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Money Talks: The Impact of *Citizens United* on State Elections

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Abstract

The U.S. Supreme Court has ruled that restrictions on independent political expenditures by corporations and labor unions are unconstitutional on First Amendment grounds (*Citizens United v. FEC*, 2010). In this paper, we test the hypothesis that the decision gave an electoral boost to Republicans, at the expense of Democrats. The 50 U.S. states provide an ideal testing ground for this hypothesis as the ruling only affected a subset of states. We find that *Citizens United* had a positive and statistically significant effect of two to three percentage points on the probability of Republicans winning in state congressional elections.

Keywords: *Citizens United*; independent expenditures; state elections; congressional races; campaign contributions; campaign finance.

JEL codes: D72, K19

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1 Introduction

On January 21, 2010, the U.S. Supreme Court issued its ruling in *Citizens United v. Federal Election Commission* (558 U.S. 50, 2010; henceforth *Citizens United*), holding that the First Amendment's free speech clause prohibits the government from restricting independent political campaign expenditures by corporations and labor unions. The decision paved the way for corporations and labor unions to spend money on political advertising either independently or by contributing funds to various forms of advocacy groups (e.g., SuperPACs and 501(c) organizations).

Citizens United is arguably one of the most far-reaching, controversial, and widely debated Supreme Court decisions in recent history.[1] The central point of contention is whether contributions raised from corporations and labor unions have tilted the political playing field so strongly in favor of wealthy players that elections can now routinely be "bought" with enough money. In his dissent to *Citizens United*, for example, Justice John Stevens writes that "the court's ruling threatens to undermine the integrity of elected institutions across the nation." Whether this outlook turns out to be valid remains to be seen—the ways in which independent expenditure groups can affect the democratic process are vast, and the long-run consequences of *Citizens United* may not become evident for years.

It is not too early, however, to assess some of the immediate and measurable impacts *Citizens United* has had on elections following the court's decision. In this paper, we examine the question of whether *Citizens United* systematically shifted the winning probabilities of Republican and Democratic candidates in state legislative elections in 2010. If independent spending is unbalanced—for example, if business interests outspend labor interests, as has been the case historically for direct contributions—candidates aligned with corporate interests should see their electoral chances increase. In particular, one may hypothesize that removing restrictions on independent spending increases the probability that Republican candidates win elections, at the expense of Democratic candidates.

The U.S. states provide an ideal testing ground for this hypothesis: A subset of the states never placed any restrictions on independent political expenditures and were, thus, unaffected by the court's decision. Of the remaining states, most banned and a few capped independent expenditures by corporations and labor unions and were forced to lift these restrictions following the court's decision, beginning with the 2010 election cycle. We utilize data covering the 2010 elections and five prior election cycles (2000 through 2008) to obtain difference-in-differences estimates of the impact *Citizens United* had on the outcomes of state legislative elections. Analyzing data on 31,080 congressional elections, we find that *Citizens United* increased the proba-

[1] For example, at the time of writing this paper, a search for "Citizens United" on the *New York Times* website brought up about 29,000 results, and a search for "Citizens United v. Federal Election Commission" about 1,400 results. "Bush v. Gore" returned slightly more than 1,100 results.

bility of Republican candidates winning by approximately two percentage points. This increase is statistically significant and appears to be mainly driven by the impact on House elections (in Senate elections, the effect is large but not statistically significant). Moreover, we find that *Citizens United* is associated with an increase of three percentage points in the probability of reelection for Republican incumbents in House races.

Lifting restrictions on independent expenditures can affect parties' odds of winning through several possible channels. Most directly, Republican candidates may receive more independent support than Democratic ones. Moreover, uncapping independent expenditures in elections also has conceivable indirect effects. First, independent expenditures can influence the incentives of donors to contribute directly to political campaigns. Some donors may become discouraged to contribute to a candidate's campaign by what they perceive as an overwhelming presence of outside money, while the visible support of a candidate or cause by an independent group may encourage others to donate. Second, independent expenditures may affect candidates' entry and positioning choices. The prospect of receiving support from outside groups may encourage entry by candidates aligned with wealthy supporters and discourage entry by candidates who do not expect to receive as much independent support as their opponents. We find no evidence that *Citizens United* has either crowded out or crowded in direct contributions to candidates belonging to either party, or that it has significantly affected the number of candidates from either party. Having eliminated these indirect channels, our results suggest that the increase in Republican candidates' winning odds post-*Citizens United* is due to an advantage in independent expenditures backing Republican candidates or causes.

Unfortunately, the available data on independent spending is fairly incomplete, preventing any detailed exploration of the direct channel through which *Citizens United* may have affected electoral advantage. Most states do not have full disclosure requirements (and many have no disclosure requirements) for such expenditures. Data on independent spending are currently available at the aggregate level for 18 states from 2006 to 2010 (Spencer and Wood 2012). Fortunately, several of these states had caps on independent expenditures by corporations and labor unions prior to *Citizens United* while others did not, allowing for at least a summary analysis of the effects of the ruling on independent expenditures. Comparing aggregate independent expenditures in 2006 and in 2010 in the 18 states for which data are available, Spencer and Wood (2012) find that independent spending increased 100 percent in those states with bans on independent expenditures by corporations and labor unions prior to 2010 relative to those states without such bans.[2] Two other recent working papers examine the effects of *Citizens United* on

[2]Race-level data on independent spending in 2010 has been published for North Carolina, which had a ban on independent expenditures prior to *Citizens United*. In this state, outside groups spent $2.6 million in the 2010 state elections, nearly 92 percent of which was used to support Republican candidates (North Carolina Free Enterprise Foundation 2011). Three groups connected with Art Pope, the Chairman and CEO of discount store chain Variety Wholesalers, accounted for 72 percent of the outside spending. One of Mr. Pope's groups, Real Jobs North Carolina (which was directly funded by Variety Wholesalers), targeted 19 House and Senate races, and in 16 of them, a

independent expenditures in U.S. elections. Gaffey (2012) underscores the difficulties of compiling precise data on such expenditures even for national elections. Selkirk (2011) reports that *Citizens United* appears to have been associated with a significant increase in independent expenditures by corporations in U.S. House races. Our paper appears to be the first to analyze the effects of *Citizens United* on election results, which are more accurately observed than independent expenditures.

Our paper is also related to the larger literature examining the effects of campaign contributions on election outcomes. This literature focuses on *direct* contributions and does not discuss the type of "speech" at issue in *Citizens United*, which is independent of a campaign. Ansolabehere *et al.* (2003) show that direct contributions have had little effect on legislator votes in the U.S. House. (In national elections, the overwhelming majority of total contributions are made by individuals because contributions by corporations and other institutions have been limited by law, so the paper does not bear directly on what might happen if corporations were legally permitted to make direct contributions to a candidate's campaign fund or to make independent campaign expenditures.) Lott (2006) finds that limits on individual campaign contributions reduced the number of candidates who ran for office by an average of 20 percent. In contrast, Stratmann and Aparicio-Castillo (2006, 2007) show that limits on direct contributions increased the number of candidates running in state assembly elections, and Hamm and Hogan (2008) demonstrate that the limits reduced the probability that incumbents went unchallenged. Studying House races from 1935 to 2009, La Raja and Schaffner (2012) find that state regulations limiting direct contributions by corporations had no effect on partisan control of government and had a small effect on incumbency reelection rates.[3]

Abramowitz (1991) and Abramowitz *et al.* (2006) document that incumbent reelection rates in U.S. House elections are high, in large part due to challengers being at a financial disadvantage. Although there is a debate about whether contributions have the same effect on the vote shares of challengers as they have on the vote shares of incumbents (Jacobsen 1990; Gerber 1998), restrictions on campaign spending should favor challengers. Conversely, removing restrictions on spending should favor incumbents. In particular, removing restrictions on independent spending should favor incumbents. If, moreover, independent spending tends to favor Republican candidates, removing restrictions on independent spending may increase Republican incumbent reelection rates. Our analysis provides some evidence that *Citizens United* indeed made it harder to unseat Republican incumbents.

Republican challenger defeating a Democratic incumbent. Republicans won 20 of the 27 races targeted by Pope's groups and gained a House and Senate majority, which they had not had since 1870 (Parkinson 2011).

[3]Several papers analyze theoretically the effects of spending caps in contests. Che and Gale (1998, 2006) show that imposing a cap on political lobbying can perversely increase overall lobbying expenditures under certain conditions by removing previous asymmetries between the opposing lobbyists. Applied to election campaigns instead of lobbying, these results suggest the following interesting possibility: Even if a cap on independent spending increased aggregate spending, it would nonetheless increase competitiveness. Conversely, the removal of a cap on independent spending could translate into a partisan advantage even if it lowered aggregate spending.

The remainder of the paper is organized as follows. Section 2 describes the data and formulates our empirical approach. Section 3 discusses our empirical results. Section 4 provides our conclusions.

2 Data and Empirical Approach

2.1 Data

We reviewed state statutory and constitutional law in order to compile a comprehensive database of state laws on independent expenditures by corporations and labor unions. Table 1 summarizes the history of these laws, listing the year of enactment for statutes banning or capping independent expenditures. As of January 2010, 22 states had bans and two states had caps on independent expenditures. These 24 states were forced by *Citizens United* to remove these restrictions before the 2010 election cycle. The remaining 26 states never had any restrictions on independent expenditures and were, thus, unaffected by *Citizens United*.

Our goal is to examine the effects of *Citizens United* on election outcomes in states that were affected by the ruling. For our outcome and control variables, we use state-level campaign finance data provided by the National Institute on Money in State Politics (NIMSP).[4] NIMSP collects campaign finance reports submitted to state disclosure agencies by all state-level candidates in primary and general elections. The data include candidate-level detail for state-level elections, including party affiliation, state, the election cycle year the candidate ran for office, the office[5] and district for which the candidate sought election, whether the candidate was an incumbent or challenger, whether the candidate won or lost, and total direct contributions raised by the candidate.

We exclude any observations for which the candidate's status is listed as *DNR* ("did not run"). This status indicates that the candidate is generally an incumbent who is not running that election year cycle but is raising money for future runs. We identify the following parties as Democrat: *Democrat*, *Democrat Write-in*, *Democratic-NPL*, *Democratic-Farmer-Labor*, *Libertarian Democrat*, *Progressive Democrat*, and *Pro-Life Democrat*. We identify the following parties as Republican: *Republican*, *Republican Write-in*, *Libertarian Republican*, and *Republican Libertarian*.

We aggregate the data to the level of election races, where an election race is defined as a unique combination of office, district, state, and election year. We exclude any special elections and recall elections. For each race, we record whether the race was won by a Republican candidate and whether the race was won by a Democratic candidate; whether the race had a

[4] www.followthemoney.org.

[5] State office indicates the office for which the candidate is seeking election (e.g., Governor, State House of Representatives, State Senator, State Supreme Court).

Republican incumbent and whether the race had a Democrat incumbent; the number of candidates running; the number of Republican candidates running; and the number of Democratic candidates running. For each election race, we also record the total direct contributions to all candidates; the total direct contributions to Republican candidates; and the total direct contributions to Democratic candidates.

For each election race, we calculate total contributions per capita in terms of 2011 U.S. dollars using the following method. First, we count the number of unique districts. Next, we use the U.S. Census Bureau's historical data on annual state population estimates[6] to estimate district populations for each district, by dividing the state population estimate by the number of unique districts. Then, for each election race, we calculate total contributions per capita by dividing total contributions by district population. Lastly, we use historical Consumer Price Index (CPI) data from the Bureau of Labor Statistics[7] to translate the variables to total contributions per capita in terms of 2011 U.S. dollars.

We focus on State House of Representatives and State Senator races for the election years 2000, 2002, 2004, 2006, 2008, and 2010. We exclude any races that had more than one winner.[8] We further exclude the state of Nebraska from the sample because the Nebraska legislature is the only legislature in the union that is unicameral and nonpartisan. Lastly, the office "State Assembly" is the lower House of the state legislature in California, New Jersey, Nevada, New York, and Wisconsin. Therefore, we rename "State Assembly" as "State House of Representatives." The final sample contains detail on $31,080$ races in $6,045$ districts in 49 states for 6 election cycles. Table 2 displays summary statistics.

Finally, for each state and election year we obtained the following demographic control variables: Average household income and percent of population with a college degree (from the Current Population Survey);[9] and percent black (from the U.S. Census Bureau).

2.2 Empirical strategy

Our empirical strategy aims to identify the effects of *Citizens United* on the probabilities of Republicans and Democrats winning in state congressional elections. The following equation governs the outcome of race i in district j in state k during election year t:

$$Win^{p}_{ijkt} = \gamma\left[IEBan_k \times 2010_t\right] + \beta X_{ijt} + \alpha_k + \mu_t + \varepsilon_{ijkt}. \tag{1}$$

Win^{p}_{ijkt} is a dummy dummy variable equal to 1 if the winning candidate in a race belongs to party $p \in \{\text{Republican, Democrat}\}$. $IEBan_k$ is a dummy variable equal to 1 if state k had a ban

[6] www.census.gov/popest/data/state.

[7] ftp.bls.gov/pub/special.requests/cpi/cpiai.txt.

[8] For example, each district for the Arizona House of Representatives is represented by two winners.

[9] cps.ipums.org/cps/.

on independent expenditures leading up to *Citizens United*, and 2010_t is a dummy variable equal to 1 if the election year is 2010, and thus is an indicator for the post-*Citizens United* period. X_{ijt} is a collection of race-level and district-level controls, including whether the race is for a House or Senate seat, whether the race had a Republican incumbent, whether the race had a Democratic incumbent, the number of Republican and Democratic candidates per race, and the total amounts of direct contributions to Republican and Democratic candidates in the race. Lastly, α_k and μ_t are state and election year fixed effects and ε_{ijkt} is the error term.

In order to answer the question how *Citizens United* affected election probabilities, we need to estimate the marginal effect of the interaction term $IEBan_k \times 2010_t$ on the probability that $Win^p_{ijkt} = 1$. We consider two alternative approaches in this regard. The first is to estimate a probit model,

$$Pr\left(Win^p_{ijkt} = 1\right) \;=\; \Phi\Big(\gamma\left[IEBan_k \times 2010_t\right] + \beta X_{ijt} + \alpha_k + \mu_t + \varepsilon_{ijkt}\Big), \tag{2}$$

where Φ is the cumulative standard normal distribution function. The (average) marginal effect of the interaction term, $IEBan_k \times 2010_t$, then measures the difference-in-differences effect of *Citizens United* on election probabilities.[10] Since the number of observations per state or per election year is bounded, the unconditional fixed-effects probit estimator is, in principle, biased and inconsistent (the "incidental parameter problem"). However, bias decreases rapidly in group size. Greene (2004[a,b]) demonstrates in Monte Carlo simulations that a group size of 20 reduces the incidental parameter bias to below 10% for coefficients, and even further for marginal effects. Coupé (2005) finds similar results for unconditional fixed-effects logit regressions. Our dataset contains, on average, 137 Senate races and 507 House races per state, and $1,122$ Senate races and $4,058$ House races per election year, suggesting that the incidental parameter bias is negligible in our estimations.

The second alternative is to use a linear probability model (LPM) instead; that is, to estimate equation (1) directly by ordinary least squares (OLS). The estimated coefficient of the interaction term $IEBan_k \times 2010_t$ is then its marginal effect and measures the impact of *Citizens United* on election probabilities. The advantage of this approach is that the LPM can be estimated using conditional fixed effects, which eliminates the incidental parameters from the estimations. The disadvantage of the LPM, of course, is that predicted probabilities are not bound on the unit interval. Furthermore, even without incidental parameters the linear estimator is generally biased and inconsistent (e.g., Horrace and Oaxaca 2006).

[10] Ai and Norton (2003) raise a concern about the interpretation of interaction terms in non-linear models. They argue that the marginal effect of a change in both interacted variables is not equal to the marginal effect of a change in their interaction. In terms of our model, $\Delta^2\Phi/[\Delta IEBan_k \Delta 2010_t] \neq \Delta\Phi/\Delta[IEBan_k \times 2010_t]$. This concern is not relevant in our case, as we are interested in the *treatment effect*, which is the marginal effect of the difference-in-differences interaction term: $\Delta\Phi/\Delta[IEBan_k \times 2010_t]$ (see also Puhani 2012).

Our empirical strategy utilizes both the probit and linear probability model. Because the group sizes in our dataset indicate that probit estimates will essentially be unbiased, we first estimate (2) using unconditional fixed effects. We run our regressions for $p =$ Republican and $p =$ Democrat, and for House races, Senate races, and all congressional races combined. We report average marginal effects of our parameter estimates. In particular, the marginal effect of the interaction term $IEBan_k \times 2010_t$ represents the impact of *Citizens United* on Republican and Democratic election probabilities in state congressional elections. To control for time-invariant factors that vary across electoral districts (e.g., political leaning of the district), we also wish to include district fixed effects in our analysis. In this case, the incidental parameter problem can no longer be ignored: On average, over our sample period each electoral district had 5.6 House elections and 3.9 Senate elections—group sizes for which bias in the probit model is potentially severe. Thus, when district fixed effects are included, we report both unconditional probit estimates and conditional LPM estimates.[11]

Finally, to explore possible indirect channels through which *Citizens United* may have affected electoral advantage, we also examine the impact of independent spending bans on a number of other outcomes. In particular, we estimate models in which the reelection probabilities for Republican and Democratic incumbents are dependent variables (using probit and linear probability models), as well as models in which the number of Republican and Democratic candidates and direct contributions to Republican and Democratic candidates are dependent variables (using OLS).

3 Empirical Results

3.1 Aggregate election outcomes

Before turning to our regression results, we take a preliminary look at state election outcomes before and after *Citizens United* at a highly aggregate level. Table 3 depicts the fraction of Republican and Democratic winners in state legislative elections between 2000 and 2010. The left panel in Table 3 pools all states that had bans on independent expenditures leading up to *Citizens United*, and the right panel pools the remaining states that did not have bans on independent expenditures.

[11] We considered several other alternatives to our empirical strategy. First, note that the incidental paramter problem can be avoided by estimating a conditional fixed-effects logit model. However, this approach prohibits the computation of marginal effects and is therefore inappropriate for our purposes. Second, one may estimate a random-effects probit model, which assumes orthogonality between incidental parameters and included variables and becomes severely biased if orthogonality is violated (Greene 2004[a]). Hausmann tests indicate that a random effects specification is inappropriate in our case. Third, one may simply choose to not include fixed effects in the regressions. This ignores some of the information contained in our panel dataset, but may be preferrable to fixed effects probit models when group sizes are very small (Greene 2004[a]). Given our rather large group sizes, neither of these alternatives appears to have a significant advantage over the conditional fixed-effects LPM and the unconditional fixed-efects probit model used in our analysis.

Consider the election year 2010—the first year that all states were required to allow unrestricted independent spending. In the first group of states in Table 3 (i.e., those with prior bans), Republican candidates won 53.3% of races. This represents an increase of 11.3 percentage points over the fraction of Republican-won seats in 2008, the last election these states had independent expenditure bans in place. In the second group of states (i.e., those without prior bans), Republican candidates won 54.1% of races, an increase of 6.6 percentage points over 2008. Note that 2008 was an election year marked by very strong anti-Republican sentiments throughout the U.S., while 2010 was a year marked by equally strong pro-Republican sentiments. This shift in sentiments *can* explain the across-the-board increase in Republican-won seats in 2010. However, we want to focus on the difference in the 2010-over-2008 increase in Republican-won seats across states with and without prior bans on independent spending. This difference is positive not only when looking at House and Senate elections together, but also when considering each chamber separately. In the 2010 state House elections, Republican-won seats increased by 11.9 percentage points in states with prior bans, and by 8.0 percentages points in states without such bans. In the 2010 state Senate elections, Republican-won seats increased by 10.2 and 1.9 percentage points, respectively.[12]

The aggregate pattern revealed in Table 3 suggests that an additional factor affected the 2010 election in some states—namely, the removal of state bans on independent expenditures in elections following the Supreme Court's decision in *Citizens United*. States in the second group never banned these expenditures, while states in the first group did. The larger increase in Republican-won seats in 2010 in states with prior independent expenditure bans provides some suggestive evidence that *Citizens United* confered an electoral advantage to Republican candidates. However, we cannot draw causal inferences from the data in Table 3, as the data are highly aggregated and we did not include controls for other factors that affect election outcomes.

3.2 Regression estimates of the effects of *Citizens United* on election probabilities

We now formally test the hypothesis that *Citizens United* increased the probability that Republican candidates win state legislative elections using the probit regression model (2), described in Section 2.2. We estimate the model using race and candidate level data, as detailed in Section 2.1. Our explanatory variable of interest is the interaction dummy "IE ban $\times$ 2010," whose estimated coefficient measures the impact of *Citizens United* on election outcomes. We report average marginal effects of this variable on election probabilities. Furthermore, in all estimations we report robust standard errors adjusted for clustering at the state level.

The results in Table 4 show that removing the state bans on corporate and union independent expenditures resulted in a statistically significant (at the 5% level) increase of 3.1 percentage

[12]The same pattern obtains when looking at 2010-over-2006 changes in Republican-won seats (i.e., when comparing 2010 to the last midterm election year prior to it).

points in the winning probability of Republican candidates for state legislative office, and in a statistically significant (at the 5% level) decrease of 3.0 percentage points in the winning probability of Democrat candidates.[13] The magnitude of these changes remains approximately the same when separately examining House and Senate elections ($+2.8/-2.7$ and $+3.6/-3.2$ points, respectively). However, significance weakens or goes away. In particular, removing state bans on independent spending did not result in a statistically significant change in the probability of either a Democrat or Republican candidate for a state Senate seat winning that election.[14]

Table 5 reports our probit regressions with added controls for direct contributions and the number of candidates. The results paint a similar picture to those in Table 4. Removing state bans on independent spending resulted in a statistically significant (at the 5% level) increase of 2.0 points in the election probability of Republican candidates for state legislative office, and a significant (at the 10% level) decrease of 1.9 points in the election probability for Democrat candidates. In House elections, the *Citizens United*-effect is the same as overall, and significant at the 5% level; in Senate elections, the effect is smaller ($+1.2/-0.7$) and not significant.

The above results suggest that *Citizens United* has helped Republican candidates in the 2010 state elections, at least for state House races. To put our estimates in context, the increase in Republican winning probabilities in House races of 2.0–2.8 percentage points corresponds to a 5–7 percent increase in seats picked up by Republican candidates in 2010, compared to 2008, in states that previously restricted independent expenditures. This also implies that about 17–24 percent of the 2010-over-2008 surge in Republican-won House seats in states with prior bans in independent spending is associated with the lifting of these bans following *Citizens United*.

3.3 Further empirical results

We now discuss a set of additional estimation results. These concern the impact of *Citizens United* on reelection probabilities in races with incumbents; the effects of *Citizens United* on direct contributions and the number of candidates; and the robustness of our results to the inclusion of state-specific time trends and district fixed effects.

A. The impact of Citizens United on reelection probabilities

The literature has documented the fundraising advantage enjoyed by incumbent politicians vis-à-vis their challengers (Abramowitz 1991; Abramowitz *et al.* 2006). We now test whether the removal of independent spending bans provides further advantages to incumbents at the expense

[13] Under the assumption that bans have an equal-sized and opposite effect of removing bans, our estimates also imply the converse: Pre-*Citizens United* state bans on corporate and union independent expenditures decreased election probabilities of Republican candidates for state legislative office by 3.1 percentage points, and increased election probabilities of Democrat candidates by 3.0 percentage points.

[14] All six regressions reported in Table 4 include controls for Republican and Democratic incumbents. The results suggest strong and highly significant partisan incumbency advantages. The impact of *Citizens United* on incumbents' reelection probabilities is examined in Section 3.3A.

of challengers. To this end, we restrict our sample to those races in which a Republican or Democratic incumbent was seeking reelection, and estimate the effect of lifting independent expenditure bans on the reelection probabilities of incumbents using a probit model. Approximately 83% of House races and 89% of Senate races in our sample had a Republican or Democratic incumbent.

Table 6 contains the results of our estimations, controlling for the number of candidates as well as direct contributions. The removal of independent expenditure bans in states that had such bans prior to 2010 is associated with an increase in the reelection probabilities of Republican incumbents of approximately four percentage points. This increase is statistically significant at the 5% level in all congressional races as well as in House races only. While negative effects are found on the reelection chances of Democratic incumbents, these effects are not significant. Thus, *Citizens United* seems to have made it more difficult to unseat Republican incumbents, but not more difficult to unseat Democratic incumbents. This finding suggests that an important channel through which *Citizens United* has affected outcomes in the 2010 state elections is the strengthening of incumbency advantages for Republican representatives.

B. The effects of Citizens United on direct contributions and the number of candidates

Observe that the controls for number of candidates per race and direct contributions in Table 5 are statistically significant predictors (at the 1% level) of electoral success for each party. In particular, the number of Republican candidates and the amount of direct contributions to Republican candidates are positively correlated with Republican wins and negatively with Democrat wins, and vice versa for Democrat candidates and contributions. We now investigate whether *Citizens United* has had an impact on these variables. If it has, then this impact needs to be added to an overall estimate of the treatment effect.

Tables 7–9 contain OLS regression results, using direct contributions (per capita, per race) and candidates running (per race) as outcomes. As before, we are interested in the coefficient of the "IE ban $\times$ 2010" indicator. Neither Republican nor Democrat direct contributions, nor overall direct contributions, are significantly affected by *Citizens United*. This is true in both House and Senate elections, with and without controlling for the number of candidates per race. Similarly, neither the number of Republican candidates per race, nor the number of Democrat candidates per race, is significantly affected by *Citizens United*, in both House and Senate elections. The only statistically significant effect on contributions or candidates running is a small positive effect on the total number of candidates in Senate races (significant at the 10% level).

Thus, while direct contributions and the number of candidates are predictors of a party's success, these variables do not seem to have been affected by the Supreme Court's decision in *Citizens United*. Our interpretation of these findings is that the measured effect of *Citizens United* on Republican and Democrat election probabilities (given in Tables 4–5) was driven by the direct impact that lifting independent spending bans had on corporate and union expenditures

in the 2010 state elections. As discussed earlier, data on independent spending are incomplete, preventing us from directly exploring the impact of *Citizens United* on independent spending in state elections at a disaggregated level. However, our results provide indirect evidence that removing restrictions on independent spending increases independent spending, and that increased independent spending increases the probability of Republicans winning elections.

C. State-specific time trends and district fixed effects

We now investigate whether our results are robust to the inclusion of state-specific time trends, which control for unobserved factors that vary within states and across time (e.g., demographic changes due to in- and out-migration), and to the inclusion of district fixed effects, which control for time-invariant factors that vary across districts (e.g., political leaning of a district, or being in the county of the state capital).

Table 10 contains our results for election and reelection probabilities in House and Senate races, including state-specific time trends in the estimation. We also include controls for incumbency, the number of candidates, and direct contributions. The results are similar to those in Tables 5–6. Republican candidates are 2.4 percentage points more likely to win in House elections, and Republican representatives are 4.7 percentage points more likely to be reelected to the House, as a result of lifting pre-2010 independent spending bans in the wake of *Citizens United*. Also similar to our previous results, no significant effects of *Citizens United* are found for Senate elections. Overall, our results appear to be robust to the inclusion of state-specific time trends.

Several challenges arise when including district fixed effects into our empirical model. First, in a number of states the boundaries of House and Senate districts are not coterminous: Senate districts often "slice" through House districts, and House districts through Senate districts. Regressions with district fixed effects hence restrict our choice of sample, in that we can only examine House elections and Senate elections separately (but we cannot pool all observations).[15] Second, we observe only a small number of election races per district (5.6 House races and 3.9 Senate races per district, on average). Including district fixed effects potentially biases our probit estimates, as already discussed in Section 2.2. To deal with this issue, we also estimate a linear probability model (LPM) with conditional fixed effects, and report its results alongside our probit results.

Table 11 contains results for election probabilities in House and Senate races, using both probit and linear probability models and controlling for incumbency, number of candidates, and direct contributions. Using the probit model, significant effects of approximately the same size as

[15] A related issue is that many states have undergone redistricting during the 2000s, so that district boundaries may have shifted between years. Thus, district j in year t does not necessarily represent the same geographic region, or the same distribution of voters, as district j in year t'. Redistricting is a consequence of changes in Census data, with the relevant Census in our sample having occured in the year 2000. To check whether our results are robust to the possibility of redistricting, we also ran our regressions exlcuding the elections year 2000, and excluding the years 2000 and 2002. In both cases, the results were unaffected.

in Table 5 remain for our incumbency, contributions, and number-of-candidates variables. Also in line with our previous results in Table 5, we find that *Citizens United* increased the probability of Republican candidates winning by 2.4 percentage points, and decreased the probability of Democratic candidates winning by 2.3 percentage points (significant at the 5% level), while no significant effect is found for Senate elections. Using the LPM, the impact of *Citizens United* in House races is comparable to the probit estimates ($+/-$ 2.6 points), and becomes significant at the 1% level. For Senate elections, on the other hand, the LPM predicts an increase of 3.8 percentage points in the probability of Republicans being elected, associated with lifting pre-2010 independent expenditure bans (significant at the 10% level), and a similarly significant decrease of 3.6 points in the probability of Democrats being elected.

Table 12 contains similar regressions concerning the impact of *Citizens United* on reelection probabilities. Again, we estimated both probit and linear probability models when including district fixed effects. All estimates associated with the lifting of independent expenediture bans in 2010 have the same signs as in Table 6; however, their magnitude and significance are affected by the inclusion of district fixed effects. The probit model does not find significant effects associated with *Citizens United* in all four outcome variables, while the LPM finds two significant effects: a decrease of 4.0 percentage points in the probability that Democratic incumbents are reelected to the House (significant at the 1% level), and an increase of 4.4 percentage points in the probability that Republican incumbents are reelected to the Senate (significant at the 10% level).

In summary, our results concerning the impact of *Citizens United* on election probabilities in House races appear robust to the inclusion of district fixed effects. Furthermore, the linear probability models generate some evidence that *Citizens United* may have helped Republicans get elected also in Senate races. On the other hand, our previous results concerning reelection probabilities appear sensitive to the inclusion of district fixed effects, and become weaker when such effects are included.

4 Conclusion

We have examined the effects of *Citizens United* on the probabilities that Republicans and Democrats win state elections. The results suggest that by removing restrictions on independent political expenditures, *Citizens United* conferred a significant advantage to Republican candidates in state congressional races, especially House races. If imposing the restrictions on independent expenditures in the first place had an equal and opposite effect to removing them, then the results also suggest that the restrictions had conferred a significant advantage to Democratic candidates prior to *Citizens United*.

Ultimately, one may also ask what the impact of *Citizens United* is on national elections. In this paper, we looked at state elections only. The fact that some U.S. states had prior restrictions on independent spending while others did not makes state election data ideally suited to

investigating the impact of *Citizens United* on election probabilities. There is, however, a second reason why one should be interested in the effects of independent spending on elections at the state level. Federal congressional districts are drawn by the state legislatures in over half of the U.S. states, and in these states control of state legislatures can be leveraged into influence in national elections due to gerrymandering.[16] An interesting question for future work is, therefore, whether *Citizens United* had a larger effect on states in which the legislature is in charge of drawing congressional maps. This may be a way to look at the impact of *Citizens United* on national politics through state-level data.

Lastly, we emphasize that our analysis is limited in that it only uses one post-*Citizens United* election cycle. Over time the size of the effects of the decision may change considerably (in either direction). It will be interesting to revisit the question as more post-decision data become available.

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Table 1: State restrictions on independent political expenditures by corporations and labor unions.

State	Type	Start year	Source(s)
Alabama	Cap	1975	Alabama Code §22-25-102(a), §10-2A-70.1(a), §10-2A-70.2
Alaska	Ban	1996	Alaska Stat. §15.13.067, §15.13.400(8), §15.13.065(a)
Arizona	Ban	1980	Arizona Const. Art. 14 §18, Arizona Revised Statutes §16-919(A), §16-920(A)(4)
Colorado	Ban	2003	Colorado Const. Art. XXVIII §3(4)
Connecticut	Ban	1987	Connecticut Gen. Stat. §9-613, Connecticut Public Act No. 86-99 §16(a)
Iowa	Ban	1975	Iowa Code §68.A.503(1), (3)
Kentucky	Ban	1974	Kentucky Rev. Stat. Ann. §121.035(2)
Massachusetts	Ban	1975	Massachusetts Gen. Laws Ch. 55 §8
Michigan	Ban	1976	Michigan Comp. Laws §169.254
Minnesota	Ban	1988	Minnesota Stat. §211B.15 subdivi. 2
Montana	Ban	1947	Montana Code Ann. §13-35-227(1)
New Hampshire	Ban*	1979	New Hampshire Rev. Stat. Ann. 664:4
New York	Cap	1976	New York Elec. Law §14-116
North Carolina	Ban	1973	North Carolina Gen. Stat. §163-278.19(a)(1), f(1)
North Dakota	Ban	1995	North Dakota Cent. Code §16.1-08.1-03.3(1)(d)
Ohio	Ban	2005	Ohio Rev. Code Ann. §3599.03(A)(1)
Oklahoma	Ban	2007	Oklahoma Const. Art. 9 §40, Oklahoma Stat. Ann. Tit. 74 Ch. 62
Pennsylvania	Ban	1979	Pennsylvania Stat. Ann. Tit. 25 §3253
Rhode Island	Ban	1988	Rhode Island Gen. Laws §17-25-10.1(h)(1)
South Dakota	Ban	2007	South Dakota Codified Laws §12-27-18
Tennessee	Ban	1972	Tennessee Code Ann. §2-19-132(a)
Texas	Ban	1987	Texas Elec. Code Ann. §253.094(a)
West Virginia	Ban	1908	West Virginia Code §3-8-8(a), b(1)(C)
Wisconsin	Ban	1973	Wisconsin Stat. Ann. §11.38(1)(a)
Wyoming	Ban	1977	Wyoming Stat. Ann. §22-25-102(a)

*Repealed in 2000 (Source: National Conference of State Legislatures 2011).

Table 2: Summary statistics, state legislative elections 2000–2010.

	All congress		House		Senate	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Republican winner	0.484	0.500	0.480	0.500	0.498	0.500
Democrat winner	0.514	0.500	0.518	0.500	0.500	0.500
Republican incumbent	0.394	0.489	0.385	0.487	0.427	0.495
Democrat incumbent	0.453	0.498	0.449	0.497	0.468	0.499
Per-capita contributions per race ($)	1.977	2.653	2.118	2.847	1.465	1.686
Republican	0.944	1.802	1.015	1.960	0.686	1.011
Democrat	1.017	1.718	1.087	1.833	0.765	1.186
Candidates per race	2.253	1.235	2.238	1.258	2.304	1.145
Republican	1.023	0.820	1.014	0.833	1.057	0.773
Democrat	1.046	0.834	1.041	0.851	1.065	0.765
Number of races	31,080		24,349		6,731	

Notes:
Data from the National Institute on Money in State Politics. Contributions are reported in constant 2011 dollars.

Table 3: Party winners in states with and without independent expenditure bans prior to *Citizens United*.

	States with IE bans						States without IE bans					
	2000	2002	2004	2006	2008	2010	2000	2002	2004	2006	2008	2010
						All congressional races						
Republican winner	0.455	0.488	0.477	0.430	0.416	0.533	0.502	0.491	0.523	0.473	0.475	0.541
	(0.498)	(0.500)	(0.500)	(0.495)	(0.493)	(0.499)	(0.500)	(0.500)	(0.500)	(0.499)	(0.499)	(0.498)
Democrat winner	0.543	0.511	0.523	0.569	0.583	0.466	0.494	0.505	0.475	0.525	0.523	0.456
	(0.498)	(0.500)	(0.500)	(0.495)	(0.493)	(0.499)	(0.500)	(0.500)	(0.499)	(0.499)	(0.500)	(0.498)
Number of races	2,549	2,642	2,500	2,609	2,502	2,610	2,540	2,720	2,556	2,647	2,569	2,636
						House races						
Republican winner	0.458	0.485	0.478	0.432	0.407	0.526	0.489	0.494	0.510	0.476	0.459	0.539
	(0.498)	(0.500)	(0.500)	(0.495)	(0.491)	(0.499)	(0.500)	(0.500)	(0.500)	(0.500)	(0.498)	(0.499)
Democrat winner	0.541	0.513	0.522	0.567	0.592	0.472	0.506	0.502	0.487	0.520	0.538	0.457
	(0.498)	(0.500)	(0.500)	(0.496)	(0.492)	(0.499)	(0.500)	(0.500)	(0.500)	(0.500)	(0.499)	(0.498)
Number of races	1,987	2,005	2,004	2,006	2,006	2,005	1,986	2,115	1,996	2,122	1,996	2,121
						Senate races						
Republican winner	0.443	0.496	0.478	0.423	0.452	0.554	0.545	0.481	0.570	0.457	0.529	0.548
	(0.497)	(0.500)	(0.500)	(0.494)	(0.498)	(0.498)	(0.498)	(0.500)	(0.496)	(0.499)	(0.500)	(0.498)
Democrat winner	0.552	0.502	0.522	0.575	0.544	0.443	0.453	0.516	0.430	0.543	0.471	0.449
	(0.498)	(0.500)	(0.500)	(0.495)	(0.499)	(0.497)	(0.498)	(0.500)	(0.496)	(0.499)	(0.500)	(0.498)
Number of races	562	637	496	603	496	605	554	605	560	525	573	515

Notes:
Data from the National Institute on Money in State Politics. Means are reported (standard deviations in parantheses).

Table 4: Probit estimates of the effect of *Citizens United* on election probabilities.

	All congress		**House**		**Senate**	
	Republican elected	Democrat elected	Republican elected	Democrat elected	Republican elected	Democrat elected
House race	−0.007	0.008*				
	(0.004)	(0.004)				
Republican incumbent	0.238***	−0.234***	0.241***	−0.238***	0.225***	−0.222***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)
Democrat incumbent	−0.243***	0.247***	−0.242***	0.247***	−0.244***	0.247***
	(0.006)	(0.007)	(0.006)	(0.007)	(0.008)	(0.009)
IE ban × 2010	0.031**	−0.030**	0.028*	−0.027*	0.036	−0.032
	(0.015)	(0.015)	(0.015)	(0.015)	(0.023)	(0.024)
N	31,080	31,080	24,349	24,349	6,731	6,731
R^2	0.635	0.633	0.636	0.634	0.635	0.636

Notes:

All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: Probit estimates of the effect of *Citizens United* on election probabilities, with controls for candidates and direct contributions per race.

	All congress		**House**		**Senate**	
	Republican elected	Democrat elected	Republican elected	Democrat elected	Republican elected	Democrat elected
House race	−0.005	0.007*				
	(0.004)	(0.004)				
Republican incumbent	0.162***	−0.157***	0.163***	−0.157***	0.159***	−0.155***
	(0.007)	(0.006)	(0.008)	(0.007)	(0.010)	(0.010)
Democrat incumbent	−0.159***	0.166***	−0.154***	0.161***	−0.173***	0.180***
	(0.008)	(0.005)	(0.009)	(0.007)	(0.008)	(0.008)
Republican candidates	0.050***	−0.047***	0.051***	−0.048***	0.049***	−0.046***
	(0.005)	(0.004)	(0.006)	(0.005)	(0.007)	(0.007)
Democrat candidates	−0.055***	0.058***	−0.054***	0.058***	−0.056***	0.059***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.007)	(0.007)
Republican contributions	0.031***	−0.031***	0.029***	−0.029***	0.046***	−0.047***
	(0.008)	(0.005)	(0.008)	(0.005)	(0.012)	(0.010)
Democrat contributions	−0.026***	0.026***	−0.023***	0.023***	−0.043***	0.040***
	(0.008)	(0.002)	(0.008)	(0.002)	(0.011)	(0.009)
IE ban × 2010	0.020**	−0.019**	0.020**	−0.019**	0.012	−0.007
	(0.010)	(0.010)	(0.009)	(0.009)	(0.020)	(0.020)
N	31,080	31,080	24,349	24,349	6,731	6,731
R^2	0.717	0.715	0.723	0.720	0.701	0.701

Notes:

All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Probit estimates of the effect of *Citizens United* on reelection probabilities.

	All congress		**House**		**Senate**	
	Republican incumbent reelected	Democrat incumbent reelected	Republican incumbent reelected	Democrat incumbent reelected	Republican incumbent reelected	Democrat incumbent reelected
House race	0.021^{***}	0.018^{**}				
	(0.006)	(0.007)				
Republican candidates	-0.073^{***}	-0.035^{***}	-0.075^{***}	-0.037^{***}	-0.074^{***}	-0.037^{***}
	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.008)
Democrat candidates	-0.028^{**}	-0.057^{***}	-0.028^{**}	-0.057^{***}	-0.015^{**}	-0.053^{***}
	(0.012)	(0.009)	(0.011)	(0.009)	(0.007)	(0.012)
Republican contributions	-0.002	-0.042^{***}	-0.002	-0.038^{***}	-0.013^{**}	-0.062^{***}
	(0.002)	(0.005)	(0.001)	(0.005)	(0.006)	(0.012)
Democrat contributions	-0.035^{**}	-0.003^{***}	-0.027^{**}	-0.002^{**}	-0.092^{***}	-0.014^{***}
	(0.015)	(0.001)	(0.013)	(0.001)	(0.008)	(0.003)
IE ban $\times$ 2010	0.040^{**}	-0.018	0.035^{**}	-0.020	0.043	-0.014
	(0.016)	(0.012)	(0.018)	(0.012)	(0.032)	(0.024)
N	12,245	14,071	9,257	10,731	2,814	3,147
R^2	0.269	0.280	0.278	0.292	0.298	0.288

Notes:

All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: OLS estimates of the effect of *Citizens United* on direct contributions per race.

	House			Senate		
	All contributions	Republican contributions	Democrat contributions	All contributions	Republican contributions	Democrat contributions
Republican incumbent	-1.055^{***}	-0.004	-1.022^{***}	-0.190^{*}	0.223^{***}	-0.379^{***}
	(0.140)	(0.070)	(0.117)	(0.102)	(0.072)	(0.062)
Democrat incumbent	-1.116^{***}	-1.102^{***}	0.017	-0.180^{*}	-0.468^{***}	0.320^{***}
	(0.134)	(0.116)	(0.079)	(0.095)	(0.081)	(0.064)
IE ban $\times$ 2010	0.052	-0.058	0.114	-0.111	-0.008	-0.102
	(0.148)	(0.100)	(0.093)	(0.145)	(0.078)	(0.109)
N	24,349	24,349	24,349	6,731	6,731	6,731
R^2	0.111	0.136	0.144	0.174	0.216	0.215

Notes:
All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8: OLS estimates of the effect of *Citizens United* on direct contributions per race, with controls for number of candidates per race.

	House			Senate		
	All contributions	Republican contributions	Democrat contributions	All contributions	Republican contributions	Democrat contributions
Republican incumbent	-0.265^{**}	0.301^{***}	-0.531^{***}	0.125^{*}	0.313^{***}	-0.153^{***}
	(0.103)	(0.049)	(0.099)	(0.074)	(0.064)	(0.041)
Democrat incumbent	-0.221^{**}	-0.514^{***}	0.331^{***}	0.180^{**}	-0.184^{***}	0.400^{***}
	(0.108)	(0.065)	(0.088)	(0.078)	(0.050)	(0.068)
Republican candidates	0.759^{***}	0.608^{***}	0.156^{***}	0.555^{***}	0.451^{***}	0.109^{***}
	(0.084)	(0.060)	(0.035)	(0.048)	(0.048)	(0.021)
Democrat candidates	0.518^{***}	0.047	0.475^{***}	0.437^{***}	0.049^{**}	0.388^{***}
	(0.123)	(0.035)	(0.096)	(0.061)	(0.024)	(0.049)
IE ban $\times$ 2010	0.034	-0.073	0.110	-0.175	-0.044	-0.131
	(0.143)	(0.093)	(0.089)	(0.134)	(0.071)	(0.105)
N	24,349	24,349	24,349	6,731	6,731	6,731
R^2	0.158	0.185	0.183	0.254	0.311	0.269

Notes:

All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 9: OLS estimates of the effect of *Citizens United* on the number of candidates per race.

	House			Senate		
	All candidates	Republican candidates	Democrat candidates	All candidates	Republican candidates	Democrat candidates
Republican incumbent	-1.420^{***}	-0.433^{***}	-0.892^{***}	-0.767^{***}	-0.140^{**}	-0.544^{***}
	(0.129)	(0.070)	(0.079)	(0.101)	(0.061)	(0.061)
Democrat incumbent	-1.401^{***}	-0.939^{***}	-0.353^{***}	-0.743^{***}	-0.626^{***}	-0.030
	(0.129)	(0.090)	(0.069)	(0.098)	(0.079)	(0.056)
IE ban $\times$ 2010	0.058	0.024	0.000	0.191	0.075	0.052
	(0.076)	(0.039)	(0.038)	(0.117)	(0.063)	(0.052)
N	24,349	24,349	24,349	6,731	6,731	6,731
R^2	0.294	0.256	0.216	0.160	0.207	0.167

Notes:
All regressions include election year fixed effects, state fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 10: Probit estimates of the effects of *Citizens United* on election and reelection probabilities in congressional races, with state time trends.

	House				Senate			
	Republican elected	Democrat elected	Republican incumbent reelected	Democrat incumbent reelected	Republican elected	Democrat elected	Republican incumbent reelected	Democrat incumbent reelected
Republican incumbent	0.162***	−0.156***			0.159***	−0.155***		
	(0.008)	(0.007)			(0.010)	(0.010)		
Democrat incumbent	−0.153***	0.161***			−0.173***	0.179***		
	(0.009)	(0.007)			(0.008)	(0.008)		
Republican candidates	0.051***	−0.048***	−0.074***	−0.036***	0.050***	−0.047***	−0.076***	−0.036***
	(0.006)	(0.005)	(0.004)	(0.006)	(0.007)	(0.007)	(0.007)	(0.008)
Democrat candidates	−0.054***	0.058***	−0.029***	−0.058***	−0.055***	0.058***	−0.019***	−0.052***
	(0.005)	(0.005)	(0.011)	(0.009)	(0.007)	(0.007)	(0.007)	(0.012)
Republican contributions	0.029***	−0.029***	−0.002	−0.038***	0.046***	−0.047***	−0.014**	−0.061***
	(0.008)	(0.005)	(0.001)	(0.005)	(0.012)	(0.011)	(0.006)	(0.013)
Democrat contributions	−0.023***	0.023***	−0.026**	−0.002*	−0.044***	0.041***	−0.094***	−0.015***
	(0.008)	(0.002)	(0.013)	(0.001)	(0.012)	(0.009)	(0.007)	(0.003)
IE ban × 2010	0.024*	−0.022*	0.047**	−0.019	−0.018	0.026	0.001	−0.009
	(0.013)	(0.012)	(0.024)	(0.018)	(0.030)	(0.029)	(0.046)	(0.037)
N	24,349	24,349	9,257	10,731	6,731	6,731	2,814	3,147
R^2	0.725	0.722	0.288	0.303	0.708	0.709	0.335	0.316

Notes:

All regressions include election year fixed effects, state fixed effects, linear state time trends, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 11: LPM and probit estimates of the effects of *Citizens United* on election probabilities in congressional races, with district fixed effects.

	Linear				Probit			
	House		**Senate**		**House**		**Senate**	
	Republican elected	Democrat elected	Republican elected	Democrat elected	Republican elected	Democrat elected	Republican elected	Democrat elected
Republican incumbent	0.373***	−0.361***	0.332***	−0.323***	0.152***	−0.148***	0.149***	−0.146***
	(0.009)	(0.009)	(0.017)	(0.017)	(0.009)	(0.006)	(0.009)	(0.010)
Democrat incumbent	−0.373***	0.384***	−0.414***	0.426***	−0.141***	0.148***	−0.156***	0.163***
	(0.009)	(0.009)	(0.019)	(0.020)	(0.010)	(0.007)	(0.008)	(0.009)
Republican candidates	0.096***	−0.093***	0.063***	−0.061***	0.048***	−0.045***	0.042***	−0.041***
	(0.004)	(0.004)	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.007)
Democrat candidates	−0.076***	0.078***	−0.067***	0.069***	−0.053***	0.055***	−0.050***	0.054***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.006)	(0.005)	(0.007)	(0.007)
Republican contributions	0.018***	−0.018***	0.044***	−0.045***	0.032***	−0.032***	0.062***	−0.061***
	(0.005)	(0.005)	(0.007)	(0.007)	(0.009)	(0.007)	(0.012)	(0.012)
Democrat contributions	−0.018***	0.018***	−0.031***	0.029***	−0.025**	0.026***	−0.056***	0.050***
	(0.003)	(0.003)	(0.005)	(0.005)	(0.010)	(0.003)	(0.007)	(0.009)
IE ban × 2010	0.026***	−0.026***	0.038*	−0.036*	0.024**	−0.023**	0.009	−0.003
	(0.010)	(0.010)	(0.020)	(0.019)	(0.010)	(0.010)	(0.022)	(0.022)
N	24,349	24,349	6,731	6,731	24,349	24,349	6,731	6,731
R^2	0.719	0.717	0.710	0.711	0.772	0.769	0.758	0.758

Notes:

All regressions include election year fixed effects, district fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 12: LPM and probit estimates of the effects of *Citizens United* on reelection probabilities in congressional races, with district fixed effects.

	Linear				Probit			
	House		**Senate**		**House**		**Senate**	
	Republican incumbent reelected	Democrat incumbent reelected	Republican incumbent reelected	Democrat incumbent reelected	Republican incumbent reelected	Democrat incumbent reelected	Republican incumbent reelected	Democrat incumbent reelected
Republican candidates	-0.119^{***}	-0.035^{***}	-0.107^{***}	-0.026^{**}	-0.061^{***}	-0.034^{***}	-0.054^{***}	-0.032^{***}
	(0.008)	(0.006)	(0.013)	(0.012)	(0.005)	(0.007)	(0.007)	(0.008)
Democrat candidates	-0.016	-0.084^{***}	0.004	-0.080^{***}	-0.031^{***}	-0.048^{***}	-0.025^{***}	-0.039^{***}
	(0.011)	(0.008)	(0.010)	(0.014)	(0.009)	(0.006)	(0.010)	(0.012)
Republican contributions	-0.004	-0.080^{***}	-0.009	-0.128^{***}	-0.003^{*}	-0.035^{***}	-0.007	-0.065^{***}
	(0.003)	(0.007)	(0.008)	(0.022)	(0.002)	(0.007)	(0.006)	(0.014)
Democrat contributions	-0.055^{***}	-0.002	-0.159^{***}	-0.013^{**}	-0.019^{*}	-0.004^{***}	-0.090^{***}	-0.007
	(0.020)	(0.001)	(0.013)	(0.006)	(0.011)	(0.001)	(0.008)	(0.005)
IE ban $\times$ 2010	0.013	-0.040^{***}	0.044^{*}	-0.017	0.010	-0.016	0.055	-0.009
	(0.011)	(0.016)	(0.024)	(0.031)	(0.016)	(0.011)	(0.036)	(0.026)
N	9,369	10,924	2,876	3,147	9,257	10,731	2,814	3,147
R^2	0.160	0.197	0.233	0.221	0.491	0.500	0.498	0.470

Notes:
All regressions include election year fixed effects, district fixed effects, and state demographic controls (percent black, percent college degree, and average household income in constant 2011 dollars). Coefficients represent average marginal effects. Numbers in parantheses are robust standard errors adjusted for clustering on states. Stars denote statistical significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

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