

Registration Deadlines and Turnout in Context

Greg Vonnahme

Published online: 13 July 2011
© Springer Science+Business Media, LLC 2011

Abstract This paper analyzes the effect of registration deadlines on voter turnout. The theoretical explanation considers how registration deadlines affect turnout when individuals influence the participation of others. The theoretical model leads to a novel empirical hypothesis, that deadlines can have both a direct and indirect effect on turnout through a behavioral contagion process. The paper reports empirical findings that confirm the theoretical expectations. These results have important implications for future research on registration deadlines and Election Day registration as the effects of these reforms depend on the specific social context in which they are adopted.

Keywords Voter registration · Closing dates · Turnout · Networks

This paper analyzes the effect of voter registration deadlines on turnout. A large literature examines the effects of registration on turnout (e.g. Mitchell and Wlezien 1995; Highton 1997, 2004; Ansolabehere and Konisky 2006) and numerous specific characteristics such as mail-in registration, Motor Voter, residency requirements, and portability (Wolfinger and Rosenstone 1980; Highton and Wolfinger 1998; Knack 2005; Brown and Wedeking 2006; McDonald 2008). While several aspects of voter registration have been examined, many studies focus on the effect of Election Day registration on turnout (Fenster 1994; Rhine 1995, 1996; Highton

Electronic supplementary material The online version of this article (doi:10.1007/s11109-011-9174-9) contains supplementary material, which is available to authorized users.

G. Vonnahme (✉)
Department of Political Science, University of Alabama, Box 870213, Tuscaloosa, AL 35487, USA
e-mail: gvonnahme@ua.edu

1997; Knack and White 2000; Knack 2001; Brians and Grofman 2001; Hanmer 2007).

While previous studies examine a number of different characteristics of voter registration laws, these studies share a common theoretical framework. That is, registration reforms are thought to lower the costs of registration, penultimately increasing rates of registration, and ultimately increasing voter turnout. This is most clearly stated in a study of Election Day registration by Brians and Grofman (2001), “The intuition underlying the assumption that shorter closing dates (i.e., ability to register closer to election day) should increase turnout is quite simple. Allowing voter registration closer to the climax of an electoral campaign should reduce peripheral voters’ costs, thereby increasing turnout” (p. 171). The theoretical understanding of voter registration found in many existing studies posits that shorter deadlines lower the costs of registration and that this is particularly important towards the end of a campaign (Gopoian and Hadjiharalambous 1994; Fournier et al. 2004; Gimpel et al. 2007).

The prevailing theoretical argument is predicated on individuals autonomously deciding whether to vote without regard for whether others vote. For example, if shorter deadlines lower a person’s costs of voting then she is more likely to vote and whether anyone else is more or less likely to vote has no effect on her decision. This assumption is problematic as studies of voting behavior have found that individuals are more likely to vote when social acquaintances vote (e.g. Glaser 1959; Straits 1990; Kenny 1992; Nickerson 2008). This suggests that the prevailing theoretical explanation for the relationship between registration deadlines and turnout is incomplete, as studies of voting behavior show that this assumption, on which current theoretical arguments are predicated, is unwarranted. Alternatively, we argue that shorter deadlines will not only lower the costs of voting for the individual, but also the costs of voting for everyone else. By making others more likely to vote there is a secondary effect of shorter deadlines which is not strictly confined to newly registered voters.

The article proceeds by reviewing existing studies which demonstrate that turnout is contagious in that a person is more likely to vote if her social acquaintances vote. We then address whether and how turnout contagion creates an additional indirect effect of registration deadlines that is unaccounted for in existing research. The conclusion summarizes the main findings and discusses the implications of these results for our understanding of registration deadlines and election reforms in general.

Is Voting Contagious?

Existing theoretical arguments of studies of voter registration deadlines assume that individuals make turnout decisions in isolation from one another. These arguments assume that voting is not contagious and the effect of deadlines is strictly confined to the individual. Yet behavioral research suggests that turnout decisions are affected by one’s friends and family members (Berelson et al. 1954; Glaser 1959; Straits 1990; Kenny 1992; Huckfeldt and Sprague 1995; Cutts and Fieldhouse

2009). These findings are contrary to the assumption that individuals decide to vote or not in isolation from one another.

A possible objection to these studies is that they are observational. While there is a strong positive association of voter turnout between social acquaintances, it could result from other factors not related to contagion. For example, an elderly, well-educated, politically interested person is more likely to vote and possibly more likely to associate with similar individuals (who are also likely voters). If true, voting might not be contagious but coincidental with other factors related to social ties.

Several studies report experimental results that exclude this possibility. Laboratory experiments have been used to examine theories of voter turnout by having subjects complete participation games under different conditions (Schram and Sonnemans 1996a; Levine and Palfrey 2007). While most laboratory experiments prevent individuals from interacting with one another, Schram and Sonnemans (1996b) report results from several experiments in which subjects were allowed to interact with one another. They found that when subjects were allowed to interact, participation (i.e. turnout) increased substantially. These results cannot be attributed to confounding factors as interactions between subjects were determined by the researchers.

Results from a field experiment reported by Nickerson (2008) provide additional evidence of turnout contagion. In his study, households were randomly selected to receive a voter mobilization message. Such messages are known to increase voter turnout among recipients of the message (e.g. Gerber and Green 2000). Nickerson found that not only did the probability of voting increase among the individuals that received the message (by about 10%) but the probability of voting also increased for everyone else in the household as well (around 6%). A separate field experiment reported by Gerber et al. (2008) suggests why this contagion effect might occur. In their study, Gerber, Green, and Larimer randomly select households to receive a notification that after the election, the names of voters and non-voters in their neighborhood will be publicized. The purpose of the study is to examine whether there exists a social norm of voting such that individuals might vote due to interpersonal pressures to vote. They found a substantial increase in turnout among individuals receiving the notification.¹ Observational and experimental studies of voting therefore support to the argument that turnout is contagious.

Does Voter Contagion Matter for the Study of Registration Deadlines?

Whereas studies of voter turnout show that the assumption of autonomous voters (which is integral to existing theories of registration deadlines) is unwarranted, it is another matter to demonstrate that the assumption is consequential. To examine the

¹ This is not the only possible mechanism by which individuals lead one another to vote. Other observational studies have also found that individuals are an important source of political information (e.g. Leighley 1996; Lake and Huckfeldt 1998; Cassel 1999) and involvement in social groups has been found to enhance civic skills and efficacy which are also positively related to turnout (Beck, Dalton, Greene, and Huckfeldt 2002; McClurg 2004, 2006).

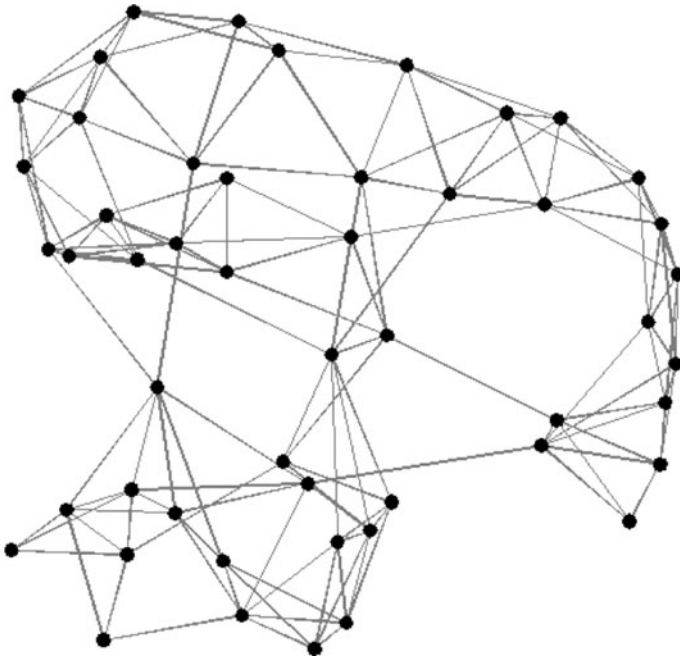


Fig. 1 A small world network

consequences of voter contagion for the study of registration deadlines, we analyze both a large number of computer simulations and data on voter registration and turnout. These analyses demonstrate the importance of voter contagion for the study of registration deadlines.

The simulation analyzes a population of 1,000 individuals.² To create a network structure, each individual is connected to her nearest four neighbors. These connections are then randomly changed with a certain probability to some other individual in the network.³ This process of assigning connections between individuals creates a “small world” network (Watts and Strogatz 1998; Fowler 2005; Siegel 2009). The model uses this type of network structure as it has been shown to approximate features of real world social networks and has previously been used to simulate turnout and participation (Fowler 2005; Siegel 2009). Figure 1 shows a graph of this type of network where the points represent individuals and the lines represent a relationship between two individuals. An individual’s neighborhood refers to all other individuals with whom she shares a connection. For example, person A is in B’s neighborhood if and only if there is a direct link between A and B.

² Additional details of the simulation and alternative specifications are presented in Sects. A1 and A2 of the electronic supplementary material.

³ As discussed in the electronic supplementary material, the probabilities were varied and the results were similar across a range of values.

Within this network, turnout decisions are determined by a behavioral contagion process (e.g. Watts 2002; Siegel 2009). According to the behavioral contagion process, an individual will vote if and only if the proportion of her associates that vote exceeds her individual threshold. For example, if an individual has a threshold of 0.3, and she has three associates one of whom votes, then she will vote as 1/3 exceeds her threshold for turning out. If she had four associates, only one of whom voted, then she would abstain as 1/4 is below the 0.3 threshold. In the model, thresholds are unique to the individual and were determined randomly.⁴

The contagion process unfolds in stages as voting spreads from one person to another. In the beginning of the simulation there are no voters and according to the model everyone has a zero probability of voting. To begin the contagion process, the model incorporates a starting population of voters. These individuals are self-mobilizing and will vote even if none of their social acquaintances vote (i.e. threshold is zero), such as individuals with very high levels of political interest and expertise. How large is the starting population of voters? The simulation varied the size of the starting population of voters from 10 to 25%, which is relatively low compared to average turnout rates in federal elections. Initially, these individuals are the only voters. In the next iteration, we calculate the proportion of voters in every individual's neighborhood. If this proportion meets or exceeds the individual's threshold, then she becomes a voter. Once we have done this for everyone in the population, we go back and repeat this process again (recalculate the proportion of voters in every individual's neighborhood and compare this to the threshold). This contagion process is repeated for a total of 20 stages (Fowler 2005).⁵ As one's neighborhood gains more and more voters, it becomes more likely that the proportion exceeds the person's threshold and she becomes a voter.

However, voting in the US is a two-step process in which individuals must first be registered to vote. We collected data on voter registration as described below and found that about 80% of the voting age population is registered to vote. With a system of (mostly) permanent voter registration these individuals have already met the registration requirements and thus would not be directly affected by shorter registration deadlines. To accommodate the population of registered voters, 80% of the individuals in the simulation are assumed to be registered. The thresholds were used to determine which individuals were registered and which were not. Since registration imposes an additional cost on individuals, it is relatively more difficult to get unregistered individuals to vote. As such, the model designates individuals with the highest thresholds as non-registrants. With high thresholds these individuals are the least likely to vote, corresponding to the greater costs imposed by registration requirements.

⁴ The thresholds were specifically drawn from a uniform distribution bound between zero and one. The parameters of the uniform distribution were chosen to match the minimum and maximum possible values of the neighborhood turnout rates. Section A2 of the electronic supplementary material reports alternative simulations which do not alter the substantive findings.

⁵ Section A2 of the electronic supplementary material reports alternative simulations which allowed the contagion process to operate indefinitely (only stopped once no individual changed their behavior for several iterations). The simulations produced substantively similar results.

Once we have designated registered and non-registered voters, the final part of the model is accounting for registration deadlines. As described above, the contagion process unfolds in stages. These stages were used to model registration deadlines. The first simulation sets a long registration deadline. In this simulation, non-registered voters were assumed to have already missed the deadline and thus were not eligible to vote, no matter how many of their associates were voters. For comparison, a second simulation incorporated a shorter registration deadline. In this case, non-registered individuals could become voters just like any other individual in the model. However, non-registered individuals had to become voters in the first 10 stages of the model. After the 10th stage, all remaining non-registrants had missed the deadline and were thus not eligible to vote. This represents a relatively modest change in the registration deadline and thus provides a conservative assessment of the effect of shorter registration deadlines.

The simulations were then compared to determine how rates of voter registration and turnout changed as a result of shorter deadlines. The results are shown in Fig. 2. The gray dashed line represents the change in rates of voter registration and the solid black line represents the change in voter turnout. The effects are plotted over the size of the starting population, which ranges from 10–25% of the total population. For example, if the starting population of voters is 25% of the total population then the effect of shorter registration deadlines is to directly increase the number of registered voters by just under 5%, and to increase the overall number of voters by about 5.5%. These results have several implications. First, the simulations show that shorter deadlines increase rates of voter registration and turnout, which is consistent with the voluminous literature on voter registration. More important the figure also suggests a novel hypothesis, which is that the effect on voter turnout is greater than the effect on voter registration. While registration deadlines increase rates of voter registration, the effect on voter turnout is even larger. This is a consequence of the voter contagion process as newly registered voters not only enter the electorate themselves but also help mobilize others. This suggests that registration deadlines have an additional indirect effect on turnout through social ties. In the next section, data on voter registration and turnout are used to test these expectations.

A remaining issue with the model is how well it approximates the conditions of an actual election, particularly the choice of 20 iterations and if individuals that register close to Election Day can affect whether others will vote. The choice of 20 iterations for the contagion process follows from previous models (Fowler 2005), which were based on political communication data (e.g. average of about 1 political discussion per associate per week for around 20 weeks for a presidential general election). While that is an approximate number of discussions, there are likely fewer discussions in the early weeks of the campaign and somewhat more as Election Day approaches. Alternative simulations are presented in the electronic supplementary material that do not make this assumption and the results are similar.

The concern that short closing deadlines might preclude social influence is an important one. Individuals that decide to register and vote on Election Day can participate themselves in states with EDR but are unlikely to influence others due to the lateness of the decision. However, some individuals that register and vote on

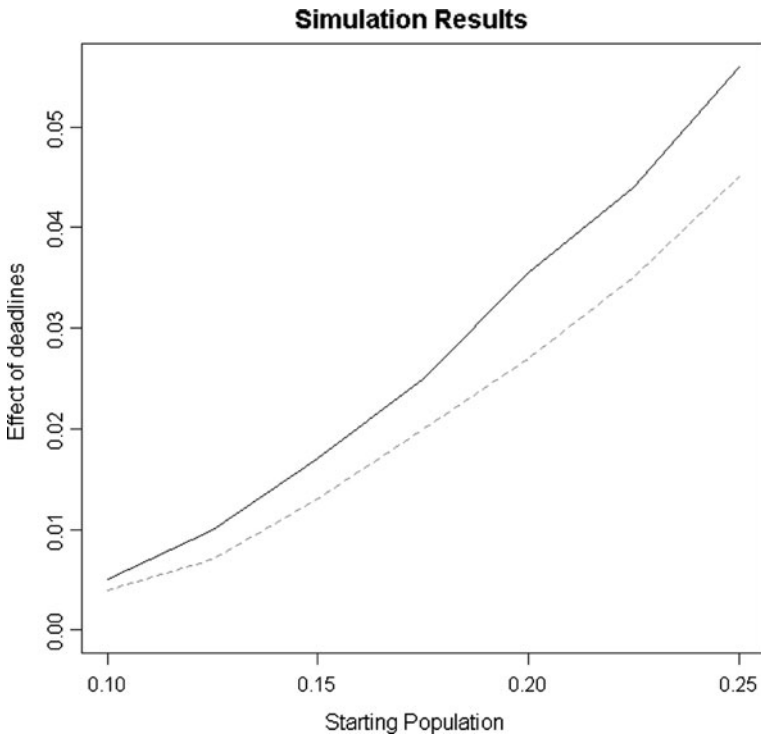


Fig. 2 Results of the computer simulation. The *gray dashed line* shows the effect of *shorter deadlines* on rates of registration, and the *solid line* is the effect on turnout. The results are plotted for different sized starting populations (expressed as a proportion of the total population)

Election Day might have decided to vote earlier in the campaign but nevertheless waited until Election Day to formally register due to the convenience of EDR. Furthermore, shorter registration deadlines might limit the amount of time that late-deciders have to influence others but would not logically preclude some level of social influence. Ceteris paribus, an individual that decides to vote thirty days before an election would have more opportunities to influence others than would an individual that decides to vote fifteen days before an election. However, even an individual that decides to vote a few days or a few weeks prior to Election Day will have at least a limited opportunity to influence others. While shorter closing deadlines such as EDR will allow some individuals to vote themselves but afford them no opportunity to influence others, individuals that decide to vote prior to Election Day will have some opportunity to exert social influence as reflected in the model.

Data Analyses

To empirically assess the relationship between deadlines, rates of voter registration, and turnout, individual and aggregate-level data are analyzed. The primary variables

Table 1 Logit estimates of voter turnout

Variable	Coef.	Std. Error	<i>p</i> -value	Lower	Upper
Deadline	−0.010	0.0003	0.000	−0.011	−0.010
Female	0.086	0.006	0.000	0.076	0.097
Age	0.039	0.0002	0.000	0.039	0.040
Education	0.404	0.003	0.000	0.399	0.408
Income	0.092	0.001	0.000	0.090	0.094
Anglo	0.048	0.008	0.000	0.034	0.061
Presidential	0.673	0.007	0.000	0.662	0.685
Competitiveness	0.870	0.032	0.000	0.817	0.922
Constant	−3.952	0.022	0.000	−3.990	−3.915

N = 499225
Pseudo-*R*² = 0.15

Lower and upper bounds are for a 90% confidence interval

of interest are rates of registration, turnout rates, and the length of voter registration deadlines. Summaries of the data and results of alternative analyses are available in the electronic supplementary material.⁶

Individual-level Data

To study the relationship empirically, data were obtained from the CPS Voter Supplement from 1994 to 2006. The main dependent variables for registration and voting are dichotomous measures. The vote variable is coded as a 1 if the respondent reported voting and 0 if not. The registration variable is similarly coded. The questionnaire directs respondents to skip the registration question if they reported voting, so the registration variable is recoded as a 1 for all those that reported voting. Registration deadlines are defined as the number of consecutive days up to and including Election Day in which registration books are closed to new registrants. This variable is coded from state statutes.

Several control variables are also included for age, sex, race and ethnicity, education, income, and the competitiveness of the election. The demographic and socioeconomic variables are taken from the CPS while the competitiveness of the election was taken from election results for the race at the top of the ticket.⁷ Estimates from logit models are shown in Tables 1 and 2 with standard errors and confidence intervals. Table 1 shows that the coefficient for deadlines is consistent with theoretical expectations as longer deadlines decrease the probability that an individual will vote. Table 2 shows similar estimates for registration, showing that longer deadlines also reduce rates of registration as anticipated.

⁶ Section A3 of the electronic supplementary material includes details of the data and measures and Sect. A4 of the electronic supplementary material discusses alternative analyses. The results shown in the electronic supplementary material support substantively similar conclusions.

⁷ More specifically, competitiveness is the ratio of votes cast for the winner to the sum of votes cast for the winner and closest competitor.

Table 2 Logit estimates of voter registration

Variable	Coef.	Std. Error	<i>p</i> -value	Lower	Upper
Deadline	−0.010	0.0004	0.000	−0.011	−0.010
Female	0.155	0.007	0.000	0.143	0.167
Age	0.036	0.0002	0.000	0.035	0.036
Education	0.438	0.003	0.000	0.433	0.443
Income	0.081	0.001	0.000	0.079	0.083
Anglo	0.060	0.009	0.000	0.045	0.074
Presidential	0.281	0.008	0.000	0.268	0.294
Competitiveness	−0.067	0.036	0.059	−0.126	−0.008
Constant	−2.311	0.024	0.000	−2.350	−2.272

N = 497437
Pseudo-*R*² = 0.12

Lower and upper bounds are for a 90% confidence interval

Table 3 Substantive effects of deadlines

CPS data	Mean	SD	Lower	Upper
Turnout	0.073	0.002	0.069	0.076
Registration	0.047	0.002	0.044	0.050

Lower and upper bounds are for a 90% confidence interval

These were obtained from the estimates in Tables 1 and 2. The table values represent the change in probability when the registration deadline is reduced from 30 days to 0 (Election Day registration)

While the coefficients are in the expected direction and statistically significant at conventional levels, the estimates are not directly comparable as the coefficients are not interpretable as marginal effects. To assess the magnitude of the effects, probabilities for turnout and registration are shown in Table 3. This table shows the expected change in an individual’s probability of voting and probability of registration. The expected change in the probability of voting is 7.3%, with a 90% confidence interval between 6.9 and 7.6%. The expected change in registration is 4.7% with a 90% confidence interval between 4.6 and 4.8%. While the results indicate that deadlines are related to both rates of registration and turnout, the effect on turnout is greater. This suggests that shorter deadlines not only affect non-registered voters, but also previously registered voters, which is consistent with the expectations from above.

County-level Data

Data on voter registration and turnout from the county level are also examined and provide further evidence of the effect of deadlines. These data span all regular general elections from 1992 to 2004 when there was at least one statewide-office on

the ballot. The spatial domain is all counties or other local governments that have jurisdiction over the administration of elections (such as some townships).

The first dependent variable of interest is voter turnout. Turnout rates were calculated using the ratio of votes cast to the voting age population (data on voting age population was obtained from the US Census Bureau). The main independent variable of interest is the registration deadline as discussed above. To adjust for potentially confounding factors, several other variables are included in the model. Specifically, measures of age, education, income, race, size of the county, an indicator variable for presidential elections, and a measure of competitiveness of the race at the top of the ticket are included. Estimates from a linear regression model are shown in Table 4.

The results from this model show that the estimated coefficient for closing deadlines is negative and statistically significant at conventional levels. The estimated effect is -0.0029 for a one-day increase in the registration deadline or an 8.7% change in turnout from a 30 day deadline to EDR. The 90% confidence interval for the estimated effect spans 8.4–9.0%. This finding is consistent with the expectation that deadlines increase turnout and previous estimates of the effects of registration deadlines (e.g. Squire et al. 1987).

Data on rates of voter registration were also analyzed, and estimates are shown in Table 5. From these results, we can see the estimated effect of registration deadlines is -0.0004 . For a 30 day change in the registration deadline, rates of voter registration would increase by 1.2%, with a 90% confidence interval between 0.6 and 1.5%. These results provide additional evidence that deadlines increase rates of registration and turnout. Additional estimates of turnout and registration are included in the electronic supplementary material.

The results from the county-level data are consistent with the individual-level findings, in that shorter deadlines increase rates of registration and turnout. This is also consistent with previous research. Moreover, the magnitude of the effect is

Table 4 Regression estimates of voter turnout

Variable	Coef.	Std. Error	<i>p</i> -value	Lower	Upper
Deadline	-0.003	0.000	0.000	-0.003	-0.003
Age	0.009	0.000	0.000	0.009	0.009
Education	0.648	0.012	0.000	0.627	0.669
Income	-0.000	0.000	0.000	-0.000	-0.000
Anglo	0.124	0.003	0.000	0.118	0.129
Population	-0.000	0.000	0.000	-0.000	-0.000
Competitiveness	0.153	0.006	0.000	0.143	0.164
Presidential	0.128	0.001	0.000	0.126	0.129
Constant	0.003	0.006	0.625	-0.007	0.013
<i>N</i> = 21071					
<i>R</i> ² = 0.604					

Lower and upper bounds are for a 90% confidence interval

Table 5 Regression estimates of voter registration

Variable	Coef.	Std. Error	<i>p</i> -value	Lower	Upper
Deadline	−0.0004	0.0001	0.000	−0.0005	−0.0002
Age	0.010	0.0002	0.000	0.010	0.010
Education	0.288	0.020	0.000	0.255	0.321
Income	−0.000	0.000	0.000	−0.000	−0.000
Anglo	0.081	0.005	0.000	0.072	0.090
Population	−0.000	0.000	0.000	−0.000	−0.000
Competitiveness	−0.032	0.010	0.002	−0.049	−0.015
Presidential	0.023	0.002	0.000	0.020	0.026
Constant	0.398	0.010	0.000	0.382	0.415

N = 19327
*R*² = 0.144

Lower and upper bounds are for a 90% confidence interval

greater for turnout than rates of registration. The results from the CPS data show that the estimated effect of having EDR versus a 30-day deadline is to increase turnout rates by about 7%, but rates of registration by only around 5%. This can be explained by social networks in which interpersonal relationships further affect turnout. These findings suggest that social networks improve our theoretical and empirical understanding of the relationship between voter registration deadlines and turnout.

To provide further evidence that turnout contagion helps to explain the effect of deadlines, an initial analysis was done using data from wave 3 of the 1996 Political Network Election Study (Huckfeldt and Sprague 2007). In the third wave of the survey, a random sample of registered voters from Indianapolis and St. Louis were interviewed after the 1996 presidential election. The main respondents were asked to provide the names of up to 5 people that he or she talked to about matters that were important to him or her. The discussion partners were then also interviewed about whether or not they voted in the 1996 presidential election.

These data can be used to conduct a preliminary analysis of two parts of the theoretical argument. The registration deadline in Missouri was slightly shorter (27 days) than in Indiana (29 days). The relatively small difference in registration deadlines does not provide an ideal test, but nevertheless there should be at least small differences in the data. Specifically, we should expect to see slightly more registered voters within the St. Louis respondents’ discussion networks than in Indiana. The data does not include a measure of voter registration, but does include a measure of turnout in the 1996 election, which was used to create two variables. The first represents the number of voters in a person’s discussion network. The second captures the proportion of voters in a person’s discussion network. As anticipated, the average number of voters was higher in the St. Louis sample (1.59) than the Indianapolis sample (1.55), although the difference was not statistically significant at conventional levels (*p* = 0.70). Similarly, the proportion of voters was

higher in the St. Louis sample (0.91) than the Indianapolis sample (0.88) although the difference was not statistically significant at conventional levels ($p = 0.38$).

While voters in St. Louis tended to be connected to more voters than in Indiana, this analysis does not address whether individuals were more likely to vote as a result. The next analyses separately consider the effect of the number and proportion of voters in an individual's discussion network. Specifically, these two measures were included in logit models of turnout in the 1996 presidential election, with control variables for age, sex, race, education, partisanship, and political knowledge. The coefficient for the number of voters in one's discussion network was positive and significant at conventional levels ($p = 0.012$). A second model was estimated using the measure of the proportion of voters in one's discussion network and that coefficient was also positive and statistically significant ($p = 0.002$).

To assess the substantive effects of the number of voters in one's discussion network, the probability of voting was calculated by holding the control variables constant at their median values, and changing the number of voters from 1.55 to 1.59 (difference in the data). This change in the number of voters increased the probability of voting by 0.002. A similar calculation was done by changing the proportion of voters from 0.88 to 0.91. This change led to an increase in the probability of voting of 0.003. While these differences are relatively small, they are consistent with the relatively small difference in the registration deadline. Additional analyses are reported in the electronic supplementary material.⁸

Results from this preliminary analysis from Indianapolis and St. Louis provide further evidence that voters do not make turnout decisions in isolation. The simulation and empirical results suggest that these social processes are important for our understanding of the effects of voter registration deadlines. It also suggests that researchers and policy-makers should take caution in generalizing results from one place to another, and from one election to another. Insofar as the structure of social networks varies, the effect of shorter deadlines can also vary across places and elections.

Conclusion

This study analyzes the effect of voter registration deadlines on turnout and how the causal mechanism linking deadlines to turnout depends on the social context of voters. This research departs from existing studies in that deadlines are argued to have both a direct and indirect effect on turnout. Shorter registration deadlines directly increase turnout by reducing the costs of voting. This creates a second indirect effect through social networks as turnout spreads from person to person. This suggests that there is an additional process by which registration deadlines affect turnout. It also suggests that the effect on turnout can manifest itself in a way not anticipated by previous research. That is, not only do shorter deadlines expand the pool of eligible voters by adding new registrants, but can also increase turnout among previously registered voters through a social contagion process. Future

⁸ These are shown in the latter part of Sect. A4 of the electronic supplementary material.

research could examine whether the effects of shorter deadlines vary depending the structure of local networks, such as locales with different levels of social capital. Future research could also examine the extent to which voter registration is contagious, as has been found for voter turnout.

The focus of this research is on voter registration deadlines but the argument has implications for studies of other election reforms as well. Reforms such as relaxed absentee voting and early voting are designed to make voting more convenient. Insofar as these other reforms affect rates of voter turnout there could also be an indirect effect of these policies. On the other hand, a recent study of early voting suggests that it reduces turnout by lessening the civic significance of voting for individuals by shifting interpersonal political contact away from Election Day (Burden et al. 2011). Improving our understanding of the structure of social relations, particularly among non-voters, could be especially important for anticipating whether reforms would be more or less efficacious in certain states and counties.

Furthermore, electoral arrangements might not only be affected by social networks but could also influence how people interact with one another. A recent study of direct democracy argues that signature gathering efforts to qualify initiatives for the ballot increases voter turnout. By encouraging individuals to interact with one another and disseminate information about ballot initiatives, interest in the election increases and leads more individuals to vote (Parry et al. 2011). It is possible that electoral institutions such as direct democracy, early voting, and registration reforms not only depend on social networks but also have an effect on how and when individuals interact with one another.

Acknowledgment The author would like to thank Randy Batsell, Keith Hamm, Mark Jones, Beth Miller, Mike McDonald, Bob Stein, Randy Stevenson and the reviewers and editors for helpful comments.

References

- Ansolahehere, S., & Konisky, D. (2006). The introduction of voter registration and its effect on turnout. *Political Analysis*, 14(1), 83–100.
- Beck, P., Dalton, R., Greene, S., & Huckfeldt, R. (2002). Social calculus of voting: Interpersonal, media, and organizational influences on presidential choices. *American Political Science Review*, 96(1), 57–73.
- Berelson, B., Lazarsfeld, P., & McPhee, W. (1954). *Voting*. Chicago: University of Chicago Press.
- Brians, C., & Grofman, B. (2001). Election day registration's effect on U.S. voter turnout. *Social Science Quarterly*, 82(1), 170–182.
- Brown, R., & Wedeking, J. (2006). People who have their tickets but do not use them: "Motor voter", registration, and turnout revisited. *American Politics Research*, 34(4), 479–504.
- Burden, B., Canon, D., Mayer, K., & Moynihan, D. (2011). Election laws, mobilization, and turnout: The unanticipated consequences of election reform. *Working paper*.
- Cassel, C. (1999). Voluntary associations, churches, and social participation theories of turnout. *Social Science Quarterly*, 80(3), 504–517.
- Cutts, D., & Fieldhouse, E. (2009). What small spatial scales are relevant as electoral contexts for individual voters? *American Journal of Political Science*, 53(3), 726–739.

- Fenster, M. (1994). The impact of allowing day of registration voting on turnout in U.S. elections from 1960 to 1992. *American Politics Quarterly*, 22(1), 74–87.
- Fournier, P., Nadeau, R., Blais, A., Gidengil, E., & Nevitte, N. (2004). Time-of-voting decision and susceptibility to campaign effects. *Electoral Studies*, 23(4), 661–681.
- Fowler, J. (2005). Turnout in a small world. In A. Zuckerman (Ed.), *Social logic of politics*. Philadelphia: Temple University Press.
- Gerber, A., & Green, D. (2000). The effects of canvassing, telephone calls, and direct mail on voter turnout: A field experiment. *American Political Science Review*, 94(3), 653–663.
- Gerber, A., Green, D., & Larimer, C. (2008). Social pressure and voter turnout: Evidence from a large-scale field experiment. *American Political Science Review*, 102(1), 33–48.
- Gimpel, J., Joshua, D., & Shaw, D. (2007). Election-year stimuli and the timing of voter registration. *Party Politics*, 13(3), 351–374.
- Glaser, W. (1959). The family, voting turnout. *Public Opinion Quarterly*, 23(4), 563–570.
- Gopoian, J. D., & Hadjiharalambous, S. (1994). Late-deciding voters in presidential elections. *Political Behavior*, 16(1), 55–78.
- Hanmer, M. (2007). An alternative approach to estimating who is most likely to respond to changes in registration laws. *Political Behavior*, 29(1), 1–30.
- Highton, B. (1997). Easy registration and voter turnout. *Journal of Politics*, 59(2), 565–575.
- Highton, B. (2004). Voter registration and turnout in the United States. *Perspectives on Politics*, 2(3), 507–515.
- Highton, B., & Wolfinger, R. (1998). Estimating the effects of the national voter registration act of 1993. *Political Behavior*, 20(2), 79–104.
- Huckfeldt, R., & Sprague, J. (1995). *Citizens, politics, and social communication: Information and influence in an election campaign*. Cambridge, U.K.: Cambridge University Press.
- Huckfeldt, R., & Sprague, J. (2007) Indianapolis-st. Louis election study, 1996–1997 [Computer file]. ICPSR02962-v2. Bloomington, IN: Indiana University Center for Survey Research [producer], 2000. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor]. doi:10.3886/ICPSR02962.
- Kenny, C. (1992). Political participation and effects from the social environment. *American Journal of Political Science*, 36(1), 259–267.
- Knack, S. (2001). Election day registration: The second wave. *American Politics Research*, 29(1), 65–78.
- Knack, S. (2005). Does “motor voter” work? *Journal of Politics*, 57(3), 796–811.
- Knack, S., & White, J. (2000). Election-day registration and turnout inequality. *Political Behavior*, 22(1), 29–44.
- Lake, R., & Huckfeldt, R. (1998). Social capital, social networks, and political participation. *Political Psychology*, 19(3), 567–584.
- Leighley, J. (1996). Group membership and the mobilization of political participation. *Journal of Politics*, 58(2), 447–463.
- Levine, D., & Palfrey, T. (2007). The paradox of voter participation? A laboratory study. *American Political Science Review*, 101(1), 143–158.
- McClurg, S. (2004). Indirect mobilization: The social consequences of party contact in an election campaign. *American Politics Research*, 32(4), 406–443.
- McClurg, S. (2006). The electoral relevance of political talk: Examining disagreement and expertise effects in social networks on political participation. *American Journal of Political Science*, 50(3), 737–754.
- McDonald, Michael P. (2008). Portable voter registration. *Political Behavior*, 30, 491–501.
- Mitchell, G., & Wlezien, C. (1995). The impact of legal constraints on voter registration, turnout, and the composition of the American electorate. *Political Behavior*, 17(2), 179–202.
- Nickerson, D. (2008). Is voting contagious? Evidence from two field experiments. *American Political Science Review*, 102(1), 49–58.
- Parry, J., Smith, D., & Henry, S. (2011). The impact of petition signing on voter turnout. *Political Behavior*, Forthcoming.
- Rhine, S. (1995). Registration reform and turnout change in the American states. *American Politics Quarterly*, 23(4), 409–426.
- Rhine, S. (1996). An analysis of the impact of registration factors on turnout in 1992. *Political Behavior*, 18(2), 171–185.
- Schram, A., & Sonnemans, J. (1996a). Voter turnout as a participation game: An experimental investigation. *International Journal of Game Theory*, 25(3), 385–406.

- Schram, A., & Sonnemans, J. (1996b). Why people vote: Experimental evidence. *Journal of Economic Psychology*, *17*(4), 417–442.
- Siegel, D. (2009). Social networks and collective action. *American Journal of Political Science*, *53*(1), 122–138.
- Squire, P., Raymond, W., & Glass, D. (1987). Residential mobility and voter turnout. *American Political Science Review*, *81*(1), 45–65.
- Straits, B. (1990). The social context of voter turnout. *Public Opinion Quarterly*, *54*(1), 64–73.
- Watts, D. (2002). A simple model of global cascades on random networks. *Proceedings of the National Academy of Sciences*, *99*, 5766–5771.
- Watts, D., & Strogatz, S. (1998). Collective dynamics of “small world” networks. *Nature*, *393*, 440–442.
- Wolfinger, R., & Rosenstone, S. (1980). *Who votes?* New Haven, CT: Yale University Press.