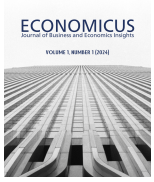
Economicus Journal of Business and Economics Insights **2024** *1(1)*

ECONOMICUS
Journal of Business and Economics Insights

OJS: https://revistascientificas.uach.mx/index.php/economicus



Article

Incentivizing Voting Turnout through Gifts and Promotions: An Analysis of 'The Civic Thumb' Program in Chihuahua, Mexico

Incentivando la Participación Electoral a través de Regalos y Promociones: Análisis del Programa 'El Gordo Cívico' en Chihuahua, México

Juan David Irigoyen-Borunda [1]

[1] Florida State University, United States of America; *jirigoyen@fsu.edu*; ORCID: 0000-0001-6654-2265

Received: 05/19/2024; Accepted: 06/28/2024; Published: 07/02/2024

Abstract: This study evaluates the effect of the get-out-the-vote program ´el Gordo Cívico´ which translates to ´The Civic Thumb´ implemented in the state of Chihuahua in Mexico on electoral participation. Using a Difference-in-Difference design, with the states of Sinaloa and Zacatecas as control cases, evidence was found that suggests that this program has not met its goal of incentivizing participation. A triple Difference-in-Difference design was used to explore if the program may have only had an effect on urban municipalities. The results of these additional estimations confirmed that, at least at the municipality level, the program did not increased turnout.

Keywords: Voting behavior, turnout-buying, Mexican elections, participation incentives.

JEL Classification: D720.

Resumen: Este estudio evalúa el efecto que ha tenido sobre la participación electoral el programa ´el Gordo Cívico´ de incentivación de participación implementada en el estado de Chihuahua en México. Usando un diseño de Diferencia-en-Diferencia, con los estados de Sinaloa y Zacatecas como casos de control, se encontró evidencia que sugiere que este programa no ha cumplido su meta de incrementar la participación. Adicionalmente, se usó un diseño de triple Diferencia-en-Diferencia para explorar si el programa pudiera haber tenido únicamente un efecto en municipios urbanos. Los resultados de estas

Citation

Irigoyen-Borunda, J. D. (2024). Incentivizing Voting Turnout through Gifts and Promotions: An Analysis of 'The Civic Thumb' Program in Chihuahua, Mexico. *Economicus Journal of Business and Economics Insights, 1*(1), 57-75.

estimaciones adicionales confirmaron que, al menos a nivel municipal, el programa no incrementó la participación.

Palabras clave: Comportamiento del Votante, compra de participación, elecciones mexicanas, incentivos de participación.

Clasificación JEL: D720.

1. Introduction

In the run-off stage of the 1993 Los Angeles mayoral election, Democratic candidate Michael Woo decided that it would be a good idea to mobilize voters by offering six free donuts to those who could provide proof that they had voted, regardless of for whom they voted. While the goal of the strategy was to mobilize voters who were more likely to vote for the Democratic party, Republican voters reportedly claimed their share of donuts as well (Fiore, 1993). Anecdotal evidence suggests that the "donut strategy" did affect turnout, but not in the way Democrats were expecting. It is possible that this bribe attracted a disproportionate number of Republicans to the polls; so, if the anecdotes do mirror reality, the Democrats' plan—which cost around USD 100,000 at the time—backfired (Fiore, 1993; Heckelman, 1995).

The apparent failure of the Los Angeles Democratic Party plan notwithstanding, it is noteworthy to consider the logic behind it. Michael Woo's strategy was an effort to mobilize the vote of potential Democratic supporters by countering the cost of voting with a material incentive. After all, empirical evidence suggests that Democratic voters seem to face higher relative costs of voting—in part because they tend to have fewer resources available—which in turn means that these voters are more likely to be deterred from turning out on election day by said costs (e.g., Gomez et al., 2007; Verba et al., 1995). As trivial as it may sound, the offer of half a dozen donuts in exchange for providing evidence of having voted in the mayoral election could have been attractive enough to some voters who would not have voted otherwise. Of course, it is safe to assume that there were voters for whom the donut offer was not appealing enough to make them show up to the polls.

Further, considering that empirical research shows that when voters perceive that democracy is flawed, levels of turnout could decrease (Gerber et al., 2013), it could have been the case that a fraction of voters were deterred from voting due to perceiving that this was an undemocratic action. These voters could have expressed disappointment in the overall electoral process by abstaining from participating in the election. Now, whatever the real effect might have been, it is clear that the Democratic Party intended to buy turnout, as they aimed at directly increasing the payoffs from voting in the mayoral election. Panagopoulos illustrates how these strategies have been used in other elections in the late 1990s and early 2000s, especially in the state of California, where these campaign practices are not illegal (2013). Panagopoulos himself took advantage of the Californian legal framework to perform a couple of experiments that measured the effect of turnout-buying strategies as the size of the offered incentives varies.

Panagopoulos´ study is substantially important as it shows that extrinsic incentives may indeed be effective in mobilizing voters without necessarily crowding out intrinsic motivations, as has been argued by Gerber et al. (2013). Yet again, the subject warrants further investigation as it is not clear if voters in his study took the offers seriously or if they were aware that they would not be breaking any laws if they had accepted the incentive. However, what if this turnout-buying was an official policy to boost voter turnout? How would voters respond if a vote-buying program was implemented by an official authority?

Well, just south of the US border, there is a case that does offer the opportunity to study the effects of turnout-buying when it is implemented as an official strategy to promote voter participation. In the year of 2016, the electoral authority of the state of Chihuahua, in Mexico, launched the program "El Gordo

Cívico"—which translates to "The Civic Thumb"—with the goal of incentivizing turnout[1]. This initiative could act as a turnout-buying program as it consists of offering discounts at different local businesses to those citizens who show their marked thumb at these businesses as proof that they have voted[2]. Thus, the "El Gordo Cívico" program offers the opportunity to investigate if an official agency, through incentives offered by private businesses, can influence the payoffs of citizens from participating in an election to increase turnout.

In this study, I aim to answer the question posited above by empirically analyzing the effects of the turnout-buying program "El Gordo Cívico" implemented in the state of Chihuahua in Mexico. First, I briefly discuss the relevant theoretical framework of voting behavior necessary to address this research question. Then, I describe the Difference-in-Difference designs implemented to estimate the effect of the program, along with the data used for these estimations, which includes electoral data from the states of Chihuahua, Sinaloa, and Zacatecas. I also discuss both the strengths and limitations of using this estimation strategy to address this research question. Next, I discuss the results of each of the estimations. Finally, I discuss the implications of the results, as well as potential future avenues of research regarding this get-out-the-vote program.

1.1. When do people vote?

In According to the rational choice theory of voting proposed by Downs (1957), and refined by Riker and Ordeshook (1968), voting should be motivated by reasons other than the actual benefit the voter would derive from her preferred candidate winning the election. The inequality, given by the calculus of voting that this theory proposes, shows a clear explanation of the logic of the statement above:

$$pB + D > C, \tag{1}$$

In this inequality, the parameter p is the probability that the vote of the individual who is deciding whether or not to cast a vote is the decisive one in the election. Meanwhile, B is the benefit that the voter gets from her preferred candidate winning the election. Note that as the size of the electorate grows, the value p will tend to zero, which means that the product pB will also tend to zero. It is clear that if a voter is aware that their vote has a minuscule probability of being decisive in the election, whatever benefit they associate with a particular candidate winning the election will, in all likelihood, not be their motivation for showing up to the polls on election day. Only if the cost associated with turning out to vote, C, is smaller than the product pB will a voter cast a vote moved by the utility derived from their preferred candidate winning the election. This cost of voting can be defined as the resources that a voter has to expend to cast a vote; these resources include—but are not limited to—time, physical effort, mental effort, or money. Every voter will face different costs; however, it is safe to assume that all voters have to pay a cost for voting, as minimal as it might be.

Considering that the costs of voting are non-zero and that the probability of casting a decisive vote tends to zero, it is evident that most citizens who vote do so because they derive a positive payoff from the act of voting itself, and this payoff outweighs their costs of voting. This is represented by the parameter D in the inequality above. This term is usually referred to as the satisfaction a voter gets from performing her civic duty. Note that this is an abstract concept that is not clearly defined, yet it is the parameter that drives individuals' decisions to cast a vote. It could be argued that, beyond civic duty, this term represents the different non-consequentialist motivations of voting, which could be divided

[1] The program was rebranded "El Pulgar Cívico" in the 2024 election, but it still translates to "The Civic Thumb."

[2] In Mexican elections, voters' thumbs are marked with a special indelible ink as a proof that they have voted. The national electoral authority provides this ink, and it is used to prevent voters from trying to vote twice.

into (1) expressive voting, (2) moral reasons and duties, and (3) self-image concerns (Shayo & Harel, 2012). Scholars have focused on studying these motivations for voting because, as mentioned above, they can explain why people decide to go to the polls even when their vote is practically inconsequential. In doing so, they have found that these non-consequentialist motivations do explain—at least in part—individuals' decision to cast a vote.

For instance, researchers have argued that peer pressure and, somewhat related, social desirability are both manifestations of the *D* parameter. Since the act of voting is interpreted as a duty that citizens should perform, whenever a potential voter perceives that her peers can observe her actions, the probability that said voter would cast a vote will tend to increase (Funk, 2010; Dellavigna et al., 2016). This is because voters derive a positive payoff from signaling to their peers that they are good citizens. This positive utility, in turn, can be high enough to offset the costs associated with voting. Additionally, the *D* term could also represent how some voters may want to express their support for a particular candidate, even if they know that their single vote will not matter in deciding the election. In some sense, it is the same satisfaction a sports fan derives from attending the stadium to cheer their favorite team (Brennan & Buchanan, 1984; Green et al., 2002). While scholars have found that these non-consequentialist reasons for voting have an impact on an individual's decision to cast a vote, it is clear that the *D* term in the calculus of voting has been used as an all-encompassing parameter that seems to represent any immaterial incentives that affect a person's utility when deciding whether or not to vote. Thus, policymakers who try to use the insight of these turnout studies to develop programs that aim to increase voter participation might have a hard time trying to translate whatever the *D* parameter represents. This term is highly individual and context-dependent, as it is an abstraction of intrinsic or cultural motivations. It is a fact that these motivations matter; nevertheless, it is not always clear how they will present themselves in different contexts.

If policymakers want to increase turnout, knowing that *pB* tends to zero, they could either attempt to diminish the value of *C* or increase the value of *D*. In other words, policymakers could enact a policy that reduces the costs related to casting a vote (e.g., implementing voting centers, easier voter registration procedures, minimizing voters' distance to their poll) to incentivize turnout. This has been a common strategy for trying to increase voter participation, and there is evidence that suggests that these programs have successfully increased turnout (Knack, 1995; Jackson, 1996; Haspel & Knotts, 2005; Stein & Vonnahme, 2008). Alternatively, policymakers could figure out the non-consequentialist motives for voting in their context and create a program that increases the payoffs associated with them. For example, face-to-face canvassing campaigns have successfully increased turnout since they constitute a form of peer pressure (Gerber & Green, 2000), which has been related to the *D* term. Nevertheless, as I have mentioned above, this parameter depends on social and cultural factors that might not be easy to identify and exploit by policymakers to increase turnout rates. That said, what if policymakers introduced an additional material payoff to the calculus of voting instead as a way to counter the costs associated with voting?

1.2. Rewarding voter participation

Consider again the inequality given by the calculus of voting. Given that the *D* term can represent different forms of incentives, Gerber et al. (2008) propose breaking it down into two component parameters that represent intrinsic motivations and extrinsic incentives (2008), such that:

$$D = U\,(D_I, D_E). \tag{2}$$

Further, Panagopoulos extends this theoretical framework in his study about monetary rewards in California so that the calculus of voting is given by the inequality (2013: 270)

$$pB + ß_1D_I + ß_2D_E + ß_3D_ID_E > C; \quad (3)$$

this means that, according to Panagopoulos, the marginal effect of extrinsic incentives over the decision of turning out is:

$$ß_2 + ß_3D_I. \quad (4)$$

This functional form considers the possibility that intrinsic motivations may interact with extrinsic incentives, and Panagopoulos´ results show that, at the very least, if there is indeed an interaction between these two types of incentives, it is not a negative one (2013). Thus, this evidence suggests that an attempt to incentivize turnout by appealing to extrinsic motivations–D_E in equations 3 and 4–is not likely to backfire and may indeed meet its goal.

Now, in an ideal democracy, the effect of parameter D_E would be zero, as there would be no extrinsic reward or punishment associated with the act of voting. Further, such payoffs are usually related to vices of democracy–like vote-buying or clientelism–as they are used by party machines to mobilize a specific set of voters (Hicken, 2011; Nichter, 2008; Cantú, 2019; Gans-Morse et al., 2014). However, extrinsic incentives can also be associated with fines for not voting, which are used in several countries. These negative extrinsic incentives are not targeted to specific voters, and instead of being a vice of democracy, they could be interpreted as an effort to correct a lack of participation. Moreover, Kaplan (1994) argues that positive extrinsic incentives distributed among all voters could be a valid and helpful strategy to promote participation and educate voters on how valuable their vote is. Hence, even if appealing to extrinsic incentives does not align with the concept of an ideal democracy, it can be argued that it is not always a sign of a flawed electoral democracy.

Taking this into consideration, policymakers have an additional strategy at hand to increase voter turnout. Instead of reducing the costs of voting—or on top of it—they could devise a program that offers a material positive reward to those citizens who participate in the election. In some sense, this program could be thought of as a turnout-buying strategy. Such a program could be effective in mobilizing those citizens for whom the motivations captured by the term D_I are not enough to offset the costs of voting. The question then is, how would a program like this look in reality? Fortunately, there is no need to imagine such hypothetical programs, as one already exists in the state of Chihuahua in Mexico[3].

1.3. "El Gordo Cívico" a turnout-buying policy

The program "El Gordo Cívico" or "The Civic Thumb" in English, was first implemented in the 2016 election as an innovative strategy to incentivize turnout. The name of the program is a reference to the way citizens would offer proof of having voted to receive a discount–or some other benefit–from participant vendors. In Mexican elections, voters' thumbs are marked with a special ink so that it is clear that they have voted[4]. This is done to prevent voter fraud since if any voter tries to cheat the system and attempts to vote twice, the marked thumb serves as a safeguard as those voters with a marked thumb will not be allowed in the voting booth again. Thus, having a marked thumb has become a symbol of

[3] While the state of Chihuahua is not the only one that has implemented a program such as "El Gordo Cívico," this specific program was one of the first ones that were both implemented and institutionalized by the local electoral authority. From 2016 onward, the program has become a staple of all state and federal elections.

[4] It is important to note that this special ink has been developed by the National Polytechnical Institute of Mexico (IPN), and it has special pigmentation that differentiates it from other commercial inks and, while it disappears in a matter of days, itis not washable (Instituto Politécnico Nacional, 2018).

electoral participation in Mexico. The "El Gordo Cívico" program appeals to this civic symbol, and so voters who showed their marked thumbs at participating vendors would be entitled to the discounts offered through "El Gordo Cívico."

The electoral authority claimed that the program was successful in 2016 and applied it in the subsequent federal and state elections (Instituto Estatal Electoral Chihuahua, 2018, 2019). The process by which this program operated–before it was recently refurbished in 2024[5]–was quite simple. The electoral authority openly invited any business interested in participating in the program to download the official imagery of the program to display at their locations and social media platforms. Additionally, the electoral authority created social media accounts dedicated to this program, and they were available for participating venues to promote the sales and discounts they offered in relation to this get-out-the-vote campaign. Note that participating businesses included restaurants, convenience stores, jewelry stores, health services, private schools, coffee shops, and clothing stores, among others. Thus, there was a wide variety of venues, which suggests that the campaign could reach voters from diverse demographic backgrounds. Finally, on election day, and in some cases on the following days, businesses made valid the promotions they publicized to those individuals who showed their marked thumb as proof that they did indeed vote.

Now, before proceeding to the description of the methodology for this study, it is necessary to give a final note about the program "El Gordo Cívico." This is not a policy that was enacted by legislators or by any other elected official. The state electoral authority, the State Electoral Institute of Chihuahua, devised and implemented this program. This is an autonomous agency that includes citizens unaffiliated with any political parties among its decision-making body. Political parties have representation in this agency, but they do not control the decision-making process, and all parties have equal representation within the agency. Thus, even if not impossible, it is unlikely that any political party in this agency conceived the program to gain a political advantage.

2. Methodology

To estimate if the "El Gordo Cívico" program has indeed increased electoral participation since it was implemented, it is necessary to disentangle its potential effects on turnout from those caused by other variables. This is especially tricky because the period in which this program was implemented included electoral reforms and political events that could have also increased the rate of voter participation. First, in the 2016 state election, independent candidates were allowed to participate in the election for the first time in the state of Chihuahua. This novelty might have motivated citizens to become more engaged in that year's electoral process.

Further, since independent candidates were seen as outsiders who were challenging the political establishment, this might have produced an underdog effect (Levine & Palfrey, 2007) as voters were eager to support the newcomers even if their chances of winning were slim. At the same time, major parties perceived a competitive environment since the two major parties in the state, PRI and PAN, were battling each other, the former to retain power, the latter to capture it. Hence, this perceived competitive environment might have also increased turnout due to a competition effect (Levine & Palfrey, 2007).

Next, the 2016 election was different from other state elections in that the term for which elected candidates would remain in office was extraordinary. Typically, a municipal president would be elected for a term of three years and the state governor for a term of six years. However, for the 2016 election, the state legislature passed a bill to synchronize future state elections with federal elections. Thus, those candidates elected in the 2016 election would be in office for one year less than usual. Additionally, municipal presidents elected in 2016 would have the option of running for reelection in the 2018 election for an additional three-year term. Finally, the 2018 election not only included state and federal elections,

[5] The potential effects of this refurbishment do warrant a separate study.

but the federal presidential race involved one of the most popular—and yet divisive—candidates in several years. These features of the 2018 federal and local elections might have resulted in downstream effects on turnout. Hence, taking all these factors into consideration, I use a difference-in-difference (DiD) design to control for these and other confounders that might cloud the real effect of the turnout-buying program implemented by the electoral authority in Chihuahua. As discussed in the previous section, for this design, I use two other states that experienced similar conditions during the period studied as control cases: Sinaloa and Zacatecas.

Specifically, I resort to the classic two-way fixed effects model (TWFE) to estimate the average treatment on the treated effect (ATT). The TWFE estimator allows me to introduce time-variant controls and fixed effects at the municipality level, which, due to the nature of the analyzed elections, is necessary to suggest the conditional parallel trends assumption holds for these cases. Now, as Sant'Anna and Zhao explained, a TWFE model with time-variant controls introduces three additional assumptions to the classical parallel-trends assumption of DiD estimation (2020). These assumptions can be summarized as the treatment not affecting the controls and the controls not having specific trends. In other words, not using bad controls with respect to treatment and a parallel-trends assumption for the controls as well. Considering this, it is necessary to address what makes the TWFE model the preferred option in this case.

While DiD estimators like outcome regression (Heckman et al., 1997), inverse probability weighting (Abadie, 2005), or the doubly robust (Sant'Anna & Zhao, 2020) do not rely on additional assumptions, they are implemented using pre-treatment time invariant controls. This means that, for this study, they are not the most appropriate tool. As discussed above, there were a couple of important changes regarding the electoral calendar and the participation of independent candidates implemented along the turnout-buying program; therefore, using pre-treatment variables would miss some of these changes that may have also affected turnout. Additionally, each election in the periods analyzed has features that may affect the outcome variable; thus, an estimator that allows me to control for time-varying covariates is better for this case, even considering its limitations and underlying assumptions.

Now, in the DiD design I use, the turnout rates at the municipal level before and after the implementation of the "El Gordo Cívico" program give the first difference. I include five elections before the implementation of the policy: the federal midterm elections of 2009 and 2015, the state election of 2010, the federal election of 2012, and the midterm state election of 2013. After the implementation of the policy, I include the 2016 local election and the federal and local elections of 2018 and 2021. It should be mentioned that turnout levels are based on the number of registered voters per section and not the total number of citizens eligible to vote. This is because this campaign focused on incentivizing turnout on election day, which is far removed in time from the date on which the national electoral authority closes registration of new voters for the upcoming election.

Further, since most official paperwork and some bank transactions require federal identification, citizens often have an incentive to register to vote, as the voter ID card is the most common form of identification in Mexico. While passports are also accepted as official federal identification, they are expensive, and it is easier for citizens to obtain a voter ID card, which is issued at no cost to the person who registers to vote. Therefore, using turnout levels based on the number of registered voters instead of on the number of eligible citizens should not affect the results of this study. These turnout rates are publicly available from the websites of the State Electoral Institutes of Chihuahua, Sinaloa, Zacatecas, and the National Electoral Institute.

For the second difference, I will compare turnout rates in the municipalities of the state of Chihuahua, where the "El Gordo Cívico" program was implemented from the 2016 election onwards, with turnout rates in the municipalities of the states of Sinaloa and Zacatecas. These offer a good case for comparison as they experienced similar electoral reforms to those that took place in Chihuahua. Both states used to hold federal and state elections in different years, and they both implemented an electoral reform to synchronize state elections with federal elections after 2016. Further, all three states have local elections spaced out by three years, during which all municipalities renew their administrations, and the

state Congress is also voted. Additionally, gubernatorial elections are held every six years on the same date as the rest of the local elections. Finally, when it comes to the electoral calendar, the legislation implemented to synchronize electoral calendars was similar for all these states. Those municipal authorities elected in 2016 would have the possibility of being reelected in the election of 2018 since their terms would be a year shorter than usual. Meanwhile, the governor elected in 2016 would have a five-year term, as opposed to the usual six-year term.

Other states, like Aguascalientes, Puebla, or Tamaulipas, also enacted similar electoral reforms to those in Chihuahua, Zacatecas, and Sinaloa; however, the conditions for the synchronization of the elections and the rules regarding reelection were not the same. Additionally, Chihuahua and Sinaloa share a border and have had similar political landscapes for many years. The PRI was the dominant party in both states from the 1990s up to the mid-2010s, and this dominance has waned, first in favor of the PAN and, more recently, MORENA[6]. Moreover, according to the Mexican Association of Market Research Agencies (AMAI), the population in Sinaloa and Chihuahua are distributed similarly among socioeconomic levels (2017), and their Human Development index has been similar over the last decade. In the case of Chihuahua, this indicator oscillated between 0.772 and 0.782 during the period of study, while for Sinaloa, it remained between 0.781 and 0.802[7] (Global Data Lab, 2023).

Finally, both states have experienced a rise in drug cartel violence in the last couple of decades, which has caused politicians and citizens alike in both cities to focus on the same social and economic problems. For these reasons, Sinaloa offers a good control case to measure the effect of the turnout-buying program that has been implemented in Chihuahua. Nevertheless, the number of municipalities in each state is one important aspect in which they differ. While Chihuahua has sixty-seven municipalities, Sinaloa only has eighteen. This difference is relevant because small municipalities might be more engaged in local elections due to phenomena like clientelism (Stokes, 2005), the competitiveness of elections (Edlin et al., 2007), peer pressure (Funk, 2010; Gerber et al., 2013), and potentially lower costs of mobilization through canvassing (Gerber & Green, 2000). Hence, the inclusion of Zacatecas as a control state attempts to remedy this lack of balance between the number of municipalities of Sinaloa and Chihuahua.

The socio-political landscapes of Chihuahua and Zacatecas are not as similar as those of Chihuahua and Sinaloa. For instance, according to the AMAI (2017), the socioeconomic distribution in Zacatecas is made up of a larger share of lower-income households. Furthermore, the PRD was the governing party in the state from 1998 to 2010, while the PRI was the second political force in the state. The PAN eventually joined forces with the PRD after the PRI won the gubernatorial election of 2010, and this coalition became the major opposition block in the state until 2021 when MORENA almost completely swept the state elections. Now, these differences with the political structure of Chihuahua are not stark, as up to 2021, there were two major political blocks that included the PRI and the PAN, and both were challenged recently by MORENA. Additionally, the differences in the distribution of socioeconomic levels in the state are, in part, a consequence of the reason for including Zacatecas as an additional control. This state is divided into fifty-eight municipalities, and–according to census data–none of them surpass a population of two hundred and fifty thousand people. In fact, most of these municipalities have populations below thirty thousand people (Instituto Nacional de Geografía y Estadística, 2021). The prevalence of low-population municipalities in this state seems to be related to the distribution of socioeconomic levels in the state, and it might explain why the PAN has not been as strong in this state. The PAN is a right-wing party that has been more successful in urban rather than rural regions.

---

[6] After the 2021 election, MORENA won the Governor's race and most municipal races in Sinaloa, while in Chihuahua, it became the second political force in the local Congress.

[7] This is an index that ranges from 0 to 1. The larger the value of the index, the higher the level of human development.

Together, Sinaloa and Zacatecas seem to constitute a fitting control case for studying the effects of the "El Gordo Cívico" program in Chihuahua. Zacatecas offers balance in the number of small municipalities, while Sinaloa provides relevant urban comparisons. All three states have experienced similar electoral legislations and share electoral calendars. Moreover, while the political dynamics of Zacatecas vary a little, they are in line with what would be expected in a state with mostly small municipalities. Finally, while it is impossible to prove that the conditional parallel trends assumption holds, prior to presenting the results of the analysis, I use event studies to provide evidence that offers some reassurance that it is reasonable to expect that parallel trends hold for these cases. But first, I discuss the model specification along with the hypotheses of this analysis.

2.1. Model specification and hypotheses

The TWFE model specification for this study is as follows:

$$Turnout\ Rate_{it} = \alpha_1 + \alpha_2 Treated_i + \alpha_3 PostTreatment_t + \partial Treated_i \times PostTreatment_t + \theta Controls_{it} + \gamma Municipality\ Fixed\ Effects_i + \varepsilon, \quad (5)$$

the variable $Treated_i$ is a dummy variable that indicates if municipality i is in the state of Chihuahua. Similarly, $PostTreatment_t$ is a dummy variable that has a value of one for all the elections that took place after the turnout-buying program was implemented. In other words, this dummy variable divides observations into two periods, one before the program was implemented and one after its application. I include five elections from the period before the implementation of the "El Gordo Cívico" program: the midterm federal elections of 2009 and 2015, the federal presidential election of 2012, the local midterm election of 2013, and the local gubernatorial election of 2010. Meanwhile, the three elections that have been held after the implementation of the program are included: the local gubernatorial election of 2016, the local midterm concurrent with the 2018 presidential election, and the local gubernatorial concurrent with the 2021 federal midterm. This means that the turnout rates are averaged across each period[8]. Next, the interaction between $Treated_i$ and $PostTreatment_t$ yields the estimated ATT, and its value is given by coefficient ∂. In other words, the estimate for this coefficient will reveal whether the implemented program has an effect on turnout rates.

$Controls_{it}$ refers to a vector of time-variant control variables relevant to this study. Specifically, I first include the log of the number of registered voters in the electoral section. This is an important variable to consider since mobilization and canvassing efforts may be more successful when the size of the electorate is small. Now, it could be argued that another reason to include this control is that a small increase (or decrease) in the raw number of voters in a small municipality would have a higher impact on the turnout rate than the same raw increase in a large municipality. However, this issue is addressed by weighting observations by the total number of registered voters in all three states in each of the elections included.

Next, I include two variables that the Mexican National Electoral Institute has consistently identified as being associated with turnout rates: the proportion of female registered voters in a municipality and the proportion of registered voters between twenty and thirty-nine years old and those older than eighty (Instituto Federal Electoral, 2011, 2013; Instituto Nacional Electoral, 2016, 2019, 2022). The National Electoral Institute reports that, at least in federal elections, women and those younger than twenty years old or between the ages of forty and seventy-nine years tend to vote at higher rates; thus, it is important to control for these variables. Unfortunately, these data are only available for federal elections; those for

[8] Given that each type of election may have unique dynamics, this approach does a better job of capturing the difference between the averages among all types of elections in each period than a TWFE model with multiple time periods where election years are included as part of the fixed effects specification. Further, it allows me to include dummy variables to indicate the type of election without creating perfect collinearity.

the local elections of 2010, 2013, and 2016. Thus, I have imputed values by interpolating using the federal elections that surround each local election. For instance, for the local election of 2010, I took the difference between the values of these variables in the years 2009 and 2012, divided the result by three, and added it to the value reported in 2009.

Given that resources available and the quality of infrastructure in a community may influence the cost of voting and, consequently, electoral participation, I include the marginalization index calculated at the municipal level and normalized as reported by Mexico's Secretariat of Government. The National Population Council calculates this index every five years using Census and mid-census population count data (Consejo Nacional de Población, 2021). Therefore, this index is available for the years 2010, 2015, and 2020. In this case, I have populated the values for the years 2009, 2012, 2013, 2016, and 2018 with the value of this index that is closest to each of these years. In other words, the value of this index imputed for a municipality in 2009 and 2012 corresponds to the value of the index in 2010. Meanwhile, for the year 2013, the value would be the same as the one reported for 2015.

Additionally, I include the margin of difference between the top two parties in the most important election held in each year included in the study, calculated at the municipal level. This variable aims to control for the competitiveness of the most important election held. The importance of an election, along with its perceived competitiveness, are important determinants of voter participation (Edlin et al., 2007). Next, I also include dummies to indicate the party in power at the municipal level and a dummy that takes the value of one when the incumbent municipal party is the same as the incumbent party at the state level. In a clientelist setting like Mexico (Beltrán & Castro-Cornejo, 2019; Cantú, 2019; Greene & Simpser, 2020), having control of the municipal and state purses can be an element that contributes to mobilization through clientelist incentives (Calvo & Murillo, 2004).

The next set of controls corresponds to dummies that identify the type of election held each year. The baseline category is federal midterm elections, that is, only when the federal Congress is voted. These are the elections with the lowest turnout rates in the data for all states. Thus, the dummy variables included indicate the following types of elections: federal-only presidential, local-only gubernatorial, local-only midterm, federal presidential and local midterm, and federal midterm and local gubernatorial.

Finally, the last two controls are also dummies that specify the first election in which independent candidates were allowed to participate and if the election resulted in a change of power at the state level after the incumbent party had been in office for twelve years or more. Both events might be related to a surge in participation. In the case of independent candidates, their novelty, in addition to potentially being perceived as anti-establishment politicians, may mobilize some voters. Similarly, a change of party in power after a long period of time could be related to a surge in participation as voters might have been motivated due to the potential alternation of power. The final term of the specification, γ, corresponds to municipality-fixed effects. This term is included to control for any unaccounted variations that are related to the characteristics of the municipalities.

Before presenting the hypotheses of this study, consider Panagopoulos' revised calculus of voting equality presented in equations 2, 3, and 4. The turnout-buying program should increase the value of parameter D_E for all voters in Chihuahua. Now, Panagopoulos argues that assuming the functional form is correct, the marginal effect of D_E always seems to be positive. At the very least, there is no evidence that suggests that D_E has a crowding-out effect on D_I (Panagopoulos, 2013). Thus, Hypothesis 1 states:

H1. Holding everything else constant, the implementation of the turnout-buying program in Chihuahua has a positive effect on the level of turnout in electoral sections in Chihuahua. Hence $\eth > 0$.

Now, one essential thing to consider is that, as reported in the social media pages that promoted the "El Gordo Cívico" program, most promotions offered were concentrated in urban municipalities. Hence, if the program had an effect on these municipalities, but none on rural municipalities, and the effect was not large, it is possible that the estimate of the coefficient $\eth$ is not significantly different from zero as rural municipalities would bring the value of the estimate down. Considering this, I extend the original TWFE

estimator to a difference-in-difference-difference (DDD) model as follows:

$$\begin{aligned} \textit{Turnout Rate}_{it} = {} & \alpha_1 + \alpha_2 \textit{Treated}_i + \alpha_3 \textit{PostTreatment}_t + \alpha_4 \textit{Urban Municipality}_i + \partial_1 \textit{Treated}_i \times \\ & \textit{PostTreatment}_t + \partial_2 \textit{Treated}_i \times \textit{Urban Municipality}_i + \partial_3 \textit{PostTreatment}_t \times \textit{Urban Municipality}_i + \\ & \partial_4 \textit{Treated}_i \times \textit{PostTreatment}_t \times \textit{Urban Municipality}_i + \theta \textit{Controls}_{it} + \gamma \textit{Municipality Fixed Effects}_i + \\ & \varepsilon. \end{aligned} \tag{6}$$

I created the urban municipality variable using Pérez-Rasgado's Mexican municipalities typology (Pérez-Rasgado, 2014). This variable is a dummy that indicates if the municipality is classified as metropolitan or urban according to this typology. Next, the coefficient of interest from this specification is δ_4, as it represents the ATT, considering that treated units might only be the urban municipalities and not the rural ones. Therefore, Hypothesis 2 can be described as follows:

H2. Holding everything else constant, the implementation of the turnout-buying program in Chihuahua has a positive effect on the turnout rates of urban municipalities in Chihuahua. Hence $\partial_4 > 0$.

2.2 Event studies and the parallel trends assumption

Before discussing the results of this study, I present the results of event studies (ES) made only with election data prior to 2016. An essential condition for giving credence to the results obtained from the estimators discussed above is that the conditional parallel trends assumption holds for the cases used in this analysis. Further, as I mentioned earlier, the use of time-variant controls in the TWFE specification means that parallel trends should also hold for these controls. Now, while it is not possible to prove that the assumptions hold (after all, they are assumptions), at least ES can offer some reassurance about the reasonability of these assumptions.

I used the specifications described in the previous section to compare two periods before the implementation of the program in Chihuahua. The first period includes the federal midterm election of 2009 and the gubernatorial election of 2010. Meanwhile, the second period consists of the federal presidential election of 2012, the local midterm of 2013, and the federal midterm of 2015. This split manages to include one federal midterm and one major election–a gubernatorial and a presidential–in each period; hence, it seems to be the most balanced way to split the elections to perform the ES. Additionally, I subsetted the data to run ES estimations with only the data from Zacatecas and Chihuahua and then only with the observations from Sinaloa and Chihuahua. Thus, I made six different ES estimations, using these three sets of data and calculating a coefficient where all observations from Chihuahua are considered as equally treated and another one where urban municipalities are considered the treated units within Chihuahua, as shown in Table 1.

If the coefficients from these calculations are not statistically different from zero, this will offer reassurance that the conditional parallel trends assumption is reasonable for these cases. It is crucial to reiterate that this is in no way conclusive evidence of parallel trends since this is, to reiterate, an assumption. But at least these calculations suggested that up to the year of the treatment, there is evidence of parallel trends. With this in mind, it is possible to interpret the results of the ES as they relate to this research. Table 1 presents the results of the ES estimations; the ES column presents the estimated ES coefficient, while the SE column displays the estimated standard errors clustered by municipality. Note that in all but one of the ES estimations, the standard error is larger than the absolute values of the estimated coefficients; thus, it is clear that none of these coefficients are significantly different from zero. As for the one in which the absolute value is larger than the standard error, this latter estimated parameter is still large enough so that the coefficient is not significantly different from zero (ES -2.2092, SE 2.1810).

Model	ES	SE
2009-2010 and 2012-2015 ES with controls Zacatecas and Sinaloa	0.8338	1.6093
2009-2010 and 2012-2015 ES, Urban Chihuahua with controls Zacatecas and Sinaloa	0.7616	2.0962
2009-2010 and 2012-2015 ES with control Zacatecas	0..0382	1.6847
2009-2010 and 2012-2015 ES, Urban Chihuahua with control Zacatecas	1.0849	1.6341
2009-2010 and 2012-2015 ES with control Sinaloa	1.0374	1.8474
2009-2010 and 2012-2015 ES, Urban Chihuahua with control Sinaloa	-0.1499	2.1130

Table 1. Event studies results using periods of 2009-2010 and 2012-2015.

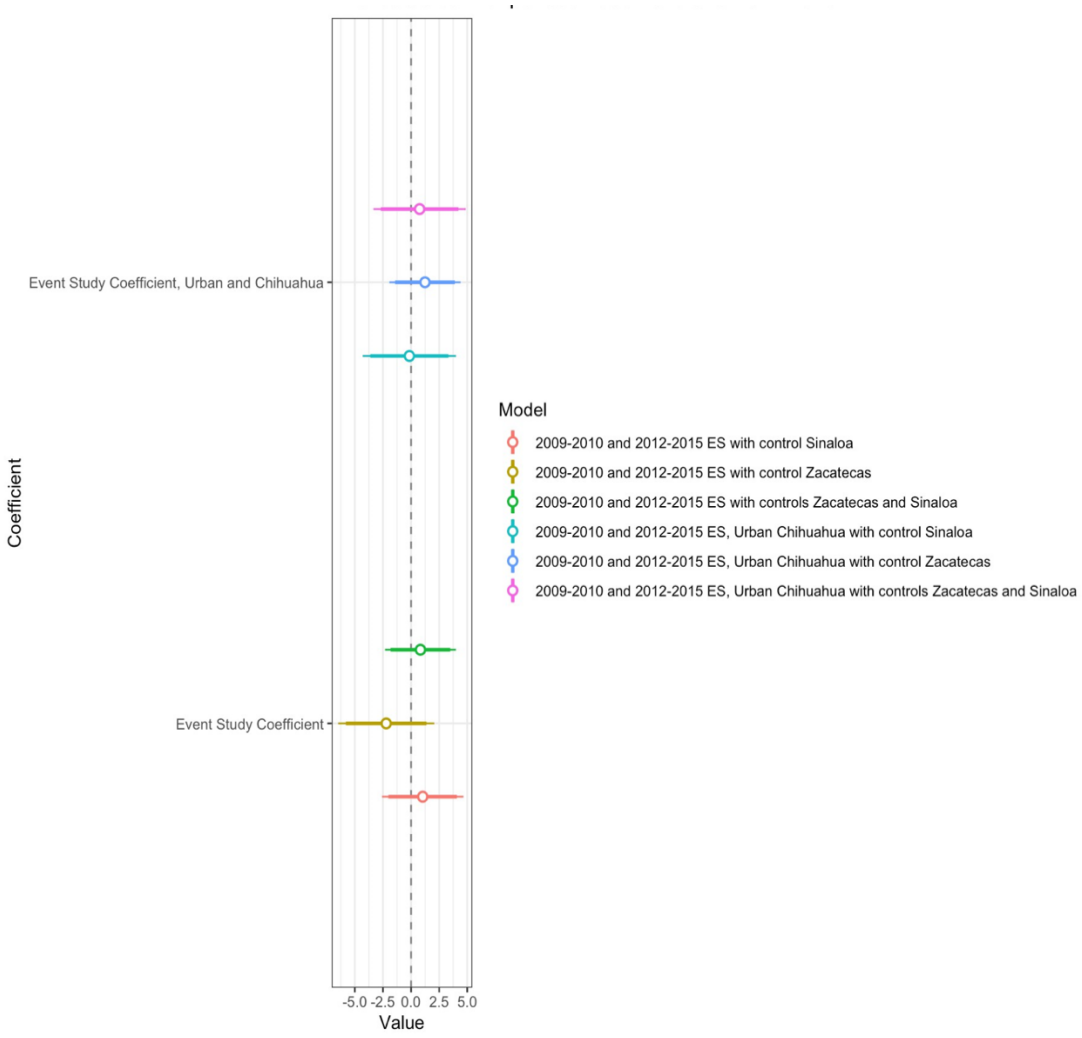


Figure 1. Event studies with periods 2009-2010 and 2012-2015. The three upper coefficients represent the ES coefficients when urban units are considered the treated units within Chihuahua. The bottom ES coefficients are from the estimations where all municipalities in Chihuahua are considered equally treated.

Figure 1 offers a visual summary of these estimates through a coefficients plot, and through it, it is easy to observe that the whiskers of all the estimated ES coefficients cross the vertical line, indicating a

value not statistically different from zero. As discussed above, the main takeaway from these results is that the assumption of parallel trends is reasonable in this study. Thus, these results offer some reassurance that the results presented below are reliable.

3. Results

Table 2 summarizes the results of all the models I estimated for this analysis. The column labeled ATT includes the estimated average treatment on the treated, which corresponds to coefficients ∂ and $∂_4$ of the TWFE DiD and DDD models described above. The SE column includes the standard error clustered by municipality. The main specifications are those found in the first two rows, as they include all three states and all election data available for this study. It is evident that the estimated ATT is not statistically significant–at 0.05 and 0.10 significance levels– in either the DiD (ATT -0.1407, SE 2.1347) or the DDD (ATT -1.0708, SE 2.0962) models. Not only are the standard errors clearly larger than the estimated coefficients, but these coefficients have the opposite sign to the one hypothesized. In other words, in both models, there is no evidence to claim that the ATT is different from zero and positive. Hence, when the elections of 2016 through 2021 are averaged together, "El Gordo Cívico" program did not affect turnout rates when compared to the average turnout rate in Chihuahua from 2009 through 2015.

	Model	ATT	SE
1	2009-2021 DiD with controls Zacatecas and Sinaloa	-0.1407	2.1347
2	2009-2021 DDD with controls Zacatecas and Sinaloa	-1.0708	2.0962
3	2009-2018 DiD with controls Zacatecas and Sinaloa	-3.0118	2.4872
4	2009-2018 DDD with controls Zacatecas and Sinaloa	-2.1338	1.9338
5	2009-2016 DiD with controls Zacatecas and Sinaloa	-4.6620	4.3758
6	2009-2016 DDD with controls Zacatecas and Sinaloa	4.5348	2.6242
7	2009-2021 DiD with control Zacatecas	-1.0690	1.8214
8	2009-2021 DDD with control Zacatecas	0.8440	2.4734
9	2009-2018 DiD with control Zacatecas	-4.0466	2.4727
10	2009-2018 DDD with control Zacatecas	0.0109	2.6953
11	2009-2016 DiD with control Zacatecas	-13.5903	6.4524
12	2009-2016 DDD with control Zacatecas	2.7606	2.4433
13	2009-2021 DiD with control Sinaloa	-1.1868	2.7141
14	2009-2021 DDD with control Sinaloa	-4.5126	2.2504
15	2009-2018 DiD with control Sinaloa	-4.0452	2.8150
16	2009-2018 DDD with control Sinaloa	-2.1338	1.9338
17	2009-2016 DiD with control Sinaloa	-4.0182	4.5691
18	2009-2016 DDD with control Sinaloa	-0.8681	2.4193

Table 2. DiD and DDD results.

Now, there is a possibility that the year 2021 bias the results since the Business Coordinating Council of the state of Durango–an organization that promotes the interests of private businesses in this state–along with the National Electoral Institute, launched a program similar to "El Gordo Cívico" called "Mi Voto Vale" or, in English, "My Vote Is Worthy." While the program was mainly implemented in Durango, businesses in other states also participated. At least one business in Sinaloa and three in Zacatecas were part of this initiative. While these numbers might not be much, it can still be argued that just like in Chihuahua with "El Gordo Cívico," an electoral authority–even if it was not the state electoral authority–also implemented a turnout-buying program in Sinaloa and Zacatecas. With this in mind, I

dropped the 2021 election and estimated the ATT again. Just as with the original estimations, the estimates of the ATT have a negative sign and are not significantly different from zero, -3.0118 (SE 2.4872) for the DiD model and -2.1338 (SE 1.9338) for the DDD model.

I performed an additional estimation, dropping both the elections of 2018 and 2021. Given that the election of 2018 was the first one where federal and local elections were held at the same time, it could be the case that the effect on the turnout rates in each state was different, which would bias the ATT estimate. Nevertheless, it should be noted that this estimator compares the average turnout rates of the elections of 2009 through 2015 with the turnout rate of a single election after the implementation of the program. However, since there are no other elections after the implementation of the program, this is a limitation that cannot be circumvented. As for the results of these estimations, the ATT from the DiD model is even more negative than the previous ones (-4.6620), and it is still not different from zero at traditional levels of significance (SE 4.3758). Meanwhile, the estimate from the DDD model has the expected sign (4.5348), and it is statistically different from zero, but only at the 0.10 significance level (SE 2.2642). Considering the results from the previous estimators, this is only weak evidence in favor of *H2*.

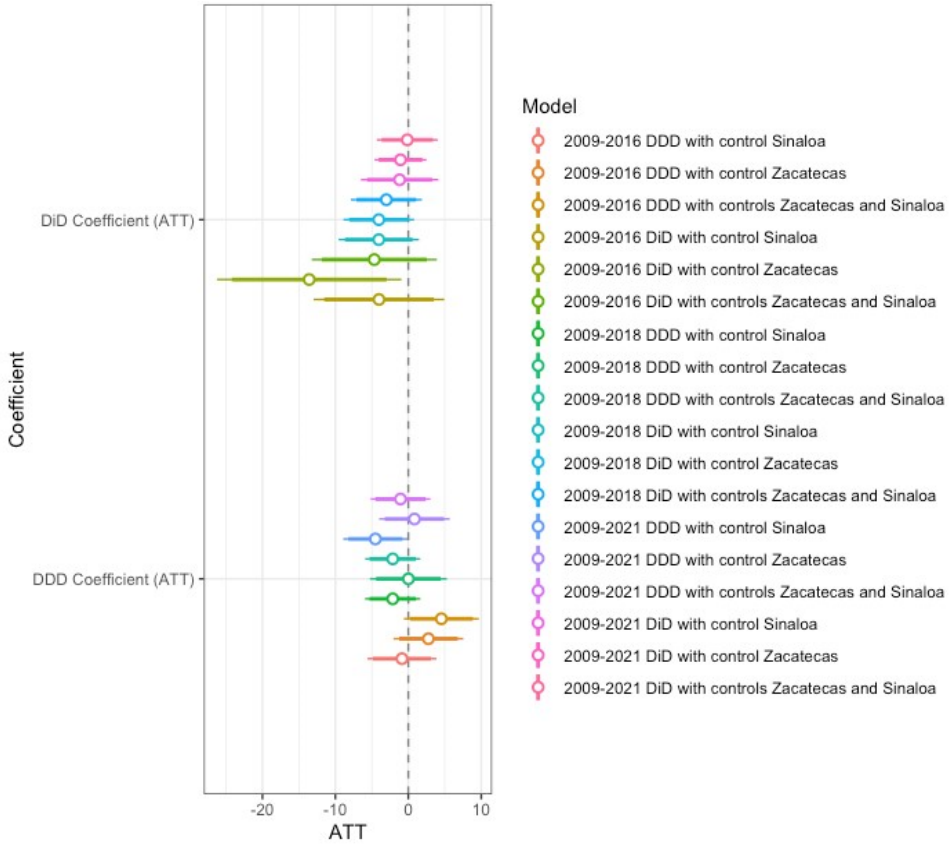


Figure 2. DiD and DDD coefficients of all estimated model specifications. The nine upper coefficients are the DiD coefficients, which indicate that all municipalities in Chihuahua are considered equally treated. The nine bottom coefficients are the DDD coefficients, which indicate that urban units are considered the treated units within Chihuahua.

Finally, I also performed the analyses again, dropping one of the control states each time. If one of these states is a bad control, then it would bias the ATT estimates. Rows seventh through eighteenth of Table 2 display the calculated ATT from these models. There is not much to discuss from these quantities as they confirm the conclusions from the first five models; none of these estimations are significantly

different from zero, and most of them are negative. Further, the estimated ATT that is larger in magnitude is also one of those that have the wrong sign. All these results, including those discussed above, can be visualized in the coefficient plot presented in Figure 2[9]. With this cumulative evidence and the limitations of the data for the estimator that do not include the elections of 2018 and 2019, it is not possible to conclude that the turnout-buying program implemented by the electoral authority of the state of Chihuahua, "El Gordo Cívico," has had any effect on turnout rates.

4. Discussion and conclusions

From the election of 2016 onwards, the electoral authority of the state of Chihuahua, along with local businesses, has implemented the "El Gordo Cívico" program in hopes of increasing turnout by rewarding voters with special sales and discounts at several venues across the state. This program can be described as a form of turnout-buying since it aims to counteract the costs of voting by offering material rewards to voters in exchange for their participation. Nevertheless, the results from this study strongly suggest that the program has not accomplished its objective. Even when voter participation in Chihuahua increased in the 2016, 2018, and 2021 elections compared to that of previous years (Instituto Federal Electoral, 2011, 2013; Instituto Nacional Electoral, 2016, 2019, 2022), it cannot be said that this increase was due to the "El Gordo Cívico" program. When considering other changes in the electoral environment that occurred during these years, the turnout-buying program did not contribute to the observed increase in turnout in Chihuahua.

Now, given that the program does not seem to affect turnout, are the results from this study just an interesting curiosity but nothing to explore any further? I would argue that this is not the case. Beyond its effectiveness, the setup of the program may raise some concerns. The first question that might come to mind is, what do businesses get for participating in the program? As has already been mentioned, at least up to the 2021 election, all businesses could freely partake in this program. Further, the electoral authority promotes those venues that want to publicize their offers on the campaign's social media accounts. This means that election day is potentially a special sales day for local businesses that participate in the program. Thus, what these local businesses expect is that their sales will increase because of taking part in this program. It is also possible that some of the participants in the program simply derive satisfaction from knowing they are doing something to promote democracy in their community. These business owners might be motivated to participate in the turnout promotion program even if the influx of customers in their business does not increase significantly because of the program.

Nevertheless, the one worrying concern–at least from a normative perspective– comes when considering the possibility that participant businesses could take advantage of the program to promote a particular candidate. In such a case, the program could quickly turn into a form of clientelism funded with private resources. Participating businesses may act strategically and attempt to exploit the program to benefit their preferred candidate by mobilizing a particular sector of the population that may find the offered promotions more appealing. Unfortunately, these concerns cannot be addressed with the data presented in this work. Thus, further research is warranted so that these questions can be addressed. The good news is that starting in the 2024 election, the Chihuahua electoral authority refurbished this get-out-the-vote program, rebranding it as "El Pulgar Cívico." With this refurbishment, participant businesses now must register to be part of the program. Hence, obtaining specific data about participant vendors and the special sales they offer will be possible. These data, along with geospatial data regarding both businesses' locations and poll stations, could shed light on potential differential effects of the program based on location and type of promotion offered. Further, having a set list of participant businesses is an essential step for surveying these businesses so that we can understand their motivations

[9] This paper's online appendix contains detailed tables with all variables in each model specification: https://www.jd-irigoyen-borunda.com/_files/ugd/eb96bb_29ea3883ed0b4bf1b905def70d086737.pdf

for participating in this program. It is possible that business owners, through the local chamber of commerce, attempt to coordinate to exploit the program by targeting only that segment of voters that would vote in line with the interest of these business owners. Alternatively, they might perceive this day as a special sales holiday. Hence, they mainly participate to increase their sales. Finally, it might be the case that business owners have the sole intention of promoting participation, and this is why they participate in the program. Of course, these scenarios are not mutually exclusive, and this is another reason for studying the different caveats of the "El Gordo Cívico" program beyond its effects on turnout.

Additionally, given that the available data are at the municipality level and voting is an individual behavior, is that this study is not exempt from the ecological fallacy. Hence, there exists the possibility that the program is indeed affecting the behavior of some individuals; nevertheless, on the aggregate, this is not perceivable. For instance, the program could affect different groups of people differently. Some would be incentivized to participate by the program, while for others, it could have a crowd-out effect, meaning that the extrinsic reward ends up decreasing intrinsic motivation (Deci et al., 1999). These differential effects cannot be inferred from municipality-level data. Thus, an extension of this study using individual-level data is necessary to safely conclude that the program has not had any effects on turnout.

Further, even if the results hold after looking at individual-level data, a study with this level of disaggregation can help us understand why voters are not mobilized by this program. It could be that the program does not have much penetration among voters; thus, they are not aware of the rewards available to them. On the other hand, they could perceive the program as an illegitimate strategy to incentivize participation; this could also decrease turnout. Finally, it could also be the case that those voters who take advantage of the program are those who already participated regularly. Even if the program can be labeled as turnout-buying, offering sales and discounts implies that voters are going to spend money after voting. Therefore, it could be possible that voters do not perceive these sales as rewards, or at least not as something that is reducing the cost of voting. For voters, this could be an incentive to spend more and not vote; hence, voters with more available resources will be the ones likelier to take advantage of the program. In general, these voters tend to be the ones that already participate in elections (Carlin et al., 2015).

In conclusion, this study is only a first step in understanding how turnout-buying programs implemented by official electoral authorities can affect the electoral environment. This is particularly important given that the electoral authority of the state of Baja California has also implemented a similar program to that in Chihuahua, and in 2021, the Business Coordinating Council of the state of Durango, with the sponsorship of the National Electoral Institute, has promoted another program like the "El Gordo Cívico" in Durango and some other states. We still need to understand how the public perceives these programs, whether they are legitimized by the sponsorship of electoral authorities, and if they could be exploited to mobilize some voters over others. Thus, even if this research suggests that these programs do not increase overall turnout, this is only a piece of a larger puzzle regarding turnout-rewarding programs.

Supplementary Materials: The online appendix is available online at https://www.jd-irigoyen-borunda.com/_files/ugd/eb96bb_29ea3883ed0b4bf1b905def70d086737.pdf.

CRediT Author Contributions: Conceptualization, J.D.I.; methodology, J.D.I.; software, J.D.I.; validation, J.D.I., J.D.I.; formal analysis, J.D.I.; investigation, J.D.I.; data curation, J.D.I.; writing—original draft preparation, J.D.I.; writing—review and editing, J.D.I.; supervision, J.D.I. "The author has read and agreed to the published version of the manuscript."

Conflicts of Interest: "The author declares no conflict of interest."

References

Abadie, A. (2005). Semiparametric Difference-in-Differences Estimators. *The Review of Economic Studies*, *72*(1), 1–19. https://www.jstor.org/stable/3700681

AMAI. (2017). *Niveles Socioeconómicos AMAI*. Asociación Mexicana de Agencias de Investigación de Mercado. http://nse.amai.org/data/

Beltrán, U., & Castro-Cornejo, R. (2019). Clientelistic Activation of Mexican Voters. *Política y Gobierno*, *26*(2).

Brennan, G., & Buchanan, J. (1984). Voter Choice: "Evaluating Political Alternatives." *The American Behavioral Scientist*, *28*(2). https://www.proquest.com/docview/1306754205/citation/D63F49DD209D4A47PQ/1

Calvo, E., & Murillo, M. V. (2004). Who Delivers? Partisan Clients in the Argentine Electoral Market. *American Journal of Political Science*, *48*(4), 742–757. https://doi.org/10.2307/1519931

Cantú, F. (2019). Groceries for Votes: The Electoral Returns of Vote Buying. *The Journal of Politics*, *81*(3), 790–804. https://doi.org/10.1086/702945

Carlin, R. E., Singer, M. M., & Zeichmeister, E. J. (2015). Introduction to the Latin American Voter. In *The Latin American Voter: Pursuing Representation and Accountability in Challenging Contexts* (pp. 1–28). University of Michigan Press.

Consejo Nacional de Población. (2021, April 10). *Índices de Marginación 2020: Conoce los índices de marginación por entidad federativa, municipio, localidad y urbana, con base en el Censo de Población y Vivienda 2020*. https://www.gob.mx/conapo/documentos/indices-de-marginacion-2020-284372

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*(6), 627–668. https://doi.org/10.1037/0033-2909.125.6.627

Dellavigna, S., List, J. A., Malmendier, U., & Rao, G. (2017). Voting to Tell Others. *The Review of Economic Studies*, *84*(1), 143–181. https://doi.org/10.1093/restud/rdw056

Downs, A. (1957). *An Economic Theory of Democracy*. Harper.

Edlin, A., Gelman, A., & Kaplan, N. (2007). Voting as a Rational Choice: Why and How People Vote To Improve the Well-Being of Others. *Rationality and Society*, *19*(3), 293–314. https://doi.org/10.1177/1043463107077384

Fiore, F. (1993). Gimmicks, Glitches Mark Effort to Get Out the Vote. *Los Angeles Times*, 1.

Funk, P. (2010). Social Incentives and Voter Turnout: Evidence from the Swiss Mail Ballot System. *Journal of the European Economic Association*, *8*(5), 1077–1103. https://www.jstor.org/stable/25700915

Gans-Morse, J., Mazzuca, S., & Nichter, S. (2014). Varieties of Clientelism: Machine Politics during Elections. *American Journal of Political Science*, *58*(2), 415–432. https://doi.org/10.1111/ajps.12058

Gerber, A. S., & Green, D. P. (2000). The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment. *The American Political Science Review*, *94*(3), 653–663. https://doi.org/10.2307/2585837

Gerber, A. S., Green, D. P., & Larimer, C. W. (2008). Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment. *American Political Science Review*, *102*(1), 33–48. https://doi.org/10.1017/S000305540808009X

Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., & Hill, S. J. (2013). Do Perceptions of Ballot Secrecy Influence Turnout? Results from a Field Experiment. *American Journal of Political Science*, *57*(3), 537–551. https://doi.org/10.1111/ajps.12019

Global Data Lab. (2023). *Subnational HDI (v6.0)*. Global Data Lab. Retrieved March 2, 2023, from https://globaldatalab.org/shdi/table/shdi/MEX/?levels=1+4&years=2018+2016+2015+2014+2013+2012+2010&interpolation=0&extrapolation=0.

Gomez, B. T., Hansford, T. G., & Krause, G. A. (2007). The Republicans Should Pray for Rain: Weather, Turnout, and Voting in U.S. Presidential Elections. *Journal of Politics*, *69*(3), 649–663. https://doi.org/10.1111/j.1468-2508.2007.00565.x

Green, D., Palmquist, B., & Schickler, E. (2002). *Partisan hearts and minds: Political parties and the social identities of voters*. Yale University Press.

Greene, K. F., & Simpser, A. (2020). Electoral Handouts During Mexico's 2018 Elections. *Política y Gobierno*, *27*(2).

Heckelman, J. C. (1995). The effect of the secret ballot on voter turnout rates. *Public Choice*, *82*(1–2), 107–124. https://doi.org/10.1007/BF01047732

Heckman, J. J., Ichimura, H., & Todd, P. E. (1997). Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme. *The Review of Economic Studies*, *64*(4), 605–654. https://doi.org/10.2307/2971733

Hicken, A. (2011). Clientelism. *Annual Review of Political Science*, *14*(1), 289–310. https://doi.org/10.1146/annurev.polisci.031908.220508

Instituto Estatal Electoral Chihuahua. (2018, June 13). *Regresa el Gordo Cívico para las elecciones del 1 de julio*. Instituto Estatal Electoral Chihuahua. http://www.ieechihuahua.org.mx/noticia_2018_06_13

Instituto Estatal Electoral Chihuahua. (2019, November 22). *Comercios del Centro ofrecerán descuentos a quien acuda a votar en el Plebiscito*. Instituto Estatal Electoral Chihuahua. http://www.ieechihuahua.org.mx/noticia_2019_11_22

Instituto Federal Electoral. (2011). *Estudio Censal Sobre la Participación Ciudadana en la Elección Federal de 2009*. https://portalanterior.ine.mx/archivos2/portal/DECEYEC/EducacionCivica/materiales/estudiosInvestigaciones/IFE_2009_Censo_Version_Final.pdf

Instituto Federal Electoral. (2013). *Estudio Censal Sobre la Participación Ciudadana en las Elecciones Federales de 2012*. https://portalanterior.ine.mx/docs/IFE-v2/DECEYEC/DECEYEC-EstudiosInvestigaciones/InvestigacionIFE/Estudio_Censal_Participacion_Ciudadana_2012.pdf

Instituto Nacional de Geografía y Estadística. (2021, January 25). *Censo de Población y Vivienda 2020*. Instituto Nacional de Geografía y Estadística. https://www.inegi.org.mx/contenidos/programas/intercensal/2015/doc/eic_2015_presentacion.pdf

Instituto Nacional Electoral. (2016). *Estudio Censal Sobre la Participación Ciudadana en las Elecciones Federales de 2015*. https://portalanterior.ine.mx/archivos2/portal/historico/contenido/recursos/IFE-v2/DECEYEC/DECEYEC-Varios/2017/Estudio-Censal-2015-VF.pdf

Instituto Nacional Electoral. (2019). *Estudio Muestral Sobre la Participación Ciudadana en las Elecciones Federales de 2018*. https://centralelectoral.ine.mx/2019/08/14/estudio-muestral-la-participacion-ciudadana-las-elecciones-federales-2018/

Instituto Nacional Electoral. (2022). *Estudio Muestral Sobre la Participación Ciudadana en las Elecciones Federales de 2021*. https://repositoriodocumental.ine.mx/xmlui/handle/123456789/146658

Instituto Politécnico Nacional. (2018, June 25). *Tinta indeleble máxima seguridad para el proceso electoral 2018*. Instituto Politécnico Nacional. https://www.ipn.mx/imageninstitucional/comunicados/ver-comunicado.html?y=2018&n=272

Jackson, R. A. (1996). A Reassessment of Voter Mobilization. *Political Research Quarterly*, *49*(2), 331–349. https://doi.org/10.2307/448877

Knack, S. (1995). Does "Motor Voter" Work? Evidence from State-Level Data. *The Journal of Politics*, *57*(3), 796–811. https://doi.org/10.2307/2960193

Levine, D. K., & Palfrey, T. R. (2007). The Paradox of Voter Participation? A Laboratory Study. *American Political Science Review*, *101*(1), 143–158. https://doi.org/10.1017/S0003055407070013

Nichter, S. (2008). Vote Buying or Turnout Buying? Machine Politics and the Secret Ballot. *American Political Science Review*, *102*(1), 19–31. https://doi.org/10.1017/S0003055408080106

Panagopoulos, C. (2013). Extrinsic Rewards, Intrinsic Motivation and Voting. *The Journal of Politics*, *75*(1), 266–280. https://doi.org/10.1017/s0022381612001016

Pérez-Rasgado, F. (2014). *Tipología del Municipio Mexicano para su Desarrollo Integral*. Instituto Nacional de Administración Pública, A.C.

Riker, W. H., & Ordeshook, P. C. (1968). A Theory of the Calculus of Voting. *American Political Science Review*, *62*(1), 25–42.

Sant'Anna, P. H. C., & Zhao, J. (2020). Doubly robust difference-in-differences estimators. *Journal of Econometrics*, *219*(1), 101–122. https://doi.org/10.1016/j.jeconom.2020.06.003

Shayo, M., & Harel, A. (2012). Non-consequentialist voting. *Journal of Economic Behavior & Organization*, *81*(1), 299–313. https://doi.org/10.1016/j.jebo.2011.10.021

Stein, R. M., & Vonnahme, G. (2008). Engaging the Unengaged Voter: Vote Centers and Voter Turnout. *The Journal of Politics*, *70*(2), 487–497. https://doi.org/10.1017/s0022381608080456

Stokes, S. C. (2005). Perverse Accountability: A Formal Model of Machine Politics with Evidence from Argentina. *American Political Science Review*, *99*(3), 315–325. https://doi.org/10.1017/S0003055405051683

Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*. Harvard University Press.