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Twitter in Congress: Outreach vs Transparency*

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Abstract

The paper provides some support in favor of Twitter adoption being driven by *outreach* reasons, rather than the well-popularized *transparency* motive. Furthermore, outreach considerations factor into a Republican's perceived benefit more than a Democrat's.

Keywords: Government communication, diffusion of technology, political marketing, social media.

JEL: M3, O3.

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1 Introduction

The Economist recently touted - with caution - Twitter as an effective mechanism for government transparency¹. However, some skepticism must be preserved, as a confounding motive behind Twitter adoption is that of government *outreach*. As Felten (2009) concisely states: "outreach means government telling us what it wants us to hear; transparency means giving us the information that we, the citizens, want to get." Not surprisingly, many Americans are convinced that the Internet is simply a new venue for government propaganda (Smith and Rainie, 2008). We humor the cynics and attempt to tease out these two motives using a simple cost-benefit trade-off that underlies the adoption decisions² of those in the 111th House of Representatives.

We use hand-collected data on the Twitter adoption decisions of members in the 111th House of Representatives. Ultimately, the study finds that a representative's propensity to adopt increases with the number bills he/she sponsored, which we argue is a proxy for the perceived benefit associated with government outreach through Twitter. When we look closer at the adoption decisions across parties, we find that the amount of support (from the 2008 election) matters for Democrats, while the number of bills sponsored matters for Republicans. We take this general finding as suggesting that Democrats and Republicans benefit from Twitter in different ways. A bolder claim from our study says that Democrats care about transparency, while Republicans care about outreach.

Furthermore, we find evidence that the benefit associated with outreach is stronger for Republicans who belong to committees with a number of Democratic Twitter adopters. What is the story here? A representative who has sponsored a number of bills will want them to be passed by his/her peers. By using Twitter to reach out to the internet community, a representative can generate public support for certain policies, which in turn, can coerce ideological rivals to vote in favor of their policies. This effect should be most pronounced if a representative's ideological rivals are also Twitter users.

Looking at the perceived benefit associated with transparency, the estimates suggest that transparency matter more for less experienced Democratic congressional members, than their seasoned counterparts. Established politicians most likely have a loyal constituent base, while younger politicians have no reputation or experience to fall back on. Therefore, those with less experience have a stronger incentive to maintain communication channels with their constituents so as to build some

¹See the article Sweet to Tweet. *The Economist*, May 8, 2010.

²The framework used here is similar to that of Forman, Goldfarb and Greenstein (2005), who investigate the relationship between location and internet adoption.

level of trust.

Twitter is a recent micro-blogging craze in the burgeoning social media market³; by the end of 2008, there were over 3 million Twitter users (Comm, 2010). The basic idea of Twitter is that those who have accounts can write short messages (up to 140 characters) that can potentially be read by thousands (or millions). That said, a Twitter user's main objective is often to attract as many followers as possible, and keeping existing followers interested in their Tweets by posting compelling content. Unlike its most famous cousins, Facebook and Youtube, users cannot post pictures or videos on their Twitter feeds; although, they can post links containing this content. Twitter has outshined traditional blogs because of its ease and simplicity; no longer do bloggers have to spend countless hours writing online content, when all they need is a few seconds to send a Twitter post via Short Message Service (SMS)⁴ (McFedries, 2007). A Twitter user gets the most benefit by also following the content of others, as being a follower of a fellow Twitter user might generate some reciprocity in followings. That said, some of the most popular Twitter accounts are those who have many followers but only follow a handful of other accounts. Unlike the more traditional form of Blogging, Twitter users rely on the technology to market themselves as a quality brand, as opposed to a low cost way to generate advertising revenue. For example, the GOP Leader John Boehner has over 25000 followers and was following over 12000 users as of May 28, 2010.

Preceding forms of social media include MySpace, Real Simple Syndication (RSS), Flickr, Facebook and Youtube, launched in 2003, 1999, 2004, 2004 and 2005. MySpace and Facebook are primarily social networking sites, although Facebook attracts mostly college educated people, while MySpace is well known for its members belonging to the music and film industry. Both have been used as venues for naked self promotion. In fact, it has become common practice for employers to evaluate job candidates by their social networking sites⁵. RSS allows Internet users to easily and effortlessly subscribe to their favorite Blogs, such as New York Time's Freakonomics or Financial Time's Undercover Economist. Flickr and Youtube specialize in publishing user generated photos and videos, respectively. They provide an easy way to share content that would otherwise be hard to share due to their file sizes. Moreover, with the spread of high speed internet, online photo albums and video streams are more accessible than ever. Successful and well known users in social media are known for integrating and combining multiple sources to cross market their brand. Facebook users can Tweet and share Youtube videos, Youtube users can include links to their MySpace

³See Comm (2010) for a complete list and description of available social media outlets.

⁴See McFedries (2007) for further details.

⁵See article Employers Look at Facebook Too. *CBC News*, June 20, 2006.

videos for viewers who want more content and Facebook users can submit their Twitter messages through a Facebook Application. Finally, Twitter is an effective way of introducing a large audience to the same user's Blog. Drawing on popular culture, Apple super-fan iJustine and video Blogger Kevjumba have successfully capitalized on multiple social media platforms to promote themselves at viral levels.

2 Related literature

It should not be surprising that the role of Twitter in politics has been a topic of discussion in political science. Note however that past research on the role of Twitter in U.S. politics has mostly been descriptive and exploratory. Williams and Gulati (2010) and Lassen and Brown (2010) both find that Republicans have a greater propensity to adopt Twitter. This result is quite interesting, given that President Obama, a Democrat, is a leading advocate of social media in politics. To some extent, we build on this result and ask a deeper question about whether the underlying incentives behind Twitter adoption differs across party lines.

Although research about Twitter use in politics is relatively new in political science, this research has become increasingly popular in other fields⁶. Virtually all of the past research is concerned with answering the question: *How is Twitter used?*

Our work complements a recent paper by Golbeck, Grims and Rogers (2010) who analyze the content of Tweets among all U.S. politicians and find that 53% of all Twitter content generated by them contains information, which they define as statements that contains links, positions on relevant issues, or resources; this finding contradicts the popular criticism that Twitter is simply an online environment that incubates hipster narcissism (McFedries, 2007). While Golbeck, Grims and Rogers' (2010) results are interesting, they do not resolve the debate as to whether Twitter is being used for outreach or transparency reasons. It is not obvious that information revelation is used exclusively to portray honesty, or push some agenda.

The research on Twitter in politics is nested within existing research about the evolution of congressional communication over time⁷. Their conclusions overwhelmingly point to the importance of the Internet and communication. To summarize, the Internet has improved interactions between politicians and voters, and as a consequence, those who embrace the technology have seen much success; with better communication, comes better mobilization of voters who support for a

⁶For instance, there is research on the content and conversations within Twitter (Honeycutt and Herring, 2009), Twitter as word of mouth (Jansen et. al., 2009), and Twitter's relationship with social networks (Java et. al., 2007; Krishnamurthy, Gill, and Arlitt, 2008),

⁷To name a few, refer to Gulati (2004), Lipinski and Neddenriep (2004) and Oleszek (2007).

representative's agenda.

One may think of our work as extending that of Adler, Gent and Overmeyer (1998). In their study, they characterize those politicians who adopt, and among adopters, who solicits constituent casework. To some extent, the adoption of Internet shares a similar undertone with Twitter adoption. Our finding that younger politicians benefit more from transparency is similar to their finding that younger politicians are more likely to "emphasize or solicit casework in their homepages more than members who are electorally secure."

Social media in general has played an increasingly large role in politics around the world, especially so after the Franking Commission⁸ permitted unrestricted use of social media in congress. For example, Williams and Gulati (2009) find that the percentage of active Facebook users among candidates in the 2006 and 2008 elections increased from 17.8 to 69.9 percent. Other authors have found that internet communications and social media matter in politics (Gibson et al, 2003; and Smith and Rainie, 2008). Our paper takes as given that social media is relevant. During the 2008 Presidential race, Barack Obama devoted nearly 100 staff just to maintain his image on social media outlets⁹. Twitter also has the power of organizing large movements, such as the response of Mir-Hosseini Mousavi's supporters to Iran's disputed and controversial election outcome in 2009¹⁰. Social media has proved to be among the most important PR tools in modern politics, and continues to do so. Perhaps the most fitting quote to describe Twitter adoption in politics is by Ivor Tassell of the Globe and Mail (September 4, 2008)¹¹: "*Like rats scurrying up the ropes before an ocean liner departs, politicians have sharp noses for knowing when to hop aboard a trend.*"

3 Research framework

3.1 Data

Our cross-sectional sample of observations consists of all active congressmen and women of the 111th House of Representatives. To obtain detailed controls about each representative, we use a combination of the information provided on their own personal websites, the Biographical Directory of the United States Congress. Using these sources of information, we can find out how long each representative has been in office, incumbency status, the state and district he/she represents, how old they are, their gender, race, religion, education and previous occupation before serving the public. We augment this information with data from the 2000 U.S. Census for the districts that

⁸Body of government that regulates Congressional Mass communication.

⁹See the article Sweet to Tweet. *The Economist*, May 8, 2010.

¹⁰See the article Iran Protests: Twitter, the Medium of the Movement. *Time Magazine*, June 17, 2009.

¹¹The authors first discovered this quote on the blog on Twitter analysis, <http://blog.mastermaq.ca/>.

they represent, such as the population, median income and race distribution of their corresponding districts.

For each representative, we are able to identify whether they use Facebook, Flickr, MySpace, RSS, Twitter and/or Youtube¹². We first consult each representative's URL to see whether they are on Twitter or not¹³. However, some representatives do not reveal this information on their website. Therefore, to get a complete set of Twitter users in the 111th House of Representatives, we also consult aggregating sites such as <http://www.congressional140.com/tweeting.php> or <http://tweetcongress.org/list>. An online search is also conducted to identify some Twitter account holders who are not listed on these sites¹⁴.

The data also contains information about which committee(s) each representative belongs to. On average, each representative belongs to two committees. A representative's underlying interests and experience are major determinants as to which committees he/she will end up in. Moreover, each committee is chaired by a Democrat and has a ranked Republican member. Committees consist of disproportionately more Democrats than Republicans, so as to reflect the current proportion of Democrats in the House of Representatives. Finally, there are a total of 23 committees, each with a specific mandate and jurisdiction, that a representative can potentially be a member of.

From the Clerk for the House of Representatives, we obtain information about each representative's percentage of votes in the most recent 2008 election, as well as the number of bills that the representative has sponsored during the 111th session.

3.2 Empirical methodology

When each representative has to make a decision as to adopt Twitter or not, costs and benefit must be weighed. We will observe a representative adopting Twitter if and only if the net benefit, benefit minus cost, exceeds zero. It is natural to consider a simple probit model of adoption, where the latent utility is equal to the net benefit and some idiosyncratic noise. We now argue that certain variables in our data can be used to proxy for the latent utility, either through benefit or cost.

3.2.1 Perceived benefit of adoption

We stipulate that the main factors in the perceived benefits of Twitter adoption are peer effects, outreach and/or transparency. Peer effects can increase the benefit of adopting Twitter, either

¹² All of this information was collected on the same day.

¹³ We are also able to identify when they adopted Twitter by observing the date of their first Twitter post.

¹⁴ Some care is taken in this procedure, as searches occasionally generated potentially fake Twitter accounts under the name of certain representatives. To avoid this dubious information, we only consider those representatives who have *verified* Twitter accounts.

through network or learning channels. As more of a representative's peers are also Twitter users, the utility associated with adopting Twitter also increases, as Twitter allows users to interact with one another through user-to-user replies. Alternatively, the amount of adoption among peers may yield a favorable signal about uncertain merit regarding Twitter's effectiveness as a political marketing tool. The amount of peer adoption is measured by the percentage of peer adopters, where peers are defined by social networks formed by common committees that representatives belong in¹⁵.

Transparency is meant to keep each representative honest. Voters will reward those politicians they deem as being the most trustworthy. A representative who won the most recent election by a large margin has only a valuable reputation to lose. Therefore, Twitter gives each representative a public venue to share intimate details about daily activities. A politician who has strong constituent support has an incentive to stay connected with his/her followers so as to maintain transparency. In this case, the percentage of votes from the 2008 election serves as a proxy for the strength of constituent support.

Alternatively, government outreach allows a politician to control the information that is released to his/her constituents. To some extent, a politician's brand can be protected or augmented through outreach. A member of congress who has sponsored a large number of bills will have a greater incentive to use Twitter as a way to push his/her political agenda by feeding the public mediated information. Reaching the public in this "grass-roots" manner may be especially important when the representative needs public support for his/her policy initiatives. Therefore, we use the number of sponsored bills during the 111th session as a proxy for the benefit associated with outreach.

3.2.2 Perceived cost of adoption

As with the adoption of any technology, there are adoption costs. These costs, however, may be lower for representatives with prior knowledge or experience about social media; in particular, if

¹⁵In a similar manner as Cohen and Malloy (2010) -to avoid identification of peer effects off of social network size - we define

$$percentage_same_party_adopters_i = \frac{number_same_party_adopters_i}{number_same_party_peers_i}$$

where $number_same_party_adopters_i$ is a count of the number of same party adopters in the same committees as i , while $number_same_party_peers_i$ is a count of the number of same party members in the same committees as i . To control for exogenous committee characteristics, we also include

$$percentage_same_party_peers_i = \frac{number_same_party_peers_i}{number_peers_i}$$

where $number_peers_i$ is the size of i 's committee social network. We include exogenous committee characteristics so as to control for contextual peer effects (Manski, 1993). Refer to Manski (2000) for further details about the identification of peer effects.

they have had experience with similar social media outlets such as Facebook, Flickr, MySpace, RSS and/or Youtube. Given the close similarities between Facebook and Twitter, our prior is that Facebook serves as the best proxy for social media familiarity.

The use of Twitter is not free of opportunity costs, as posting Twitter messages uses up a representative's own time, or his/her staffer resources. Their opportunity cost should especially large if they belong to a number of committees. Time spent away from committee duties can have serious consequences on important policy decisions, especially so if a representative is a chair.

4 Main results

Our results suggest that Twitter adoption is driven by both cost and benefit considerations. The proxies for MySpace, RSS, Flickr, Facebook and Youtube adoption have positive effects on the adoption of Twitter, especially so for Facebook. This result supports our hypothesis that those politicians who are tech-savvy face lower adoption costs than those who are not. Members of congress who belong to a large number of committees and/or are committee chairs are less likely to adopt Twitter, which suggests an opportunity cost associated with Twitter use.

A major benefit associated with Twitter is driven by peer effects¹⁶. The percentage of own party adopters within a committee network has a marginal effect of 1.02 (0.35). Using the entire sample, we find that the number of bills has a positive and significant influence on the propensity to adopt, while the percentage of 2008 votes does not matter. At first glance, this result suggests that outreach outweighs transparency when representatives formulate the benefits of adopting Twitter. However, if we repeat the cost-benefit analysis across party lines, we get a rather different picture.

The marginal effect¹⁷ of the percentage of votes in 2008 is 0.58 (0.27) for Democrats, while it is 0.17 (0.48) for Republicans. This result supports the conjecture that the benefit associated with communicating with one's own constituents is largest for Democrats. Outreach serves as a more important benefit to Republicans, as the marginal effect associated with the number of bills is 0.01 (0.0044) as opposed to 0.003 (0.0024) for Democrats. Furthermore, we see that the marginal effect of the percentage of own party adopters within a committee network is 1.17 (0.52) for Republicans, and 1.50 (0.77) for Democrats, which suggests that peer effects impact adoption decisions across party lines.

A large concentration of Twitter adoption occurred around January 2009¹⁸, which is the time

¹⁶Peer effects may materialize through network or learning effects. Investigating this further is beyond the scope of this paper. Our companion paper demonstrates that these peer effects are related to social learning.

¹⁷Standard errors in parenthesis.

¹⁸Refer to the histograms in the appendix.

in which a number of new staffers began to work for the representatives. This exogenous event may bias our estimates for the bills effect upwards, as the staffers likely assist in both the initiation of bills, as well as activity on Twitter. We attempt to control for this event by repeating the probit estimations, except omitting those representatives who adopted Twitter 100 days before or after January 20, 2009. Even after controlling for this event, the effect that the number of bills has on the rate of adoption is still significant, and especially so for Republicans.

4.1 Extensions

Two follow up questions naturally arise: 1) *How does the benefit associated with outreach accrue?* and 2) *Who benefits the most from transparency?* Answering these questions will provide us a deeper understanding about the latent incentives behind Twitter adoption.

We demonstrate that, at least for Republicans, the rate of adoption is higher if a representative has sponsored a large number of bills and belongs to committees with a large proportion of Democratic Twitter adopters¹⁹. The benefit associated with outreach is substantial if Twitter can be used to garner public support for certain policies, which in turn, generates support from political rivals. This benefit should be especially pronounced if a large percentage of rivals are also Twitter users, who consequently are more likely pay attention to peers' Twitter activity.

To answer the second question, we focus on the interaction between the number of votes and a representative's experience. One may conjecture that transparency is most important to unseasoned politicians - in their *expansionist* stage - who have the most to prove, as their experienced counterparts have years of experience - in their *protectionist* stage - and success to help generate the public's trust. The estimates from our sub-sample of Democrats certainly support this story, as the positive effect on adoption associated with the number of past votes in 2008 is smaller for more experienced politicians²⁰. Indeed, the incentive to maintain open communication channels with constituents is strongest for younger politicians. In some sense, this result is analogous to Adler, Gent and Overmeyer's (1998) finding that younger (Democratic) politicians are more likely to adopt websites that contain their openness towards constituent casework. However, contrary to their study, representatives who adopt Twitter are electorally secure.

¹⁹This assertion is made after calculating the marginal effects using the Ai and Norton (2003) technique.

²⁰As before, this assertion is made after calculating the marginal effects using the Ai and Norton (2003) technique.

5 Concluding remarks

Our study uncovers heterogeneity in the benefits of Twitter adoption across political parties, which leads us to conclude that transparency matters for Democrats, while outreach matters for Republicans. We later show that the perceived benefit of outreach is related to the impact it could have in influencing political rivals who are also on Twitter, while the perceived benefit of transparency is related to a representative's experience. In general, this paper provide additional insight into the recent popular culture debate about Twitter's relevance in effective government communication, using a standard model of innovation adoption along with hand-collected data.

This study falls short of identifying the role that constituents play in social media. Even if the motivation behind Twitter adoption is related to transparency, there is no guarantee that politicians will use the Twitter activity of their constituents beyond the scope of information gathering. While we are certain that politicians keep track of their constituents' Tweets, we are uncertain whether these Tweets have any influence on important legislature. For this reason, we (and other researchers) are eagerly waiting for the public release of the Library of Congress' archived Twitter data so as to paint a clearer picture about the interactions between constituents and representatives á la Twitter²¹.

References

- [1] Adler, Gent and Overmeyer (1998). The Home Style Homepage: Legislator Use of the World Wide Web for Constituency Contact. *Legislative Studies Quarterly* 23.
- [2] Ai, C. and Norton, E (2003). Interaction terms in logit and probit models. *Economic Letters* 80.
- [3] Cohen, L. and Malloy, C (2010). Friends in High Places: Peer Effects and Politics. Working paper.
- [4] Comm, J (2010). *Twitter Power 2.0*. Wiley & Sons: New Jersey.
- [5] Felten, E (2009). Government online: Outreach vs. transparency. Retrieved on June 1, 2010 from <http://freedom-to-tinker.com/blog/felten/government-online-outreach-vs-transparency>. *Princeton's Center for Information Technology Policy*.

²¹Refer to the April 14, 2010 post at <http://twitter.com/librarycongress>.

- [6] Forman, Goldfarb and Greenstein (2005). How Did Location Affect Adoption of the Commercial Internet: Global Village vs. Urban Leadership. *Journal of Urban Economics* 58.
- [7] Gibson et al (2003). Election Campaigning on the WWW in the USA and UK: A Comparative Analysis. *Party Politics* 9.
- [8] Golbeck, Grims, and Rogers (2010). Twitter Use by the U.S. Congress. *Journal of the American Society for Information Science and Technology* 61.
- [9] Gulati, G (2004). Members of Congress and Presentation of Self on the World Wide Web. *The Harvard International Journal of Press/Politics* 9.
- [10] Honeycutt, C. and Herring, S (2009). Beyond Microblogging: Conversation and Collaboration via Twitter. *Proceedings of the 42nd Hawaii International Conference on System Sciences*.
- [11] Jansen et. al (2009). Twitter Power: Tweets as Electronic Word of Mouth. *Journal of the American Society for Information Science and Technology* 60.
- [12] Java et. al (2007). Why We Twitter: Understanding Microblogging Usage and Communities. *Proceedings of the Joint 9th WEBKDD*.
- [13] Krishnamurthy, Gill and Arlitt (2008). A Few Chirps About Twitter. *Proceedings of the first workshop on Online social networks*.
- [14] Lassen, D. and Brown, A (2010). Twitter: The Electoral Connection? Meeting of the Midwest Political Science Association.
- [15] Lipinski, D. and Neddenriep, G (2004). Using "New" Media to Get "Old" Media Coverage: How Members of Congress Utilize their Web Sites to Court Journalists. *The Harvard International Journal of Press/Politics* 9.
- [16] Manski, C (2000). Economic Analysis of Social Interactions. *Journal of Economic Perspectives* 14.
- [17] Manski, C (1993). Identification of Endogenous Social Effects: The Reflection Problem. *The Review of Economic Studies* 60.
- [18] McFedries, P (2007). Technically speaking: All a-Twitter. *IEEE Spectrum* 44.
- [19] Oleszek, W (2007). Congress and the Internet: Highlights. *CRS Report for Congress*.

- [20] Smith, A. and Rainie, L (2008). The internet and the 2008 election. *PEW Internet and American Life Project*.
- [21] Williams, C. and Gulati, G (2010). Communicating with Constituents in 140 Characters or Less: Twitter and the Diffusion of Technology Innovation in the United States Congress. Meeting of the Midwest Political Science Association.
- [22] Williams, C. and Gulati, G (2009). Social Networks in Political Campaigns: Facebook and Congressional Elections 2006, 2008. Working paper.

6 Appendix

6.1 Detailed data description

A list of the variables and short descriptions for each are provided below:

1. The variables $\log(\text{Population})$, $\log(\text{Income})$ and the percentage of black residents are based on the population numbers from the 2000 U.S. Census (as this study was conducted before the 2010 Census).
2. Personal information about each candidate, such as gender, race, education, age, tenure, party affiliation, profession and religion were collected using a combination of the directory of representatives, their personal websites, and Wikipedia. Information common to all sources were cross referenced with one another to ensure that the accuracy of our information was not dependent on the source. The information about education and past occupation are based on the representative's most recent degree and professions. We categorize education and profession using two dummy variables, a dummy that indicates whether the representative went to an Ivy League school, and another dummy that indicates whether the representative was an attorney, judge or lawyer. Furthermore, we categorize religion using a dummy indicating whether a candidate is Catholic or not. A representative's tenure is based on the number of years he/she has been in office as a representative in the House of Representatives. We do not count past experience in state level politics towards our measure of tenure.
3. MySpace, RSS, Flickr, Facebook, and/or Youtube use are indicated on each representative's personal homepage. Because of the amount of identity theft in social media, we do not indicate that a representative adopted a particular technology, unless it is explicitly stated on their website; even if an Internet search produces a Facebook link to that representative. On

the other hand, we are able to use both the representative's endorsement within a homepage as well as Internet searches to identify Twitter use because of Twitter's "verified" feature, which ensures that the online persona corresponds to its true corresponding identity. The date of the first Twitter post was collected by going to each user's first page of posts and recording the date of the earliest one.

4. Voting data from 2008 was collected from <http://clerk.house.gov/>. The variable party votes corresponds to the percentage of votes in favor of the presidential candidate corresponding to the representative's party loyalties. The percentage of votes in favor of the representative himself/herself is captured by the variable representative votes.
5. Each representative belongs to as few as 0 and as many as 4 committees. We identify which committees each representative belongs to by going to each committee's website and looking up its membership. The committees that we consider are the committees on agriculture, appropriations, armed service, budget, education, energy, financial services, foreign relations, homeland security, house administration, economic, taxation, judiciary, natural resources, oversight, intelligence, rules, science and technology, small business, official conduct, transportation and infrastructure, and ways and means.
6. We include the number of bills sponsored by each representative in our analysis. This information is obtained for the 111th House of Representatives (2009-2010). Furthermore, we can also identify all representatives that are chairs or ranked members of committees. The data was collected on June 11, 2010.

Table 1: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Twitter adoption	0.418	0.494	0	1	438
log(Population)	13.364	0.214	10.96	15.2	438
log(Income)	10.643	0.262	9.620	11.43	438
Percentage black	12.637	15.963	0	96.400	438
Gender	0.167	0.373	0	1	438
Black	0.082	0.275	0	1	438
Catholic	0.292	0.455	0	1	438
Law	0.352	0.478	0	1	438
Ivy league school	0.098	0.298	0	1	438
Age	57.333	10.16	28	86	438
Incumbent	0.861	0.347	0	1	438
Tenure	9.550	8.711	0	54	438
Democrat	0.598	0.491	0	1	438
Party votes	0.516	0.1	0	0.96	432
Representative votes	0.656	0.125	0.27	1	427
Number of committees	1.936	0.826	0	4	438
MySpace	0.014	0.116	0	1	438
RSS	0.573	0.495	0	1	438
Flickr	0.151	0.358	0	1	438
Facebook	0.571	0.496	0	1	438
Youtube	0.731	0.444	0	1	438
Bills	18.018	12.45	0	96	438
Chair	0.103	0.304	0	1	438
Percentage same party adopters	0.403	0.182	0	0.889	438
Percentage other party adopters	0.461	0.189	0	0.889	438
Percentage same party peers	0.512	0.148	0	1	438
Percentage other party peers	0.459	0.142	0	0.697	438

Table 2: Baseline probit regression results. Column (1) contains the full set of observation. Column (2) uses only the subset of representatives who are members of the Democratic party, while column (3) uses only the subset of representatives who are members of the Republican party.

	(1)		(2)		(3)	
	Full sample		Democrat		Republican	
log(Population)	0.372	(1.593)	2.420	(2.546)	-3.065	(2.181)
log(Income)	0.171	(0.314)	0.722	(0.454)	-0.503	(0.535)
Percentage black	0.00491	(0.00557)	-0.00201	(0.00762)	0.0250	(0.0142)
Gender	0.165	(0.178)	-0.0762	(0.233)	0.904*	(0.394)
Black	-0.582	(0.342)	-0.370	(0.421)		
Catholic	0.0492	(0.161)	0.0703	(0.209)	-0.255	(0.293)
Law	-0.0613	(0.149)	0.0511	(0.206)	-0.218	(0.238)
Ivy league school	0.383	(0.227)	0.465	(0.263)	0.549	(0.527)
Age	-0.0120	(0.00821)	-0.00288	(0.0111)	-0.0229	(0.0154)
Incumbent	-0.376	(0.234)	-0.355	(0.305)	-0.561	(0.434)
Tenure	-0.00910	(0.0115)	-0.0112	(0.0139)	-0.00549	(0.0206)
Democrat	-0.474	(0.549)				
Party votes	-0.0695	(0.688)	-0.498	(0.904)	-1.409	(1.337)
Representative votes	1.236	(0.657)	1.869*	(0.863)	0.444	(1.285)
Number of committees	-0.132	(0.104)	-0.0628	(0.159)	-0.168	(0.156)
MySpace	1.099	(0.726)			-0.316	(0.661)
RSS	0.264	(0.146)	0.466*	(0.196)	-0.0834	(0.241)
Flickr	0.407*	(0.187)	0.237	(0.258)	0.579*	(0.295)
Facebook	0.709***	(0.154)	0.929***	(0.214)	0.521*	(0.257)
Youtube	0.0744	(0.183)	0.102	(0.236)	0.273	(0.351)
Bills	0.0144*	(0.00577)	0.00926	(0.00775)	0.0281*	(0.0118)
Chair	-0.186	(0.246)	-0.177	(0.360)	-0.128	(0.356)
Percentage same party adopters	2.625**	(0.907)	4.831	(2.473)	3.124*	(1.398)
Percentage other party adopters	0.762	(0.695)	0.112	(1.227)	1.078	(1.497)
Percentage same party peers	-1.465	(0.822)	-2.099	(1.128)	-4.358	(3.719)
Percentage other party peers	-1.925	(1.096)	-1.625	(2.113)	-0.980	(1.801)
Constant	-6.981	(21.42)	-41.65	(34.44)	48.22	(30.21)
Observations	427		249		175	
McFadden R^2	0.222		0.192		0.206	
BIC	616.6		380.0		315.5	

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Probit regression results using a sub-sample of representatives who did not adopt Twitter a 100 days before and after January 20, 2009. Column (1) contains the full set of observation. Column (2) uses only the subset of representatives who are members of the Democratic party, while column (3) uses only the subset of representatives who are members of the Republican party.

	(1)		(2)		(3)	
	Full sample		Democrat		Republican	
log(Population)	0.674	(2.159)	3.417	(2.826)	-7.397	(4.261)
log(Income)	0.0263	(0.357)	0.320	(0.523)	-0.756	(0.842)
Percentage black	0.00511	(0.00651)	-0.000963	(0.00831)	0.0273	(0.0153)
Gender	0.312	(0.215)	0.101	(0.268)	1.319*	(0.596)
Black	-0.506	(0.400)	-0.261	(0.474)		
Catholic	0.137	(0.189)	0.259	(0.240)	0.0991	(0.471)
Law	-0.167	(0.176)	0.0237	(0.232)	-0.918*	(0.365)
Ivy league school	0.421	(0.269)	0.478	(0.308)	1.339	(0.757)
Age	-0.0136	(0.00945)	-0.0107	(0.0128)	-0.0118	(0.0190)
Incumbent	-0.452	(0.290)	-0.400	(0.356)	-0.965	(0.608)
Tenure	0.00363	(0.0131)	0.00348	(0.0165)	0.0228	(0.0274)
Democrat	-0.596	(0.619)				
Party votes	-0.327	(0.810)	-0.258	(1.230)	-2.384	(2.164)
Representative votes	1.081	(0.788)	1.475	(0.982)	1.371	(1.838)
Number of committees	-0.0968	(0.119)	-0.0177	(0.178)	0.0581	(0.226)
MySpace	0.899	(0.859)			-0.108	(0.775)
RSS	0.302	(0.171)	0.414	(0.218)	0.233	(0.391)
Flickr	0.488*	(0.223)	0.429	(0.288)	0.454	(0.629)
Facebook	0.712***	(0.190)	0.921***	(0.267)	1.257**	(0.448)
Youtube	0.0536	(0.215)	0.138	(0.273)	-0.487	(0.511)
Bills	0.0188**	(0.00659)	0.0111	(0.00900)	0.0546***	(0.0161)
Chair	-0.279	(0.260)	-0.245	(0.390)	-0.0502	(0.481)
Percentage same party adopters	2.083	(1.095)	6.137*	(2.796)	2.465	(2.054)
Percentage other party adopters	0.848	(0.766)	-0.0149	(1.333)	0.938	(2.193)
Percentage same party peers	-1.387	(0.899)	-2.762*	(1.298)	-6.956	(5.098)
Percentage other party peers	-1.865	(1.305)	-1.676	(2.309)	0.349	(2.434)
Constant	-9.549	(29.22)	-50.69	(38.19)	107.1	(59.19)
Observations	341		221		99	
McFadden R^2	0.196		0.204		0.295	
BIC	482.0		310.6		200.5	

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: How does the benefit associated with government outreach accrue through Twitter adoption? Column (1) contains the full set of observation. Column (2) uses only the subset of representatives who are members of the Democratic party, while column (3) uses only the subset of representatives who are members of the Republican party.

	(1)		(2)		(3)	
	Full sample		Democrat		Republican	
log(Population)	0.358	(1.592)	2.426	(2.541)	-2.839	(2.163)
log(Income)	0.165	(0.314)	0.717	(0.454)	-0.521	(0.532)
Percentage black	0.00491	(0.00555)	-0.00193	(0.00762)	0.0204	(0.0141)
Gender	0.170	(0.179)	-0.0732	(0.234)	0.787*	(0.388)
Black	-0.565	(0.341)	-0.362	(0.419)		
Catholic	0.0488	(0.161)	0.0711	(0.209)	-0.237	(0.301)
Law	-0.0606	(0.149)	0.0528	(0.205)	-0.217	(0.240)
Ivy league school	0.375	(0.227)	0.458	(0.265)	0.506	(0.528)
Age	-0.0121	(0.00823)	-0.00296	(0.0112)	-0.0206	(0.0158)
Incumbent	-0.379	(0.234)	-0.358	(0.305)	-0.538	(0.437)
Tenure	-0.00895	(0.0115)	-0.0110	(0.0140)	-0.0126	(0.0209)
Democrat	-0.518	(0.557)				
Party votes	-0.0443	(0.691)	-0.488	(0.904)	-1.567	(1.335)
Representative votes	1.244	(0.656)	1.874*	(0.860)	0.389	(1.347)
Number of committees	-0.131	(0.103)	-0.0624	(0.159)	-0.209	(0.158)
MySpace	1.088	(0.723)			-0.205	(0.666)
RSS	0.261	(0.147)	0.465*	(0.196)	-0.0972	(0.241)
Flickr	0.405*	(0.187)	0.241	(0.258)	0.604*	(0.292)
Facebook	0.712***	(0.155)	0.927***	(0.214)	0.473	(0.259)
Youtube	0.0768	(0.183)	0.104	(0.237)	0.215	(0.355)
Bills	0.0194	(0.0140)	0.0138	(0.0236)	-0.0891	(0.0643)
Chair	-0.187	(0.246)	-0.188	(0.366)	-0.0949	(0.363)
Percentage same party adopters	2.564**	(0.917)	4.827	(2.474)	2.736	(1.444)
Percentage other party adopters	0.979	(0.899)	0.275	(1.443)	-3.349	(2.999)
Percentage same party peers	-1.425	(0.822)	-2.076	(1.130)	-3.171	(3.754)
Percentage other party peers	-1.922	(1.096)	-1.599	(2.110)	-1.504	(1.800)
Bills * Percentage other party adopters	-0.0103	(0.0270)	-0.00782	(0.0386)	0.418	(0.222)
Constant	-6.804	(21.40)	-41.80	(34.40)	46.91	(29.82)
Observations	427		249		175	
McFadden R^2	0.222		0.192		0.220	
BIC	622.5		385.5		317.4	

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: Who benefits the most from transparency? Column (1) contains the full set of observation. Column (2) uses only the subset of representatives who are members of the Democratic party, while column (3) uses only the subset of representatives who are members of the Republican party.

	(1)		(2)		(3)	
	Full sample		Democrat		Republican	
log(Population)	0.441	(1.589)	2.605	(2.530)	-3.079	(2.181)
log(Income)	0.156	(0.314)	0.717	(0.453)	-0.495	(0.533)
Percentage black	0.00442	(0.00558)	-0.00353	(0.00761)	0.0263	(0.0145)
Gender	0.149	(0.179)	-0.128	(0.240)	0.882*	(0.396)
Black	-0.552	(0.337)	-0.297	(0.413)		
Catholic	0.0608	(0.161)	0.0792	(0.212)	-0.278	(0.297)
Law	-0.0415	(0.150)	0.0844	(0.208)	-0.251	(0.248)
Ivy league school	0.373	(0.226)	0.452	(0.264)	0.513	(0.520)
Age	-0.0119	(0.00821)	-0.00292	(0.0112)	-0.0239	(0.0156)
Incumbent	-0.484*	(0.242)	-0.641*	(0.319)	-0.500	(0.440)
Tenure	0.0536	(0.0445)	0.129*	(0.0639)	-0.0686	(0.0912)
Democrat	-0.403	(0.557)				
Party votes	-0.0483	(0.688)	-0.610	(0.913)	-1.383	(1.340)
Representative votes	2.066*	(0.939)	3.589**	(1.187)	-0.553	(1.866)
Number of committees	-0.136	(0.103)	-0.0675	(0.158)	-0.159	(0.156)
MySpace	1.072	(0.729)			-0.296	(0.654)
RSS	0.254	(0.147)	0.421*	(0.197)	-0.100	(0.243)
Flickr	0.405*	(0.188)	0.254	(0.262)	0.607*	(0.304)
Facebook	0.704***	(0.154)	0.931***	(0.213)	0.536*	(0.257)
Youtube	0.0863	(0.183)	0.116	(0.235)	0.264	(0.352)
Bills	0.0141*	(0.00577)	0.00930	(0.00782)	0.0300*	(0.0123)
Chair	-0.201	(0.246)	-0.325	(0.376)	-0.140	(0.356)
Percentage same party adopters	2.715**	(0.921)	5.556*	(2.534)	3.032*	(1.405)
Percentage other party adopters	0.665	(0.705)	-0.0304	(1.262)	1.206	(1.527)
Percentage same party peers	-1.484	(0.826)	-2.185	(1.136)	-4.343	(3.719)
Percentage other party peers	-1.932	(1.098)	-2.021	(2.118)	-0.990	(1.801)
Representative votes * tenure	-0.0921	(0.0647)	-0.196*	(0.0888)	0.102	(0.141)
Constant	-8.209	(21.38)	-44.82	(34.25)	48.89	(30.24)
Observations	427		249		175	
McFadden R^2	0.224		0.205		0.208	
BIC	621.2		381.4		320.3	

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 1: Concentration of Twitter adoption around the date January 20, 2009.

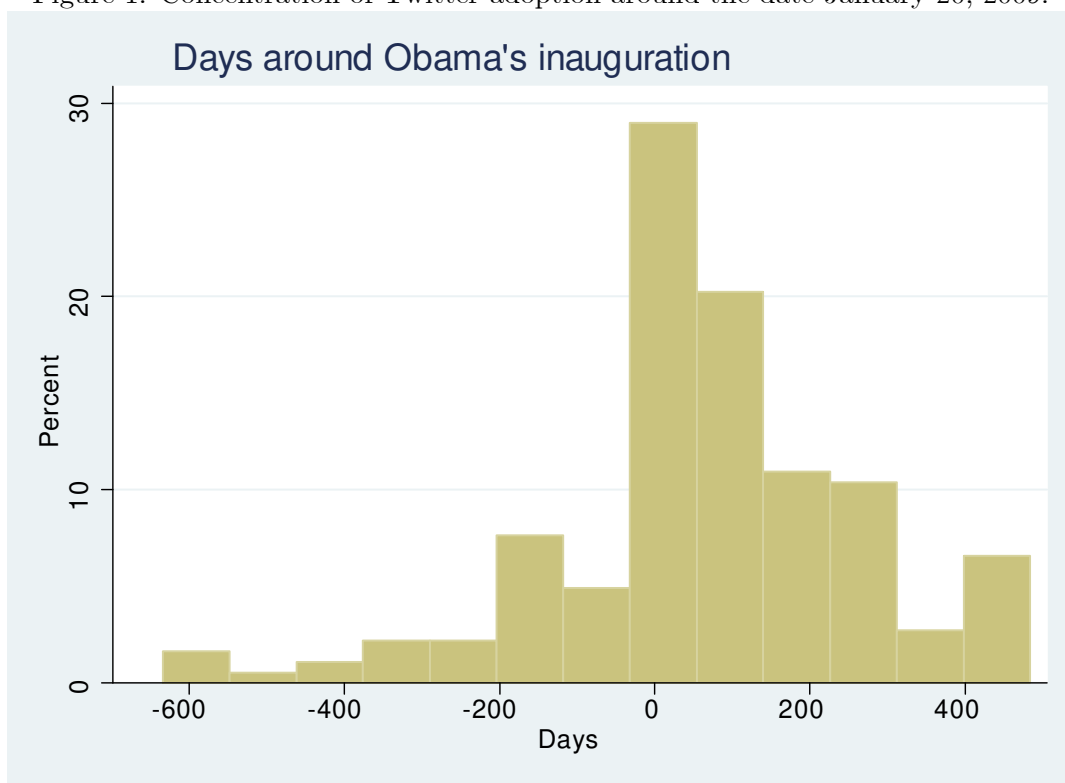


Figure 2: Concentration of Twitter adoption around the date January 20, 2009 across parties.

