment

Deactivation

Compliance Checks

Post-Treatment Survey



# Overview of the Experiment

Recruitment

Treatment Assignment

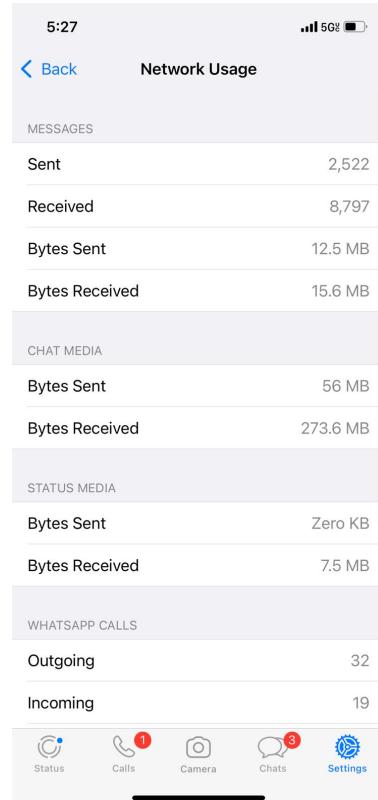
Deactivation

Compliance Checks

Post-Treatment Survey

## Compliance Tasks:

- Screenshots of WhatsApp storage information
- Every week + final survey
- After the first compliance check, the control group was activated



# Overview of the Experiment

Recruitment

Treatment  
Assignment

Deactivation

Compliance  
Checks

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Survey

## General Info

- October 5th, three days after the election
- Complete Responses: 732
- Attrition Rate: 5.3%

# Outcomes

## **Self-Reported Exposure and Accuracy Judgment**

- False Rumors published on fact-checking webpages during the month of the experiment + True News stories headlines from mainstream media.

## **Polarization**

- Affective polarization (Feeling Thermometer)
- Social Polarization (Willingness to engage with outgroup voter)
- Issue Polarization (Abortion, gun control, etc..)
- Perceptions about ideological polarization ('Where do I observe the two main candidates?')

## **Subjective Well-being**

- How did you feel for the past three weeks? (Happy, Anxious, etc...)

# Hypotheses

H1: Deactivated users will report lower levels of previous exposure to FALSE rumors.

H2a: Deactivated will display a higher ability to accurately identify FALSE rumors.

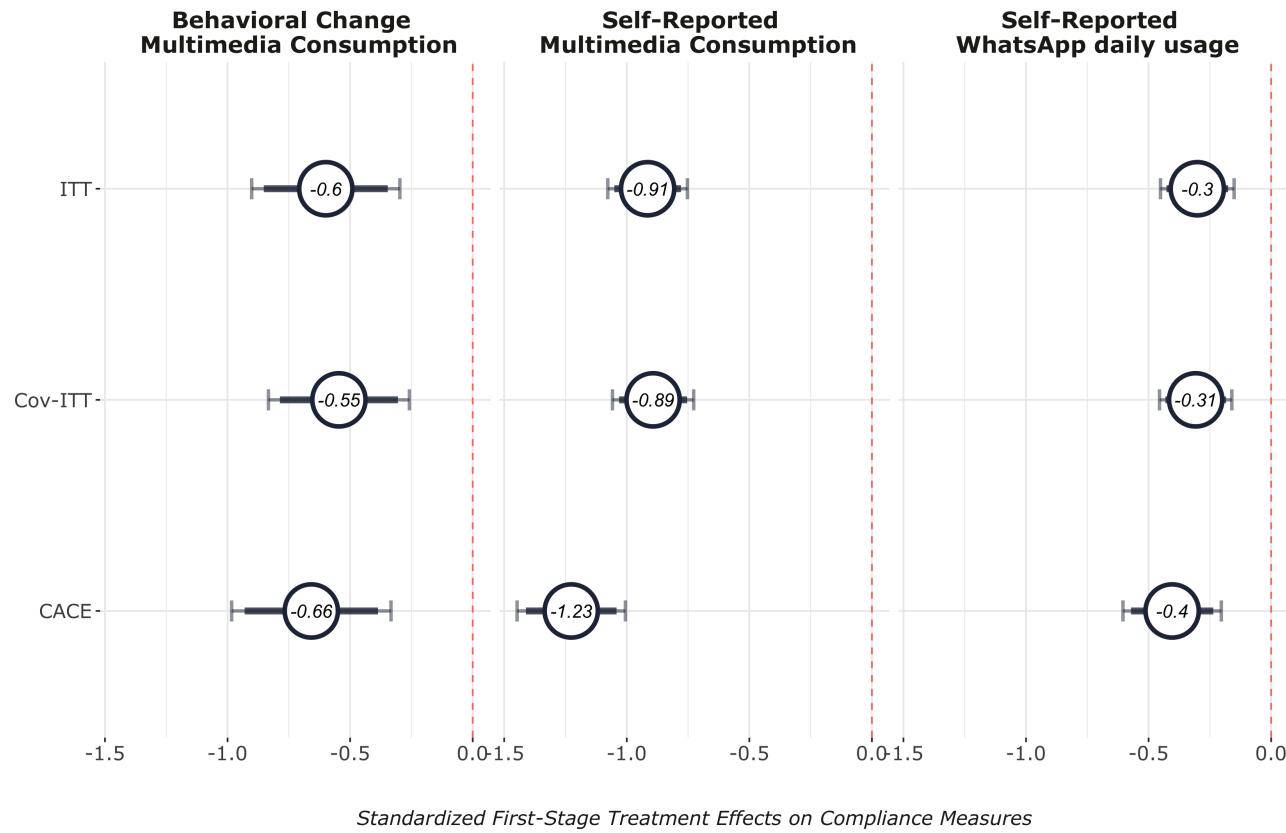
H2b Deactivated users will display lower levels of mainstream news knowledge.

H3: Deactivated will display lower levels of outgroup political polarization.

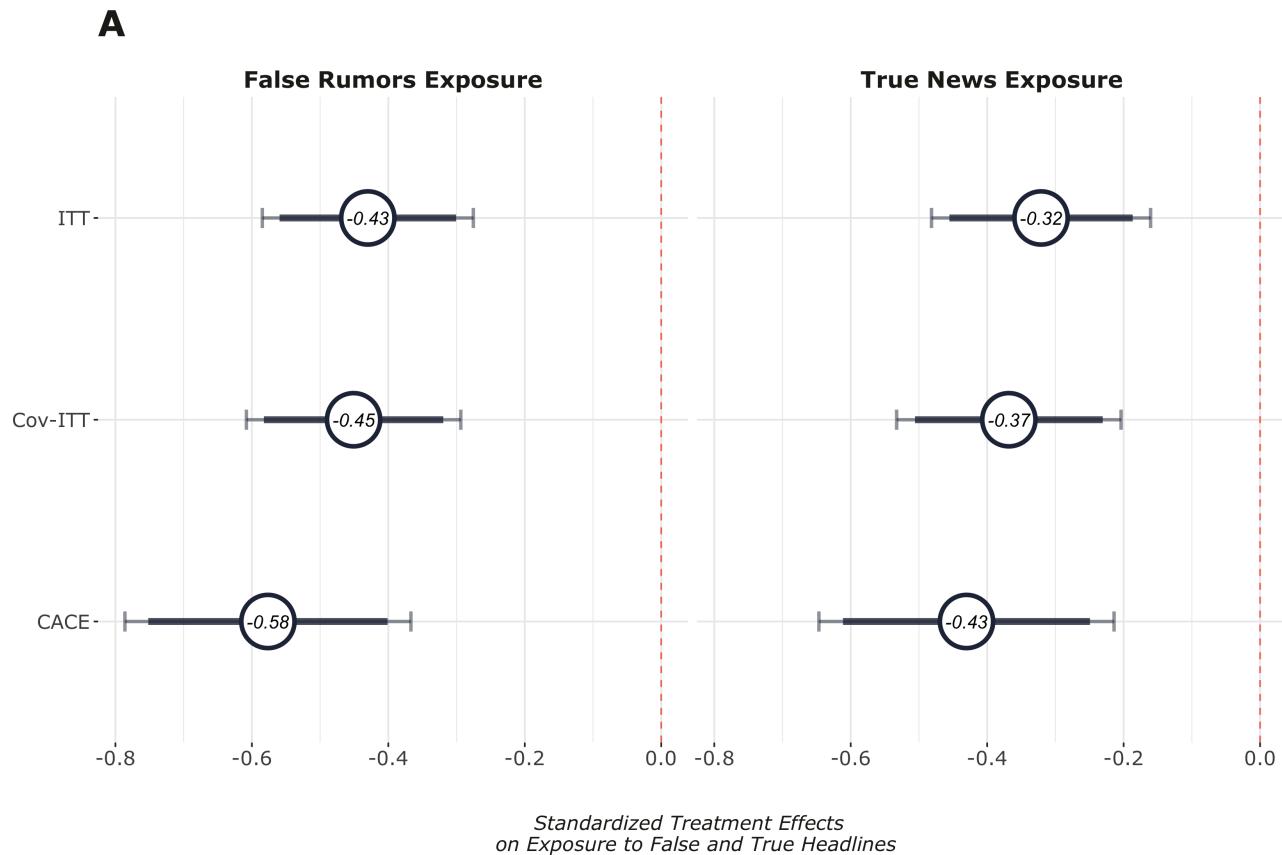
H4: Deactivated will display higher levels of the aggregated index of subjective well-being.

# Results

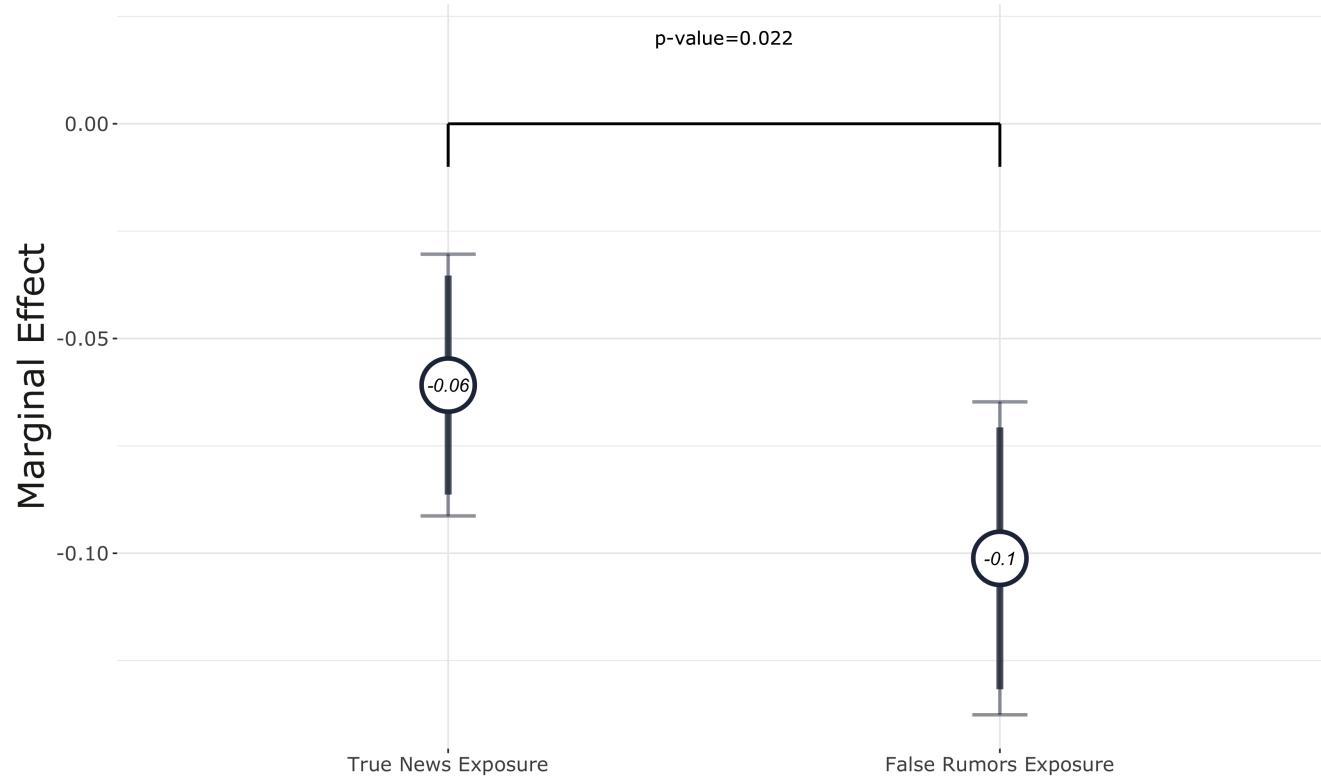
# First-Stage Results



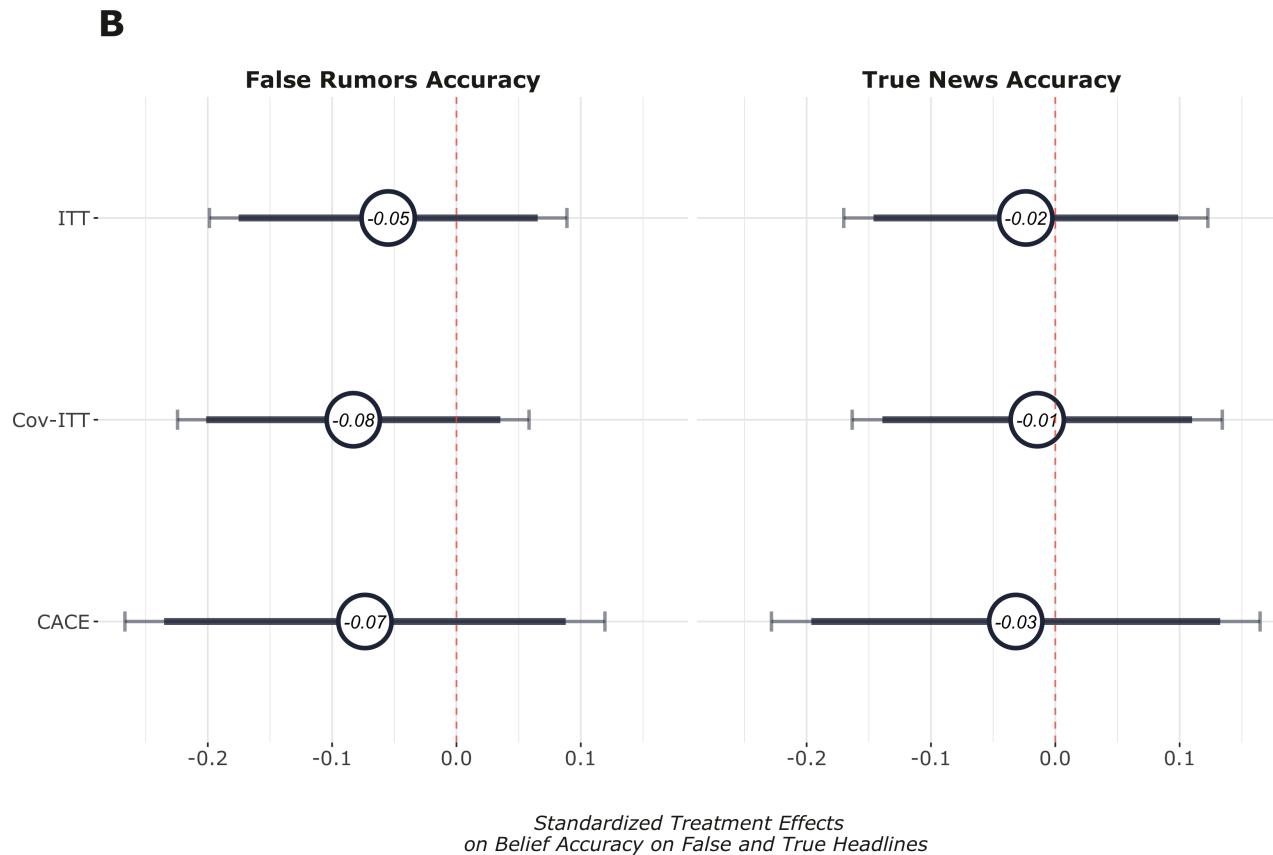
# Effects on Exposure to Misinformation Rumors (H1)



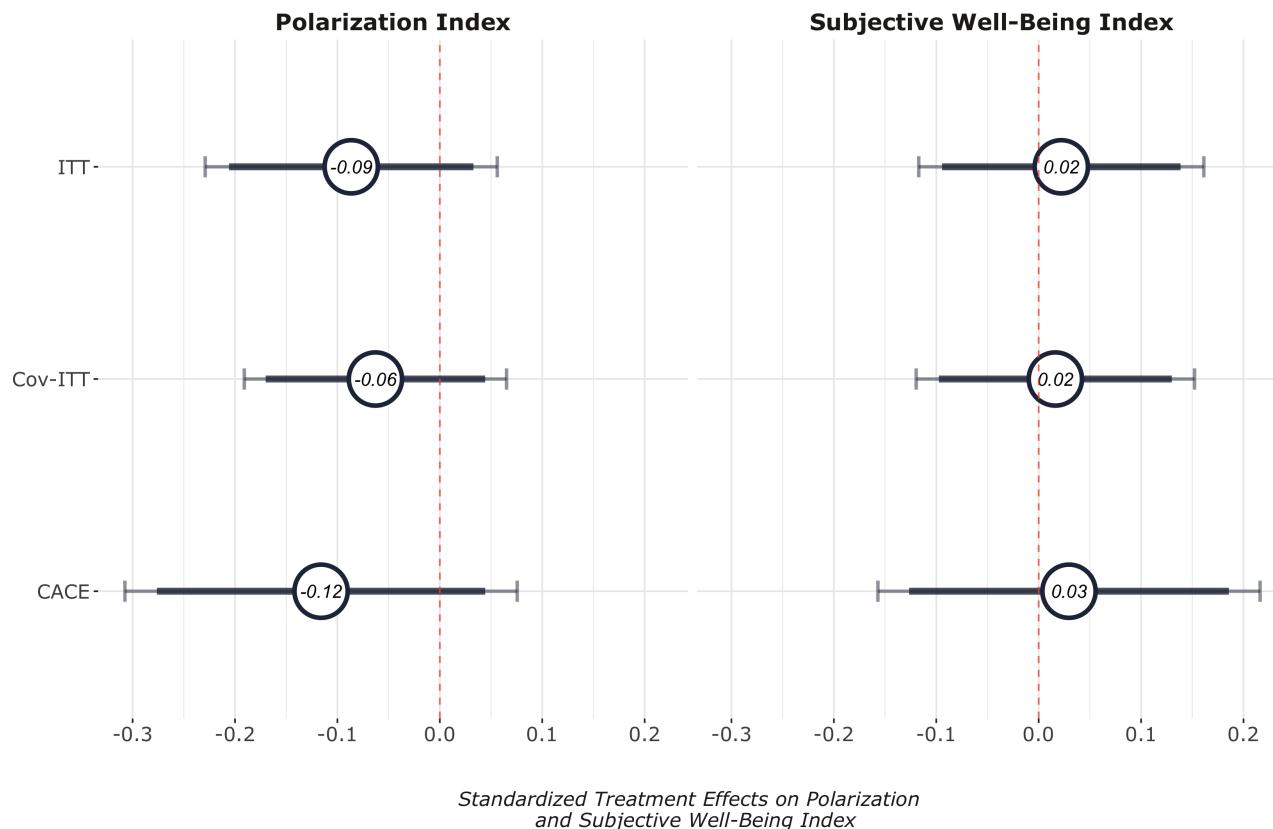
# Reduction in exposure is large for false news



# Effects on Belief Accuracy (H2)



# Effects on Polarization & Subjective Well-Being (H3 & H4)



# Discussion

- ⊕ WhatsApp is an important vector through which voters receive misinformation in Brazil at a higher rate compared to true news.
- ⊕ The null results provide support for a minimalist view of the causal effects of WhatsApp on political attitudes.
- ⊕ Exposure to misinformation does not mechanically affect attitudes

# Limitations

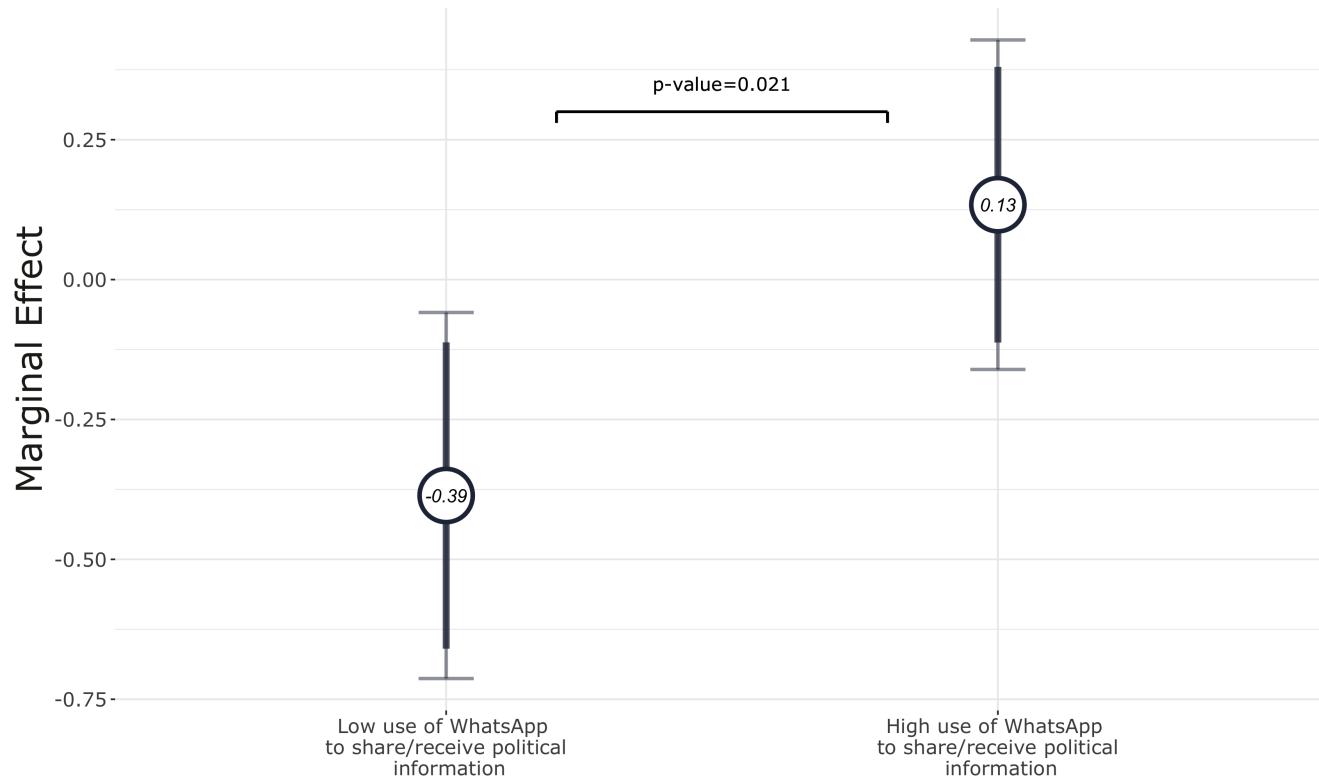
- Scope conditions: focus on direct effects of WhatsApp.
- Larger effect might exist exactly in hard to reach populations.
- Small effect size vs Power

# Next steps.

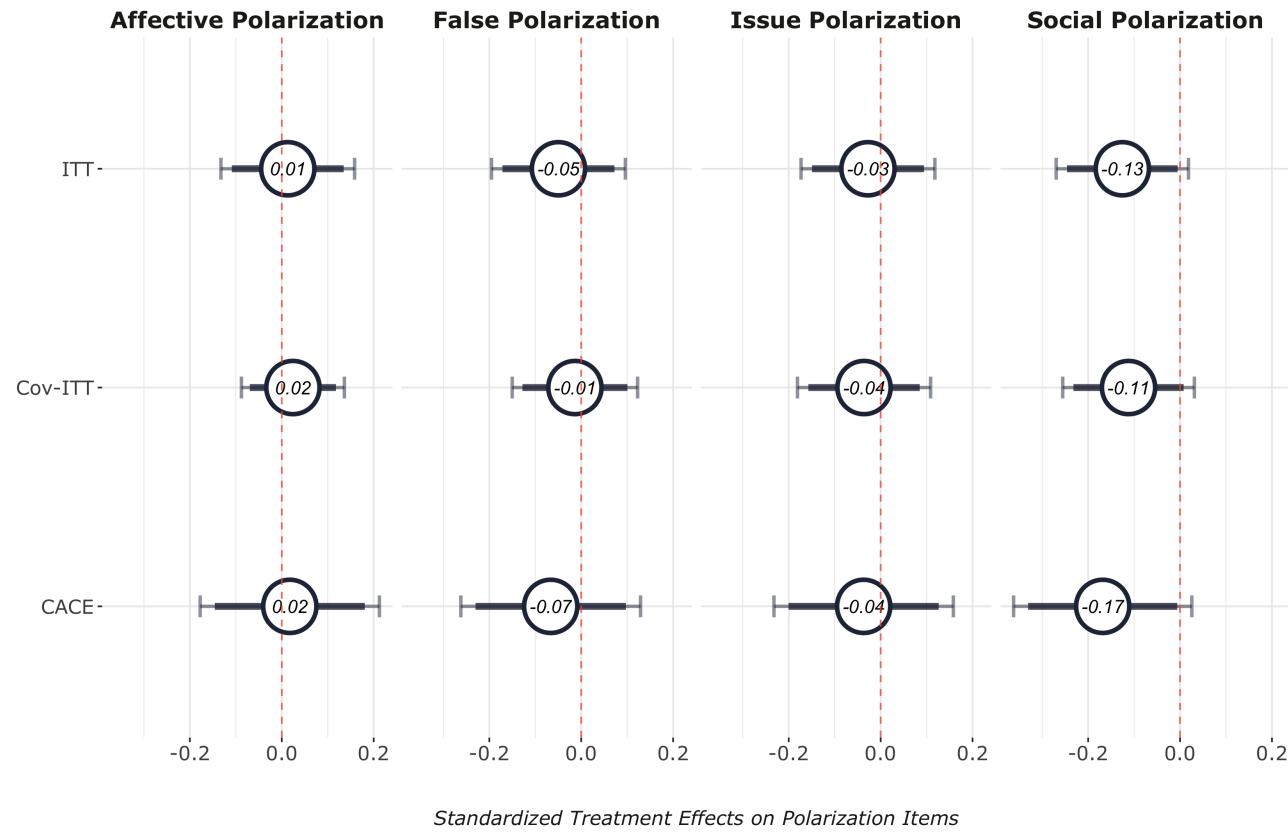
## Replication, Replication, Replication

# Thank you!

# Belief Accuracy Conditional on WhatsApp usage for Politics



# Polarization Outcomes



# Examples of Misinformation Outcomes

## False Item:

*Only complete votes are counted by the electoral justice. If the voter only votes for the President, and votes blank for all the other races, the vote is considered a partial vote, and will be annulled*

## True Item:

*After consecutive reductions, the current oil price in Brazil is below the global average value*