3G Internet and Confidence in Government

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The ongoing public debate

What are the political implications of the expansion of mobile broadband internet around the world?

- Starting with the Arab Spring, optimists: “Liberation technology”
  - Internet improves access to independent political information
  - Social media, for which mobile broadband was instrumental, helps coordinating protests by enabling two-way information flows
- Pessimists: “Misinformation technology”
  - It facilitates the dissemination of fake news
  - helps populists to connect to voters
  - empowers non-democratic regimes by reducing costs of surveillance and propaganda
- These conjectures found empirical support in a number of studies, most of which are single-country (survey: Zhuravskaya, Petrova, and Enikolopov ARE 2020)
Yet, they seem to describe a global phenomenon:

In a recent book, a former CIA analyst Martin Gurri argues:

- “the rise of Homo informaticus [a person relying on social media for information] places governments on a razor’s edge, where any mistake, any untoward event, can draw networked public into the streets... This is the situation today for authoritarian governments and liberal democracies alike. The crisis in the world [...] concerns loss of trust in government”

- “the greater the diffusion of information to the public [through social media], the more illegitimate any political status quo will appear... [It] poses an existential challenge to the legitimacy of every government”

We test this conjecture in a global setting in...
What we do...

• We test this conjecture in a global setting
• We combine data on:
  • the expansion of 3G internet across the world over the last decade
  • survey data on attitudes toward governments from the Gallup World Poll (GWP)
  • election results for European democracies
• The global setting allows us to shed light on at least some of the mechanisms at play by comparing the effect of 3G on government approval across different institutional environments
Outcome 1: Confidence in government

Gallup World Poll

- Survey of about 1 million people
- Between 2008 and 2017
- The same questions asked in over 100 countries
- 4 yes/no questions:
  Do you have confidence in each of the following, or not:
  1. – The national government?
  2. – The judicial system and courts?
  3. – The honesty of elections?
  4. Is corruption widespread throughout the government in your country, or not?
- Information on subnational region for each respondent and the time of the interview
3G networks in 2007

ITU: Only 0.04 active mobile broadband subscriptions per capita in 2007

Sample: Countries with 3G and GWP data.
3G networks in 2018
ITU: 0.70 active mobile broadband subscriptions per capita in 2018

Sample: Countries with 3G and GWP data.
Exercise No. 1: Standard diff-in-diff

- Look at how government approval changes with the arrival of mobile internet into a subnational region, controlling for other factors that can affect government approval, such as economic development, demographics, education, income, and region and year fixed effects.
3G internet and government approval

Increase in 3G coverage and government approval across the globe

- Mean government approval, by equal-size bins
- Predicted government approval (local polynomial smoothing)
- 90% confidence interval from block bootstrap replications
3G internet and government approval, all respondents

Confidence in government
Confidence in judicial system
Honesty of election
No corruption in government
Overall government approval

All respondents

% of respondents

Before 3G
After 3G

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Is this relationship causal?

• Could it be that the expansion of 3G networks is driven by a change in government approval or other factors related to it?
  
  • Yes, but it is unlikely
  
  • To show this, we look at the dynamics of government approval around sharp changes in regional 3G coverage
    
    • Define a sharp increase as more than half of the population of the subnational region get access to 3G in one year
    
    • 452 regions in 65 countries
Change in government approval around sharp 3G increases

Panel A: Event study

Treatment: regional 3G coverage increased by over 50 percentage points in year 0
Coefficients on year dummies relative to year -1

Effect on government approval, 90% CIs

Effect on regional 3G coverage, 90% CIs

Years since treatment

Government approval
Regional 3G coverage

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2G networks allowed SMS, but not broadband internet
Could it be that any new ICT leads to fall in government approval?
Exercise No. 2: IV

- To fully address causality, we use IV
- Frequent lightning strikes cause power surges, which substantially increase the costs of providing mobile service and maintaining the infrastructure
  - Thus, they hinder the rollout of telecommunication technologies
- We follow Manacorda and Tesei (2020) to predict the speed of 3G expansion with frequency of lightning strikes
- The first stage is strong and the second stage confirms the OLS diff-in-diff results
What could explain this effect of 3G?

Mechanism 1: The information channel

If 3G provides citizens with negative information on government performance (be that real or fake)

- The effect should be weaker if internet content is censored
- The effect should be stronger if alternative channels of information (e.g., traditional media) are censored
Comparative analysis: Internet censorship
3G coverage and government approval: Low vs. high internet censorship

Data: Limits on Online Content score from Freedom House

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3G Internet and Confidence in Government
Comparative analysis: Censorship of traditional media

The effect of 3G is stronger when traditional media is censored
Why is the *average* effect negative?

- The business model of social media is based on keeping attention
  - making it an “outrage machine,” more prone to disseminating negative messages (Castells 2015)
- The elites have control over traditional media
  - which means that the pre-3G view of the government was too positive
- Yet, if government is very clean (e.g., Denmark or Switzerland), even when social media is biased toward negative news, people should learn that the situation in other countries is even worse,
  - and *update upward* confidence in their own government
- Is the effect negative everywhere?
In cleanest countries, 3G expansion increases ratings

The effect of 3G by country's overall corruption level on:

- Conf. in nat. government
- Conf. in judicial system
- Conf. in honesty of elect.
- Perc. gov. not corrupt
- Share of positive ans.
- Pr. comp. of gov. approval

Coefficients on each graph come from a single regression; group M has countries with missing GICI index

Clean countries: Denmark, Germany, Japan, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, New Zealand

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Does 3G internet help expose actual corruption? GICI

Belief: No corruption in government
Before and after an actual corruption incident
in regions with and without 3G

Region without 3G

Region with 3G

% of respondents
10 15 20 25

Before corruption incident
After corruption incident

Data: Global Incidents of Corruption Index (GICI) from Furceri, et al. (2019)
Does 3G help expose actual corruption? Panama Papers

Belief: No corruption in government

Effect of Panama Papers revelations
countries with lots of scandals

Region without 3G

Region with 3G

No effect in countries not featured in Panama Papers
Outcome 2: Elections
What are electoral implications of voter disillusionment with the government, caused by 3G expansion?

- We test for the effect of 3G on vote shares for:
  - Incumbents, opposition, Populist and Green parties in Europe
- Focus of Europe because:
  - A recent rise of populist parties in Europe
- Data:
  - 33 European democracies
  - 102 parliamentary elections between 2007 and 2018
  - Populist parties are classified based on the Chapel Hill Expert Survey and text analysis of online sources
  - Subnational level
Electoral implications of 3G internet: incumbents

![Graph showing the relationship between increase in district 3G coverage and incumbents' vote share.](image)

- **Mean vote share, by equal-size bins**
- **Predicted vote share (local polynomial smoothing)**
- **90% confidence interval from block bootstrap replications**
Electoral implications of 3G internet: opposition

![Graphs showing the electoral implications of 3G internet]
Why populists?

• The mechanism behind the effect on populist opposition is unclear and could be both coincidental and causal
  • The timing of the 3G expansion could have coincided with the time when the populist message resonated with voters
  • It could also be that populist messages may be simpler, and thus, better suited for the social-media format

• More research needed to understand this
  • Importantly, populist incumbents are hurt by 3G as much as other incumbents
The main takeaways

1. On average, access to 3G internet decreases government approval.
2. The availability of independent-of-the-government political information is one of the channels at play.
   - There is no effect if internet is censored.
   - The effect is stronger when traditional media is censored.
   - The 3G internet helps expose *actual* corruption.
   - In the cleanest countries, the effect is positive.
3. In Europe, 3G reduces incumbent parties’ vote shares.
   - Only the *populist* opposition benefits.
Alternative explanation: “general unhappiness”
Could it be that social media makes people generally unhappy?

- Standard of living getting better (Range: 1-3)
- Current satisfaction with standard of living (Range: 0-1)
- Expected future life satisfaction (Range: 0-10)
- Current life satisfaction (Range: 0-10)