Under The Same Flag

Exploring Protest Fragmentation With Search Query Data

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Motivation

- **Why do some protest campaigns succeed while others fail?**
  - **Structural factors:** Economy, Technology, Regime, Demography
  - **Strategy & Tactics:** Mobilization, Violence, Collective Identity
  - **Internal Factors:** Leadership, Organization, Agenda, Unity
    - Understudied
    - Weak results

- **Challenges** [Quantification]
  - **Access to relevant information:** timely events, surveys are costly
  - **Measurement error**
    - Sensitive survey questions ⇝ self-selection bias & “dishonesty” bias
    - Media bias
    - Misclassify multiple campaigns as a single entity
  - **Comparability:** cross-country / cross-campaign is a concern

This Paper

☐ Protest Fragmentation

- Goals / Motivations Perspective
- Do scholars mistakenly categorize de-facto separate campaigns as a single entity? *[“Under The Same Flag” Hypothesis]*

☐ **Current Goal:** Method to estimate campaign fragmentation*

☐ Desired Properties

- **Behavior-based measure:** ~~media reports~~, ~~surveys~~, ~~expert opinions~~
- **Explicit interpretation:** ~~Likert scale~~, ~~composite measures~~ *[Polity IV]*
- **Comparability:** cross-country / cross-campaign comparison

* **Campaign Fragmentation** – variation in the goals / motivations of a protest campaign among protesters

Focus

- ☐ **Sub-national differences in the demand for information related to a protest campaign**
  - **Assumption:** High variation ⇝ High protest fragmentation

- ☐ **Correlated behaviors**
  - **Key idea:** Individuals who look for the same information related to a protest campaign share similar views regarding the goals of this campaign

- ☐ **Implementation**
  - **Input data:** Search queries (Google Trends)
  - **Key feature:** Ability to identify *other* search queries individuals conduct when they seek for protest-campaign information

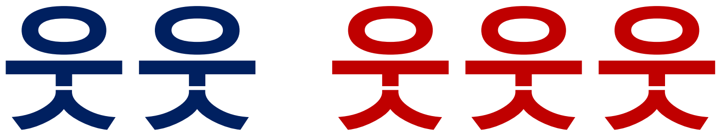
How scholars measure protest fragmentation

☐ **Surveys**

- **General Population:** <u>Activists</u> underrepresented
  Behavior: Reported ≠ Observed
  Self-selection | ‘Dishonesty’ bias
  List-experiments are hard | Costs
- **Protesters:** Hard timing (!) | Safety concerns
  <u>Locations</u> underrepresented | Costs

1. Identify Protesters

2. Identify Differences



Corruption

Ethnic Discrimination

How scholars measure protest fragmentation

☐ Event Cataloging

- **Documents:** Proclaimed goals ≠ Actual goals
  Leadership perspective
  Spontaneous collective action
- **News:** Bias in media reporting
  `Black Box`
- **Multimedia:** Representativeness
  Reporting Bias | Costs
  Leadership perspective

The New York Times

So Many Faces Make Up One Crowd

A scene from the documentary filmed during protests in Ukraine. Cinema Guild

1. Identify Protesters

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2. Identify Differences

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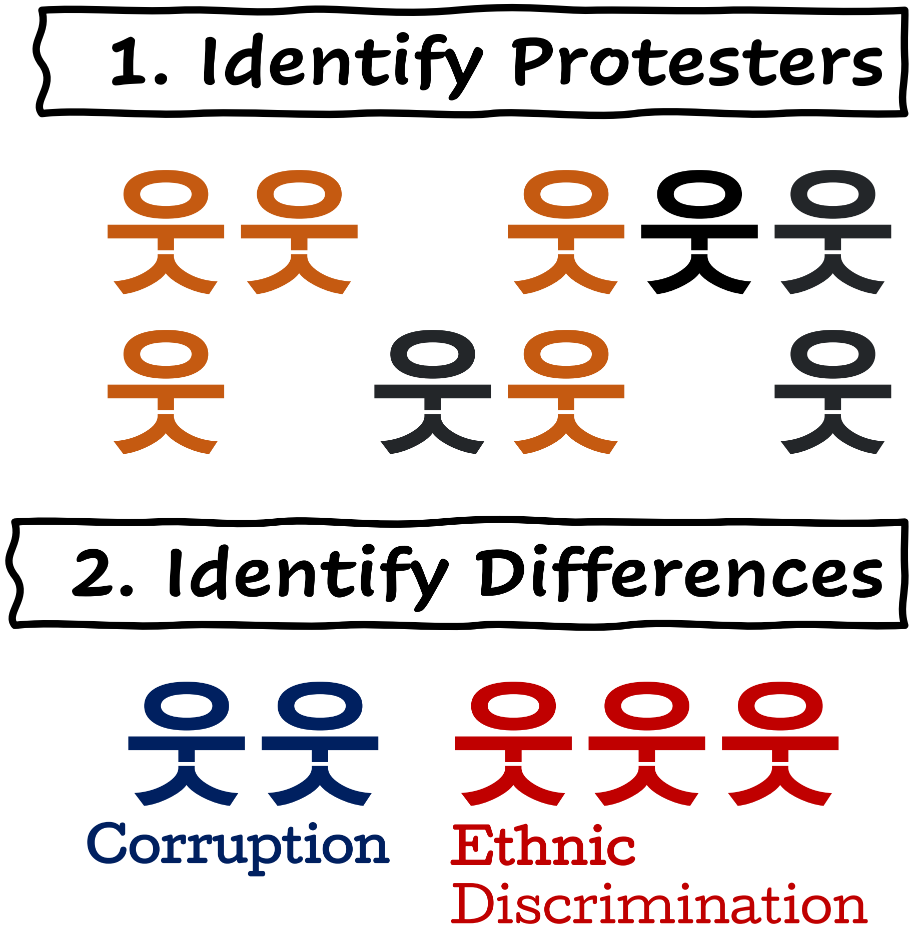
Corruption

Ethnic Discrimination

How scholars measure protest fragmentation

☐ User-generated content

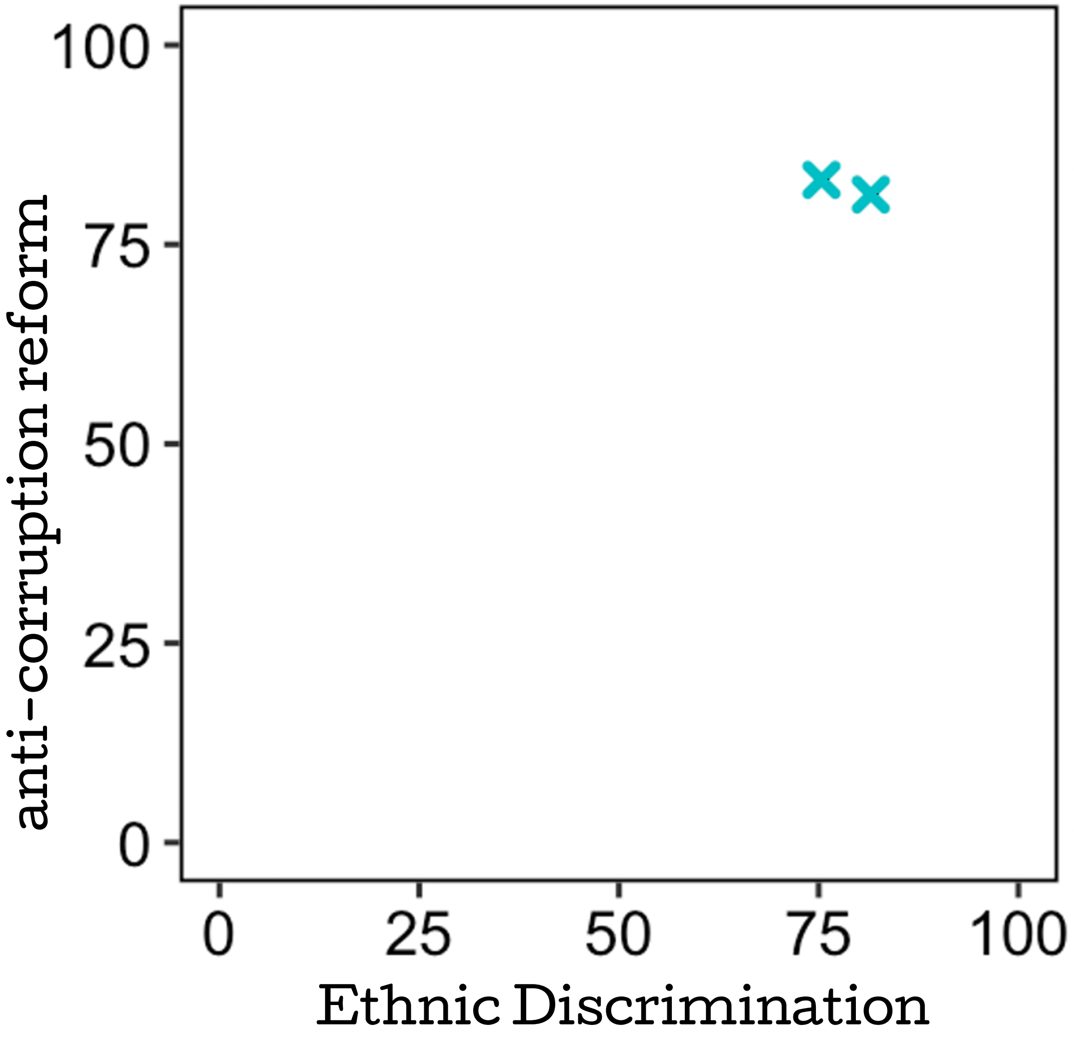


Theory

- ☐ In location x_i, individuals who look for protest campaign information *also* search:
  - “revolution”
  - “anti-corruption reform”

Similar interest in both topics ⇝ unified protest campaign

Case 1: No Fragmentation

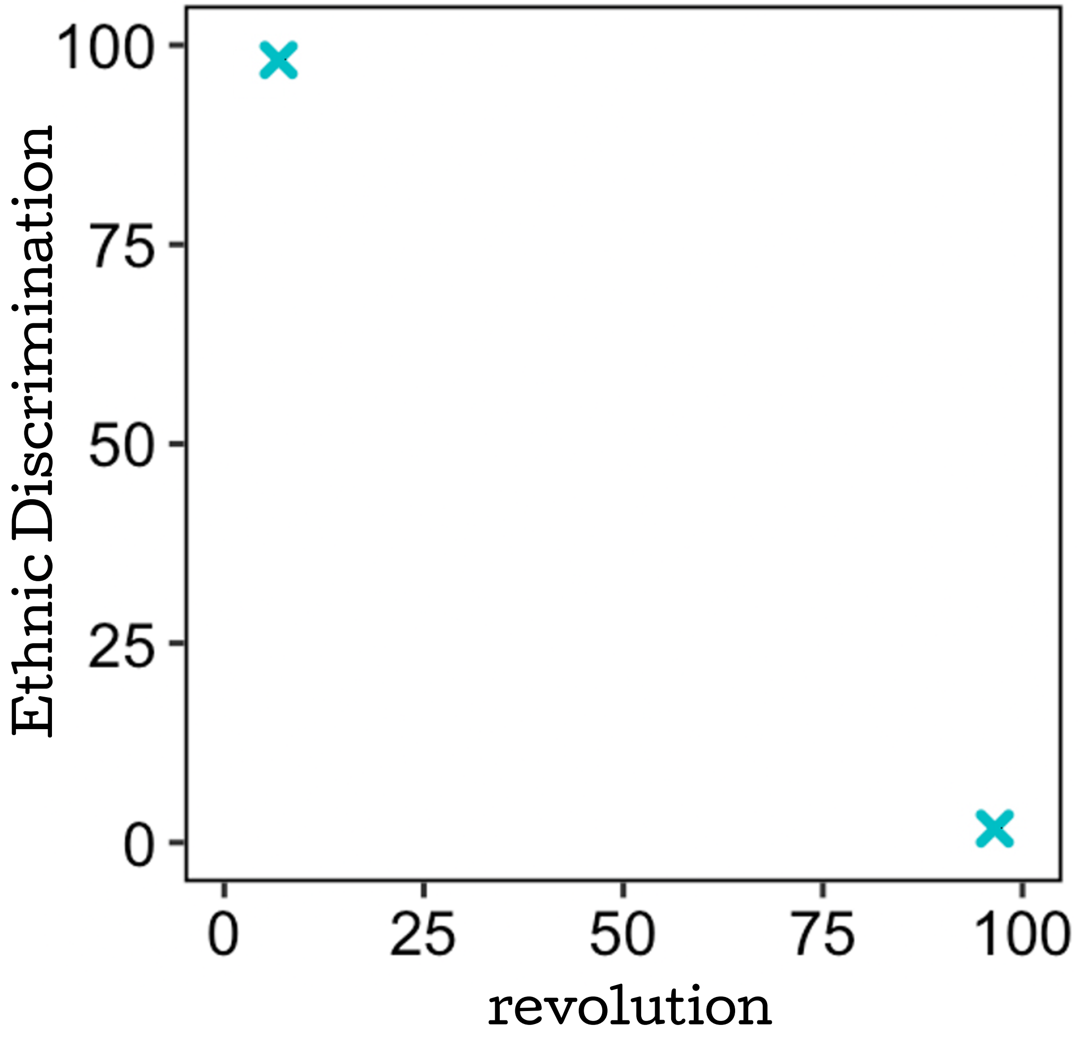


Theory

☐ In location x_i, individuals who look for protest campaign information *also* search:
- "revolution"
- "anti-corruption reform"

Dissimilar interest in topics ⇝ High protest campaign fragmentation

Case 2: High Fragmentation



Theory

- ☐ In location x_i, individuals who look for protest campaign information *also* search:
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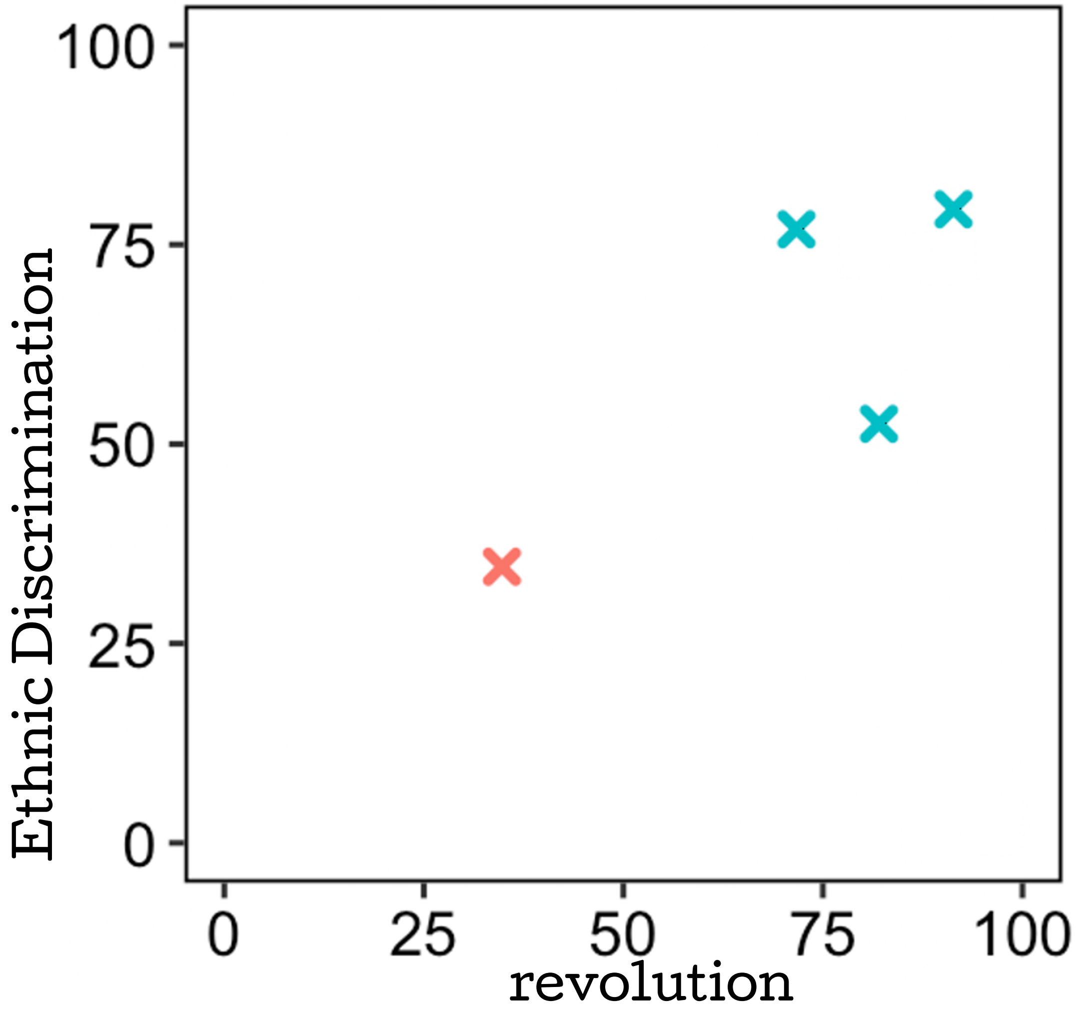
Case 3: Multiple Locations

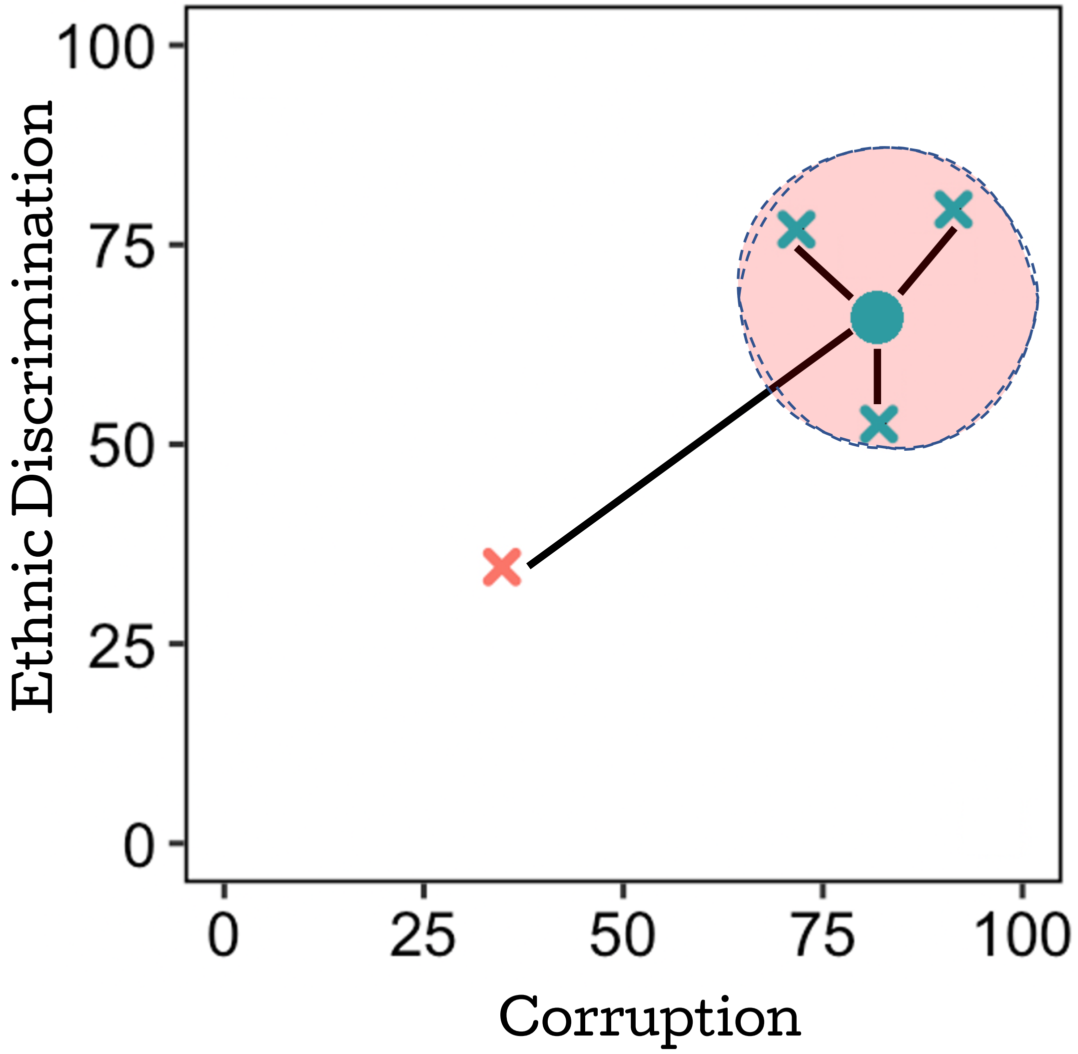


Theory

- ☐ In location x_i, individuals who look for protest campaign information *also* search:
  - "revolution"
  - "anti-corruption reform"

- ☐ **Proposed Approach**
  - Identify the largest cluster *[robust to outliers]*
  - Calculate cluster's centroid *[n-dimensional space]*
  - **Fragmentation Score**: average distance to the centroid *[Manhattan distance]*

Case 3: Multiple Locations



Search Queries

Yandex

Keyword statistics

☐ **Initial Q: How do people search for protest-related information?**

Identify: Search queries by a keyword
Similar queries

Classification method: Clicking same websites

митинг Submit

By keyword | By region | Query history | All regions

All | Desktop | Mobile | Phones only | Tablets only

Last update: 29.08.2023

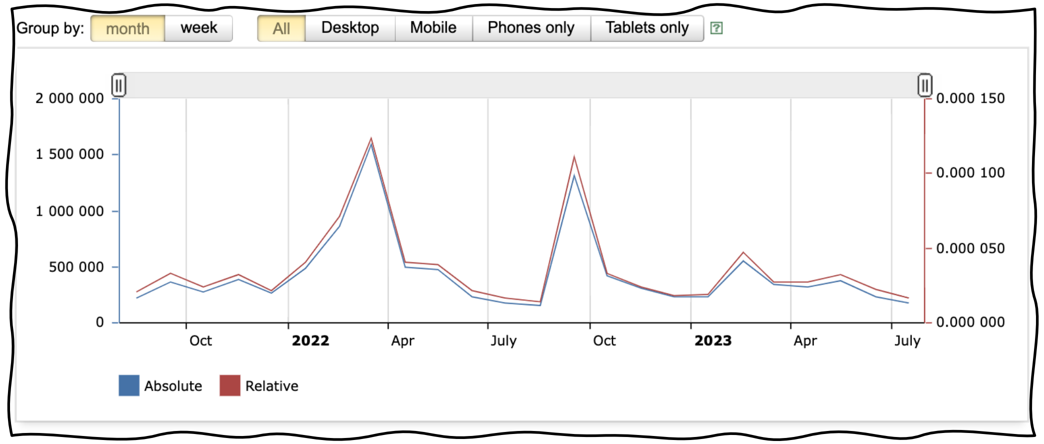
Other searches containing the word «митинг» — 123,966 impressions per month

Statistics by keyword	Displays per month
митинг	123,966
митинг 2023	8,672
митинг +в москве	8,212
митинг против	7,296
митинги августа	6,935
митинг сегодня	6,758

Requests, similar to «митинг»

Statistics by keyword	Displays per month
самые важные новости	14,864
митино	521,808
когда будет мобилизация	65,338
кто против	129,119
самая интересная новость дня	4,926

Raw volume of search queries containing keyword



Period	Absolute	Relative
01.08.2021 - 31.08.2021	216 811	0.000 020 736 036
01.09.2021 - 30.09.2021	363 898	0.000 033 018 338
01.10.2021 - 31.10.2021	277 206	0.000 023 673 519
01.11.2021 - 30.11.2021	391 215	0.000 032 698 807
01.12.2021 - 31.12.2021	265 974	0.000 021 635 545
01.01.2022 - 31.01.2022	491 261	0.000 040 198 758
01.02.2022 - 28.02.2022	867 256	0.000 071 654 695
01.03.2022 - 31.03.2022	1 587 907	0.000 123 160 982
01.04.2022 - 30.04.2022	494 952	0.000 040 661 098
01.05.2022 - 31.05.2022	471 760	0.000 039 129 490
01.06.2022 - 30.06.2022	237 453	0.000 021 874 484
01.07.2022 - 31.07.2022	172 360	0.000 016 349 320

Raw data over time

Search Queries

Google Trends

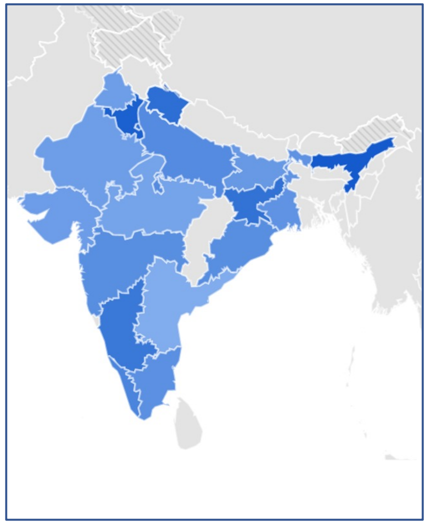
- G-Trends: Queries aggregated by topics
  - Identify: ☐ "Co-related' queries | topics
    ☐ `Protest topic` ~ `Related topics`
  - Classification method: Wikipedia
    [Reverse Engineering]

Citizenship (Amendment) Bill protests

Citizenship (Amendment) Bill protests
Search term

Citizenship (Amendment) Bill protests
Topic

Related Topics			Related Queries	
1	Citizenship (Amendment)	100	1 caa	100
2	Protest - Topic	82	2 protest	65
3	Bill - Law	34	3 protest caa	53
4	National Register of Citizen:	11	4 caa bill	34



Anti-CAA Protests (India, 2019)

Implementation with G-Trends

Example: Citizenship Amendment Act protests (India, 2019)

- **Google trends**
  - Score [0-100] based on the volume of search queries
  - Provides data for separate queries and queries aggregated into topics
  - Identifies queries / topics correlated with the initial query / topic
  - Subnational level data

- **Fragmentation due geographic variation**

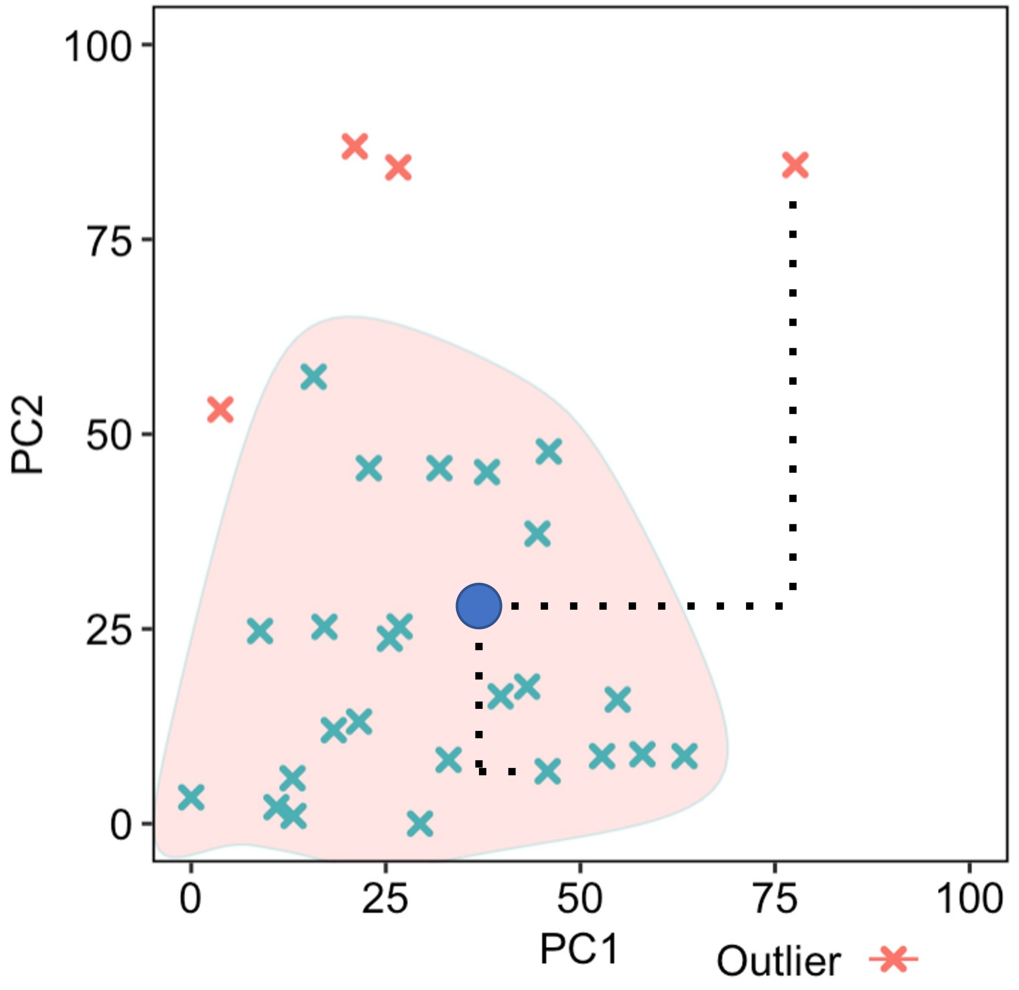
Implementation with G-Trends

Example: Citizenship Amendment Act protests (India, 2019)

☐ **Citizenship Amendment Act protests (India, 2019)**

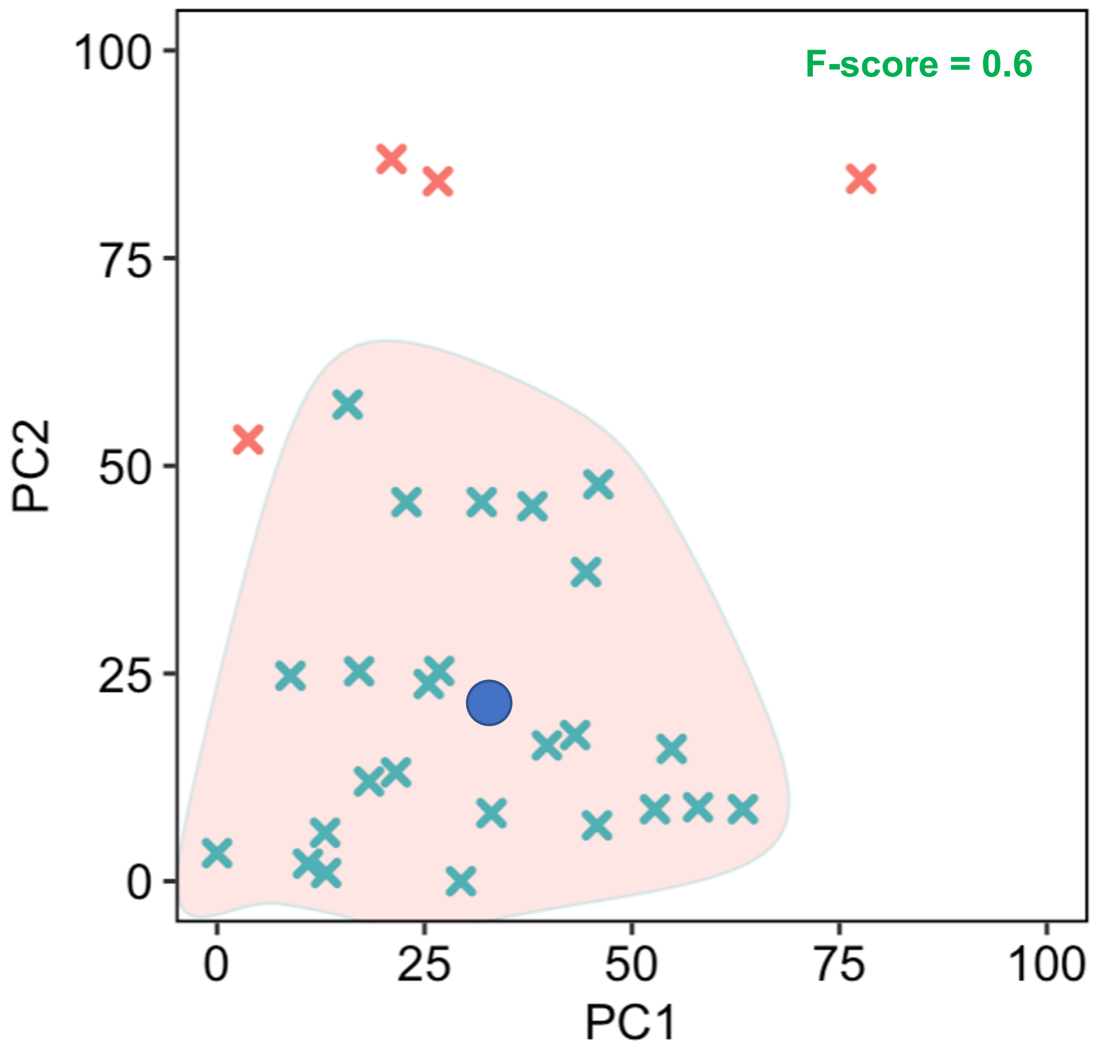
- Identify the protest movement topic
- Identify first 10 correlated topics
- Identify largest cluster *[via DBSCAN]*
- Calculate centroid
- Calculate mean distance D *[Manhattan]*
- Adjust $(100 - \frac{D}{2})/100$

Fragmentation Score = 0.6

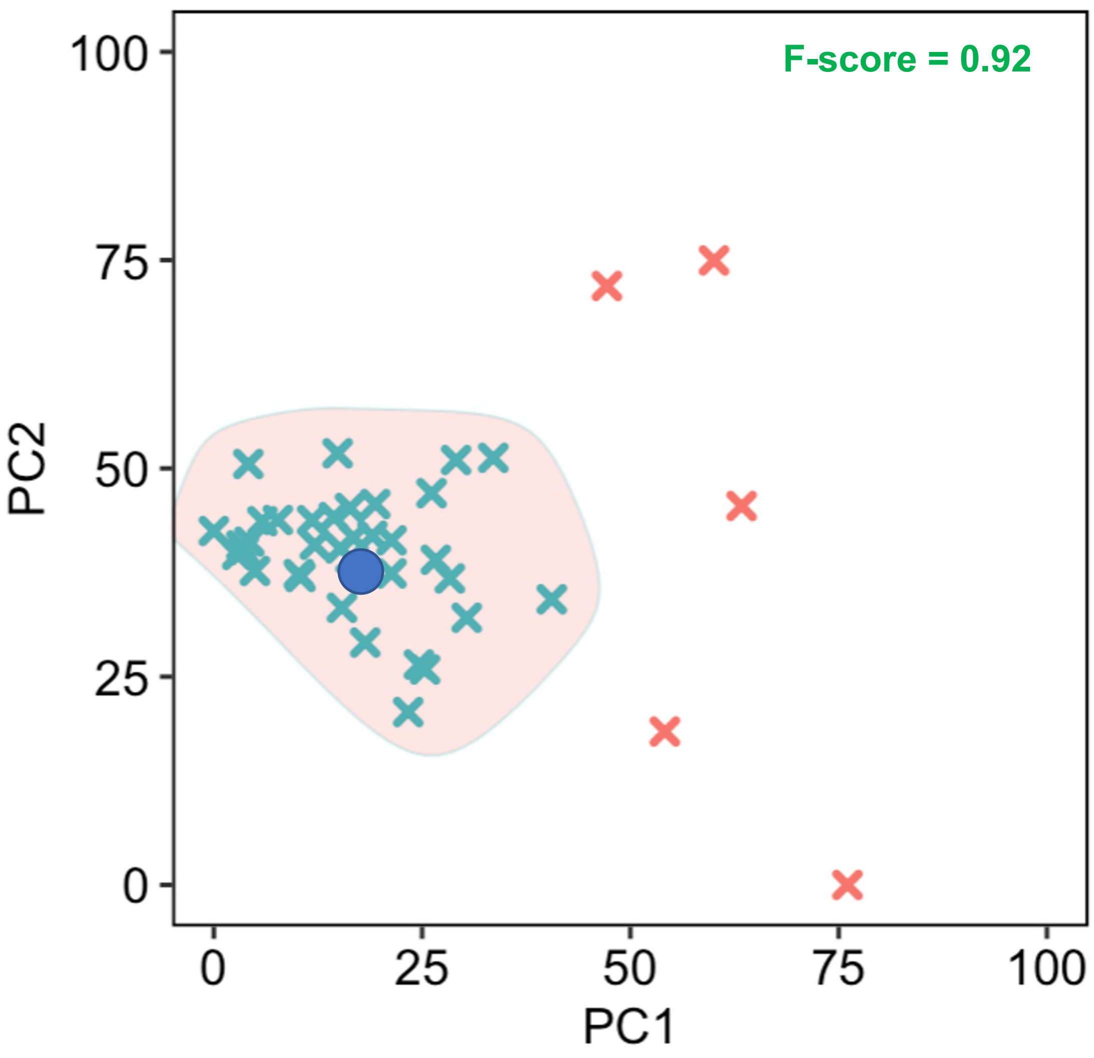


* Principal Components are used for illustration purposes

Comparison India-2019 *VS* US-2017

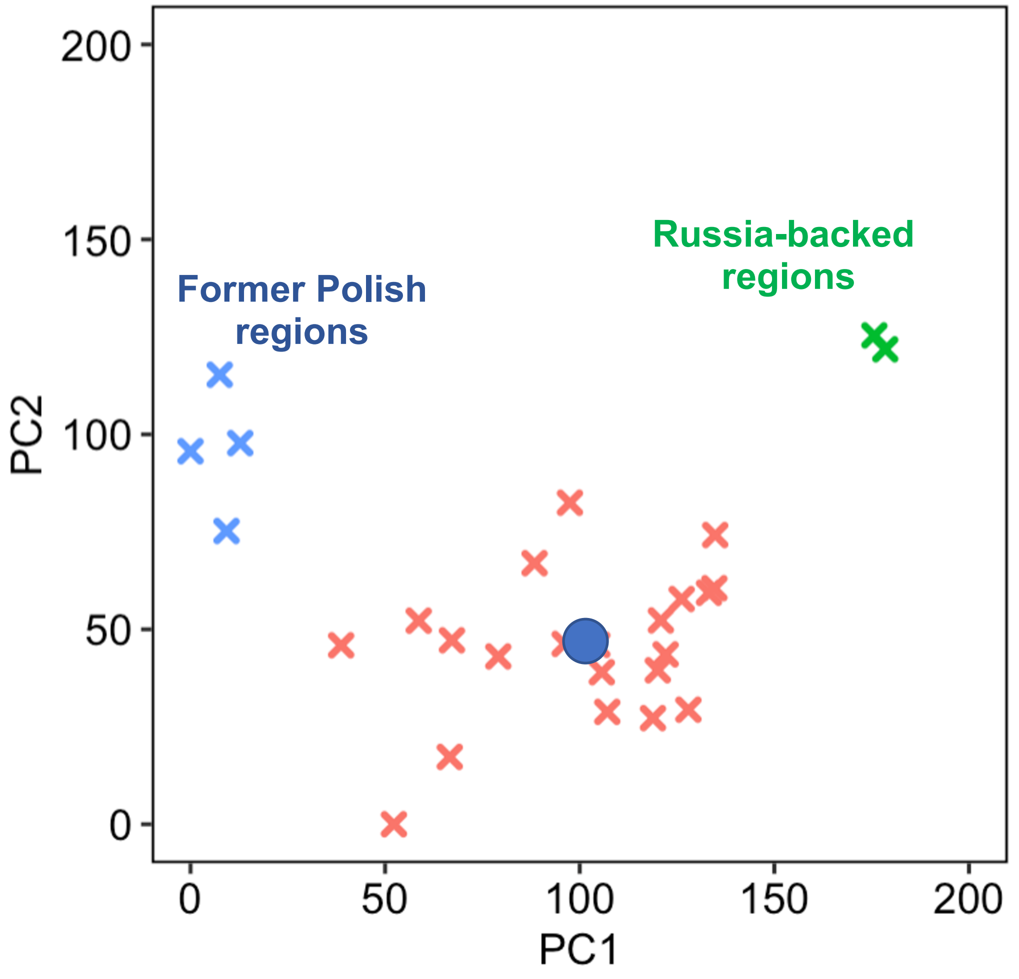


Citizenship Amendment Act protests (India, 2019)

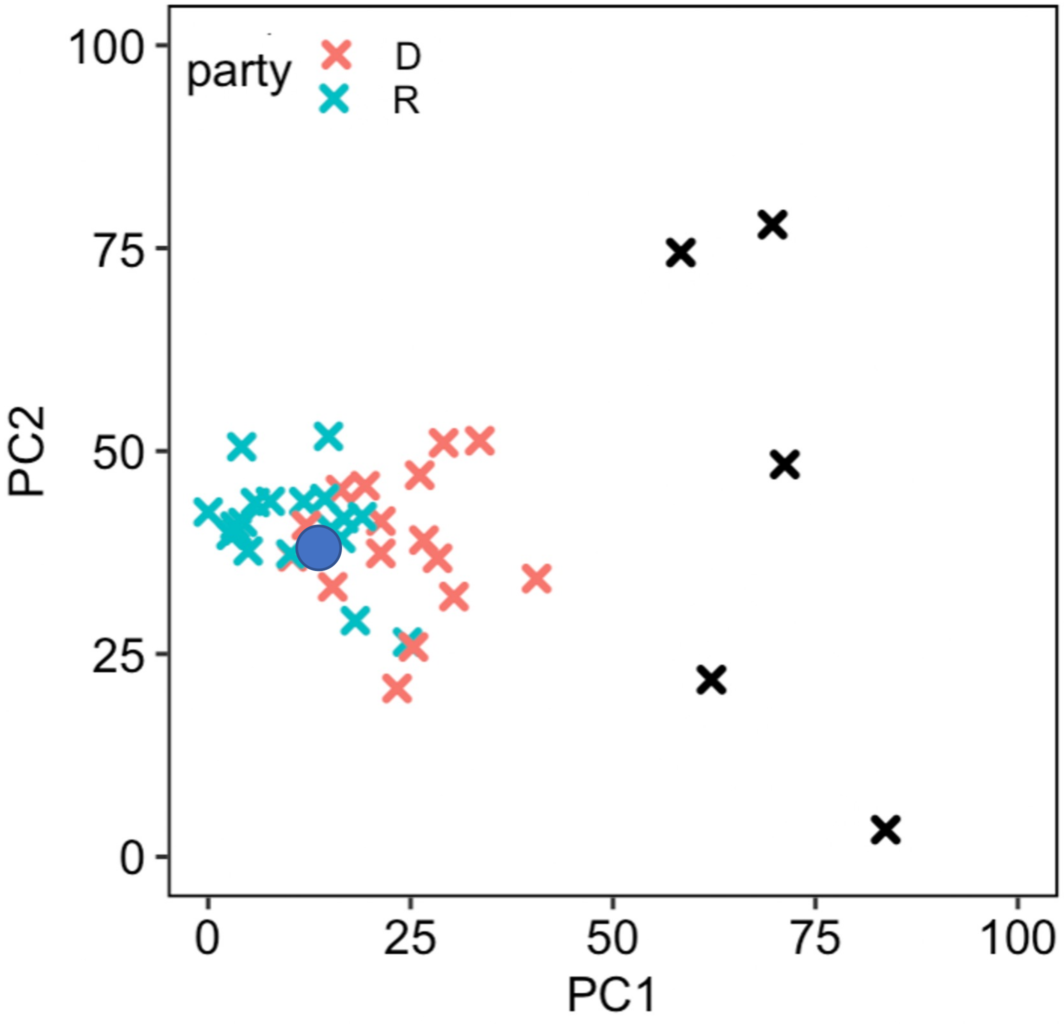


Women's March (US, 2017)

Validity Check Potentially Important Variables



Ukraine EuroMaidan (Ukraine, 2013-14)

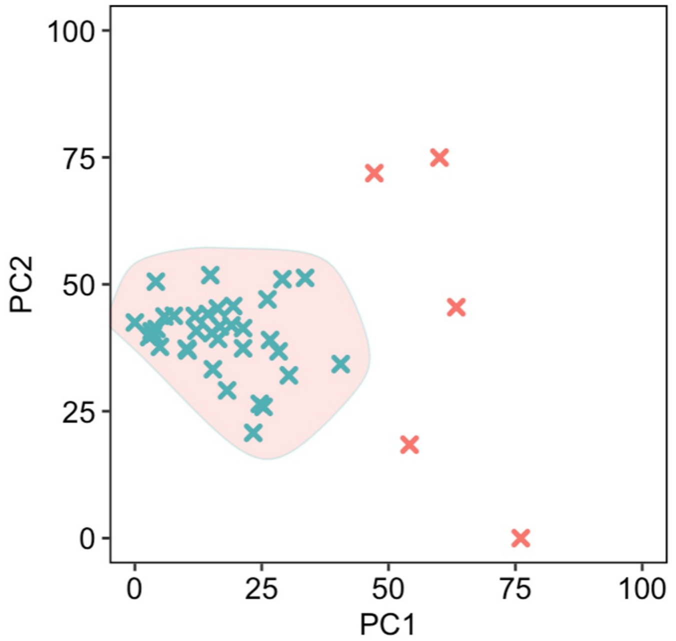


Women's March (US, 2017)

At the end of the day

☐ Not an ideal measure

- **Benefits:** ☐ observed behavior ☐ mitigate biases
  ☐ fine-grained data ☐ real-time ☐ free
- **Issues:** ☐ cross-location variation is required
  ☐ Inequality in Internet coverage
  ☐ Protesters ≠ Interested in Protest
  ☐ Specific Censorship Regimes



☐ Applications

- Standardized measure with explicit interpretation
- Temporal Dynamics
- Misclassification

Concluding thoughts

Thank you!

- ☐ **Not an ideal measure**
  - **Benefits:** ☐ observed behavior
    ☐ comparability
    ☐ fine-grained data
- ☐ **Applications**
  - Protest Fragmentation snapshot
  - Solving misclassification issue (single VS multiple campaigns)
  - Track temporal dynamics
- ☐ **Issues**
  - **Location-based measure:** cross-location variation is required
  - **Inequality in Internet coverage:** [fades away with time]
  - **Protesters ≠ Interested in Protest Information**
  - **Specific Censorship Regimes:** China [Google Censored]
    Russia **[**Identity Check]

Feedback, please 🙏

Thank you!

☐ **Next steps**

└ **Robustness:** ☐ Correlations with other existing measures

☐ Sensitivity to: Alternative clustering / list of topics