Politicians from 12 countries rarely engage with researchers on social media, but this can change when expertise gains salience

Sebastian Ramirez-Ruiz

Hertie School

ramirez-ruiz@hertie-school.org

Berlin-Brandenburg Political Behavior Workshop

October 1, 2024

Background

Background

Research evidence can be valuable in informing and shaping policy decisions by equipping policymakers with data and information to create and execute policies to address societal problems (e.g., Bavel et al. 2020; Berger et al. 2021; Geddes 2021)

Background

Research evidence can be valuable in informing and shaping policy decisions by equipping policymakers with data and information to create and execute policies to address societal problems (e.g., Bavel et al. 2020; Berger et al. 2021; Geddes 2021)

The endeavor to understand how academic research insights are integrated into policymaking has a long tradition in the social sciences (e.g., Weiss 1979; Caplan 1979; Huberman 1994)

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022; Baekgaard et al., 2019)

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022; Baekgaard et al., 2019)

Since research is rarely there with calls-to-action for all policy problems, academic researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; Walgrave & Dejaeghere, 2017)

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022; Baekgaard et al., 2019)

Since research is rarely there with calls-to-action for all policy problems, academic researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; Walgrave & Dejaeghere, 2017)

With that in mind, we can also take a step back from this question and ask ourselves:

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022; Baekgaard et al., 2019)

Since research is rarely there with calls-to-action for all policy problems, academic researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; Walgrave & Dejaeghere, 2017)

With that in mind, we can also take a step back from this question and ask ourselves:

Would she take upon that research insight given the opportunity?

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022;

Individual inclination to engage with researchers

Since researchers present papers with calls-to-action for all policy problems, academic researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; Walgrave & Dejaeghere, 2017)

With that in mind, we can also take a step back from this question and try to get to:

Would she take upon that research insight given the opportunity?

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022; [...])

Si[...] researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; V   grave & Dejaeghere, 2017)

With that in mind, we can also take a step back from this question and try to get to:

Would she take upon that research insight given the opportunity?

Individual inclination to engage with researchers and self-selection into research evidence can matter

Background

Growing body of literature looking at: "**What would a policy decisionmaker do if she were confronted with this research insight?**" (e.g., Vivalt and Coville, 2023; Lee, 2022;

Individual inclination to engage with researchers and self-selection into research evidence can matter

Since researchers compete with other types of information for politicians' researchers and scientific insights compete with other types of information for politicians' attention (Senninger & Seeberg, 2022; Walgrave & Dejaeghere, 2017)

a lot

With that in mind, we can also take a step back from this question and try to get to:

Would she take upon that research insight given the opportunity?

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

I propose that digital traces from policy decisionmakers can provide valuable information to understand their inclination to engage with producers of research evidence and contribute to the current knowledge base.

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

I propose that digital traces from policy decisionmakers can provide valuable information to understand their inclination to engage with producers of research evidence and contribute to the current knowledge base.

The structure of online social networks can be revealing of individuals' latent features (e.g., Barberá 2015; He and Tsvetkova 2023)

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

I propose that digital traces from policy decisionmakers can provide valuable information to understand their inclination to engage with producers of research evidence and contribute to the current knowledge base.

Social media, specifically Twitter, are increasingly important for political and scientific communities (Brainard 2022; Castanho Silva and Proksch 2022; Jungherr, 2016).

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

I propose that digital traces from policy decisionmakers can provide valuable information to understand their inclination to engage with producers of research evidence and contribute to the current knowledge base.

These accounts operate within the same framework of platform-imposed behaviors and are embedded in a broader social network.

Background

There are challenges to measuring policy decisionmakers' engagement with researchers and their research, but we cannot simply ignore their agency in research evidence consumption.

I propose that digital traces from policy decisionmakers can provide valuable information to understand their inclination to engage with producers of research evidence and contribute to the current knowledge base.

These accounts operate within the same framework of platform-imposed behaviors and are embedded in a broader social network. Also meaning that the different available behaviors on Twitter have unique properties, such as their potential time demands, privacy, cognitive engagement, and capacity to deliver messages to constituents (Metaxas et al., 2015; Wojcieszak et al., 2022).

Materials and Methods

Materials and Methods

I employ digital trace data from legislators' Twitter profiles

COUNTRY		SEATS	ON TWITTER
Pooled		**4134**	**3670 (89%)**
Ireland		160	154 (96%)
UK		650	580 (89%)
Colombia		108	104 (96%)
Spain		349	314 (90%)
Canada		338	324 (96%)
Argentina		72	61 (85%)
Germany		736	583 (79%)
US House		435	426 (98%)
US Senate		100	100 (100%)
Italy		400	286 (72%)
Mexico		128	114 (89%)
France		577	548 (95%)
Brazil		81	76 (94%)

Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.

a) Data structure
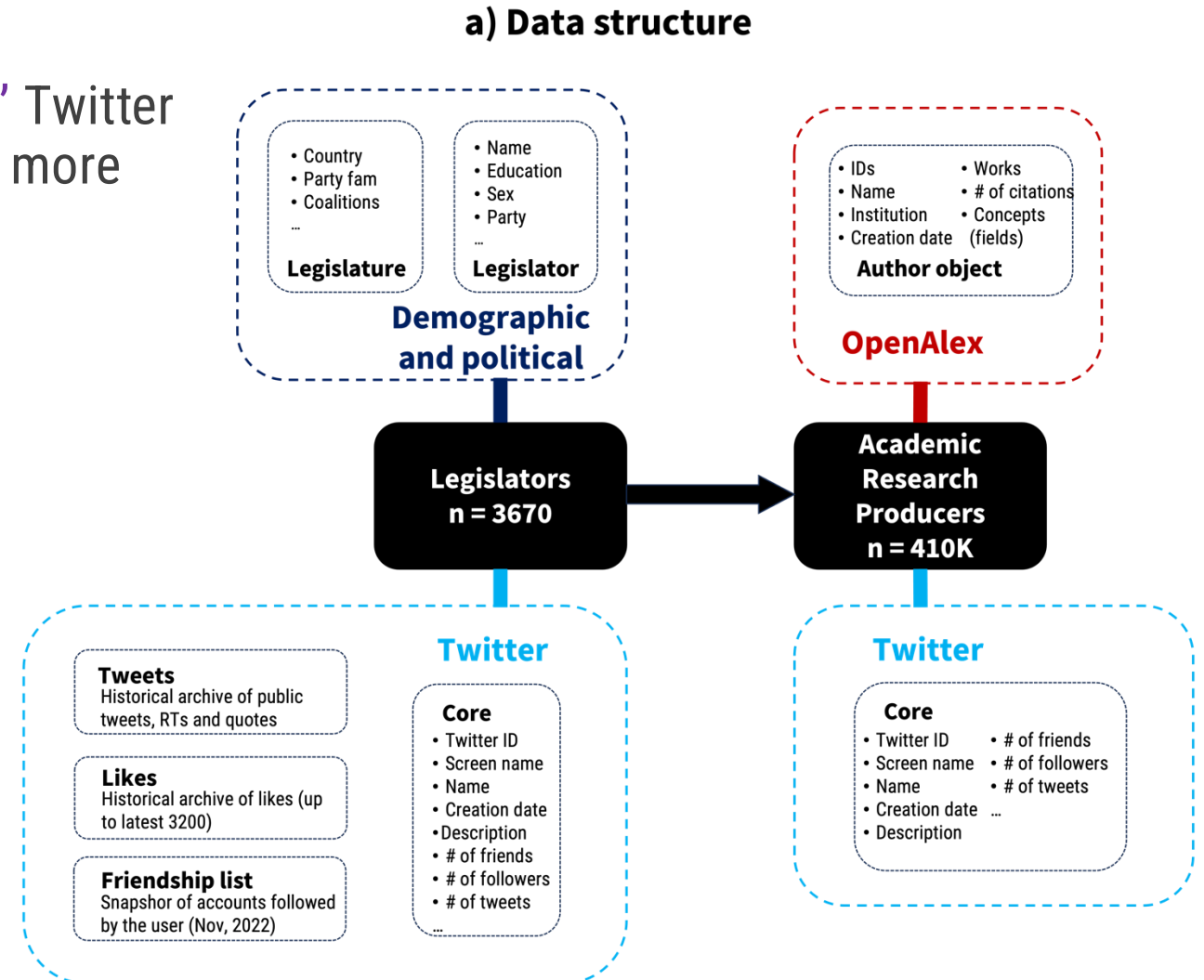
Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.

- historical archive of all their public posts (≈20M)

- followed accounts (≈2.6M)

- liked posts (≈6.5M)

a) Data structure

Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?
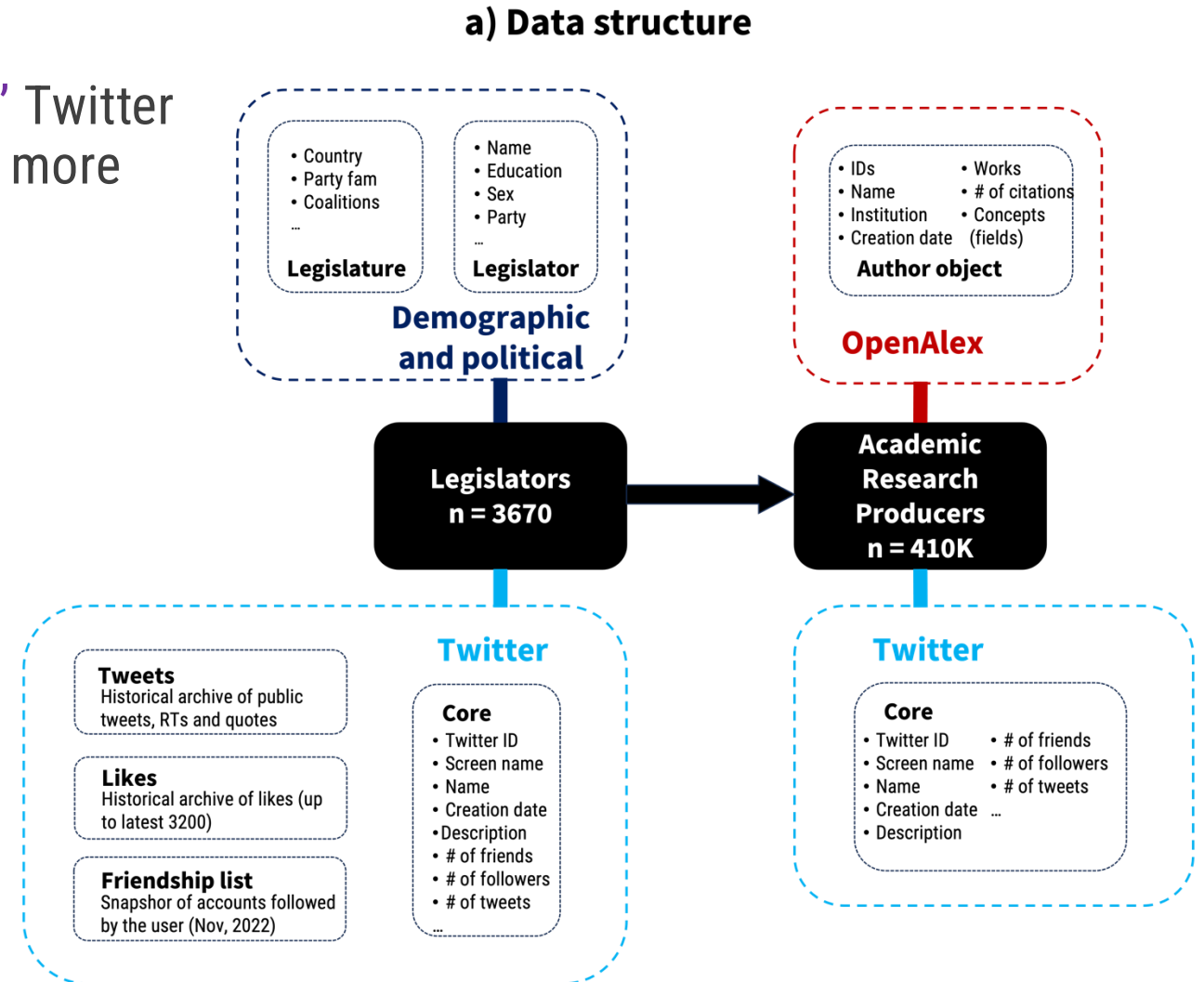

a) Data structure

Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

a) Data structure

Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.
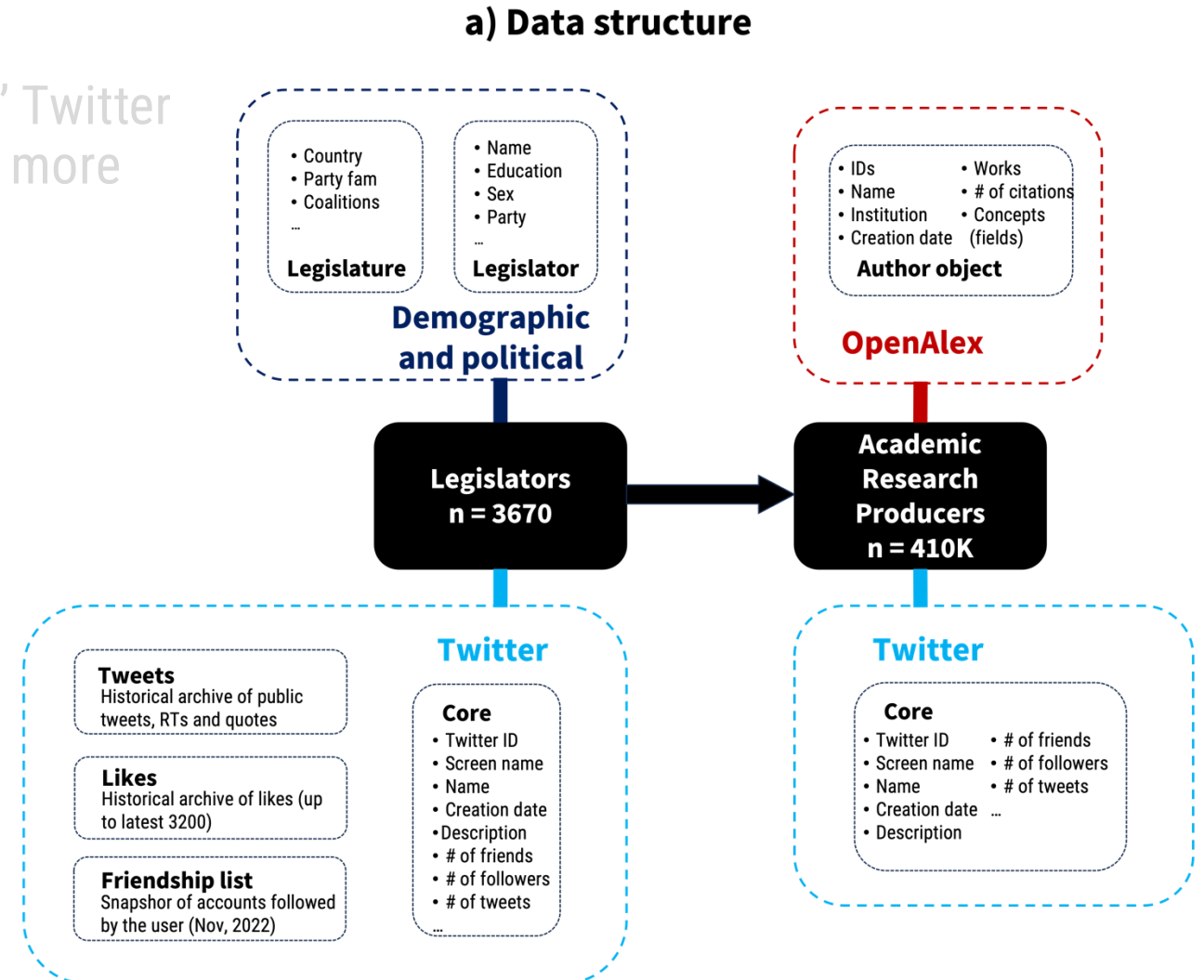
1. Do we observe lawmakers following and engaging with researchers 'in the wild'?
2. Are there any contextual and legislator level correlates to online engagement with researchers?
3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

a) Data structure
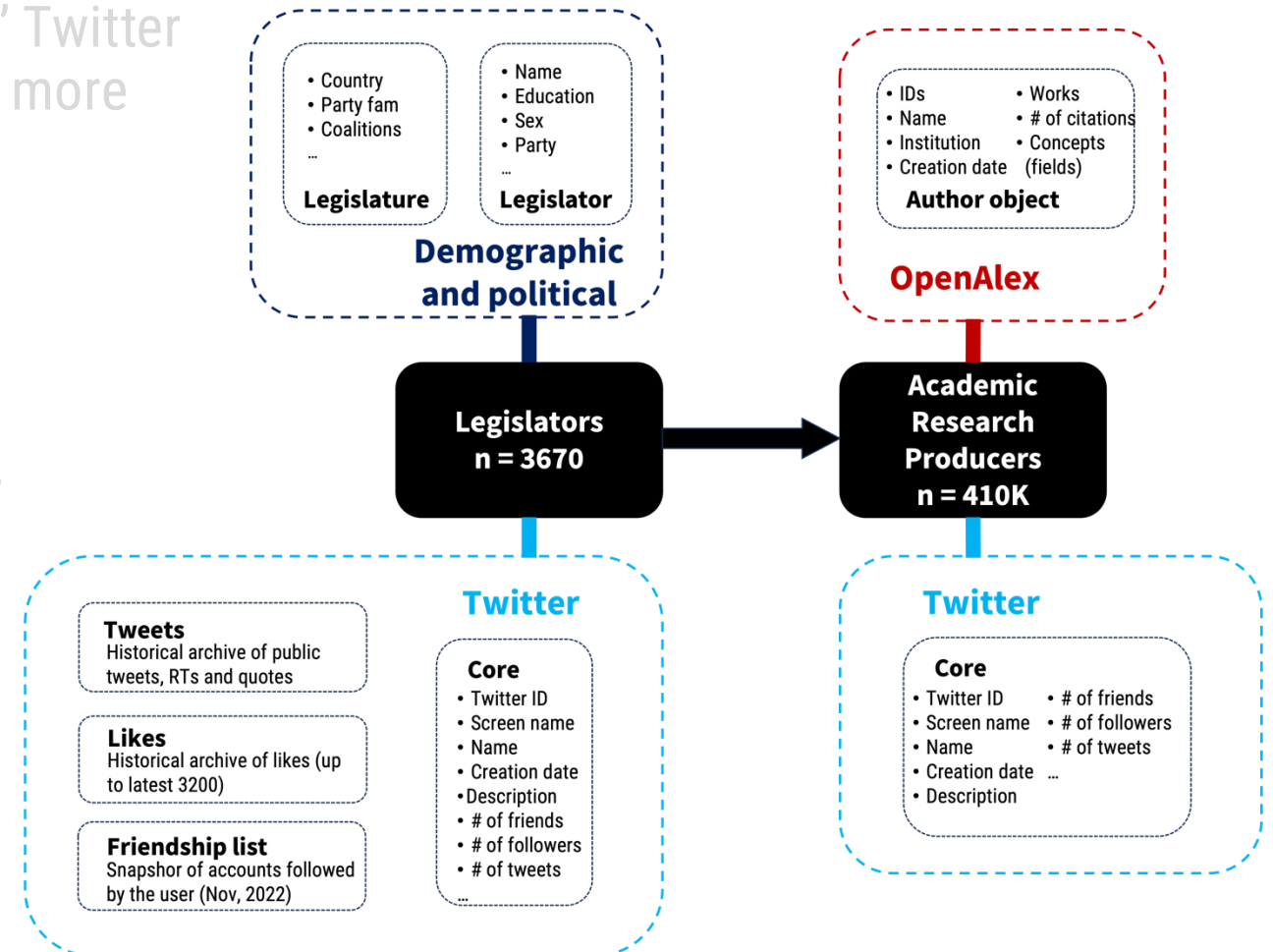
Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?
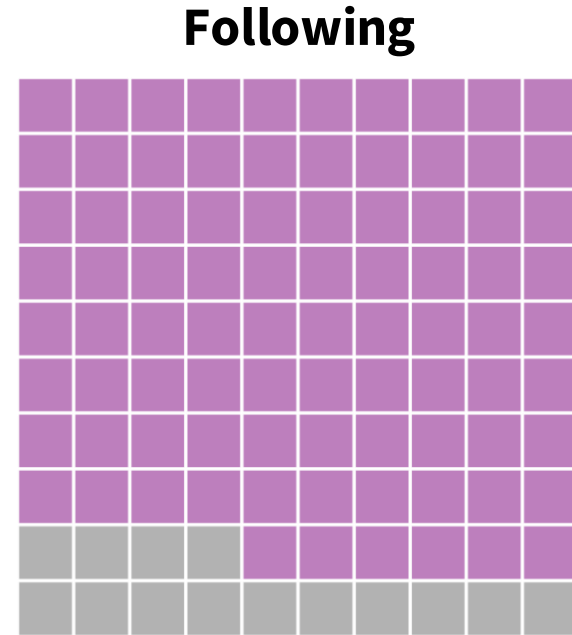
Following

86% of legislators follow at least one of researchers 'in the wild'

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?
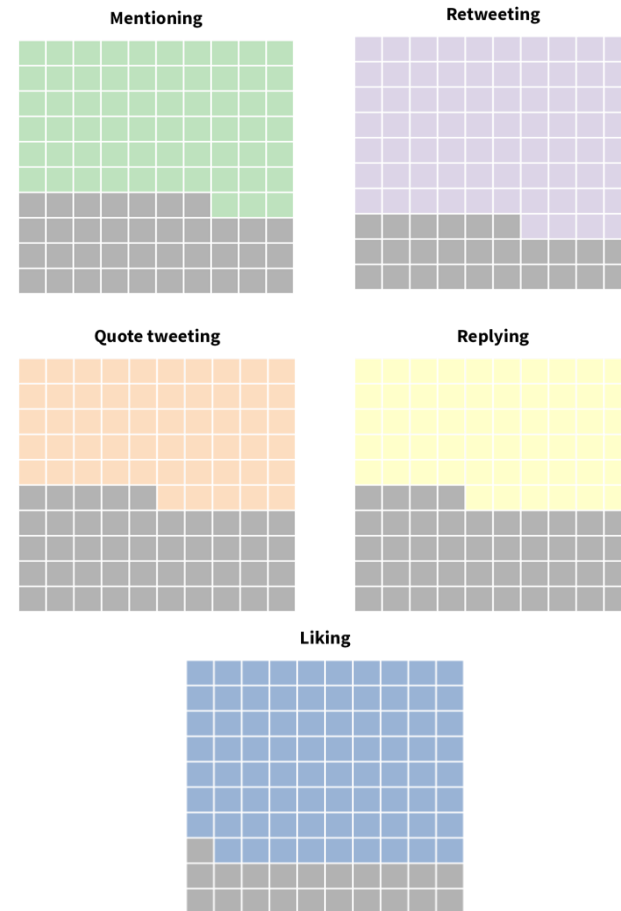
The **majority** legislators also **engages** in more "expensive" behaviors

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

Distribution of the scientific fields of the matched academic researchers

Following
n=27293
(6.7% of researchers in the list)
| 47% | 18% | 17% | 7% | 6% | 5% |

Mentioning
n=5226
(1.3%)
| 53% | 16% | 13% | 8% | 6% | 5% |

Retweeting
n=15358
(3.8%)
| 47% | 18% | 16% | 7% | 6% | 6% |

Quote tweeting
n=5626
(1.4%)
| 51% | 17% | 14% | 7% | 6% | 5% |

Replying
n=10501
(2.6%)
| 47% | 16% | 17% | 8% | 7% | 5% |

Liking
n=11998
(2.9%)
| 45% | 19% | 18% | 7% | 6% | 5% |

- Social science
- Applied science
- Natural science
- Formal science
- Humanities
- No category
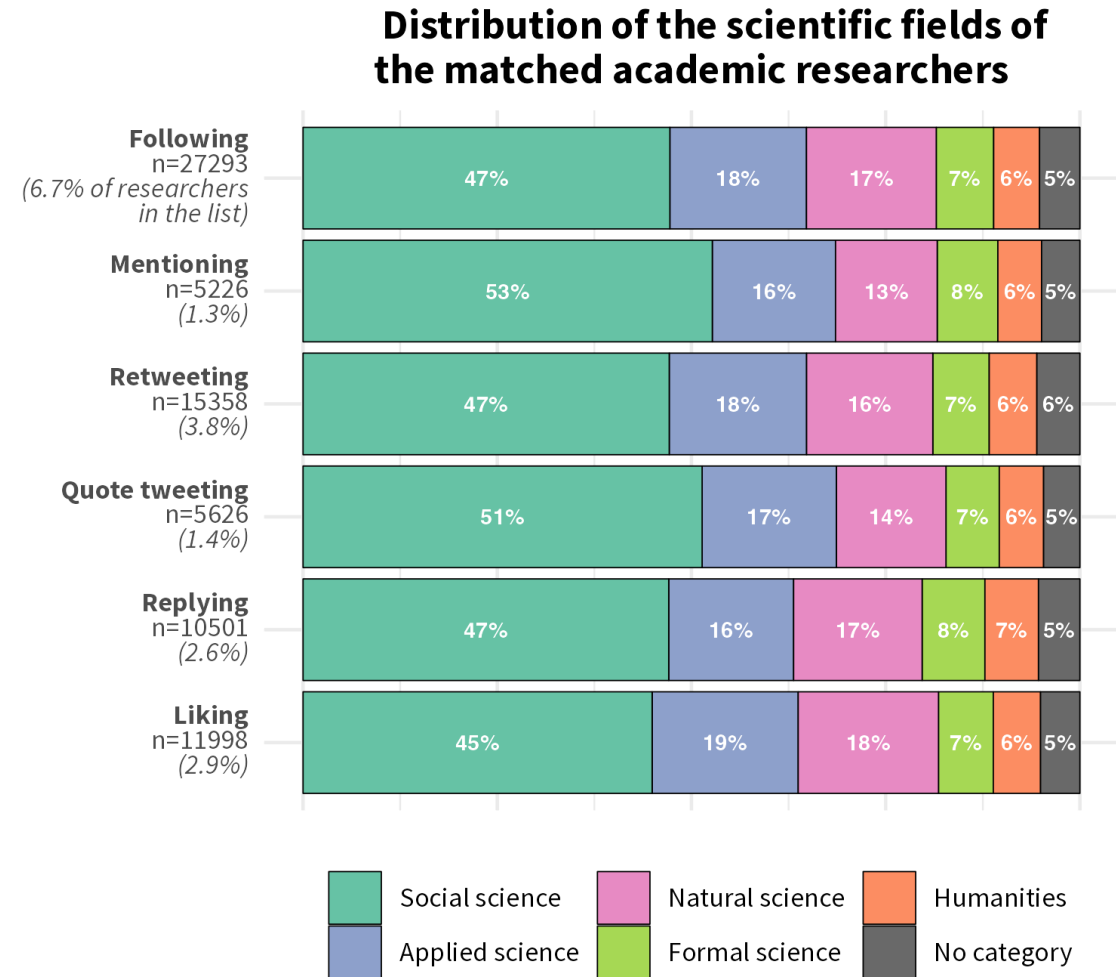
Most of legislators' "attention" goes to **social scientists**

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

Percentage of overall legislator behavior with a researcher as a target

Following
n=3681
(86% of legislators have a researcher match) — 1.4%

Mentioning
n=3609
(63%) — 1.1%

Retweeting
n=3628
(74%) — 1.1%

Quote tweeting
n=3429
(55%) — 1.5%

Replying
n=3598
(56%) — 1.7%

Liking
n=3587
(79%) — 1.5%

No match   10%   20%   30%   40%   50%
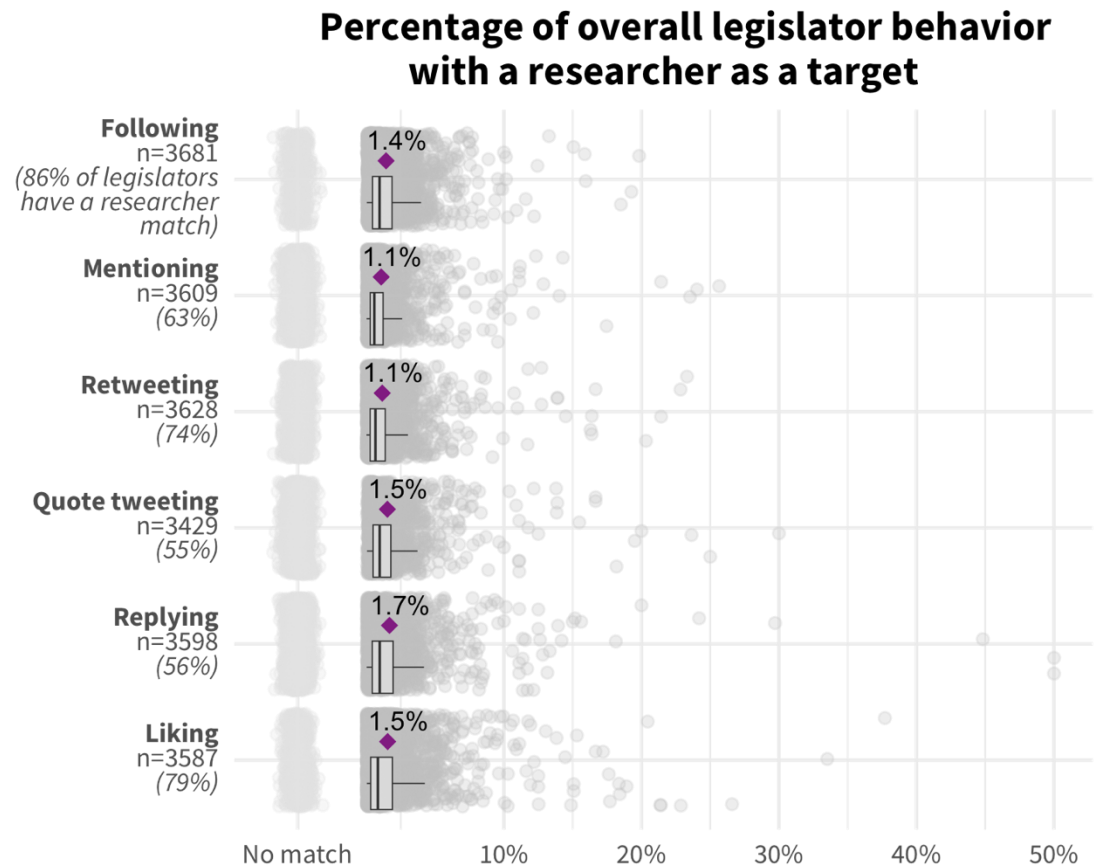
There are **some differences**, but for the most part these researchers represent a small fraction of whom lawmakers follow and engage with on social media

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

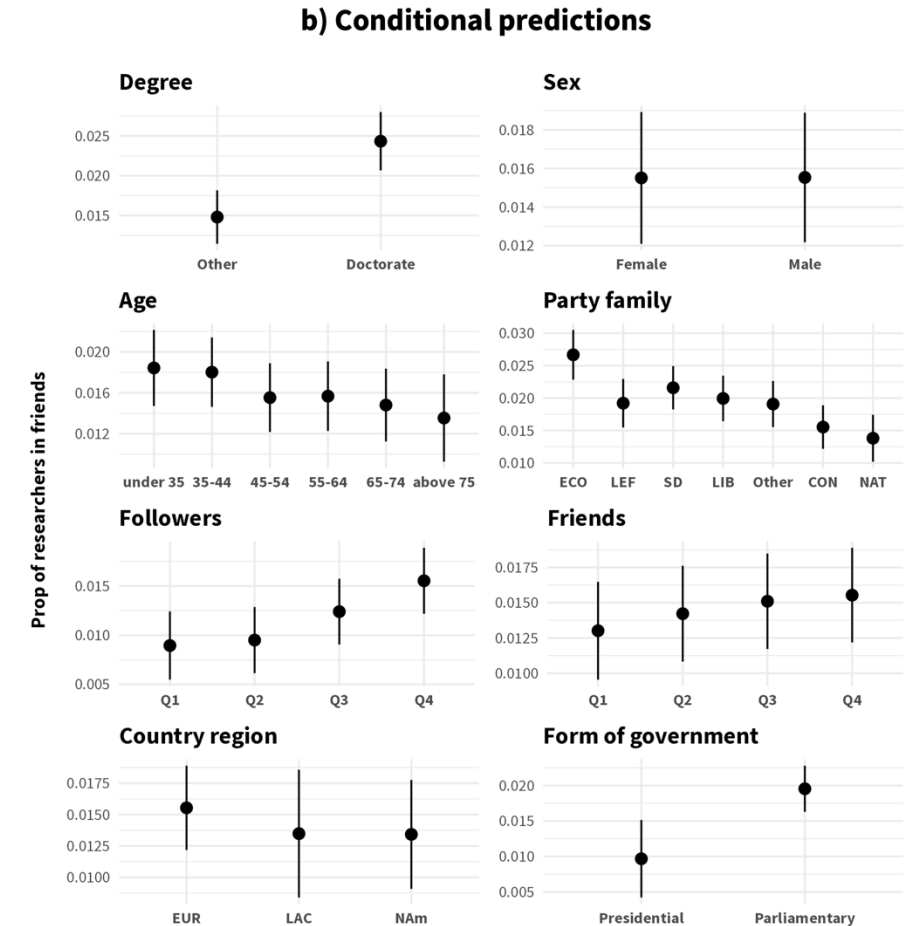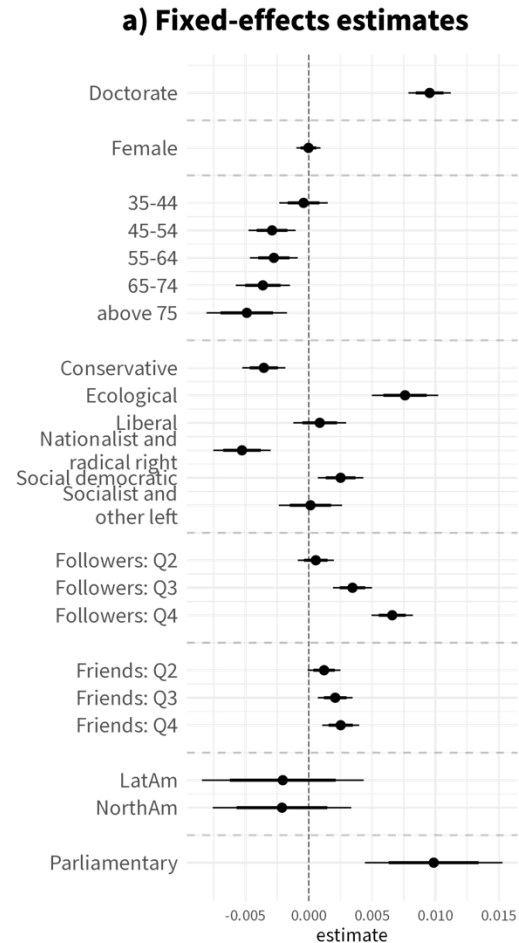2. Are there any contextual and legislator level correlates to online engagement with researchers?

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks. Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks.} Results from a linear mixed-effects model with legislature random effects with age (under 35), party family (other), country region (Europe), system (presidential), and Q1 for followers and friends as references for categorical variables. Number of observations: 3,247. Panel a presents the coefficients with 80% and 95% confidence intervals. The conditional predictions are computed with numeric covariates are held at their means and the other covariates at their modes: no research degree, presidential, European, male, 45-54, Q1, and Conservative party..

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

Legislators' **research background** and **political ideology** are predictors across behaviors

a) Fixed-effects estimates
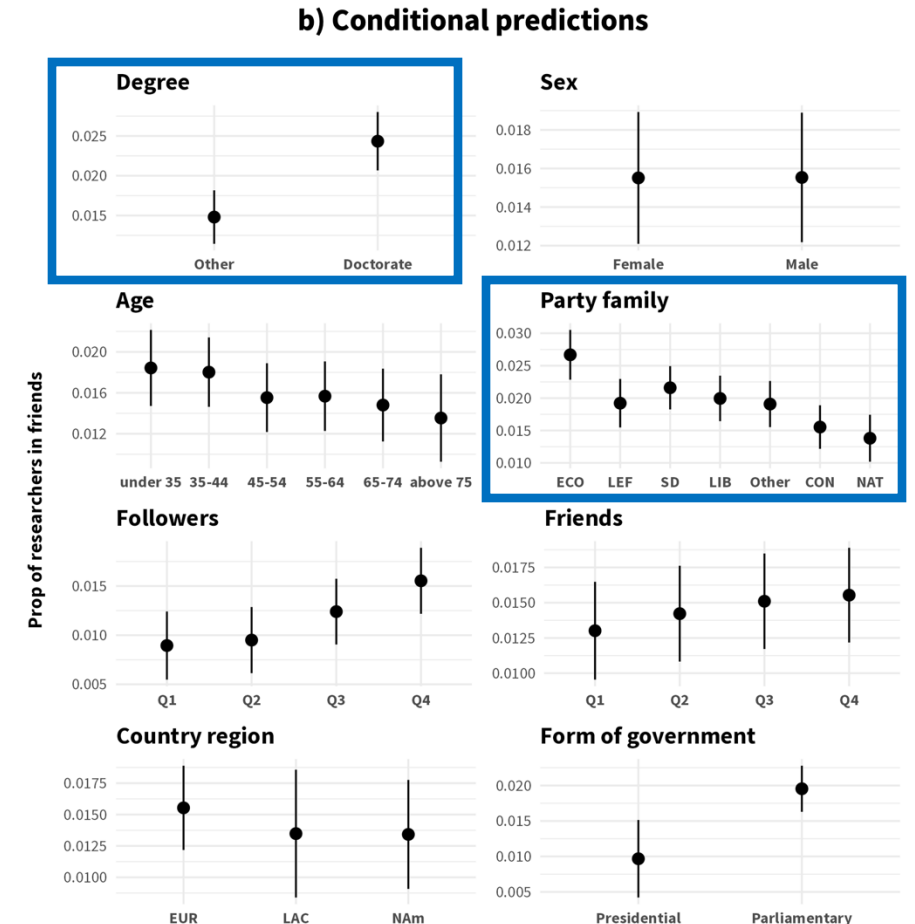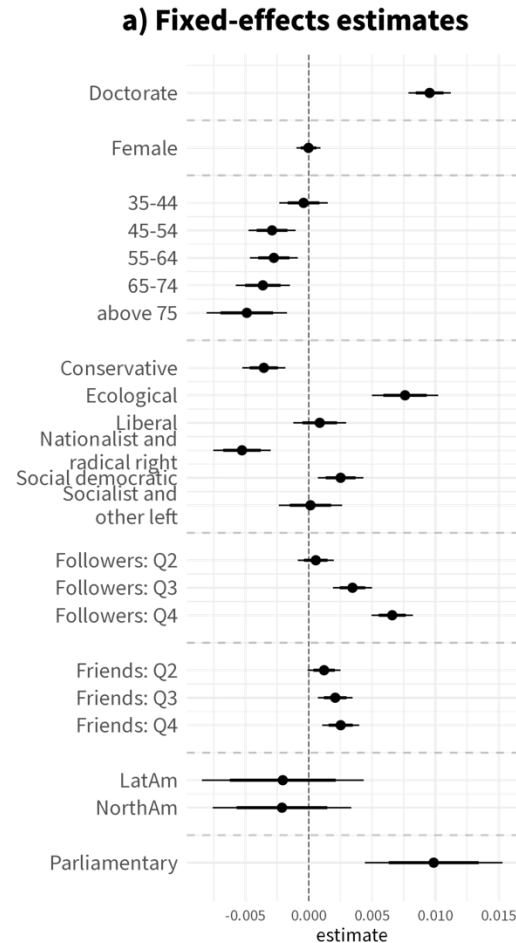
b) Conditional predictions

Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks. Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks.} Results from a linear mixed-effects model with legislature random effects with age (under 35), party family (other), country region (Europe), system (presidential), and Q1 for followers and friends as references for categorical variables. Number of observations: 3,247. Panel a presents the coefficients with 80% and 95% confidence intervals. The conditional predictions are computed with numeric covariates are held at their means and the other covariates at their modes: no research degree, presidential, European, male, 45-54, Q1, and Conservative party..

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

Legislators' **research background** and **political ideology** are predictors across behaviors

a) Fixed-effects estimates

b) Conditional predictions

A **green** legislator is **3.5x** more likely to follow researchers compared to a **nationalist and radical right** member
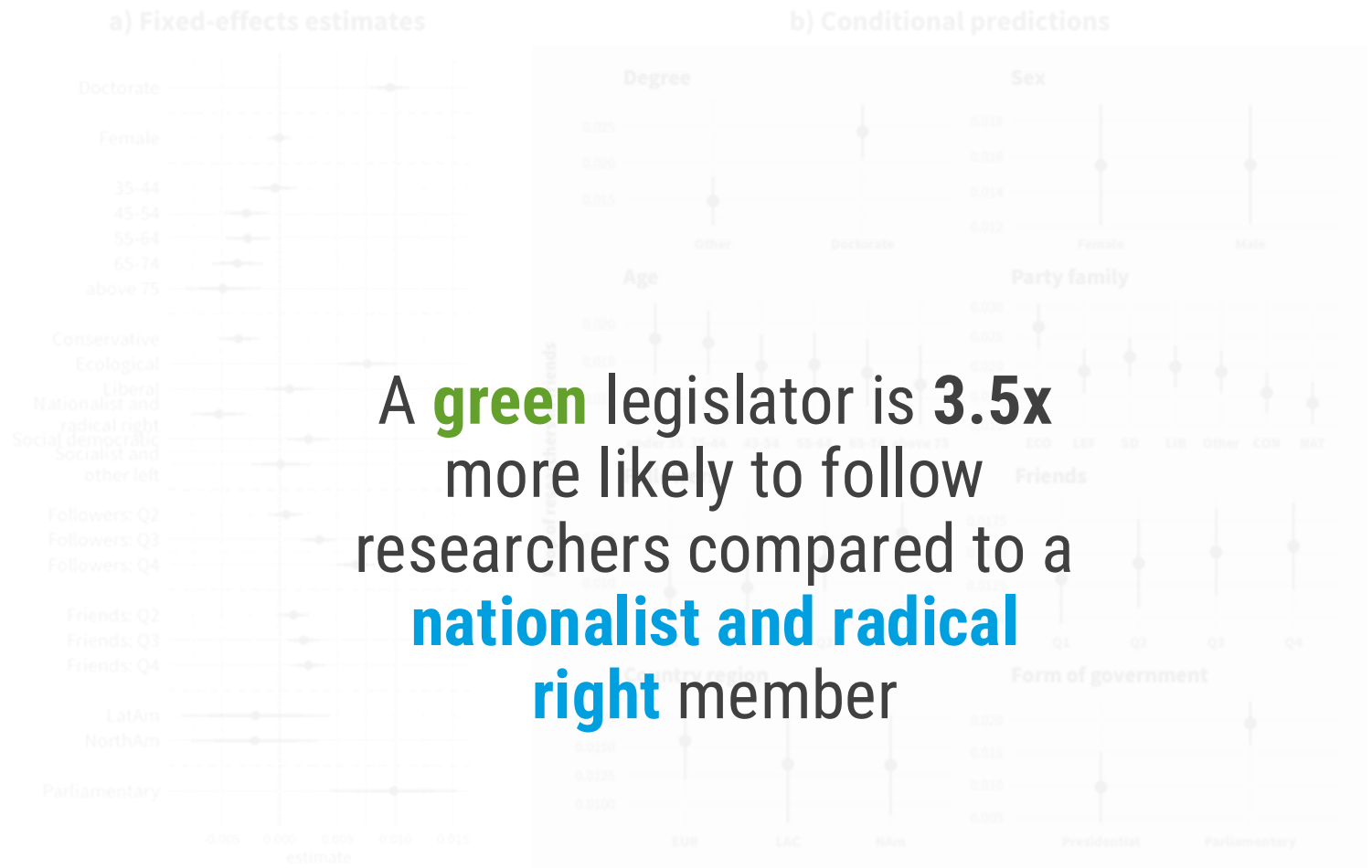
Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks. Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks.} Results from a linear mixed-effects model with legislature random effects with age (under 35), party family (other), country region (Europe), system (presidential), and Q1 for followers and friends as references for categorical variables. Number of observations: 3,247. Panel a presents the coefficients with 80% and 95% confidence intervals. The conditional predictions are computed with numeric covariates are held at their means and the other covariates at their modes: no research degree, presidential, European, male, 45-54, Q1, and Conservative party..

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

Pooled scholars

Comparison group:
12w pre-covid period

Increased likelihood of event aimed at a researcher

Mentioning — 1.3x

Following — 1.27x

Retweeting — 1.23x

Quote tweeting — 1.22x

Replying — 0.99x

Just as likely   1.25x   1.5x

likelihood of a behavior targeting a scholar in the COVID-19 period

Marginal effects of public health crisis on following and engagement with academic researchers during the COVID versus pre-COVID periods with a ±12 week bandwidth. Results from a logistic mixed-effects models with legislature random effects. The estimates in the figure are relative risks representing the ratio of the probability of an event in the COVID period to the probability of an outcome in a pre-COVID period.

Results

1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

2. Are there any contextual and legislator level correlates to online engagement with researchers?

3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

Scholars by branch

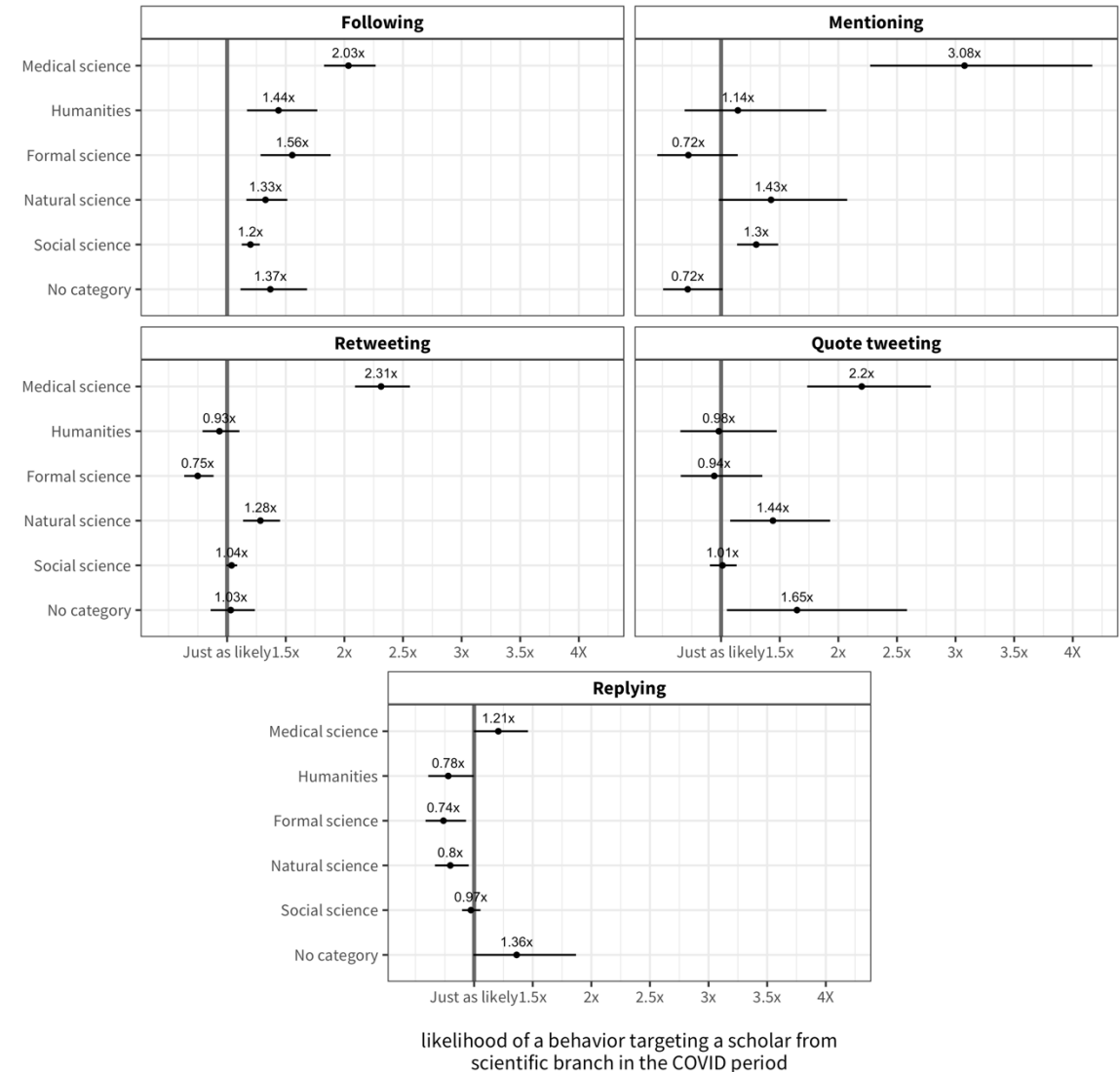likelihood of a behavior targeting a scholar from scientific branch in the COVID period

Marginal effects of public health crisis on following and engagement with academic researchers during the COVID versus pre-COVID periods with a ±12 week bandwidth. Results from a logistic mixed-effects models with legislature random effects. The estimates in the figure are relative risks representing the ratio of the probability of an event in the COVID period to the probability of an outcome in a pre-COVID period..

Conclusions

Conclusions

In this study I contribute to past work on the relationship between academic researchers, research evidence, and policy decisionmakers in three ways:

Conclusions

In this study I contribute to past work on the relationship between academic researchers, research evidence, and policy decisionmakers in three ways:

1. I employ a **novel set of behavioral measures** to gauge legislators' engagement with academic research providers in the digital realm

Conclusions

In this study I contribute to past work on the relationship between academic researchers, research evidence, and policy decisionmakers in three ways:

1. I employ a **novel set of behavioral measures** to gauge legislators' engagement with academic research providers in the digital realm
2. Leveraging the scalability and comparability of these measures, I provide a comprehensive analysis **across 13 legislatures** spanning the Americas and Europe

Conclusions

In this study I contribute to past work on the relationship between academic researchers, research evidence, and policy decisionmakers in three ways:

1. I employ a **novel set of behavioral measures** to gauge legislators' engagement with academic research providers in the digital realm

2. Leveraging the scalability and comparability of these measures, I provide a comprehensive analysis **across 13 legislatures** spanning the Americas and Europe

3. I investigate **potential shifts in the digital engagement** behaviors of legislators with research producers in times when the demand for evidence should be pronounced

Conclusions

I ask three sequential questions:

Conclusions

I ask three sequential questions:

1. Do we observe lawmakers following and engaging with researchers '**in the wild**'?

Conclusions

I ask three sequential questions:

1. Do we observe lawmakers following and engaging with researchers '**in the wild**'?

2. Are there any legislator and legislature level **correlates to online engagement with researchers**?

Conclusions

I ask three sequential questions:

1. Do we observe lawmakers following and engaging with researchers '**in the wild**'?
2. Are there any legislator and legislature level **correlates to online engagement with researchers**?
3. Do legislators **adapt their behaviors** when expertise gains salience?

Conclusions

I find that:

Conclusions

I find that:

1. Legislators do follow and engage with researchers '**in the wild**', but they are **rare occurrences**

Conclusions

I find that:

1. Legislators do follow and engage with researchers '**in the wild**', but they are **rare occurrences**

2. Legislators' **research background** and **political ideology** are predictors across behaviors

Conclusions

I find that:

1. Legislators do follow and engage with researchers '**in the wild**', but they are **rare occurrences**

2. Legislators' **research background** and **political ideology** are predictors across behaviors

3. Legislators' digital behaviors seem to be **responsive to exogenous shocks** to the **salience of expertise**

Thank you!

✉ ramirez-ruiz@hertie-school.org

Auxiliary material

Overview of academic research producers

PREDICTED FIELD	TWITTER ACCOUNTS	FOLLOWED BY LEGS	
Pooled	**409192**	27295	6.7%
Political science (Social science)	39172	7418	18.9%
Economics (Social science)	8389	1404	16.7%
Art (Humanities)	2054	317	15.4%
History (Humanities)	3373	475	14.1%
Philosophy (Humanities)	6179	820	13.3%
Sociology (Social science)	4292	541	12.6%

PREDICTED FIELD	TWITTER ACCOUNTS	FOLLOWED BY LEGS	
Business (Applied science)	3690	362	9.8%
Geography (Natural science)	4241	276	6.5%
Psychology (Social science)	56815	3524	6.2%
Computer science (Formal science)	29013	1527	5.3%
Environmental science (Natural science)	6493	345	5.3%
Geology (Natural science)	5005	257	5.1%
Engineering (Formal science)	3346	167	5%

PREDICTED FIELD	TWITTER ACCOUNTS	FOLLOWED BY LEGS	
Medicine (Applied science)	94718	4439	4.7%
Mathematics (Formal science)	7482	325	4.3%
Physics (Natural science)	15217	555	3.6%
Biology (Natural science)	83120	2814	3.4%
Chemistry (Natural science)	12176	255	2.1%
Materials science (Natural science)	2759	56	2%
Not categorized (No category)	21658	1418	6.5%

Auxiliary material

1. Extract Twitter entities from the Crossref Event Data dump

2. Extract author features from the papers linked from OpenAlex's API

3. Map these features under a set of rules

4. Validate

An open data set of scholars on Twitter

Philippe Mongeon[1,2] ID, **Timothy D. Bowman**[3] ID, and **Rodrigo Costas**[4,5] ID

[1]School of Information Management, Dalhousie University, Halifax, Nova Scotia, Canada
[2]Centre interuniversitaire de recherche sur la science et la technologie (CIRST), Université du Québec à Montréal, Montréal, Québec, Canada
[3]School of Information Sciences, Wayne State University, Detroit, MI, USA
[4]Centre for Science and Technology Studies (CWTS), Leiden University, Leiden, The Netherlands
[5]DSI-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy (SciSTIP), Stellenbosch University, Stellenbosch, South Africa

ABSTRACT

The role played by research scholars in the dissemination of scientific knowledge on social media has always been a central topic in social media metrics (altmetrics) research. Different approaches have been implemented to identify and characterize active scholars on social media platforms like Twitter. Some limitations of past approaches were their complexity and, most importantly, their reliance on licensed scientometric and altmetric data. The emergence of new open data sources such as OpenAlex or Crossref Event Data provides opportunities to identify scholars on social media using only open data. This paper presents a novel and simple approach to match authors from OpenAlex with Twitter users identified in Crossref Event Data. The matching procedure is described and validated with ORCID data. The new approach matches nearly 500,000 matched scholars with their Twitter accounts with a level of high precision and moderate recall. The data set of matched scholars is described and made openly available to the scientific community to empower more advanced studies of the interactions of research scholars on Twitter.