

Censorship in Cyberspace: Unraveling Internet Filtering

Dissertation Proposal

Shreyas Meher

The University of Texas at Dallas

December 12, 2023

- ▶ **Evolving Digital Landscape:** In an age where digital spaces are as influential as physical territories, understanding internet governance is imperative.
- ▶ **Global Tech and Sovereignty:** The intersection of global tech giants' strategies with national digital sovereignty presents new geopolitical challenges.
- ▶ **Timeliness and Relevance:** Amidst growing internet censorship and digital revolutions, these studies offer timely insights into current global trends.

- ▶ **Investigation 1:** "Democracy and Internet Control" w/ Dr. Pengfei Zhang
- Examining internet censorship in democracies versus authoritarian regimes.
- ▶ **Key Insight:** Challenges the notion that internet control is solely an autocratic tool, revealing nuanced approaches in democracies.

- ▶ **Investigation 2:** "The Politics of Internet Blackouts in India" - Analyzing India's internet blackouts during the 2021 Farmer Protests.
- ▶ **Investigation 3:** "The Digital Vacuum: Google's Exit from China" - Exploring global impacts of Google's strategic withdrawal.

National

Twitter Doc: Centre Requests To Block Journalists And Politicians

by Joanna Ann Daniel © June 28, 2022

Illustration: Other Means for The Intercept

GOOGLE PLANS TO LAUNCH CENSORED SEARCH ENGINE IN CHINA, LEAKED DOCUMENTS REVEAL

Search app that will "blacklist sensitive queries" could be launched in six to nine months, according to documents and people familiar with the plans.



Ryan Gallagher

August 1 2018, 4:58 a.m.

Our study poses critical questions aimed at dissecting the fabric of internet censorship and its relationship with political structures:

- ▶ How do the strategies and justifications for online content removal in Democracies compare with those in Autocracies?
- ▶ To what degree does electoral accountability act as a moderating force on the decisions of Democratic Leaders to censor online content?

Our study poses critical questions aimed at dissecting the fabric of internet censorship and its relationship with political structures:

- ▶ How do the strategies and justifications for online content removal in Democracies compare with those in Autocracies?
- ▶ To what degree does electoral accountability act as a moderating force on the decisions of Democratic Leaders to censor online content?

- ▶ **Stylized Facts:** Use Transparency Reports as a novel dataset to analyze internet requests for content removal.
- ▶ **Political Agency Model:** We develop a model to explain how reputation concerns affect political actors in Democracies.
- ▶ **Natural Experiment:** Leveraging the timing of elections as a natural experiment, our paper provides insights into the diverse strategies and underlying motivations behind internet control in Democracies and Autocracies.

- ▶ **Theory:** Democracy encourages incumbents to delegate internet censorship decisions to citizens.
- ▶ **Timing Analysis:** A robust link exists between election cycles and government content removal requests, with a notable pattern in democratic nations.
- ▶ **Regime Dynamics:** Evidence shows democratic governments' requests for content takedowns decrease as elections near, a trend absent in autocracies. Democracies exhibit approximately 1,368 fewer requests in the run-up to elections, underscoring electoral accountability's impact.

- ▶ Actors: Two Politicians (Incumbent and Challenger), one Citizen.
- ▶ Decision on Internet Content Filtering: $x \in \{0, 1\}$.
- ▶ Decision Rights: $i \in \{P, C\}$.
- ▶ Content might be removed in two ways:
Government Censorship: $i = P, x = 1$
or User Moderation $i = C, x = 1$.

The posterior belief π_C reflects the citizen's perceived probability of the politician being unbiased: the citizen will vote for the incumbent if $\pi_C > \pi$.

- ▶ **In Dictatorship:** Politician's actions are unrestrained by π_C , leading to potential welfare loss due to censorship risk.
- ▶ **In Democracy:** π_C is pivotal—politicians want to signal or pretend they are the unbiased type. Democracy introduces a trade-off between policy preferences and re-election incentives.
- ▶ **Reputation Building:** Politicians in democracies engage in reputation-building behaviors, influenced by the citizen's belief and electoral proximity.

The key to our model is the reputation incentive of the incumbent politician.

The reputation concern is more salient when an election is closer.

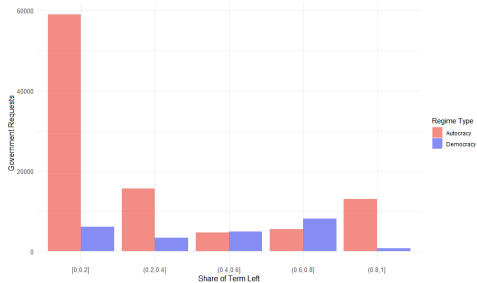
- ▶ Government takedown requests changes with the election cycles.

The empirical model we utilize to analyze the relationship between governmental information requests and electoral cycles is formalized as follows:

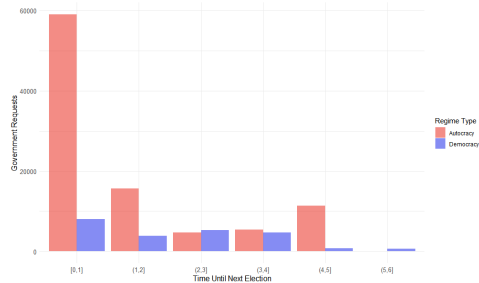
$$Req_{c,t} = \alpha + \beta_1 ShareOfTermLeft_{c,t} + \Theta Controls_{c,t} + \mu_c + \tau_t + \epsilon_{c,t}$$

where $Req_{c,t}$ is the count of requests sent by government 'c' in time 't' to internet platforms, $ShareOfTermLeft_{c,t}$ is the normalized score denoting the share of term left for the current government, $Controls_{c,t}$ is a vector of control variables (including economic indicators, political stability measures, and internet penetration rates), μ_c represents country-fixed effects, τ_t denotes year-fixed effects, and $\epsilon_{c,t}$ is the error term.

Influence of Electoral Cycles on Government Requests



(a) Government Requests across Share of Term Left



(b) Government Requests across Time Until Next Election

Figure: Distribution of Government Requests

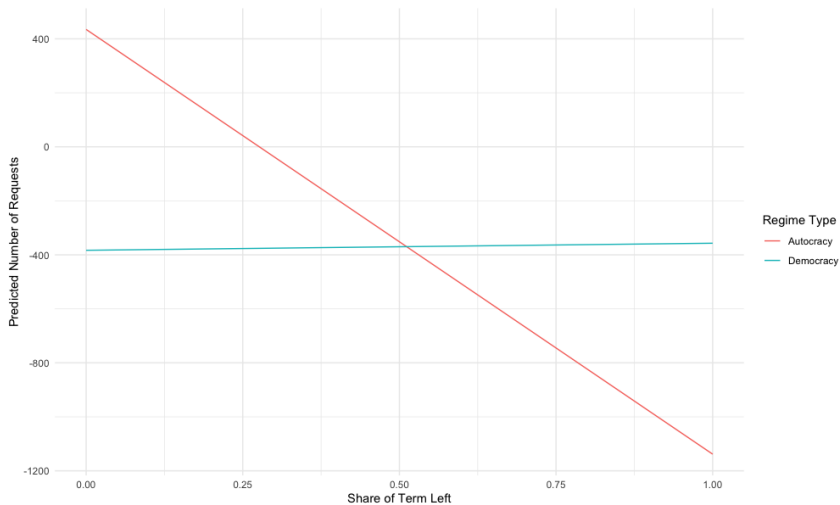
Results - Government Requests and Share of Term Left



	<i>Number of Government Requests</i>				
	(1)	(2)	(3)	(4)	(5)
Share of Term Left	-339.137*	-960.898***	-1,081.518***	-1,413.351***	-1,343.860***
	(173.898)	(288.516)	(308.141)	(357.242)	(358.004)
Democracy	-338.783***	-827.482***	-940.157***	-833.933**	-747.832*
	(107.625)	(210.665)	(233.291)	(400.732)	(401.840)
Share of Term Left * Democracy		972.343***	1,101.682***	1,417.627***	1,368.153***
		(360.801)	(384.738)	(425.837)	(428.142)
GDP Per Capita			-63.736	-765.546**	-813.121*
			(92.728)	(387.742)	(426.988)
% of Internet Users			5.302	6.979	4.346
			(4.047)	(7.441)	(9.863)
Urban Population %			1.862	-5.180	-25.268
			(4.213)	(67.619)	(70.636)
State Fixed Effect				✓	✓
Year Fixed Effect					✓
Observations	829	829	787	787	787

Note: Standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Interaction Plot



- ▶ The **baseline model** reveals that as the share of term left decreases, the number of government requests increases.
- ▶ This aligns with the hypothesis that leaders may seek to mitigate adverse news as elections approach.
- ▶ A comparative analysis shows that **democracies tend to reduce the number of requests** substantially, reflecting the political discipline exerted through electoral accountability.
- ▶ The **interaction term** between share of term left and democracy is particularly telling, suggesting that democratic leaders become more restrained in their internet control strategies as they near the end of their terms.

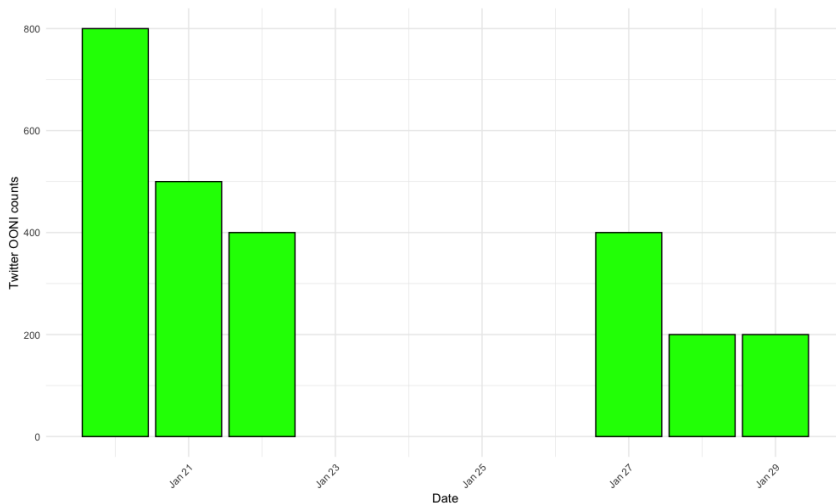
Collectively, these results highlight the nuanced ways in which electoral considerations shape government strategies for online information control, with clear distinctions between autocratic and democratic regimes.

	<i>Number of Court Orders</i>				
	(1)	(2)	(3)	(4)	(5)
Share of Term Left	-31.649 (24.406)	-42.337 (41.472)	-26.650 (33.199)	-8.979 (22.101)	-10.573 (21.235)
Democracy	-0.378 (15.247)	-8.508 (29.711)	42.088* (24.475)	-29.182 (26.084)	-28.123 (25.040)
Share of Term Left * Democracy		16.361 (51.310)	2.866 (40.865)	10.108 (26.134)	19.077 (25.144)
GDP Per Capita			-10.712 (9.751)	-44.718* (23.482)	-78.857*** (24.962)
% of Internet Users			0.066 (0.446)	2.574*** (0.456)	1.249** (0.586)
Urban Population %			1.538*** (0.442)	-0.048 (4.071)	-4.274 (4.156)
State Fixed Effect				✓	✓
Year Fixed Effect					✓
Observations	848	848	791	791	791

Note: Standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

- ▶ The analysis of court orders reveals a **less pronounced influence of electoral cycles** compared to government requests.
- ▶ Notably, the **interaction term between share of term left and democracy is not significant** in this context, contrasting with the significant findings in government requests.
- ▶ While government requests are strategically timed with electoral cycles, especially in democracies, **court orders do not show a similar pattern**, as citizens are not constrained or influenced by electoral timing.

Chapter 2 - The Politics of Internet Blackouts in India



- ▶ In late 2020, India witnessed the emergence of widespread farmer protests.
- ▶ These protests intensified in February 2021, drawing national and international focus.
- ▶ Central to this development was the Indian government's decision to block internet access in key protest regions.
- ▶ This action sparked debate: viewed by some as necessary for order, others as a violation of democratic rights.

- ▶ The protests were a reaction to three agricultural reform bills introduced in June 2020.
- ▶ Farmers feared these reforms would leave them vulnerable to corporate exploitation.
- ▶ Despite ongoing dialogues and a Supreme Court intervention, no significant resolution was achieved.
- ▶ The government maintained intermittent internet blackouts in protest areas, affecting communication and media coverage.

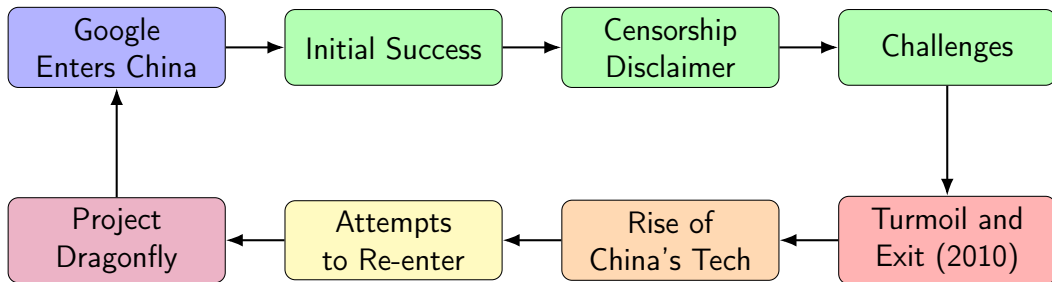
- ▶ The unexpected internet blackout during the 2021 Farmer Protests in Delhi is leveraged as a *natural quasi-experiment*.
- ▶ This incident allows for a comparative analysis to assess impacts on public sentiment, providing a clear 'before and after' research scenario.
- ▶ The design's validity stems from the suddenness of the event, which sharply delineates the conditions for observational study.

- ▶ Objective: Assess the impact of internet blackouts on public perception during farmer protests in India.
- ▶ Data Collection: Combine quantitative public opinion data with an event study of protest timelines.
 - ▶ $n = 1644426$ tweets scraped.
- ▶ DID Analysis:

$$Y_{it} = \alpha + \beta \times \text{Blackout}_i + \gamma \times \text{Post}_t + \delta \times (\text{Blackout}_i \times \text{Post}_t)$$

- ▶ **Insights into the broader impact** of internet blackouts on public perception and media discourse.
- ▶ Understand the **role of digital access** in shaping narratives during political crises.
- ▶ **Future Directions:** Potential for follow-up studies with more granular data when available.

- ▶ The 21st century's digital age has seen massive growth in internet use, bringing both opportunities and challenges, particularly in internet filtering and censorship.
- ▶ China, with its 'Great Firewall', is a prime example of stringent internet control, balancing socio-political stability with the right to information and free expression.
- ▶ This study explores the impact of Google's 2010 exit from China, a significant event that potentially altered the landscape of internet governance and digital content control in the country.



- ▶ **Hypotheses:**
 - ▶ Assess whether Google's 2010 exit from the Chinese market led to increased internet censorship or catalyzed shifts in internet governance strategies.
 - ▶ Investigate the subsequent impact on domestic technological innovation and the adaptation of Chinese netizens to the new digital landscape.
 - ▶ Analyze whether the vacuum left by Google led to alternative digital platforms gaining prominence and how this influenced the digital information flow.
- ▶ **Goal:** To unravel the nuanced effects of a major global tech company's withdrawal on a nation's internet policies and the broader digital ecosystem.

▶ **SCM Mathematical Representation:**

$$\textit{Synthetic China}_t = \sum_{j=1}^J w_j X_{jt} \quad (1)$$

$$\min_w \sum_{t=1}^{T_0} \|Y_{China,t} - \textit{Synthetic China}_t\|^2 \quad (2)$$

$$\Delta Y_{\textit{post-treatment}} = Y_{China,\textit{post-treatment}} - \textit{Synthetic China}_{\textit{post-treatment}} \quad (3)$$

- ▶ SCM assesses the divergence in internet censorship trends between actual China and a synthetic control constructed from other countries.
- ▶ Robustness checks include placebo tests and analysis of unobserved confounders.

- ▶ **Data Reliability and Interpretation:** Challenges in obtaining accurate data on China's internet censorship due to its complex digital governance.
- ▶ **Geographic and Socio-Economic Diversity:** The study treats China as a uniform entity, potentially overlooking regional variations in the impact of Google's exit.
- ▶ **Feasibility of Synthetic China:** Creating a comparable synthetic control for a unique entity like China is methodologically challenging.
- ▶ **Broader Impacts:** The study primarily focuses on internet censorship, possibly underestimating the wider social, psychological, and cultural effects.
- ▶ **Future Research Directions:** Suggests more granular studies at regional levels and exploration of broader societal impacts in subsequent research.

Thank You for Attending!

Any questions or comments?

Feel free to reach out:

Shreyas Meher

shreyas.meher@utdallas.edu