University of Amsterdam

Amsterdam School of Communication Research

The Cost of Reach

The Role of Ad Delivery Algorithms in Disseminating Political Ads

Fabio Votta

favstats.github.io/lunchlab25 (Slides)
@favstats.eu
@favstats@fosstodon.org

April 1 - Lunch Lab 2025

Trump given ‘equal time’ on NBC via ads after Harris SNL appearance

- NBC aired Donald Trump ads on its network on Sunday
- Network was criticized for hosting Harris on SNL on Saturday
- FCC commissioner: "Clear and blatant effort to evade Equal Time rule"

ZEBULON, GEORGIA – OCTOBER 23: Republican presidential nominee, former U.S. President Donald Trump looks on during a roundtable with faith leaders at Christ Chapel on October 23, 2024 in Zebulon, Georgia. Trump is campaigning across Georgia today as he and Democratic presidential nominee, U.S. Vice President Kamala Harris attempt to win over swing state voters. (Photo by Anna Moneymaker/Getty Images)

> ***Equal-time rule** mandates radio and television broadcast stations must provide equivalent access to competing political candidates

Introduction

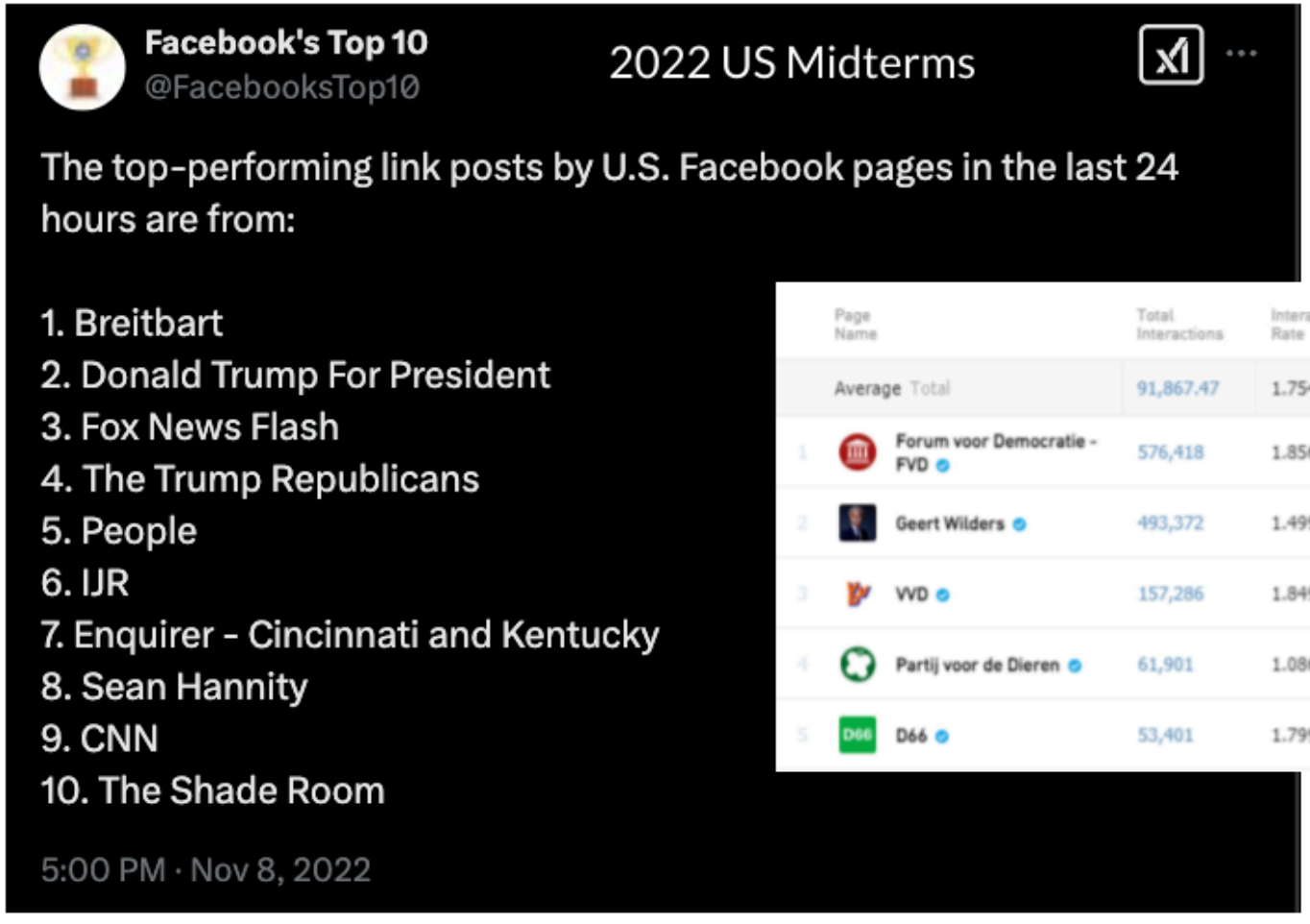
Democracy relies on the principle of *fair competition* between political candidates

🏛️ **Campaign rules aimed to level the field**:

- 🇺🇸 *Equal-time rule* 📡 *(US)*
- 🇫🇷 *Equal airtime law* 📺 *(France)*

- 💰 Campaign finance laws regulate spending to prevent undue influence

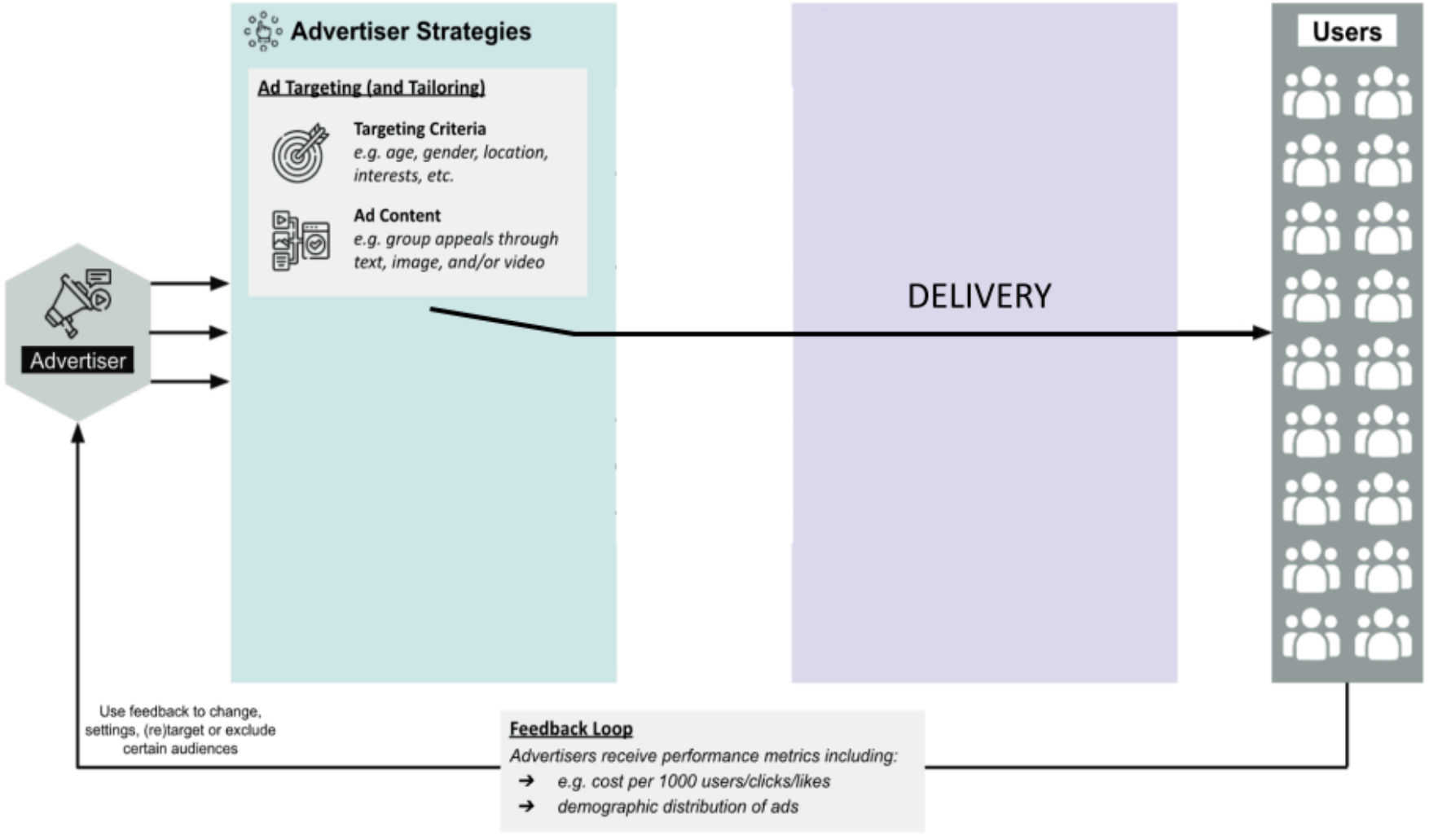
> Advent of social media disrupts traditional campaigns and challenge regulations

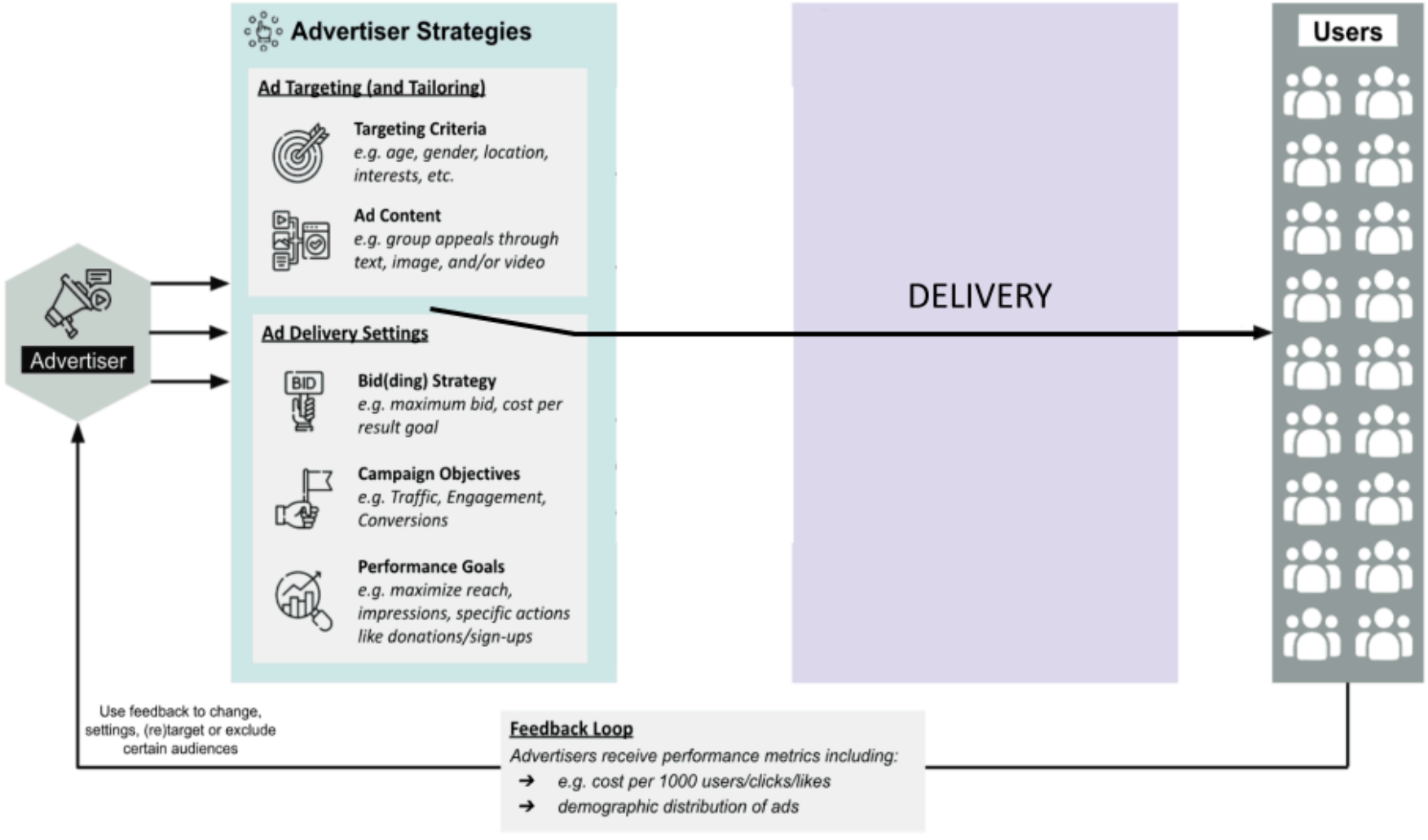


2021 Dutch Election

	Page Name	Total Interactions	Interaction Rate	Avg. Posts Per Day	Views on Owned Videos	Page Followers
	Average Total	91,867.47	1.754%	6.03	947,142.35	88,459.24
1	Forum voor Democratie - FVD	576,418	1.856%	12.44	6.44M	282,576
2	Geert Wilders	493,372	1.499%	8.33	2.01M	441,533
3	VVD	157,286	1.849%	8.56	3.24M	111,300
4	Partij voor de Dieren	61,901	1.086%	5.11	385,818	124,922
5	D66	53,401	1.799%	4.56	403,830	73,665

💀 RIP Crowdtangle


Advertiser Strategies
Ad Targeting (and Tailoring)
Targeting Criteria
e.g. age, gender, location, interests, etc.
Ad Content
e.g. group appeals through text, image, and/or video
Advertiser
DELIVERY
Users
Use feedback to change, settings, (re)target or exclude certain audiences
Feedback Loop
Advertisers receive performance metrics including:
→ e.g. cost per 1000 users/clicks/likes
→ demographic distribution of ads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Bid(ding) Strategy
e.g. maximum bid, cost per result goal
Campaign Objectives
e.g. Traffic, Engagement, Conversions
Performance Goals
e.g. maximize reach, impressions, specific actions like donations/sign-ups
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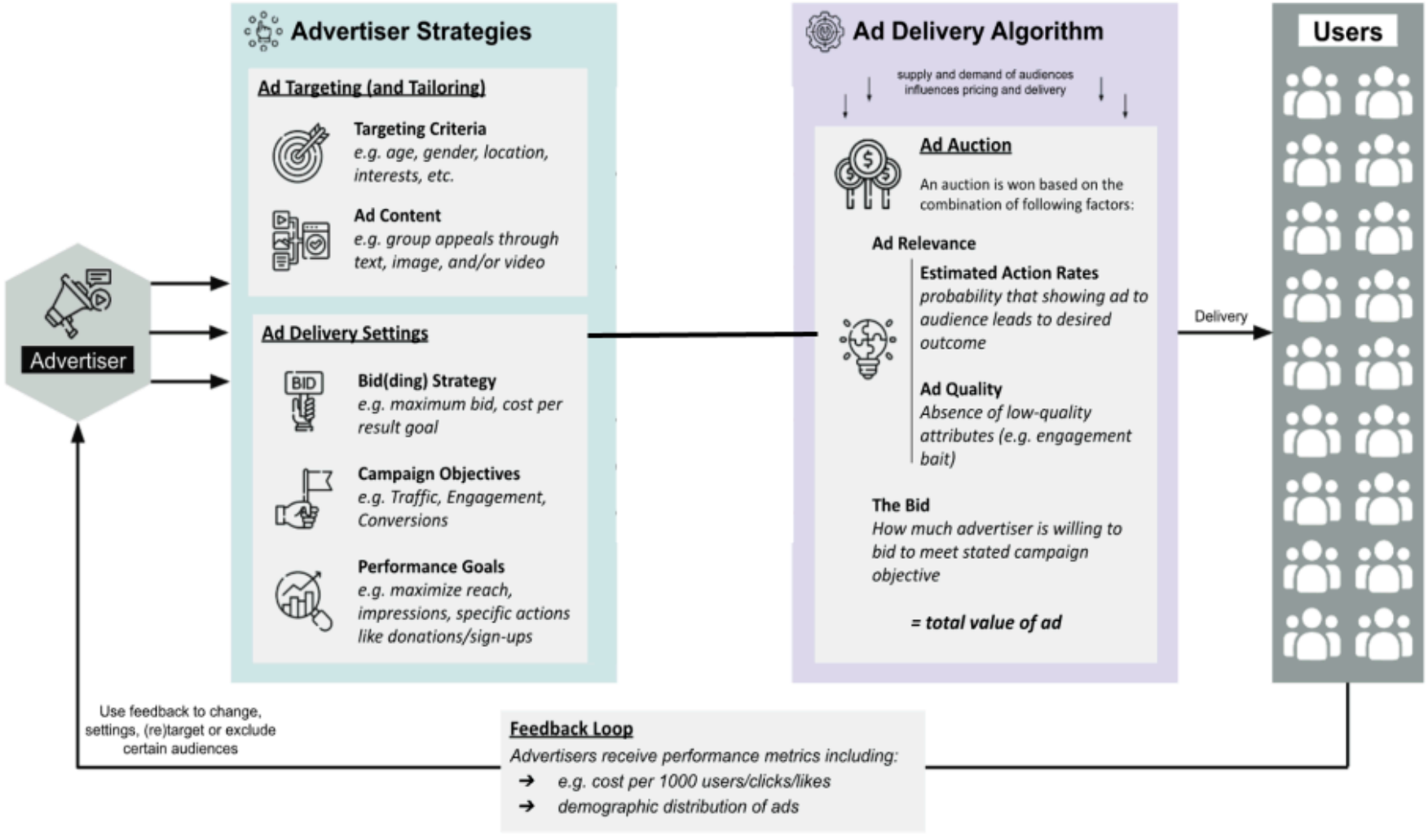
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Ad Delivery Algorithm
supply and demand of audiences influences pricing and delivery
Ad Auction
An auction is won based on the combination of following factors:
Ad Relevance
Estimated Action Rates
probability that showing ad to audience leads to desired outcome
Ad Quality
Absence of low-quality attributes (e.g. engagement bait)
The Bid
How much advertiser is willing to bid to meet stated campaign objective
= total value of ad
Delivery
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Use feedback to change, settings, (re)target or exclude certain audiences
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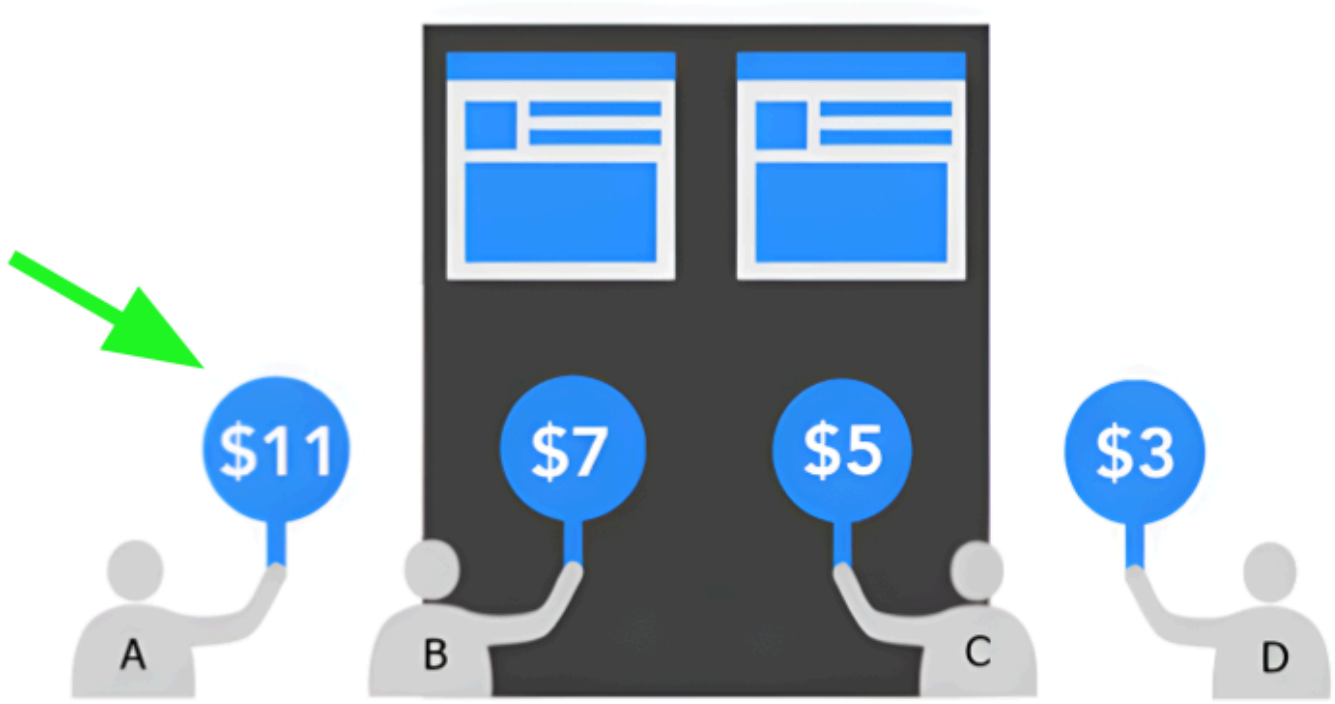
Ad auctions = an auction takes place that determines which ad by whom is shown



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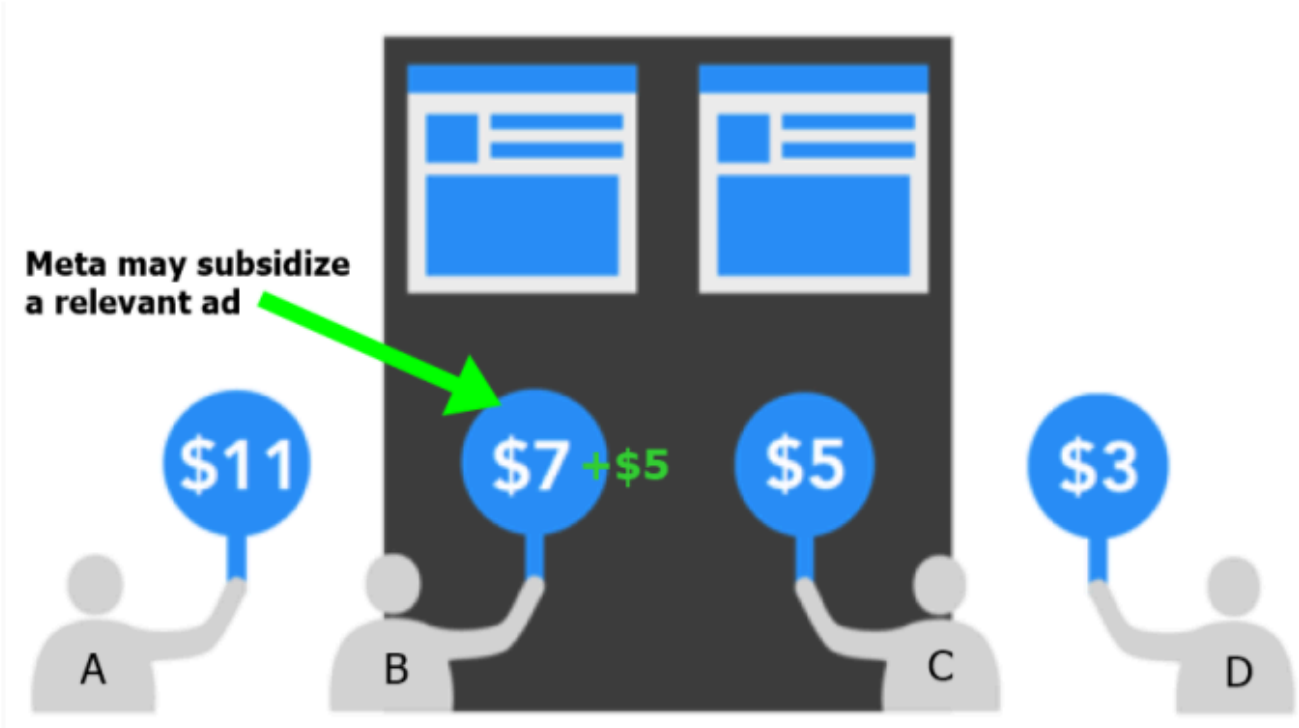


Evidence of Skewed Delivery

When targeting the same audience, at the same time, with the same budget:

- Ad delivery is heavily skewed along gendered and racial stereotypes
  - even without the intent of the advertiser (Ali et al., 2020)

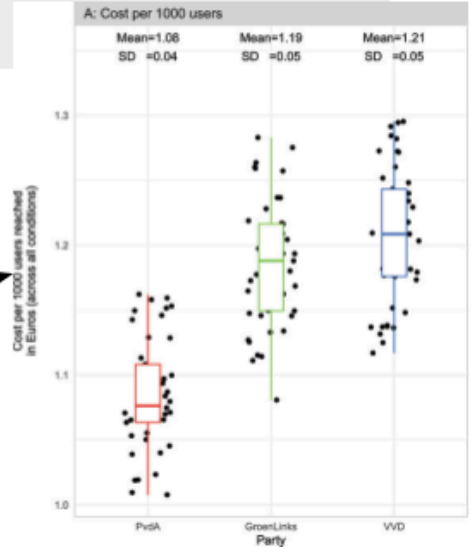
Regarding political ads (Ali et al., 2021):

- **Skewed delivery**
  - Political ads more often delivered to ideologically congruent audience
    - Bernie ads → higher % D;
    - Trump ads → higher % R
- **Increased cost**
  - Liberal ad to a liberal audience: *21 Dollar per 1000 users*;
  - Conservative ad delivered to liberal audience: *40 Dollar per 1000 users*.

Evidence of Uneven Playing Field

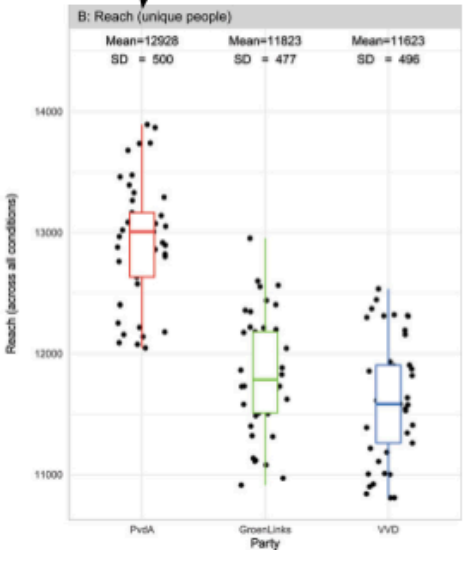
PvdA

pays less



PvdA

reaches more



WE NEED TO GO
DEEPER
memegenerator.net

Research Aim

- 🎯 In this study, we explore the **pricing of political advertisements** on Facebook
- 🌍 Examining **cross-country** and **party** differences during the 2024 European Parliament Elections

RQ1: Do prices for political ads differ across *countries* and *parties*?

RQ2: What factors influence the price of political advertisements *between* parties?

Pre-Registered Hypotheses

> **RQ1**: Do prices for political ads differ across *countries* and *parties*?

📌 **H1**: The price for political advertisements differs across countries.

📌 **H2**: Political parties are charged different prices for the same political ads.

Exploratory Analysis

> **RQ2**: What factors influence the price of political advertisements *between* parties?

📱 Account Factors

Characteristics of the Facebook accounts placing ads
e.g. follower count & past ad spending

🏛️ Party Factors

Characteristics of the party placing ads
e.g. support level & voter demographics

📊 Market Factors

Characteristics of the market environment in which ads are placed
e.g. audience demand & advertiser competition

Design

Prominent Account *Algorithm Audit Study* (PAAAS)

35 parties in 8 countries placed **identical ads with the same settings**

Germany, Denmark, Austria, Belgium, Sweden, Ireland, Hungary, Netherlands

30 parties in 8 countries placed identical ads with the same settings **at the same time**

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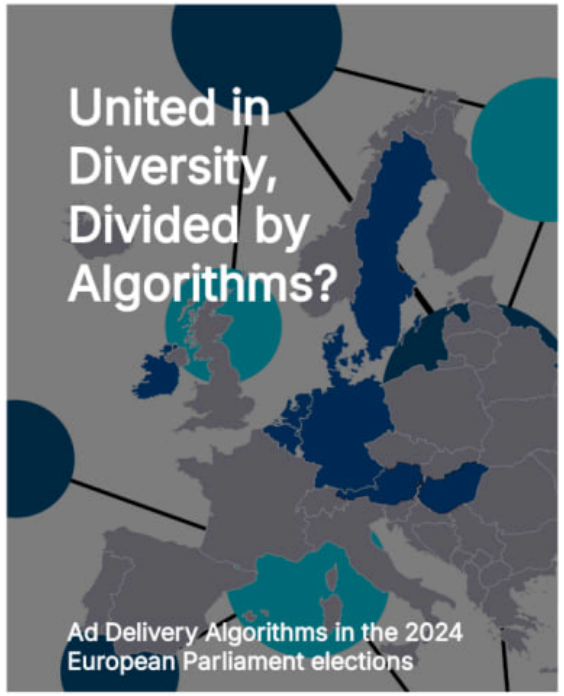
30 parties in 8 countries placed identical ads with the same settings **at the same time**



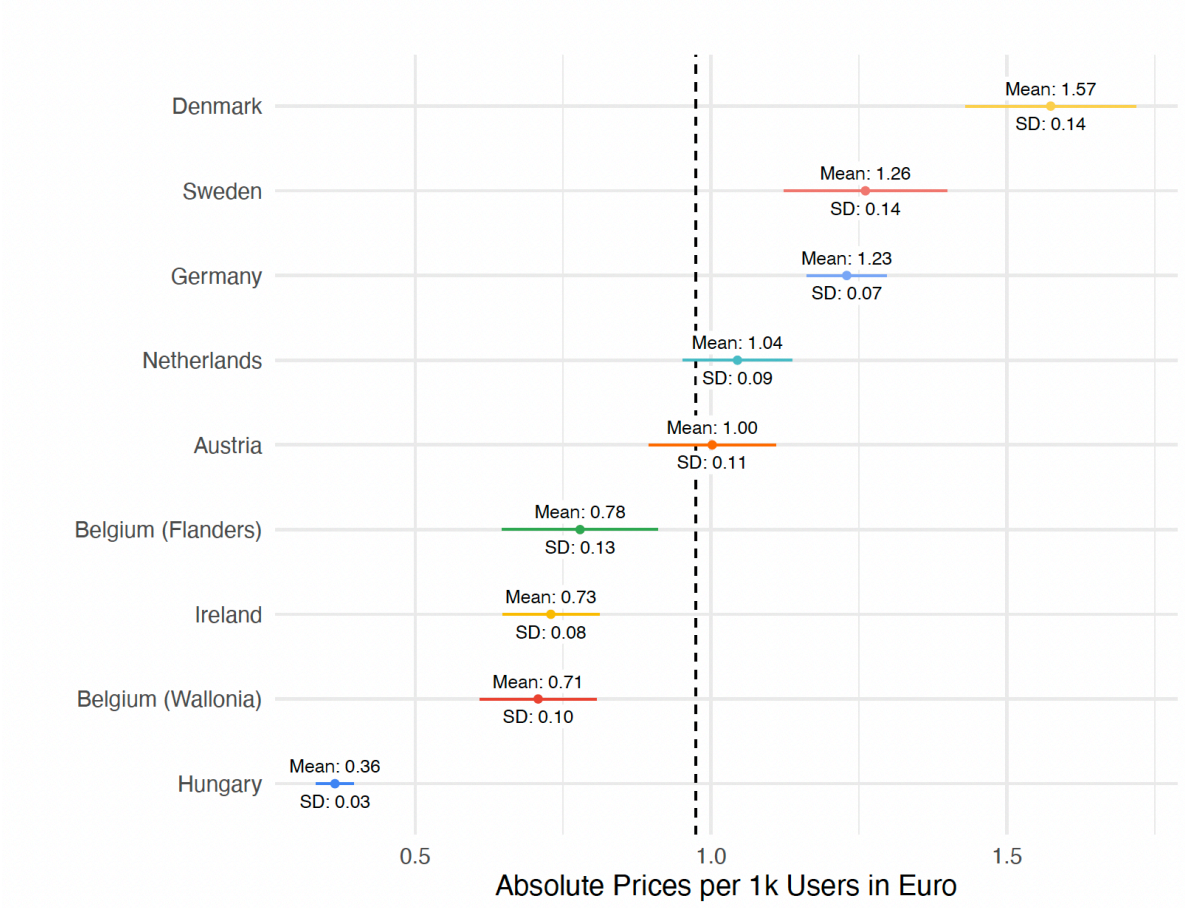
💰 Budget & Timing

- €1/day for 7 days
- 📅 Start Date: *April 29, 2024*
- 📊 Outcome Measured: *Cost per 1k users*
- 5 ads X 3 audiences X 30 parties = *450 ads*

🎯 Targeting Conditions

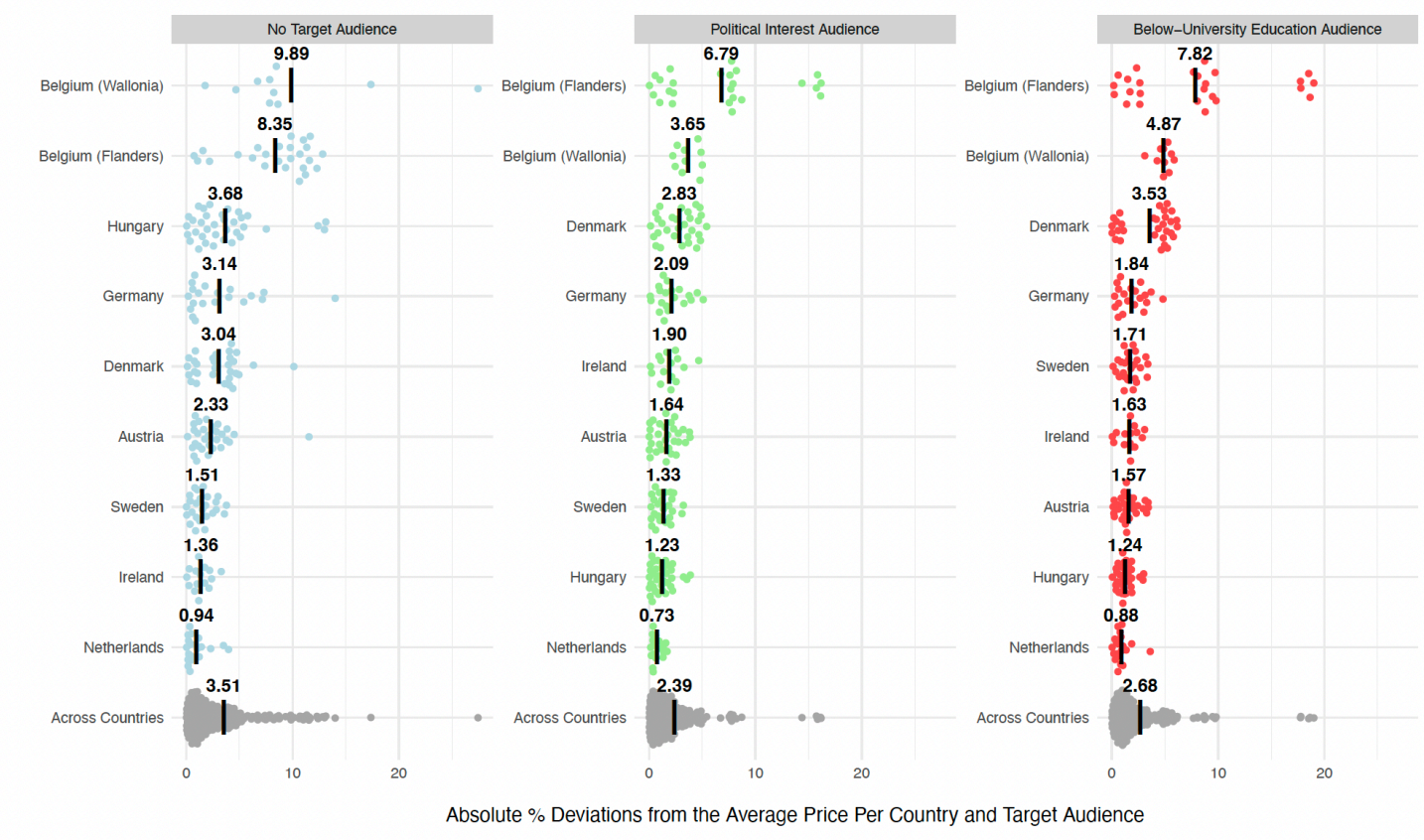
- 🚫 No Targeting
- 📣 Interested in Politics
- 🎓 Below-University Education

Do prices differ between countries? (RQ1)



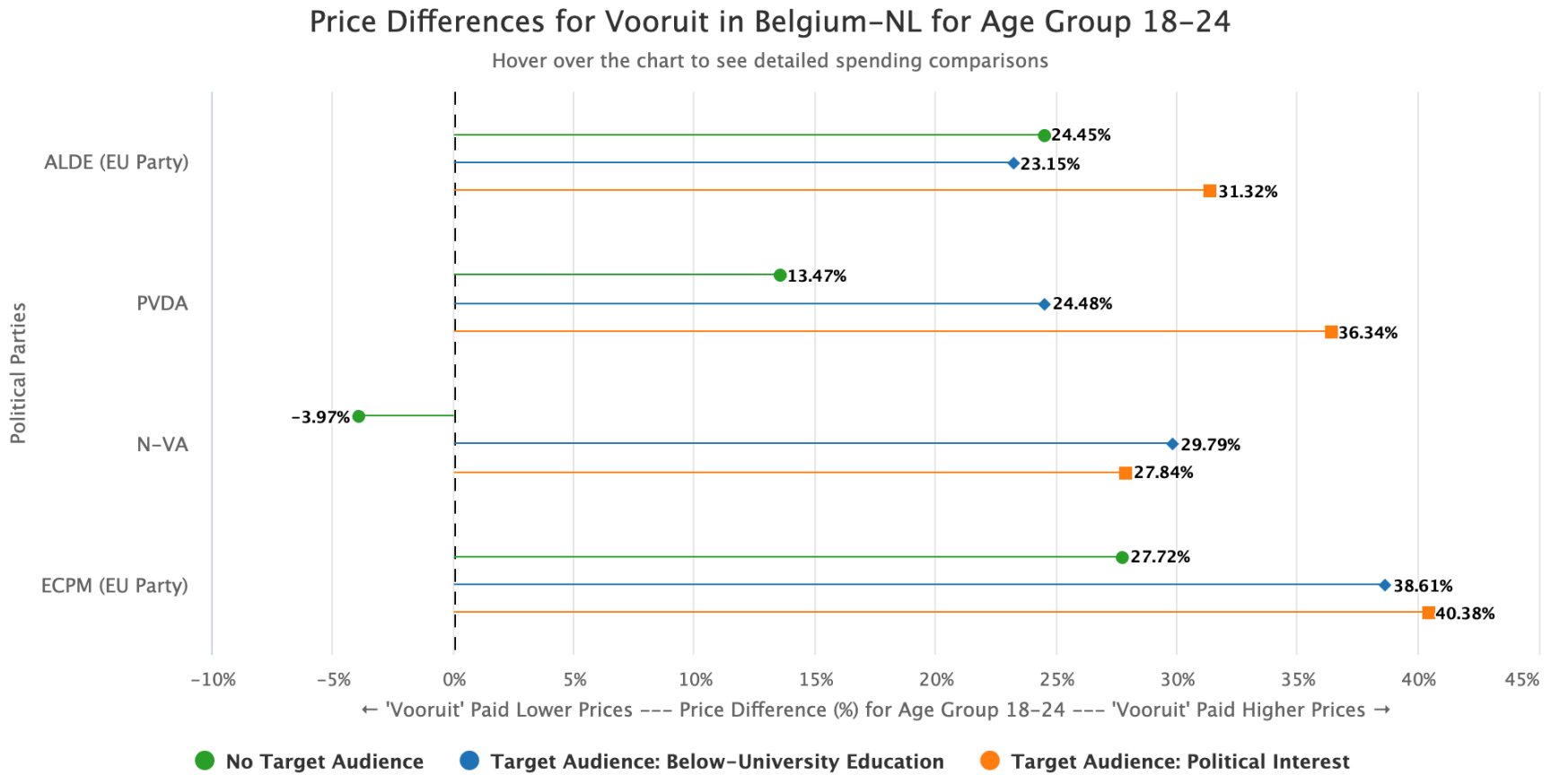
- **High variance across countries** (49% on average, 321% max.)

Do prices differ between parties? (RQ1)



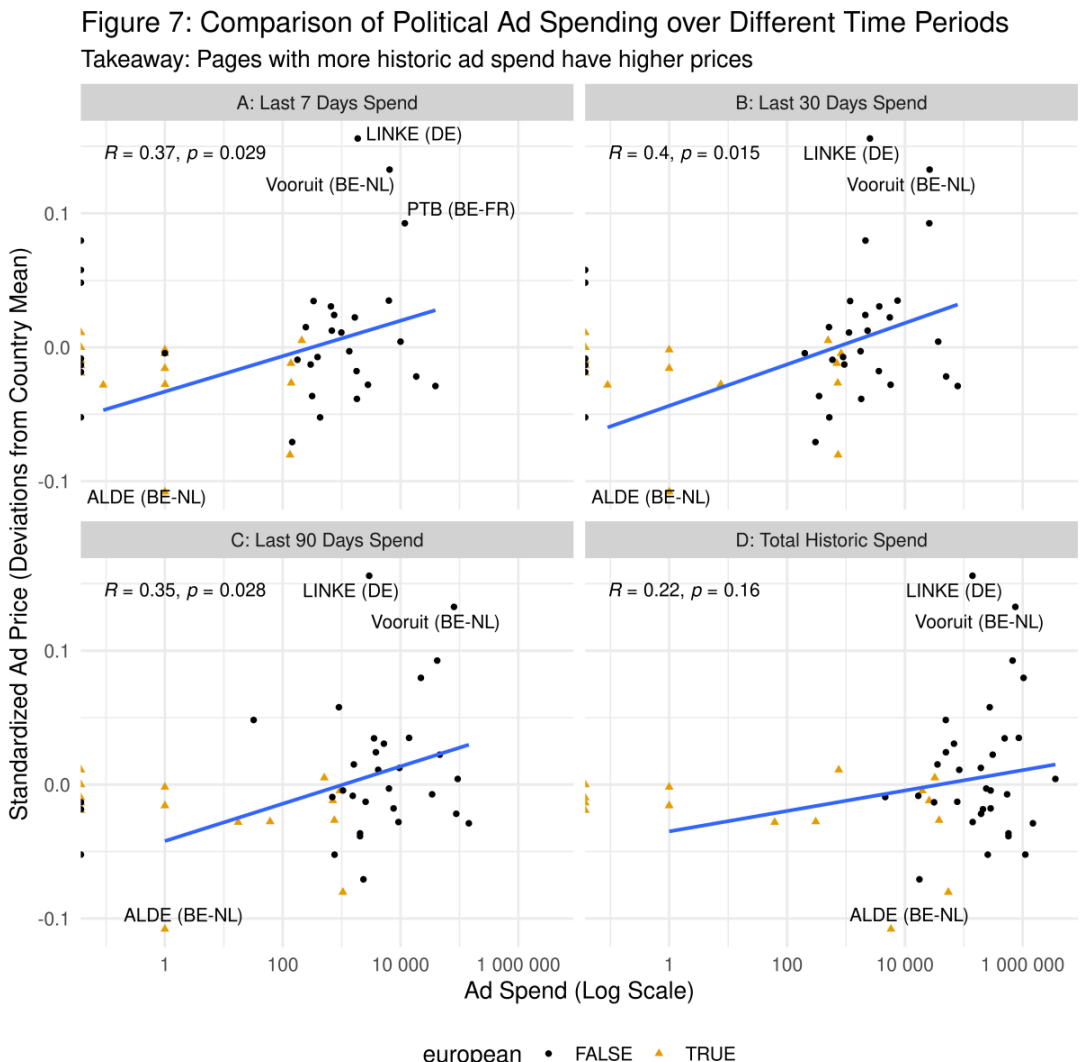
- **Within-country differences:**
  - 4% average variation (max. 27%)
  - Even *"small"* differences can lead to thousands of additional unique people reached

Do prices differ between parties? (RQ1) - Demographic differences

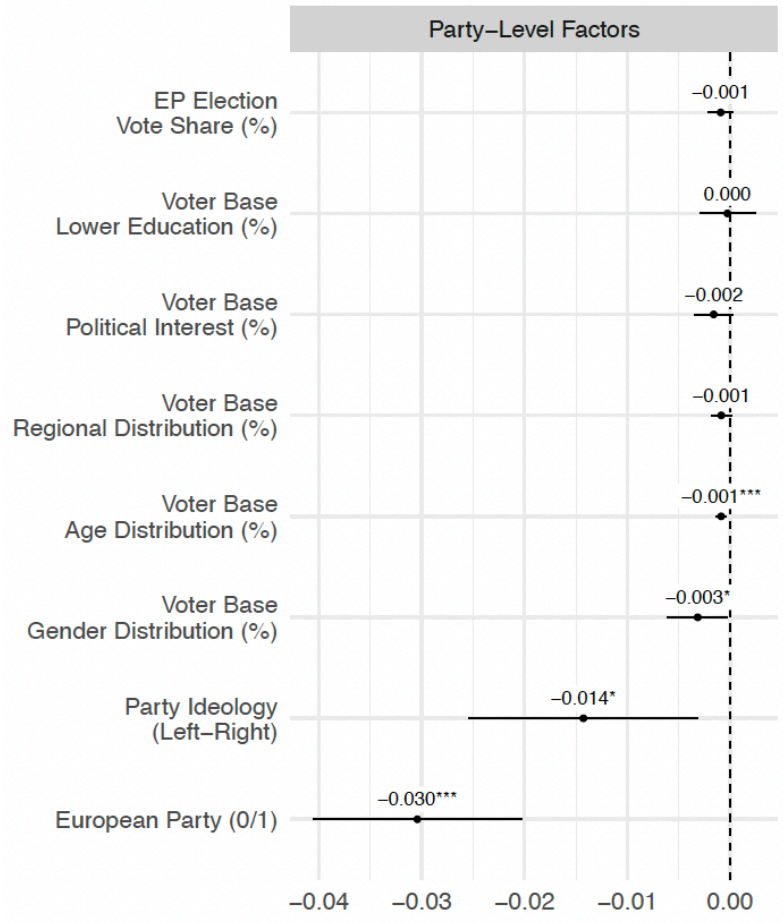


- **Explore Data yourself!**
  - euroalgos.shinyapps.io/explore/

What Drives Price Differences? (RQ2) - Account-Level



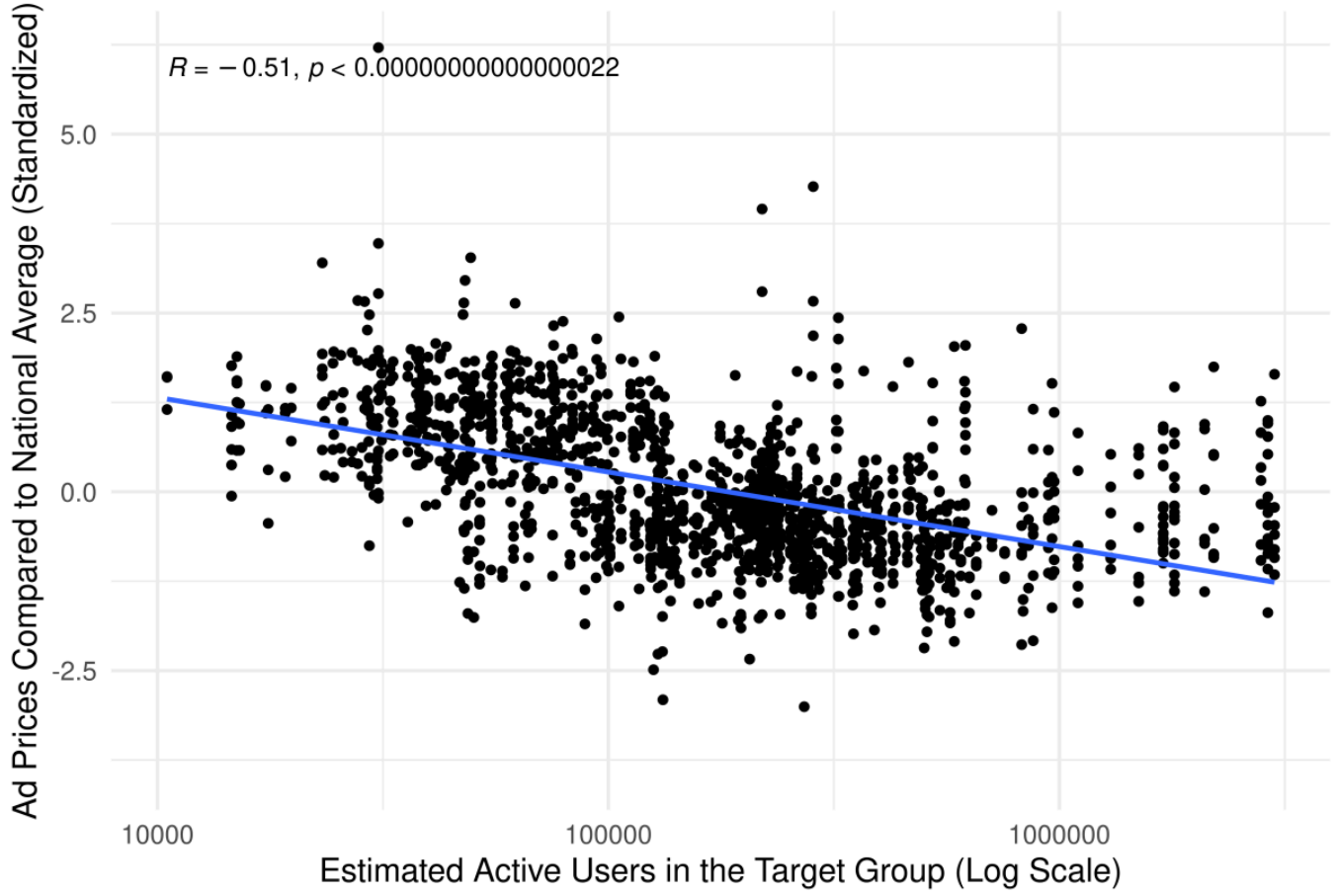
What Drives Price Differences? (RQ2) - Party-Level



What Drives Price Differences? (RQ2) - Market-Level

Figure 10: Active User Base by Age, Gender, and Target Audience

Takeaway: Higher number of active users drives price down



Conclusion

- Ad delivery algorithms (unintentionally?) favor some political actors
- Within-country price variation:
  - Average 4% (max. 27%)
  - Significant exposure bias leads to thousands of differential reach
- Key drivers:
  - Audience size
  - Spending history
  - Ideology (?)
  - Supranational parties (?)
- Calls for regulatory attention to preserve an equal playing field:
- Algorithmic access for researchers to audit independently

Thank You for Listening!

Questions? 🎤

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United in Diversity, Divided by Algorithms?

A Cross-National Examination of ***Ad Delivery Algorithms*** during the 2024 European Parliament Elections

Fabio Votta, Simon Kruschinski, Mads Fuglsang Hove, Anamaria Dutceac Segesten, Márton Bene, Christina Gahn, Linn Sandberg, Jan Zilinsky, Claes de Vreese, James P. Cross, Ruth Dassonneville, Tom Dobber, and Benjamin Guinaudeau