

# The Effect of Social Capital on Voter Turnout: Evidence from Saint’s Day Fiestas in Mexico<sup>1</sup>

Matthew Atkinson<sup>2</sup> & Anthony Fowler<sup>3</sup>

## Abstract

Social capital is thought to increase voter turnout and improve political representation. Measures of social capital are positively correlated with turnout, but reverse causation and omitted variables may bias the results of previous studies. We exploit quasi-random variation in the timing of saint’s day fiestas across municipalities in Mexico to estimate the causal effect of community participation on turnout. Employing both cross-municipality and within-municipality estimates, we find that saint’s day fiestas occurring near an election decrease turnout by 2.5 to 4.5%. This effect is strongest where fiestas have the greatest impact on social capital – namely smaller and more Catholic municipalities. In these contexts, 1 in 5 citizens are demobilized by a fiesta occurring near the election date. Contrary to previous studies, our results suggest that large doses of social engagement can decrease turnout by consuming time, exposing citizens to conflicting views, and providing an alternative route to fulfilling civic obligations.

---

<sup>1</sup> Both authors contributed equally. We thank Alberto Alesina, Stephen Ansolabehere, Gloria Chao, Ana De La O, Ryan Enos, Jens Hainmueller, Eitan Hersh, Gabriel Lenz, Jeffrey Lewis, Kay Schlozman, James Snyder, Michael Tesler, Gelin Valencia, and seminar participants at MIT for their suggestions and support.

<sup>2</sup> Matthew Atkinson (matthewa@ucla.edu) is a graduate student in the Department of Political Science at the University of California, Los Angeles.

<sup>3</sup> Anthony Fowler (fowler@fas.harvard.edu) is a graduate student in the Department of Government and an affiliate of the Center for American Political Studies at Harvard University.

Rational-choice theories struggle to explain voter turnout because the expected benefits of voting do not outweigh the costs (Downs 1957). Voting requires time and information, and there is little chance that one vote will change the outcome of an election. But as Downs (1957: 268) warns, very low turnout "can conceivably cause democracy to break down." Thus, turnout poses a classic collective action problem (Olson 1965), and increasing voter turnout is an important means to improving democracy.

Putnam (1993, 1995, 2000) and others have posited community social capital to be the basic resource necessary for achieving collective goals, including widespread political participation.

“Social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu and Wacquant 1992: 119). The primary components of community social capital are inter-personal trust, norms/values, and social connectedness (Putnam,1995; Knack 2002; Kirshna 2007).

Social capital may lead individuals to internalize collective goals and behave in ways that benefit the community over the individual (Duch and Palmer 2004). Putnam has emphasized social connectedness as the central factor in explaining variation in civic engagement, and this thesis has spawned a large literature on the relationship between connectedness, inter-personal trust, and the realization of collective goals. At the center of this literature is a debate about the relevance of social connectedness to the achievement of collective goals.

While the literature offers robust support for the relationship between inter-personal trust and collective action, empirical support for the importance of social connectedness is mixed and some social capital scholars have argued that trust is actually the dominant factor in social capital (Uslaner 1999). Since 1990, major political science journals have published two studies that separately evaluate the effects of trust and connectedness on the achievement of collective goals.

Knack (2002) finds that inter-personal trust is associated government performance but connectedness is not. In contrast, Keele (2007) reports that both inter-personal trust and connectedness are associated with trust in government. Analyses specifically focused on the relationship between connectedness and collective action also report conflicting results. Knack (1992), Skocpol (1997), and Putnam (2000) report a significant relationship between connectedness and political participation, and Paxton (2002) finds that bridging social ties positively affect democratic performance. However, Kaufmann (1999) and Sampson et al. (2002) report no relationship between connectedness and political participation, and Hill and Matsubayashi (2005) report no association between bridging social ties and government performance.

In spite of these mixed findings, social connectedness remains a topic of substantial interest in part because variation in connectedness offers an attractive hypothesis for explaining variation in civic engagement and in part because it suggests concrete actions that can improve collective outcomes. As Kirshna (2007) writes in her study of the contributors to social capital formation, “if one can do nothing to grow social capital then, practically speaking, why does it matter what difference social capital can make?” Indeed, aid agencies have substantially increased their investment in fostering civil association in developing countries in recent years in spite of little hard evidence that such investment promotes improved democratic functioning (Paxton 2002).

Beyond mixed empirical findings, previous studies linking connectedness to collective action have been criticized for not sufficiently addressing the possibility of reverse causation (Tarrow 1996). Several empirical studies suggest that good institutions foster social capital but the reverse relationship does not hold (Letki and Evans 2005; Booth and Richard 1998).

In this paper, we exploit a natural experiment to test the effect of social connectedness on voter turnout. We evaluate whether exogenous change in social connectedness leads to political participation. This analysis speaks to the most important issues in the debate about social capital

and collective action. First, while connectedness is not the only component of social capital, connectedness is the component of social capital with the greatest relevance for public policy (Schneider et al. 1997; Skocpol 1997). Our specific evaluation of connectedness is consistent with advice in the literature urging focused analysis on the specific components of social capital individually (Messner, Baumer, and Rosenfeld 2004; Knack 2002; Paxton 1999). Second, voter turnout is widely considered one of the best indicators of the health of a democracy – as Franklin (2004) puts it: “participation is the lifeblood of democracy.” Thus in contributing to the debate regarding whether connectedness improves democracy, voter turnout is an obvious outcome of interest.

For the remainder of the paper, we use the terms social capital and social connectedness interchangeably, acknowledging that other definitions of social capital exist in the literature. This simple definition is consistent with Putnam’s view of social capital and holds greatest policy relevance for those that hope to increase political participation. Can this type of social capital solve the collective action problem of voter turnout and improve democratic representation?

### **Previous Observations on Social Capital and Turnout**

The existing empirical evidence for the effect of social capital on turnout is correlational: trends in measures of social capital over time correspond to trends in turnout (Putnam 2000), regions with high measures of social capital tend to have higher turnout (Putnam 2000), and socially connected individuals are more likely to vote (Lake and Huckfeldt 1998; Fowler 2005). Moreover, citizens who participate in their community are more likely to participate in politics (Verba et al. 1995). However, these correlations lack a causal interpretation due to reverse causation and omitted variable bias. Social capital is not randomly assigned but rather an endogenous characteristic of generations, regions, and individuals. For instance, the act of participating in politics may generate

social capital. Additionally, the types of individuals who are socially connected are probably the types of citizens who would vote regardless of their social situation.

Even in 1840, Alexis de Toqueville acknowledged the possibility that social activities are endogenous to political activity: “Civil Associations, therefore, pave the way for political associations; on the other hand, political associations develop and improve in some strange way civil associations” (Volume 2, Part 2, Chapter 7). This type of reverse causation would lead any correlational finding to overestimate the true causal effect of social capital on political participation.

One important omitted variable in these studies is an individual’s underlying level of sociability. Researchers have shown that personality traits such as extroversion, social aggression, and self-confidence have direct effects on both social capital (Scheufele and Shah 2000) and voter turnout (Denny and Doyle 2008; Gerber et al. 2010). Individuals predisposed to be social are more likely to be involved in their communities and are more likely to vote. However, forcing a non-social person to connect with others may have no impact on her decision to vote. Numerous other omitted variables may further cloud the interpretation of the generational, regional, and individual correlations between social capital and turnout.

Ideally, we could obtain an unbiased estimate of the effect of social capital on turnout through a randomized, controlled experiment. In the correlational observations, socially connected individuals or groups are significantly different from those who are unconnected. Randomization would remove selection bias and omitted variable bias because we could be sure that the treatment and control groups are comparable to one another. We would randomly assign some individuals or groups to be socially connected and others to be disconnected. Unfortunately, such an experiment would be practically, financially, and ethically unfeasible. Therefore, we employ a natural experiment in which doses of social capital are assigned in a quasi-random manner. Saint’s day fiestas in Mexico provide exogenous shocks of community activity. Further, parish communities receive this shock at

different times throughout the year as determined by the feast day associated with each parish's patron saint. By exploiting the quasi-random variation in the timing of fiestas across municipalities and by exploiting an exogenous change in Mexico's electoral calendar, we obtain unbiased estimates of the effect of community activity on turnout.

We are aware of only one other study that employs a quasi-experimental approach to determine the causal effect of social capital on turnout. Condon (2009) conducts an ongoing study of U.S. elementary schools randomly assigned into the FAST (Families and Schools Together) program. Parents of students in the treated schools are encouraged to become more involved in their child's school. Condon estimates a negative effect of the treatment on turnout. Parents assigned to the FAST program were less likely to vote than the control parents. Unfortunately, the way in which subjects were recruited for the study led to significant pre-treatment differences between parents in the treatment and control groups. Specifically, treatment parents were typically poorer and less likely to vote before the study, potentially leading Condon to underestimate the effect of social capital on turnout. We admire this approach and exploit a separate quasi-experiment to address the same question in a different political setting.

### **Saint's Day Fiestas: Exogenous Shocks to Social Capital**

The generation of social capital is not a formal process. Rather, citizens become connected to one another by coming together, engaging in casual conversation, eating, drinking, and having fun. In their review of communities which succeed in generating social capital, Putnam and Feldstein (2003) identify dinner parties, picnics, music, local art, and dancing as sources of social capital. In one specific example, the authors argue that a multicultural festival helped the Dudley Street Neighborhood Initiative to build social capital in a previously deteriorating Boston neighborhood: "At countless community meetings, at the multicultural festival, through hard side-

by-side labor, they [the initiative] helped people connect and reconnect” (p. 80). According to Putnam and Feldstein, social capital arises from casual community interaction, and it can arise quickly over the course of days or weeks. By this account, saint’s day fiestas in Mexico supply social capital in abundance. These are exactly the types of events that scholars would prescribe to increase the social capital of a community.

Saint’s day fiestas offer a unique opportunity to test the effects of social capital on turnout. Roman Catholic churches are predominant throughout Mexico, and each church or parish has a patron saint. Each patron saint has a particular feast date, typically the day of the year that the saint died. Around the feast date of a particular church’s patron saint, the members of the church community hold a festival to celebrate their saint and their community. In most Mexican communities, these saint’s day fiestas are the biggest social event of the year, comparable to if not bigger than the celebrations coinciding with Easter and Christmas. Church communities typically suspend their normal activities and celebrate the fiesta for multiple days.

Our subsequent analysis makes two assumptions about saint’s day fiestas in Mexico. First, the time of year at which each parish celebrates its fiesta is exogenous to other features of the communities. For example, a community that celebrates its fiesta in January is on average no different from one that celebrates its fiesta in July.<sup>4</sup> Second, these fiestas increase social connectedness within the community for several weeks leading up to and following the fiesta. Because the vast majority of Mexicans consider themselves at least culturally Catholic and because the saint’s day festivals are community celebrations with a diverse array of activities, all segments of

---

<sup>4</sup> Later in the paper, we show that our results are not sensitive to this assumption. Exploiting an exogenous change in the election date, we test for the effect of increased social capital within a particular municipality, so our results are valid even if fiesta dates are not randomly assigned.

the community are connected. This is important because Putnam and others have emphasized bridging connections as most important for promoting participation toward collective goals. To test these assumptions, we surveyed 14 Catholic priests and officials in Mexico.<sup>5</sup> These responses are not representative of all Catholic communities in Mexico, but they provide general, qualitative support for our assumptions about when fiestas occur and how they affect social capital.

The patron saint of each church is often chosen for historical or idiosyncratic reasons. Moreover, the particular fiesta date for each Saint is arbitrary, typically the day of the year that the saint died centuries ago.<sup>6</sup> In our survey, we asked respondents how their particular parish chose its patron saint. No respondent indicated that the time of year for the fiesta was considered in this decision. Rather, patron saints often resulted from idiosyncratic events or the preferences of one particular priest or bishop. For example, one respondent from a church called “Our Lady of Refuge” provided the following account: “The people of God were consulted with the approval of the bishop. Here in Tamaulipas, there is great devotion to Our Lady of Refuge because we were officially put under the patronage of Our Lady of Refuge by the Spanish royalty during colonial times.”<sup>7</sup> These types of stories indicate that the fiesta date of a particular parish is exogenous to the

---

<sup>5</sup> Surveys were conducted online. E-mail addresses were obtained from online directories of the 68 dioceses and 18 archdioceses in Mexico (<http://www.cem.org.mx/dioceseis/>).

<sup>6</sup> In most small Mexican municipalities, the local parish and the municipality share the same patron saint. Many municipalities hold other festivals at times of convenience, but these are different from the festivals in our analysis. Regardless of other celebrations, virtually all communities honor the traditional feast date of their patron saint and hold a large festival during that time.

<sup>7</sup> All responses have been translated from Spanish.

characteristics of the community. In the results section, we will provide further empirical indication that the fiesta dates are exogenous.

To discern whether saint's day fiestas increase the short-term social capital of their communities, we asked a series of questions regarding the nature of these fiestas. Respondents indicated that their fiestas last anywhere from 1 to 10 days, require 8 to 30+ days of preparation, and involve 400 to 5000 attendants. When asked about the types of activities at the fiestas, respondents listed numerous social and religious activities including eating, dancing, theatrical performances, wheelbarrow races, egg tosses, lotteries, singing, musical performances, mass, communion, confession, and religious processions. Since the respondents are priests and religious officials, we expected that they would focus on the religious aspects of the event. However, more than half of the activities mentioned were social and secular. Several respondents specifically mentioned that coexistence of neighbors is a primary component of the fiestas.

When we asked more specifically whether fiesta attendants discussed important political issues, respondents indicated that community members discuss municipal administration, public safety, unemployment, and the performance of political leaders at the fiestas. Finally, we asked whether the fiesta helps to build trust within the community. All 12 of the respondents who answered the question confirmed that this was the case. Community trust and discussion of important issues are critical elements of social capital, and it appears that the fiestas are successful in fostering these phenomena. Saint's day fiestas increase social capital by bringing members of a community together. By preparing food, singing, dancing, and discussing important issues, the citizens are raising the social capital of the entire community. As one clergy-member remarked, "Saint's day fiestas are a means to increase communion between the faithful."

Lastra et al. (2009) conducted an in depth ethnographic study of two saint's day fiestas in Central Mexico. In their descriptive account, the authors note the significance of these events for

community connectedness: “The event reinforces peoples’ sense of community. . . . It is striking that all the events of the patron saint fiesta are group activities that require collaboration. . . . Every year the collaboration necessary for the complex organization of the fiesta reaffirms its [the community’s] social and ritual structure. . . . One aspect of sociability that is prevalent during fiestas is the cultural theme of accompanying, that is, or being with, sharing the moment with, friends, compadres, and the saint.” (pp. 116-117) This account affirms our claim that saint’s day fiestas temporarily increase a community’s social connectedness.

The account of Lastra et al. (2009) and our survey responses suggest that saint’s day fiestas provide quasi-random shocks to social capital. Every community receives this positive shock at some point throughout the year, but the particular time of year is essentially random. We focus our study on Mexican municipalities with one Catholic church. On average, municipalities which celebrate their fiesta around an election should be no different than those that do not, except for the timing of their fiesta date. Both sets of municipalities have the same general level of social capital, but they receive these treatments of social capital at different times. We exploit this quasi-random variation to estimate the effect of a boost of social capital on voter turnout.

## **Methods and Results**

We have collected census and electoral data for all municipalities across Mexico in which there is only one Catholic church and in which we could confidently identify the patron saint and corresponding feast date of the church.<sup>8</sup> We focus specifically on municipalities with one church because we want to ensure that the saint’s day fiesta and corresponding social capital is treating a

---

<sup>8</sup> Census data were downloaded from the web site of the Instituto Nacional de Estadística y Geografía. Electoral data were downloaded from the web site of the Instituto Federal Electoral.

large proportion of the community that we observe.<sup>9</sup> In total, we examine 325 municipalities across 7 national elections for a total of 2255 observations.<sup>10</sup> Table 1 presents summary statistics for all municipalities in the data set. These communities are predominantly rural, agricultural, low-income, and Roman Catholic.

[Table 1]

Our surveys indicate that saint’s day fiestas increase social capital for several weeks before and after the actual fiesta date. As a result, we code a treatment variable, *Fiesta*. This variable takes a value of 1 if the fiesta date is within 2 weeks of the election date and 0 if the fiesta date is further from the election. We will say that a municipality is receiving the treatment of social capital if its fiesta date lies anywhere within the four week window surrounding the election in that particular year.

Municipalities with fiesta dates after the election are included in our treatment, because fiesta preparations begin weeks before the actual fiesta date. The treatment of social capital begins several weeks before the fiesta date and continues for several weeks afterward. Moreover, rational individuals will smoothly allocate their free time (Becker 1965), so an upcoming fiesta will consume time and affect citizens before it begins. However, our subsequent results are unchanged if we only include municipalities with a fiesta date before the election in our treatment. For any of the 7 election years in our data set, there are 52 to 54 municipalities that fall under the “fiesta” treatment.

---

<sup>9</sup> We identified single parish municipalities by collecting online diocese directories and determining which municipalities are served by only a single church.

<sup>10</sup> The total number of observations is less than 325 times 7 because turnout data is missing in 1 case, and 19 cases were dropped because the reported turnout levels were inconsistent with census data.

With these data in hand, we can now quantitatively test our assumption that fiesta dates are as good as randomly assigned and then evaluate whether social capital is a complement or a substitute for political participation.

We have previously made the case that fiesta dates are “as good as” randomly assigned. Therefore, our treatment variable can also be thought of as quasi-randomly assigned. If this is the case, there should be no significant differences in observable characteristics between municipalities which are in the treated and untreated groups. One way to test this is to measure the balance of census demographic variables across these two groups of municipalities. Table 2 shows the balance of several key census variables across municipalities in the treatment and control groups for the 1991 election. There are no statistically or substantively significant differences between the two treatment groups. This suggests that the treatment and controls groups are truly comparable and is consistent with our prior argument that the fiesta treatment is “as good as” randomly assigned.

[Table 2]

We can also assess the comparability of municipalities in the treatment and control groups by estimating a propensity score. We estimate a probit model, regressing the fiesta treatment on all demographic variables from the census.<sup>11</sup> A municipality’s propensity score is its predicted value from the regression, representing the a priori predicted probability that the municipality would be in the fiesta treatment given its demographic characteristics. Figure 2 shows the distribution of propensity scores for both the treated and untreated municipalities.

---

<sup>11</sup> Our propensity model includes 60 census controls, so we likely “over-fit” the data. If this is the case, the propensity scores of treated and untreated observations will diverge, leading us to underestimate the true degree of comparability between treatment and control. In this way, Figure 1 provides a conservative estimate of the true similarity of our treatment groups.

[Figure 1]

Ideally, every municipality would have the same propensity score. However, slight imbalances of demographic characteristics across treatment and control groups could arise by chance, leading some municipalities to have greater propensity scores than others. Fortunately, the distribution of propensity scores is similar for both the treatment and control observations. We find common support between the treatment groups, meaning that for every observation in which the treatment was received, there are untreated observations with similar propensity scores. Not all municipalities are comparable, but those with similar propensity scores can be compared to obtain an unbiased causal estimate of the treatment effect. This is the motivation for propensity score matching (Rosenbaum and Rubin 1983). Having established that our treatment variable can be thought of as randomly assigned, we now turn to evaluating the effect of social capital on turnout.

If social capital influences voter turnout, we expect turnout to vary with our treatment variable. If this exogenous shock of social capital increases voter turnout, we should see the average turnout levels increase for municipalities with fiestas closer to the election date. Conversely, we should see the opposite trend if the shock to social capital decreases turnout. We take several approaches to estimating the effect of fiestas on turnout. We begin by presenting a nonparametric approach, a kernel regression. We calculate residual turnout for each observation removing variation associated with different election years and the mean turnout levels in each state. Figure 2 shows the predicted level of residual turnout relative to the number of weeks that a municipality's fiesta occurs before or after the election. Turnout is significantly lower for municipalities holding a fiesta close to the election date. Even five weeks before the election we begin to see the negative effect, and it continues for municipalities holding fiestas five weeks after the election.

Next, we employ four different approaches to estimate the effect of the *Fiesta* treatment on voter turnout. All four results are presented in Table 3. First, we match treated and untreated

observations based on the propensity score calculated previously (PS Matching), with the requirement of exact matching on the election year. Using the matching estimator suggested by Abadie et al. (2004), we estimate that holding a fiesta within two weeks of the election reduces voter turnout by 4.3 percent. Next, we employ the nearest-neighbor matching estimator of Abadie et al., again matching observations from the same year based on their census demographics (NN Matching). Here we estimate a 3.4 percent reduction in voter turnout. For our third approach, we estimate the treatment effect by ordinary least squares (Pooled OLS). We include year fixed effects and all census covariates in the model. This approach estimates a 3.2 percent reduction in voter turnout. All three of these negative estimates are statistically significant at the .01 level. This negative effect is robust to the inclusion or exclusion of any census variables. We show a number of these robustness checks in the appendix.

[Table 3]

As a final test of the effect of the festivals, we leverage a shift in the federal election date. For the 1991 and 1994 elections, elections took place in mid-August, but the subsequent 5 elections took place in early July. Therefore, we can test for changes in voter turnout for individual municipalities which fell in or out of the fiesta treatment as a result of the change in election date. Our fourth estimate in Table 3 includes municipality fixed effects, removing any variation in turnout across different municipalities. We find that the fiesta treatment reduces turnout by 2.5 percent on average for those municipalities which fall into the treatment as a result of the change in the time of federal elections ( $p < .01$ ).<sup>12</sup> In the next section, we will explain why our fixed effects estimate is slightly smaller (closer to zero) than the cross-sectional estimates.

---

<sup>12</sup> We conduct a Hausman test (Hausman 1973) comparing our fixed effects estimates to those from a random effects model. The resulting p-value of .999 tells us two things. First, we have no

We reject the hypothesis that social capital increases turnout. Rather, a fiesta occurring within two weeks of a federal election will reduce voter turnout in the municipality by 2.5 to 4.5 percent. This result is inconsistent with previous correlational observations regarding social capital and turnout, suggesting that those analyses are biased upward due to reverse causation and omitted variable bias. While social individuals and groups are more likely to vote, the random assignment of community involvement does not increase but rather decreases voter turnout.

### **Persistence of the Fiesta Effect across Subsequent Elections**

If saint's day fiestas decrease turnout in one election, we expect that such demobilization will continue to have an effect in subsequent elections. Empirical research suggests that voting is habitual (Putzer 2002; Gerber et al. 2003; Meredith 2009), so the decision to abstain from voting in one election will decrease the probability of voting in future elections. To explore this possibility we take a closer look at the switchers, those municipalities which fell into or out of the fiesta treatment over time.

Our cases fall into three categories in regard to their receipt of the treatment. There are approximately 50 municipalities with August feast dates which only received the treatment in 1991 and 1994. There are approximately 50 municipalities with late June or early July feast dates which

---

evidence that our fixed effects estimate is statistically different from our cross-sectional estimates. Second, we cannot reject the null hypothesis that the independent effect of each municipality is uncorrelated with the treatment variable. This provides further support for our claim that saint's days are "as good as" randomly assigned.

only received the treatment in the five elections following 1994. And there are approximately 220 municipalities with other feast dates which never received the fiesta treatment.<sup>13</sup>

Figure 3 shows the residual turnout rates for all three of these groups across each election year. We can see that the June/July municipalities voted at the same rate as the untreated municipalities in 1991 and 1994 when they had not yet received the treatment. Then, after the election date moved toward their fiesta date, their turnout rates dropped and remained lower through all subsequent elections. The August municipalities initially began with lower turnout rates because they received the treatment in 1991 and 1994. Following the change in election date, turnout remained low through subsequent years even though these municipalities no longer received the treatment. The observed trend is consistent with our prediction that the fiestas' negative effects are persistent.

[Figure 3]

Looking more closely at the municipalities treated from after 1994, we see further evidence that the fiesta treatment is persistent. Residual turnout is initially similar between the two groups before either receives the treatment, but once the election date switches, residual turnout progressively declines with each election. The longer a municipality has been treated, the greater the negative effect. By 2006 when these municipalities receive their fourth treatment, their turnout is 4.5% lower than their untreated counterparts. The repeated existence of a community event around the time of multiple elections has a particularly strong demobilizing effect. These results do not suggest that the community engagement generated by a fiesta persists for several years; we saw

---

<sup>13</sup> These numbers are approximate, because the election date does move slightly from year to year. However, the only big change occurred between 1994 and 1997, so we simplify our analysis here to designate only three groups of municipalities.

earlier that the fiestas only increase community participation for several weeks. Rather, the act of voting itself is persistent, so an individual's failure to vote in one election decreases her chances of voting in the next election.

The persistence of the fiesta effect explains why our fixed effects estimate is smaller (closer to zero) than our cross-sectional results. The fixed effects analysis focuses on individual municipalities in which the treatment changed. When the election date changed, the municipalities with August elections were no longer treated. However, the negative effects of their previous treatments persisted, causing turnout to remain low. For this reason, our fixed effects estimate is biased toward zero, suggesting that we should rely more heavily on our cross-sectional results.

### **Variance of the Fiesta Effect across Municipalities**

If saint's day fiestas truly decrease voter turnout, we expect the effect to vary across different types of municipalities. We modify our pooled OLS model to include interaction terms, which indicate the conditions under which the fiestas will have a stronger or weaker effect on voter turnout. Table 4 shows the results of three regressions which include various interaction terms. In every case, the interaction variables have been re-coded to range from 0 to 1. Therefore, we can interpret the coefficient on an interaction term as the change in treatment effect as we move from municipalities with the lowest level of the explanatory variable to those with the highest level.

[Table 4]

First, we expect the effect to be larger in municipalities with a higher percentage of Catholics. In these municipalities, the fiesta will involve a higher proportion of residents and the treatment will be more intense. Column 1 shows that the effect is 5.9% greater (more negative) as we move from the municipalities with the lowest proportion of Catholics to those with the highest proportion of Catholics.

Second, the effect should be greater in municipalities with higher levels of turnout, because high turnout communities have more individuals that can be influenced by the treatment. If nobody votes regardless of the fiesta, then the treatment cannot possibly have an effect. Column 2 shows that the negative fiesta effect is stronger for municipalities with higher levels of a priori predicted turnout. We regressed turnout on the census covariates to generate predicted values of turnout, ignoring the fiesta treatment. Consistent with our prediction, municipalities which are most likely to vote at high rates are most sensitive to the fiesta treatment.

Third, the effect should be greater in smaller municipalities for several reasons. Smaller communities with fewer social alternatives will attract a higher proportion of residents to the fiesta. Also, remember that we have restricted our analysis to municipalities with only one church. Larger municipalities are more likely to be erroneously classified as single parish municipalities due to omissions on the diocese directories. If this is the case, our effect will be diluted in these larger municipalities because a smaller proportion of residents will attend the fiesta. Model 3 indicates that the fiesta treatment is strongest for smaller municipalities. Saint's day fiestas actually decrease turnout by 20 percent for the smallest municipalities in our data set. In a community of 400 to 500 residents, 1 in 5 individuals are demobilized by a fiesta occurring near the election date. The incredible magnitude of this effect suggests that saint's day fiestas influence a broad subset of citizens. Such a large effect cannot be explained by the demobilization of specific groups such as the most religious citizens or active festival volunteers.

Finally, we expect that community participation will have a smaller effect on turnout when an election is particularly salient or important to citizens. Turnout in Mexico is typically higher for state and local elections than in federal elections, and citizens appear to care more about these elections. Some states hold their state and local elections at the same time as federal elections, so we can test whether our observed effect is weaker or stronger when a particular federal election

coincides with a gubernatorial election where citizens have more at stake. Column 4 shows that the effect of fiestas is weaker when the federal election coincides with a gubernatorial election, suggesting that citizens can overcome the demobilizing force of the fiesta when the election is more salient. Summing the coefficients on “Fiesta” and the interaction between fiestas and gubernatorial elections, we see that community participation does not boost turnout in local elections. Rather, community participation decreases turnout most when the election is less salient and when the collective action problem of turnout is greatest.

### **Testing Alternative Explanations**

We have presented evidence that the occurrence of a saint’s day fiesta near a federal election significantly decreases voter turnout in a community, and we have argued that this decrease is causally attributable to the social capital generated by fiestas. In this section, we consider alternatives to our causal interpretation. Challenges to our findings will likely come in two forms. First, there may be unobserved differences between municipalities in the treatment and control groups that confound our results. Second, the observed effect may not be due to social capital but rather something else that changes during the time of the fiestas.

We have already attempted to rule out the first challenge regarding the comparability of treated and untreated municipalities. The balance table and distribution propensity scores demonstrate that there are few observable differences between treatment groups. Also, using the Hausman test, we cannot reject the null hypothesis that the independent effects for individual municipalities are uncorrelated with the treatment. All of these results are consistent with our claim that fiesta dates are “as good as” randomly assigned. However, more subtle alternative explanations are still possible.

Catholic parishes choose their patron saints for many reasons. Perhaps certain characteristics are correlated with the type of patron saint that a church will select. Since some saints are quite common, one may worry that the results are driven by the churches of one or a few particular saints. There are 7 different fiesta dates that are shared by more than 15 churches in our data set. Our results are robust to the exclusion of any of these sets of churches. Another way to address this concern is to measure the degree of similarity within churches sharing a fiesta date. We find that the variance of census covariates within municipalities sharing a fiesta date is the same as the variance of covariates across all municipalities. Therefore, all evidence is consistent with our argument that the fiesta dates are “as good as” randomly assigned.

Another possibility is that certain types of municipalities will choose patron saints whose feast date occurs at a convenient time. Perhaps the family members of college students or migrant workers will prefer to have their fiestas during the summer or around Christmas so that their relatives can return home during the celebration. We find that municipalities with summer or Christmas fiesta dates are demographically similar to all other municipalities. However, even if there were some unobserved variable correlated with fiesta dates, our fixed effects estimate would still provide an unbiased estimate because it removes differences across municipalities.

We assume that saint’s day fiestas influence social capital, and the way in which the fiestas affect voter turnout is through their effect on social capital. Since we cannot obtain a precise measure of social capital, we simply estimate the effect of the fiesta treatment on turnout. If fiestas affect turnout through some mechanism other than social capital, we would obtain a biased result. While we cannot prove the validity of this assumption, we can raise alternative possibilities and assess their plausibility.

As we have discussed, saints day fiestas are large events spanning several days and requiring multiple weeks of preparation. Is there something other than social capital that changes during the

fiesta that might explain our result? One possibility is that intense celebration and alcohol consumption exhaust citizens. On one level, exhaustion is not inherently at odds with social capital. We want to test the effect of citizens coming together and connecting. If they happen to consume alcohol or lose sleep when they convene, that would be one byproduct of social capital. However, our results cannot likely be attributed solely to hangovers or sleeping in, because we look at a four week window. Tiredness might influence turnout if the fiesta occurs one or two days before the election. However, we find that fiestas occurring two weeks before or after the election date decrease turnout as much as those occurring the day before the election.

Another possibility is that political candidates or government officials would visit the festivals in order to influence the community's political participation. Since turnout decreases during the fiestas, this type of political activity would have to decrease turnout in order to work against our conclusions. Perhaps citizens are disillusioned by political campaigning at the festivals or government officials actually attempt to decrease turnout in communities that oppose them. Both possibilities seem unlikely, particularly for the small, rural municipalities in our data set. Most of these communities are so small and so distant from urban centers that politicians or government officials would rarely attend the fiestas. Additionally, all of our survey respondents indicated that there is never any official political or government activity at their fiestas. We can also rule out the possibility that voter registration plays a role because the deadline to register is several months before the election date.

A related explanation is that saint's day fiestas interfere with the campaign activity that would typically mobilize voters. This possibility can be ruled out in several ways. First, we find that fiestas occurring after the election demobilize voters as much as those occurring before the election. Fiesta preparations would not interfere with campaign activity in the same way that the fiesta celebration might. If anything, the occurrence of the fiesta should make it easier for campaigns to reach citizens

and mobilize them. Second, fiesta participation is most intense on the weekends, and campaign activity is outlawed during the weekend of the election. Therefore, a saint's day fiesta would not interfere with the normal campaign activity in the region.

Since saint's day fiestas have an inherently religious purpose, the fiestas may alter the community's level of personal religiosity which in turn influences turnout. There is no obvious reason to think that elevated religiosity would decrease voter turnout. In fact, our analysis of Mexican survey data from Latinobarometro indicates that religiosity is uncorrelated with voter turnout and positively correlated with the discussion of politics. Most of our survey respondents indicated that church attendance increases during the fiesta. Since church attendance is both a source and consequence of social capital, we take this as supporting evidence that the fiestas temporarily increase the social capital within the community.

### **Replicating the Findings in an Urban Setting**

Our previous analysis has focused solely on Mexican municipalities with just one Catholic Church. Thus, our data set consists of primarily poor, rural, agricultural communities. The questions remain whether our results will generalize to other democratic communities. In order to ensure internal validity, we have limited our study to the subset of regions for which we can make valid inferences. To test for external validity, we turn to the Mexican city of Monterrey. This urban center looks nothing like the previous communities in our data set. Monterrey has over one million residents, a well regarded health care system, four major universities, and a GDP per capita of more than 45,000 U.S. dollars.

For every church in Monterrey, the local archdiocese website lists the saint's day fiesta date and the neighborhoods served by the church. In many cases, we were able to match these listed neighborhoods to "secciones," the smallest geographic unit for which electoral results were reported

in 2006 and 2009. As a result, we have compiled a dataset of 584 neighborhoods served by 93 different churches for which we know the fiesta date and voter turnout levels for 2006 and 2009. With only 93 churches, two election years, and no census variables our tests will be much less precise than in our previous analysis. However, we can test for the fiesta effect just as before to see if fiestas have the same type of effect in an urban area.

Table 5 shows the results of this analysis. We conduct OLS to test whether neighborhood turnout changes when the church's saint's day fiesta occurs within two weeks of the election date. Both models control for the year, and model 2 includes partisan controls. The partisan controls are the proportion of the vote earned in each neighborhood by the three major political parties - the National Action Party, the Institutional Revolutionary Party, and the Party of the Democratic Revolution. Since we do not have census data for each neighborhood, we rely on these partisan variables to serve as a proxy for the social structure and unobserved characteristics of neighborhoods. These controls explain some of the variance in turnout and increase the precision of our estimate.

[Table 5]

As with the rural municipalities, we estimate a negative effect of the saint's day fiesta on turnout in Monterrey. Model 2 estimates that the occurrence of a saint's day fiesta within 2 weeks of an election reduces neighborhood turnout levels by 2.9% ( $p < .01$ ). While the evidence is not as strong as before due to our lack of data, this analysis suggests that our findings in rural Mexico may apply to a much broader set of democratic communities. Saints day fiestas decrease voter turnout in Monterrey just as they do in rural communities, and the same mechanisms by which social capital decreases turnout in rural communities appear to be present in urban centers.

## Potential Mechanisms

How can a positive shock to social capital decrease voter turnout? Previous research predicts that social capital will increase turnout through norms of reciprocity (Putnam 1993; Stolle 1998), social pressure (Gerber et al. 2008; Nickerson 2008), increased flow of political information (Fiorina 1990; Berinsky 2005), and exposure to the interests of others (Kinder and Kiewiet 1981; Fowler 2006; Edlin et al. 2007; Rotemberg 2009). However, we offer three competing ways in which social capital might decrease turnout:

First, social capital consumes time, which is an essential resource for political participation (Verba et al. 1995; Rupasingha et al. 2006). Rational individuals will smoothly allocate their free time (Becker 1965) such that community participation will decrease political participation even when the community event occurs weeks before or after an election. As citizens become more involved with the community, they have less time to learn about the election, form an informed opinion, and visit the polling place. Our surveys indicate that the social capital generated by saint's day fiestas comes at a price; it consumes large amounts of the citizens' time.

Second, social connectedness may expose citizens to conflicting views (Mutz 2002) which creates uncertainty and decreases turnout. Our surveys indicate that citizens talk about contentious issues at the fiestas and express discontent with political leaders and the political system. Moreover, Joel and Dina Sherzer, two authors of *Adoring the Saints: Fiestas in Central Mexico* (Lastra et al. 2009), told us that political discontent is pervasive throughout the fiestas. "If you look at the kinds of figures, giant puppets, etc. which parade about during fiestas, they are sardonic, politically biting, and humorously critical of government leaders."<sup>14</sup> The exposure to conflicting views may cause

---

<sup>14</sup> Quote was taken from e-mail correspondence with Joel and Dina Sherzer.

members of the community to lose confidence in their own political opinions or become disillusioned with politics altogether.

Lastly, citizens often vote because of the sense of civic duty or the fulfillment they derive from the act itself (Riker and Ordeshook 1968). Perhaps social capital serves as a substitute for that type of satisfaction. When citizens contribute to their community at the saint's day fiesta, they may no longer feel the need to vote, because they have already achieved the fulfillment that they would otherwise obtain through voting. Lastra et al. (2009) argue that this sense of duty explains the high levels of participation in saint's day fiestas. "These networks of relationships are effective because of ethical principles that govern the behavior of the inhabitants of the communities. They feel a sense of duty . . . to carry out one's promise." (p. 116)

We cannot identify one mechanism that explains the negative effect of saint's day fiestas on turnout, but qualitative evidence suggests that all three mechanisms play an important role. Through a combination of statistical evidence, survey evidence, previous literature on voting behavior, and previous anthropological research, we conclude that the social capital generated by saint's day fiestas decreases turnout by consuming time, exposing citizens to conflicting views, and providing alternative routes to personal fulfillment.

## **Discussion**

Social scientists have long considered vibrant civic political associations a basic requisite of democracy. Lipset (1959) claims, "In a large complex society, the body of the citizenry is unable to affect the policies of the state. If citizens do not belong to politically relevant groups, if they are atomized, the controllers of the central power apparatus will completely dominate the society." More recently, social capital scholars have argued that non-political civic associations promote

participation and effective governance (Putnam 1993, 1995, 2000; Tavits 2006). This study focuses on the hypothesis regarding social capital and political participation.

We exploit a natural experiment to test the effect of participation in local churches and community festivals on voter turnout. Saint's day fiestas bring together individuals in a community, allowing them to connect with one another and discuss important issues. Contrary to previous theories and observational findings, this exogenous shock to social capital around the time of a federal election actually decreases voter turnout. This finding is not obvious. In fact, when we described our design to other researchers of social capital, many predicted that turnout would increase and none expected that it would decrease.

While the results presented in this paper undermine one of the most important social capital hypotheses, our findings are not a general indictment of the role of social capital in democracy. The mechanisms connecting participation and quality of governance are manifold and complex. The direct effect on turnout is only one component. It is possible that while civic participation has a negative effect on the turnout of peripheral voters, there are other ways that social capital improves the quality of democracy. For example, governments might be more responsive to a socially-connected citizenry. We have no way of testing the overall net effect of social capital on governance in this study, but we are open to the possibility that social capital has benefits outside of turnout.

Several previous studies are consistent with our finding that social capital decreases turnout. As previously mentioned, Condon (2009) finds that parents randomly assigned into the FAST (Families and Schools Together) program are less likely to vote. However, the nonrandom willingness of parents to share information with the researcher may bias the results of the study. Additionally, Stoker and Jennings (1995) find that couples experience a decrease in political participation around the time of their weddings. Marriage ceremonies bring families and friends together like no other event, and despite the elevated level of social capital, turnout decreases.

However, marriages do not occur at random times, and there are other changes around a wedding that might explain the lower rates of turnout. We present a similar result but hope to overcome the limitations of previous studies by exploiting the quasi-random timing of saint's day fiestas.

Community festivals do not always detract from voter turnout. Addonizio et al. (2007) find that festivals held on the election date near the polling location can increase voter turnout by several percentage points. How do festivals increase turnout in their context and decrease it in ours? The key difference is that their festivals were specifically designed to attract voters to the polls. In a sense, their treatment lowers the cost of voting, which increases turnout as expected. Our treatment on the other hand, does not happen on the exact election date (except in a few cases). Instead, saint's day fiestas bring individuals together at a time and location removed from voting, raising social capital without directly altering the cost of voting. Their result suggests that planned festivals can raise turnout by bringing people to the polls, but their finding says nothing about social capital.

We are among many political scientists concerned with voice and equality in the political process (Verba et al. 1995). Socioeconomic status is highly correlated to voter turnout, which may bias public policies in favor of the few. Many scholars and activists hope that social capital will open the doors of political representation for underrepresented communities like those in our analysis. If social connections really do increase turnout, then we can improve representation by building community centers, opening parks, and throwing community-wide fiestas. However, we find no evidence that social capital can solve the collective action problem of turnout. Our results indicate that community participation is a byproduct, not a cause, of a healthy democracy. Contrary to previous thinking, social capital is a substitute, rather than a complement, for political participation.

## References

- Abadie, Alberto, David Drukker, Jane Herr, and Guido Imbens. 2004. Implementing Matching Estimators for Average Treatment Effects in Stata. *Stata Journal* 4(3):290-311.
- Abadie, Alberto and Guido Imbens. 2008. On the Failure of the Bootstrap for Matching Estimators. *Econometrica* 76(6):1537-1557.
- Addonizio, Elizabeth., Donald Green, and James Glaser. 2007. Putting the Party Back into Politics: An Experiment Testing Whether Election Day Festivals Increase Voter Turnout. *PS: Political Science and Politics*, 40(4):721-727.
- Becker, Gary. 1965. A Theory of the Allocation of Time. *The Economic Journal* 75(299):493-517.
- Berinsky, Adam. 2005. The Perverse Consequences of Electoral Reform in the United States. *American Politics Research* 33(4):471-491.
- Booth, John A. and Patricia Bayer Richard. 1998. Civil Society, Political Capital, and Democratization in Central America. *Journal of Politics* 60(3): 780-800.
- Bourdieu, Pierre and Loic Wacquant. 1992. *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press.
- Condon, Meghan. 2009. The Effect of Social Capital on Voter Turnout: A Field Experiment in Two Southwestern Cities. Working Paper.
- Denny, Kevin and Orla Doyle. 2008. Political Interest, Cognitive Ability and Personality: Determinants of Voter Turnout in Britain. *British Journal of Political Science* 38(2):291-310.
- De Tocqueville, Alexis. 1840. *Democracy in America*.
- Duch, Raymond M. and Harvey D. Palmer. 2004. It's Not Whether You Win or Lose, but How You Play the Game: Self-Interest, Social Justice, and Mass Attitudes toward Market Transition. *American Political Science Review* 98(3): 437-452.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. Harper and Row.

- Edlin, Aaron, Andrew Gelman, and Noah Kaplan. 2007. Voting as Rational Choice: Why and How People Vote to Improve the Well-Being of Others. *Rationality and Society* 19(3):293-314.
- Fiorina, Morris. 1990. Information and Rationality in Elections. *Information and Democratic Processes* pp. 329-342.
- Fowler, James. 2005. Turnout in a Small World. *Social Logic of Politics*. Temple University Press.
- Fowler, James. 2006. Altruism and Turnout. *Journal of Politics* 68(3):674-683.
- Franklin, Mark N. 2004. *Voter Turnout and the Dynamics of Electoral Competition in Established Democracies since 1945*. Cambridge: Cambridge University Press.
- Gerber, Alan, Donald Green, and Ron Shachar. 2003. Voting May Be Habit-Forming: Evidence from a Randomized Field Experiment. *American Journal of Political Science* 47(3):540-550.
- Gerber, Alan, Donald Green, and C. Larimer. 2008. Social Pressure and Voter Turnout: Evidence from a Large-scale Field Experiment. *American Political Science Review* 102(1):33-48.
- Gerber, Alan, Gregory Huber, David Doherty, Conor Dowling, Connor Raso, and Shang Ha. 2010. Personality Traits and Participation in the Political Process. *Journal of Politics* forthcoming.
- Hausman, Jerry. 1978. Specification Tests in Econometrics. *Econometrica* 46(6):1251-1271.
- Hill, Kim Quaille and Tetsuya Matsubayashi. 2005. Civic Engagement and Mass-Elite Policy Agenda Agreement in American Communities. *American Political Science Review* 99(2): 215-224.
- Kaufmann, Jason. 1999. Three Views of Associationalism in 19th-Century America: An Empirical Examination. *American Journal of Sociology* 104(5): 1296-1345.
- Keele, Luke. 2007. Social Capital and the Dynamics of Trust in Government. *American Journal of Political Science* 51(2): 241-254.
- Kinder, Donald and D. Roderick Kiewiet. 1981. Sociotropic Politics: The American Case. *British Journal of Political Science* 11:129-161.

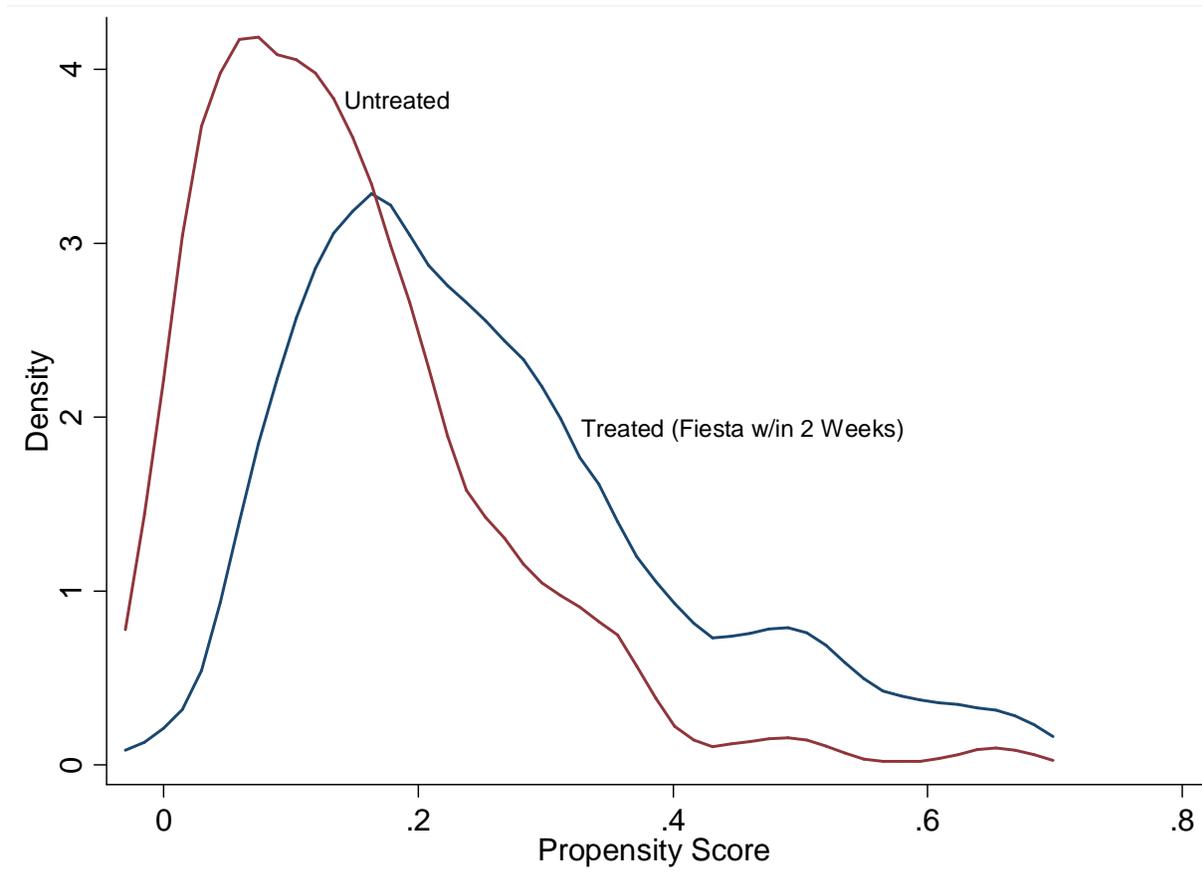
- Kirshna, Anirudh. 2007. How Does Social Capital Grow? A Seven-Year Study of Villages in India. *Journal of Politics* 69(4): 941-956.
- Knack, Stephen. 1992. Civil Norms, Social Sanctions, and Voter Turnout. *Rationality and Society* 4(2): 133-156.
- Knack, Stephen. 2002. Social Capital and the Quality of Government: Evidence from the States. *American Journal of Political Science* 46(4): 772-785.
- Lake, Ronald La Due and Robert Huckfeldt. 1998. Social Capital, Social Networks, and Political Participation. *Political Psychology* 19(3):567-584.
- Lastra, Yolanda, Dina Sherzer, and Joel Sherzer. 2009. *Adoring the Saints: Fiestas in Central Mexico*. University of Texas Press.
- Letki, Natalia and Geoffrey Evans. 2005. Endogenizing Social Trust: Democratization in East-Central Europe. *British Journal of Political Science* 35(3): 515-529.
- Lipset, Seymour Martin. 1959. Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *American Political Science Review* 53(1):69-105.
- Meredith, Marc. 2009. Persistence of Political Participation. *Quarterly Journal of Political Science* 4(3):186-208.
- Messner, Steven F., Eric P. Baumer, and Richard Rosenfeld. 2004. Dimensions of Social Capital and Rates of Criminal Homicide. *American Sociological Review* 69(6): 882-903.
- Mutz, Diana. 2002. The Consequences of Cross-Cutting Networks for Political Participation. *American Journal of Political Science* 46(4):838-855.
- Nickerson, David 2008. Is Voting Contagious? Evidence from Two Field Experiments. *American Political Science Review* 102(1):49-57.
- Olsen, Marvin. 1972. Social Participation and Voting Turnout: A Multivariate Analysis. *American Sociological Review* 37(3):317-333.

- Olson, Mancur. 1965. *The Logic of Collective Action*. Harvard University Press.
- Paxton, Pamela. 1999. Is Social Capital Declining in the United States? A Multiple Indicator Assessment. *American Journal of Sociology* 105(1): 88-127.
- Paxton, Pamela. 2002. Social Capital and Democracy: An Interdependent Relationship. *American Sociological Review* 67(2): 254-277.
- Plutzer, Eric. 2002. Becoming a Habitual Voter: Inertia, Resources, and Growth in Young Adulthood. *American Political Science Review* 96(1):41-55.
- Putnam, Robert. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press.
- Putnam, Robert. 1995. Tuning In, Tuning Out; The Strange Disappearance of Social Capital in America. *PS: Political Science and Politics* 28(4):664-683.
- Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster.
- Putnam, Robert and Lewis Feldstein, with Don Cohen. 2003. *Better Together: Restoring the American Community*. Simon and Schuster.
- Riker and Ordeshook. 1968. A Theory of the Calculus of Voting. *American Political Science Review* 68(1):25-42.
- Rosenbaum, Paul and Donald Rubin. 1983. The Central Role of the Propensity Score in Observational Studies for Causal Effects. *Biometrika* 70(1):41-55.
- Rotemberg, Julio. 2009. Attitude-Dependent Altruism, Turnout, and Voting. *Public Choice* 140:223-244.
- Rupasingha, Anil, Stephan Goetz, and David Freshwater. 2006. The Production of Social Capital in US Counties. *Journal of Socio-Economics* 35(1):83-101.

- Sampson, Robert J. , Doug McAdam, Heather MacIndoe, and Simón Weffer-Elizondo. 2002. The Durable Nature and Community Structure of Collective Civic Action. *American Journal of Sociology* 111(3): 673-714.
- Scheufele, Dietram and Dhavn Shah. 2000. Personality Strength and Social Capital: The Role of Dispositional and Informational Variables in the Production of Civic Participation. *Communication Research* 27(2);107-131.
- Schneider, Mark, Paul Teske, Melissa Marschall, Michael Mintrom, and Christine Roch. 1997. Institutional Arrangements and the Creation of Social Capital: The Effects of Public School Choice. *American Political Science Review* 91(1): 82-93.
- Skocpol, Theda. 1997. The Tocqueville Problem: Civic Engagement and American Democracy. *Social Science History* 21(4): 455-479.
- Stoker, Laura and M. Kent Jennings. 1995. Life-Cycle Transitions and Political Participation: The Case of Marriage. *American Political Science Review* 89(2):421-433.
- Tarrow, Sidney. 1996. Making Social Science Work Across Space and Time: A Critical Reflection on Robert Putnam's Making Democracy Work. *American Political Science Review* 90(2): 389-397.
- Tavits, Margit. 2006. Making Democracy Work More? Exploring the Linkage between Social Capital and Government Performance. *Political Research Quarterly*. 59(2):211-225.
- Uslaner, Eric M. 1999. "Democracy and Social Capital," in Warren, Mark E. (Ed), *Democracy and Trust*. Cambridge: Cambridge University Press.
- Verba, Sidney, Kay Schlozman, and Henry Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press.

## Tables and Figures

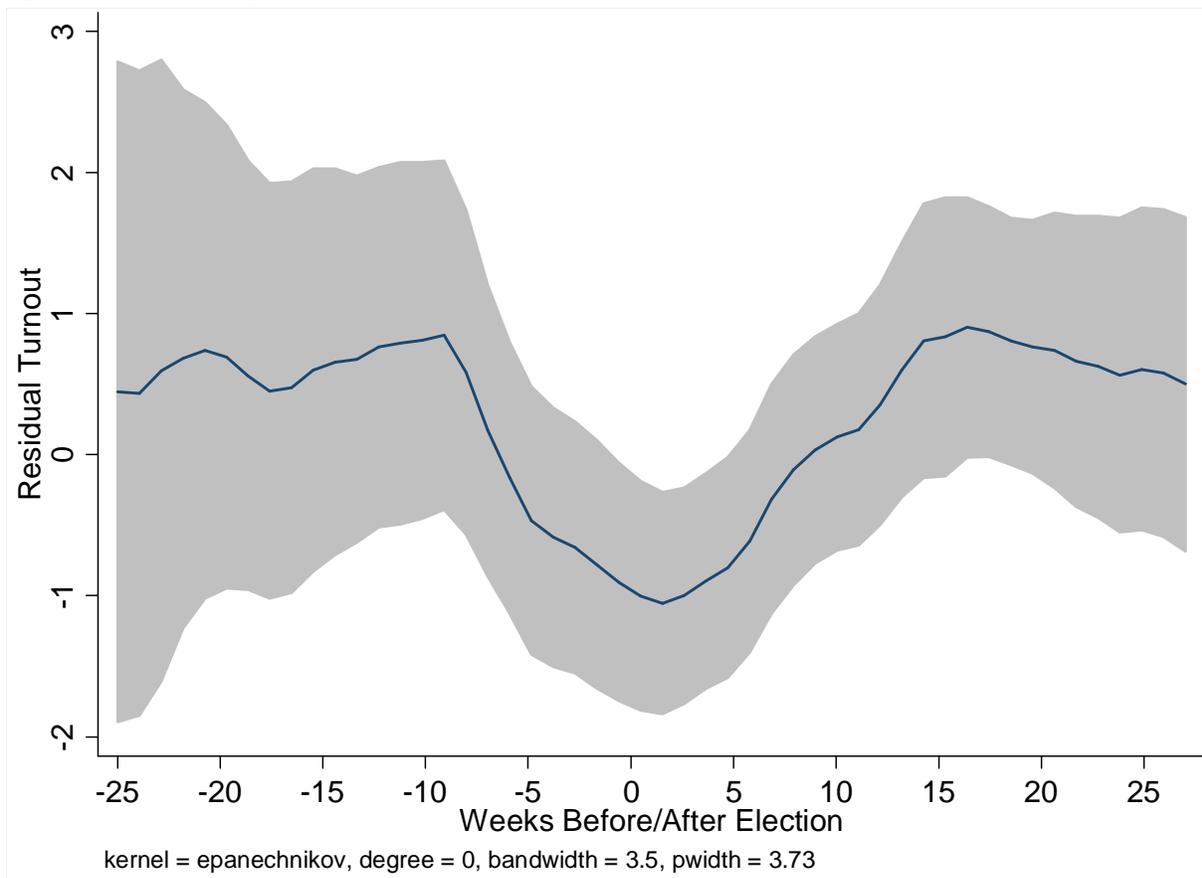
Figure 1. Distribution of Propensity Score across Treated and Untreated Communities<sup>15</sup>



---

<sup>15</sup> The distributions are estimated by a kernel density function. The propensity scores are estimated from a Probit model which regresses Fiesta on all census variables and year fixed effects.

Figure 2. Kernel Regression: Turnout across Fiesta Dates<sup>16</sup>



<sup>16</sup> 95% confidence band is shown.

Figure 3. A Closer Look at the Switchers

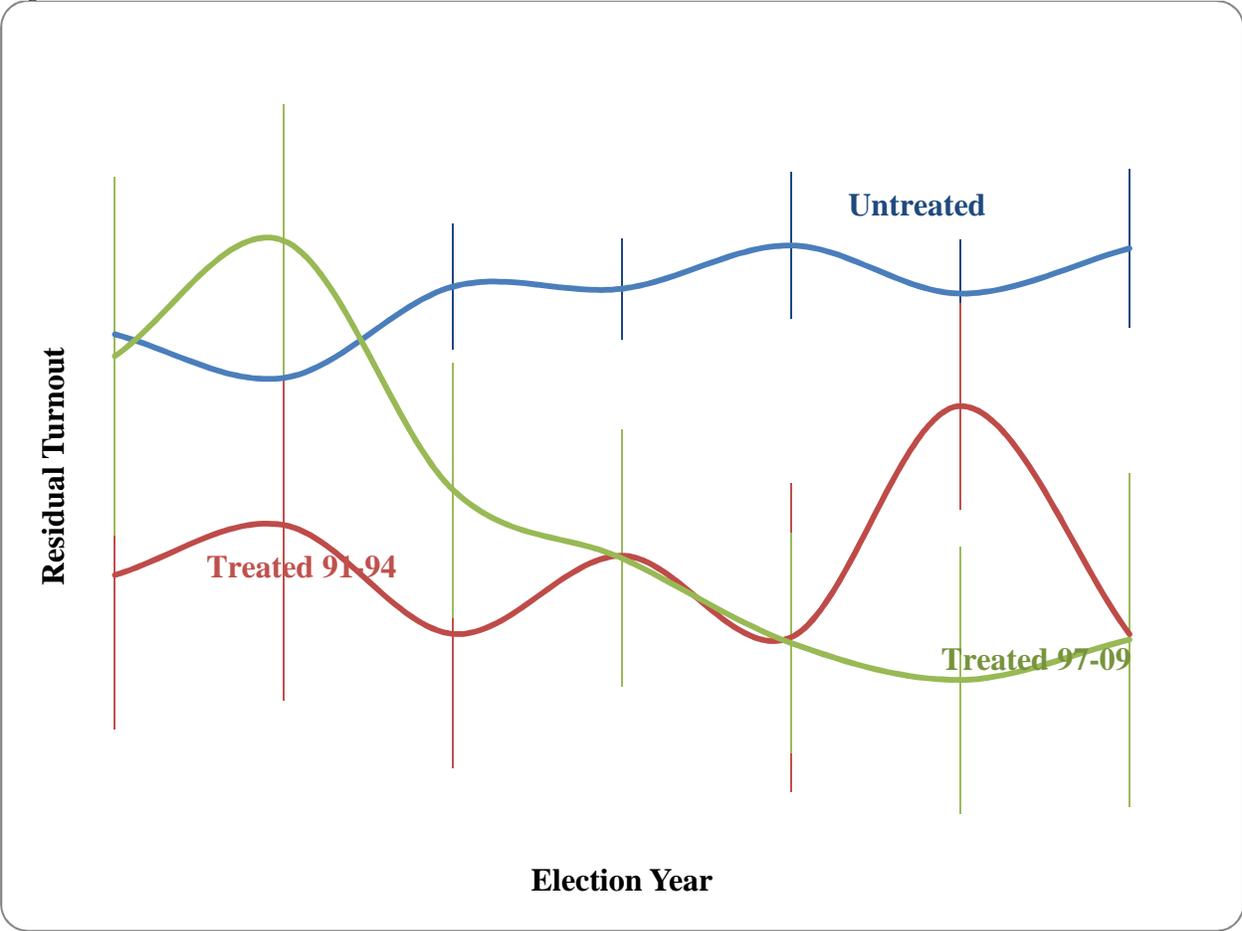


Table 1. Sample Summary Statistics: 325 Municipalities, 7 Elections<sup>17</sup>

Variable	Mean	Median	Min	Max	St Dev	Observations
Population 2000	12198	9517	413	49462	9706	325
Population Density	101.7	51.1	0.9	1743.3	180.7	296
Pct. w/ some High School	11.2	9.4	1.2	55.0	7.4	325
Pct. $\leq$ Min. Wage	16.6	13.4	1.5	58.0	10.7	325
Pct. $>$ 10x Min. Wage	0.9	0.6	0.0	5.6	0.9	325
Pct. Agriculture	51.3	51.1	1.3	96.4	22.7	325
Pct. Government	3.1	2.8	0.3	14.8	1.9	325
Pct. $>$ 70 Years Old	1.5	1.3	0.3	5.1	0.7	325
Pct. $<$ 18 Years Old	44.5	44.9	27.8	56.8	5.2	325
Pct. Catholic	91.2	93.4	51.7	99.8	8.2	325
Turnout 2000	61.5	61.8	27.0	96.9	10.2	325
Fiesta	0.16	0	0	1	0.37	325

---

<sup>17</sup> Data on population density is missing for 29 municipalities. In all subsequent analyses, we have imputed population density for those cases by estimating a Tobit model. We regressed log population density on all other census variables to obtain predicted values of log population density for the missing cases.

Table 2. Balance of Covariates across Fiesta Treatment

Variable	Fiesta w/in 2 weeks of Election?		Difference	P-value
	No	Yes		
Population 2000	11879	14144	2265	0.122
Population Density	78.5	89.4	10.9	0.552
Pct. w/ some High School	11.0	11.9	0.9	0.457
Pct. Minimum Wage	16.4	17.3	0.9	0.554
Pct. > 10x Min. Wage	0.89	0.86	-0.03	0.859
Pct. Agriculture	51.8	48.1	-3.7	0.287
Pct. Government	3.11	3.10	-0.01	0.961
Pct. > 70 Years Old	1.54	1.36	-0.18	0.105
Pct. < 18 Years Old	44.5	44.3	-0.2	0.808
Pct. Catholic	91.4	89.7	-1.7	0.157

Table 3. The Effect of Saint's Day Fiestas on Voter Turnout<sup>18</sup>

	(1) PS Matching	(2) NN Matching	(3) Pooled OLS	(4) Fixed Effects
Fiesta	-4.298 (1.186)**	-3.442 (0.777)**	-3.209 (0.970)**	-2.525 (0.916)**
Year FE's			X	X
Census Vars.			X	
State Turnout			66.480 (5.204)**	48.185 (5.479)**
Observations	2255	2255	2255	2255
R-squared			0.512	0.680
SER			10.84	9.37

Standard errors in parentheses

\*\* significant at 1%

---

<sup>18</sup>Both matching estimators match on year exactly and include a linear bias adjustment. For both matching estimators, we report the standard errors proposed by Abadie et al. (2004). With propensity score matching, this procedure does not account for the uncertainty associated with the estimation of the propensity score. Many researchers bootstrap the standard errors in this case to account for such a problem. However, Abadie and Imbens (2008) show that the bootstrap does not yield valid standard errors for matching estimators. They argue that the closed-form standard errors are adequately conservative to account for uncertainty associated with the propensity score. For our pooled OLS and fixed effects estimates, we report municipality-clustered standard errors. In this case, they are nearly identical to standard errors calculated from a non-parametric bootstrap.

Table 4. Variance of the Fiesta Effect across Municipalities<sup>19</sup>

	(1)	(2)	(3)	(4)
Fiesta	1.492 (4.616)	-0.925 (1.724)	-20.351 (3.990)**	-3.311 (.976)**
Fiesta * Catholic	-5.861 (5.614)			
Fiesta * Predicted Turnout		-5.218 (4.132)		
Predicted Turnout		69.549 (36.893)		
Fiesta * Log Pop			27.003 (5.790)**	
Fiesta*Gubernatorial Election				6.318 (1.014)**
Gubernatorial Election				3.920 (1.720)*
Year Fixed Effects	X	X	X	X
Census Covariates	X	X	X	X
State Turnout	66.625 (5.176)**	-0.925 (35.386)	66.073 (5.088)**	63.388 (5.063)**
Observations	2255	2255	2255	2255
R-squared	0.51	0.51	0.53	0.52
SER	10.84	10.84	10.70	10.76

Robust standard errors in parentheses

\*\* significant at 1%

<sup>19</sup> All standard errors are clustered by municipality. The main effects for models 1, 2, 4, and 5 are not shown in the table, but they are included in the regressions as census covariates.

Table 5. The Effect of Fiestas on Turnout in Monterrey<sup>20</sup>

	(1)	(2)
Fiesta	-0.782 (1.610)	-2.931 (0.738)**
Year Fixed Effects	X	X
Partisan Controls		X
Observations	1160	1160
R-squared	0.07	0.48
SER	8.99	6.74

Robust standard errors in parentheses

\*\* significant at 1%

---

<sup>20</sup> Standard Errors are clustered by church.

## Supplementary Information

Table S1. The Effect of Fiestas on Voter Turnout: Robustness Checks<sup>21</sup>

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fiesta	-3.817 (1.152)**	-2.481 (0.870)**	-3.925 (1.118)**	-3.454 (1.120)**	-3.675 (1.124)**	-2.867 (1.076)**	-3.640 (1.172)**	-3.665 (1.165)**
Year Fixed Effects	X	X	X	X	X	X	X	X
State Fixed Effects		X						
3 Population Variables			X					
7 Education Variables				X				
10 Wage Variables					X			
18 Economic Variables						X		
10 Age Variables							X	
5 Misc. Variables <sup>22</sup>								X
Observations	2255	2255	2255	2255	2255	2255	2255	2254
R-squared	0.28	0.56	0.36	0.31	0.32	0.34	0.34	0.30
SER	13.01	10.27	12.25	12.76	12.70	12.50	12.45	12.87

Robust standard errors in parentheses

\* significant at 5%; \*\* significant at 1%

<sup>21</sup> Standard errors are clustered by municipality.

<sup>22</sup> Miscellaneous variables are (1) percent residing outside of state, (2), percent residing outside of Mexico, (3) percent speaking indigenous language, (4) percent Catholic, (5) log percent Catholic.