YouTube and Election Outcomes

Labor Brown Bag

Guillermo Lezama
Department of Economics
University of Pittsburgh

March 30, 2022

Motivation I

- Interest on the impacts of social media and the internet (Zhuravskaya et al., 2020)

Use of online platforms, apps varies – sometimes widely – by demographic group

% of U.S. adults in each demographic group who say they ever use ...

	YouTube	Facebook	Instagram	Pinterest	LinkedIn	Snapchat	Twitter	WhatsApp	TikTok	Reddit	Nextdoor
Total	81	69	40	31	28	25	23	23	21	18	13
Men	82	61	36	16	31	22	25	26	17	23	10
Women	80	77	44	46	26	28	22	21	24	12	16
White	79	67	35	34	29	23	22	16	18	17	15
Black	84	74	49	35	27	26	29	23	30	17	10
Hispanic	85	72	52	18	19	31	23	46	31	14	8
Ages 18-29	95	70	71	32	30	65	42	24	48	36	5
30-49	91	77	48	34	36	24	27	30	22	22	17
50-64	83	73	29	38	33	12	18	23	14	10	16
65+	49	50	13	18	11	2	7	10	4	3	8
<$30K	75	70	35	21	12	25	12	23	22	10	6
$30K-$49,999	83	76	45	33	21	27	29	20	29	17	11
$50K-$74,999	79	61	39	29	21	29	22	19	20	20	12
$75K+	90	70	47	40	50	28	34	29	20	26	20
HS or less	70	64	30	22	10	21	14	20	21	9	4
Some college	86	71	44	36	28	32	26	16	24	20	12
College+	89	73	49	37	51	23	33	33	19	26	24
Urban	84	70	45	30	30	28	27	28	24	18	17
Suburban	81	70	41	32	33	25	23	23	20	21	14
Rural	74	67	25	34	15	18	18	9	16	10	2

Motivation II

- User-generated content.
- Local News.
- Content is shareable outside YouTube.
- It was already popular 10 years ago.
- It demands special requirements to use (0.5 Mbps)

Question

- Do counties with more intense usage* of YouTube show a higher...
  - vote for third parties?
  - turnout?

- * What is intense usage?
  - Producing content
  - Sharing

- Mechanisms
  - local content + networks $\rightarrow$ more alternative content is consumed and less national/mainstream/political content is consumed $\rightarrow$ less involvement in two-party-election
  - less costs of entry of consumption $\rightarrow$ increase total consumption of YouTube videos $\rightarrow$ more involvement in two-party-election

- Roadmap
  - Lit Rev $\rightarrow$ Data $\rightarrow$ Design $\rightarrow$ Preliminary Results

Lit Rev and Contribution

- Internet on Political Outcomes (Boxell et al., 2017; Falck et al., 2014), 3G (Guriev et al., 2021)
- Social Media on Political Outcomes (Fergusson and Molina, 2019; Fujiwara et al., 2021), mental health (Braghieri et al., 2021)
- YouTube: social motive (Haridakis and Hanson, 2009), right-wing content (Ottoni et al., 2018)
- Sharing content on Political Outcomes (Vosoughi et al., 2018)
- Local content on Elections: (Oberholzer-Gee and Waldfogel, 2009; Wang, 2020)

Independent Variable

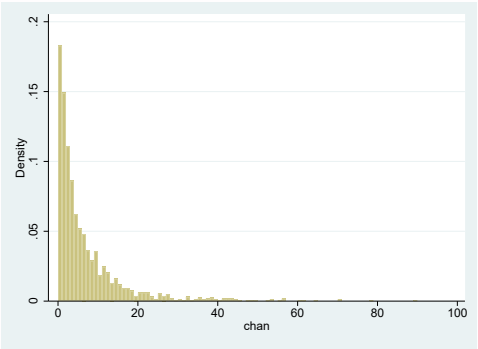
YouTube $\rightarrow$ Election Outcome

- Geotagged YouTube videos (and unique channels) [youtube-geofind, Wright(2021)]
  - Above median and above 75th. percentile

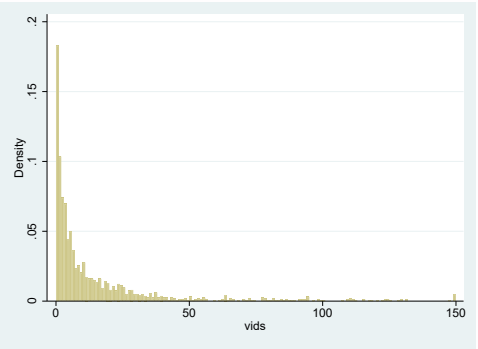
Other possible variables

- Geotagged tweets that share a YouTube link (Kinder-Kurlanda et al., 2017)
- Local Media Channels
  - media data (mediacontactslist.com)
  - search for channel on YT: date, videos, views, suscribers, comments.

Geotagged Content-Production



(a) Distribution of Channels



(b) Distribution of Videos

Outcome

YouTube $\rightarrow$ Election Outcome

- Political Choices: Turnout and vote to minor parties [MIT Election Lab]

Other possible outcomes

- Turnout in Local Elections [.]
- Tea Party Candidates and attendance to rallies (Li and Martin, 2021; Madestam et al., 2013)

Other Data

- 3G maps [Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services (FCC)]
- NHGIS

OLS Results

Table: OLS Regression

	Other	Other	Other	Other	Turnout	Turnout	Turnout	Turnout
Above Median (chan)	0.000				0.006			
	(0.000)				(0.003)			
Above Median (vids)		0.001*				0.005**		
		(0.000)				(0.001)		
Above 75th (chan)			0.000*				0.007*	
			(0.000)				(0.003)	
Above 75th (vids)				0.000				0.006**
				(0.000)				(0.001)
Observations	1,623	1,623	1,623	1,623	1,623	1,623	1,623	1,623
R-squared	0.890	0.891	0.890	0.890	0.766	0.766	0.767	0.766

Robust standard errors in parentheses
*** p< 0.01, ** p< 0.05, * p< 0.1

Design I: YouTube and 3G expansion (timeline)

- I follow Fujiwara et al. (2021)
- September 2006: $\sim 99\%$ lived in a county with cell coverage, but $\sim 62.6\%$ with 3G technology.
- June, 2007: First iPhone
- July, 2007, and November 28, 2007, CNN and YouTube produced televised presidential debates in which Democratic and Republican US presidential hopefuls fielded questions submitted through YouTube.
- Febraury, 2008: $\sim 83\%$ lived in a county with 3G coverage.
- January, 2008: $\sim 92\%$ lived in a county with 3G coverage.

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- Febraury, 2008: $\sim$ 83% lived in a county with 3G coverage.
- January, 2008: $\sim$ 92% lived in a county with 3G coverage.
- Summary: Treat$=0 \Leftrightarrow$(3G$<$Jan2008) & Treat$=1 \Leftrightarrow$(3G$>=$Jan2008)

Design II: 3G

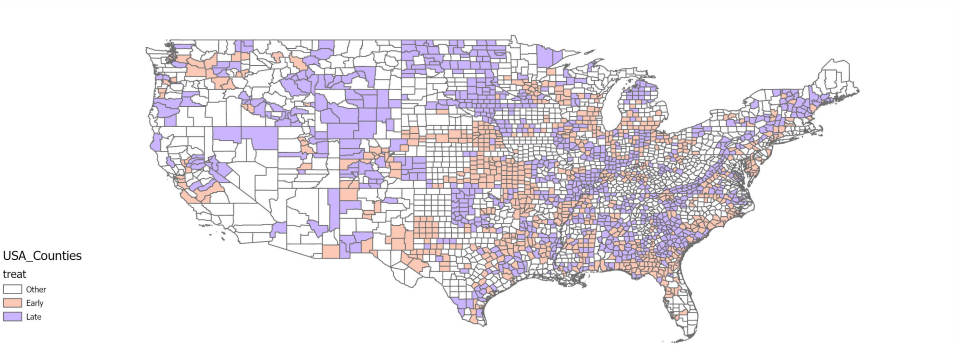

Figure: Counties according to their entry to the 3G network (early: 2007, late: 2008, Other: before 2007 or after 2008)

Balance of Early/Late

	Mean (Early)	Diff		Mean (Early)	Diff
% Hispanic	0.049	-0.030**	% College	0.458	-0.040***
% White	0.917	0.026**	% HS	0.322	0.020*
% Black	0.034	-0.009**	% Manufacture	0.103	0.003
% Asian	0.000	-0.000	% Information	0.018	-0.002**
% Age (20-29)	0.119	-0.007	% Poverty	0.087	0.013*
% Age (60+)	0.176	0.018**	Votes Bush (2000)	0.484	-0.006
Pop. Per Sq. Mi.	382.9	-119.327*	Turnout	0.583	0.010*
Pop decile	4.908	-0.782***			

- Both groups are not balanced
- Matching on observables

Balance

I explored two options:

- PS to select matches (concerns: King and Nielsen (2019))
- IPW and Kernel

Table: Balance with PSM

	Mean (Early)	Diff		Mean (Early)	Diff
% Hispanic	0.04	0.002	% College	0.56	-0.001
% White	0.92	0.000	% HS	0.28	-0.001
% Black	0.04	-0.003	% Manufacture	0.08	0.003
% Asian	0.00	0.000	% Information	0.03	0.000
% Age (20-29)	0.10	0.000	% Poverty	0.04	0.001
% Age (60+)	0.15	-0.001	Votes Bush (2000)	0.51	0.003
Pop. Per Sq. Mi.	738.4	-8.647	Turnout	0.60	-0.005
Pop decile	4.95	0.083			

Preliminary Results with PSM

Table: IV Estimation - PSM

	Other	Other	Other	Other	Turnout	Turnout	Turnout	Turnout
Above Median (chan)	-0.010				0.047			
	(0.011)				(0.101)			
Above Median (vids)		-0.025				0.114		
		(0.025)				(0.272)		
Above 75th (chan)			-0.004				0.021	
			(0.006)				(0.038)	
Above 75th (vids)				-0.006				0.029
				(0.008)				(0.056)
Observations	1,135	1,135	1,135	1,135	1,135	1,135	1,135	1,135
R-squared	0.431	0.017	0.503	0.494	0.641	0.489	0.665	0.658
F-stat	14.90	1.346	21.80	94.75	14.90	1.346	21.80	94.75

Robust standard errors in parentheses
*** p< 0.01, ** p< 0.05, * p< 0.1

Summary

- I want to look at whether I can identify some effects of YouTube usage
- YouTube usage is not only about consumption
- Next Steps
  - Define better the outcome
  - Get the mentioned data to compare the other two approaches

Thank you!

gul30@pitt.edu

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