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### Does Political Representation Increase Participation? Evidence from Party Candidate Lotteries in Mexico

MATHIAS POERTNER London School of Economics and Political Science, United Kingdom

Hold to be a communities of the political participation of political participation? Analyzing a natural experiment from Mexico in which a party uses lotteries to select candidates for public office, this paper presents new insights into how representation shapes the political participation of underrepresented segments of society. I find that participation in subsequent elections is significantly higher among constituents who have been represented by randomly selected legislators with a similar social background who are part of local organizational networks (embedded representatives). Furthermore, I show that these represented constituents feel more empowered and that the party that provides this "grassroots" representation is rewarded with more support in the subsequent election. The findings highlight the importance of community embeddedness for political mobilization and have important implications for debates about democratic inclusion and representation.

#### INTRODUCTION

In recent decades, many well-established and nascent democracies have adopted policies to promote the representation of underrepresented groups in legislatures. Such policies, which include quotas and reserved seats, are designed to improve the descriptive and substantive representation of groups that have historically been excluded from politics, including women and ethnic minorities. These measures seek to politically empower underrepresented constituents and close gaps in political participation.

Prior studies have explored the ability of such policies to improve descriptive representation (e.g., see Hughes 2011; Schwindt-Bayer 2009) and the extent to which enhanced descriptive representation translates into improved substantive representation, such as the provision of public goods or constituent services (e.g., Broockman 2013; Chattopadhyay and Duflo 2004; Dunning and Nilekani 2013; Jensenius 2017). However, there is very little empirical evidence on how descriptive representation affects political participation. Although some historical studies in the United States have documented that descriptive representation enhances political engagement (Bobo and Gilliam 1990), several more recent studies in the US and beyond find no evidence that individuals are more likely to turn out to vote if they are represented by legislators of the same race/ethnicity or genders as themselves (e.g., see Clayton 2015; Gay 2001; Lawless 2004).

Past findings might have been so mixed because previous research has focused primarily on ascriptive characteristics—often a single characteristic, such as race or gender, that representatives share with their constituents. Although such highly visible shared characteristics are certainly very important, such a focus often overlooks another crucial factor that is less directly visible: representatives' embeddedness in the communities they purport to represent.

Building on this insight, this paper identifies and tests a largely overlooked mechanism through which descriptive representation can foster more political participation. I argue that representatives who not only share their constituents' social background but also come from the communities they represent and are embedded within local social networks (*embedded representatives*) are particularly effective at empowering constituents and mobilizing political participation. Embeddedness in local social networks, such as civil society organizations, can help increase representatives' visibility as well as their ability to connect with voters.

To test this argument and overcome the challenge that the extent to which certain communities are represented politically is usually driven by their past representation and participation, I present evidence from one of the very few instances in contemporary history in which sortition (a random lottery) was used to select and nominate candidates for national public office. In Mexico, where most voters are poor and do not feel represented by the mostly upper-class representatives of the traditional parties, the recently founded MOR-ENA (Movimiento Regeneración Nacional; National Regeneration Movement) party has extensively used lotteries to select candidates for elected office. At the national level, this party, which contested its first election in 2015 and won the country's presidency and both chambers of Mexico's Congress of the Union in 2018, selects two-thirds of its party-list proportional representation (PR) candidates for legislative office (federal deputies) through publicly conducted block-randomized lotteries from among local activists.

Mathias Poertner . Assistant Professor of Political Science, Department of Government, London School of Economics and Political Science, United Kingdom, M.Poertner@lse.ac.uk.

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Through these lotteries, citizens in some localities (which together comprise about 9% of the country's electorate) randomly received political representation through embedded representatives from their local area. Drawing on an original dataset with biographic information on national legislative candidates in Mexico coded from candidate registration forms and congressional deputy biographies, I show that the embedded representatives-unlike the traditional legislators of other parties-have social backgrounds that are similar to those of their constituents and are embedded in local organizational networks, such as labor or peasant unions. These networks facilitate crucial connections with lower-class voters and provide information about how they are being represented by "someone like them." The "grassroots" characteristics and community embeddedness of these representatives contrast starkly with the representation provided by "traditional" deputies who belong to other parties or were selected via other procedures from the same party.

I reconstructed the randomization procedure MORENA used in the lotteries it conducted in 2015, assembled detailed information on the candidates, and connected them to the results of the 2018 general elections, based on information gathered in dozens of information requests and a lawsuit under Mexico's 2015 General Transparency Law. Analyzing these data, I show that participation in subsequent elections is significantly higher among constituents who have been represented by embedded representa*tives*—even though those deputies were prohibited by law from running for reelection. Furthermore, I find evidence that the party that provided this "improved" representation was rewarded in the long-term: it received significantly more votes in the next election among constituents with embedded representatives.

Although several related mechanisms could account for these effects and it is not always possible to distinguish conclusively between them, additional analyses suggest that alternative mechanisms, such as the presence of "hometown boys"/local candidates (Key 1949; Talalovich 1975), pork-barrel politics, legislative behavior, or perceived improvements in substantive representation, cannot simply account for these results. Instead, I find evidence suggesting that embedded representatives are particularly effective at empowering constituents and mobilizing political participation in four ways. First, these mobilization effects are particularly pronounced when constituents are represented by lottery deputies with a lower-class background and close ties to local civil society organizations prior to assuming office. Second, using geocoded survey responses from the Latin American Public Opinion Project (LAPOP 2017), I show that constituents-especially those with a lower-class background and previous nonvoters-who randomly received embedded representation developed a stronger sense of political efficacy, became more interested in politics, and expressed more support for the country's political institutions prior to their increased electoral participation. Third, I document a similar pattern regarding constituents' news consumption through Google searches: constituents with an embedded representative became much more interested in relevant political topics. Last, I show that embedded representation can help overcome participation gaps for underrepresented segments of the electorate. Whereas constituents in poorer localities are usually much less likely to vote than those in richer areas, additional analyses of poverty data suggest that representation through a lottery deputy from their community can boost participation enough to close the participation gap.

## POLITICAL REPRESENTATION AND PARTICIPATION

In democracies around the world, the inclusion of underrepresented groups in legislatures has commanded increasing attention. Here I do not seek to determine what types of policies are most effective at increasing representation. I instead explore whether and how increased political representation boosts political participation. In many countries, underrepresented groups continue to participate less in the political process; for instance, they vote at lower rates. Can increased representation help close such participation gaps? What is the effect of having representatives who emerged from specific communities on the communities' participation?

There is good reason to expect descriptive representation-representation "in which a person ... stands for others 'by being sufficiently like them'" (Pitkin 1967, 80)—to increase substantive representation and, in turn, the political engagement of those who are represented. As Mansbridge (1999) points out, descriptive representation offers "communicative advantages" (642) between representatives and constituents and permits "experiential deliberation" (643): "as (new) issues arise unpredictably, a voter can expect the representative to react more or less the way the voter would have done, on the basis of descriptive similarity" (644). Building on these ideas and focusing more explicitly on their implications for political engagement, empowerment theory maintains that the presence of representatives of underrepresented groups should increase "political trust, efficacy, and knowledge about politics" among group members and demonstrate the "value ... (of) sociopolitical involvement" (Bobo and Gilliam 1990, 379). In addition to these two potential mechanisms-communicative advantages and experiential deliberation – through which the mere presence of representatives of underrepresented groups could empower constituents and prompt them to become more politically engaged, a third (somewhat more instrumental) mechanism has been put forward: if representatives of underrepresented groups indeed improve a community's substantive representation, their constituents should positively evaluate their performance and vote for them again to ensure future substantive representation. Although this third mechanism would also yield higher electoral participation, it does not necessarily predict more broadly engaged or empowered constituents.

Most previous empirical work on descriptive representation implicitly centers on the second and third mechanisms and often focuses on a single characteristic that is shared between representatives and their constituents. Many prior studies explore whether the presence of representatives of, for example, the same gender, race, or ethnicity as underrepresented constituents empowers these constituents, improves their substantive representation, and enhances their political participation. However, the empirical evidence in support of claims that descriptive representation improves substantive representation and that descriptive representation promotes political engagement—especially outside the US—is rather mixed.

Furthermore, there is only limited empirical evidence that descriptive representation directly affects political participation.<sup>1</sup> On the one hand, some historical studies have documented a positive effect, which supports empowerment theory. For example, Bobo and Gilliam (1990) show that African Americans who live in cities with Black mayors exhibit higher levels of trust, efficacy, knowledge, and engagement in local politics. On the other hand, numerous, more recent studies find no evidence that descriptive representation boosts political participation. For example, Gay (2001) demonstrates that the election of Black members of Congress in the US rarely increases political engagement among African Americans and is even associated with decreased turnout among white citizens. Similarly, Lawless finds that while "(w)omen represented by women tend to offer more positive evaluations of their members of Congress, ... this difference does not consistently translate into political attitudes or behavior" (Lawless 2004, 82). Clayton (2015) even finds that quota-mandated female representation decreased women's political engagement in Lesotho. This lack of evidence in support of the idea that descriptive representation (through national legislators) increases political participation has led some scholars to conclude that it "may be that the executive (rather than the legislative) office" is critical in bringing about minority engagement (Griffin 2014, 331).

#### **Embedded Representation**

Part of the reason for the mixed findings might be that prior research has focused primarily on ascriptive characteristics — often a single characteristic, such as race or gender, that is shared between representatives and their constituents. Although such highly visible characteristics are certainly very important, the first mechanism discussed above (communicative advantages between representatives and constituents) also relies on an additional factor that might be less directly visible: shared experiences and relationships.

Although shared identities, such as race, gender, or class, often entail shared experiences, intersectionality theory highlights that there can be considerable variation in the life experiences of people who share a specific identity. For example, a representative and a constituent might share the same ethnic background but have vastly different life experiences due to their gender or class backgrounds. Therefore, we might expect descriptive representation to offer more communicative advantages when representatives not only share a social identity with their constituents but also have extensive shared experiences and relationships.

Representatives who share their constituents' social background and are embedded within local social structures (*embedded representatives*) should be particularly well positioned to connect with their voters. This concept of *embedded representation* advances arguments that "most behavior is closely embedded in networks of interpersonal relations" (Granovetter 1985, 504) and applies this notion of "embeddedness" to political representation. In doing so, it builds on earlier notions of descriptive representation that go beyond shared ascriptive characteristics (see Pitkin 1967, 87). For example, as Mansbridge points out,

Few commentators have noticed that the word "descriptive," modifying representation, can denote not only visible characteristics, such as color of skin or gender, but also shared experiences... This criterion of shared experience, which one might reasonably expect to promote a representative's accurate representation of and commitment to constituent interest, has a long history in folkways and even in law. Long-term residents in a town often argue for electing to office someone born in the town on the implicit grounds that lifetime experience increases the representative's common experiences with and attachment to the interests of the constituents. (Mansbridge 1999, 629)

More specifically, local social networks, such as organized civil society, can help increase representatives' visibility and ability to connect with voters. Recent studies have demonstrated that local networks can influence turnout and electoral performance (Arias et al. 2019; Cruz, Labonne, and Querubín 2017; Nickerson 2008) and that locally organized civil society organizations hold strong sway over the electoral preferences of their members and other people in their wider social networks (Poertner 2021). I build on these insights to formulate the following hypotheses:

**Participation hypothesis:** *Electoral participation in subsequent elections will be higher among constituents represented by an embedded representative than among those without an embedded representative.* 

<sup>&</sup>lt;sup>1</sup> However, recent scholarship has found some evidence that descriptive representation along ethnic and gender lines can influence political attitudes and nonelectoral forms of political engagement (Barnes and Burchard 2013; Broockman 2014; Schwindt-Bayer 2010).

Following this logic, participation should be highest when representatives are particularly deeply embedded within their communities. For example, representatives who held leadership positions in local civil society

organizations before assuming office should be particularly good at mobilizing their constituents.

The mechanism discussed above still requires an overlap in social background between a representative and a constituent in order to be empowering. In a context like Mexico, where the majority of the adult population is part of the informal sector and faces precarious living conditions, social class arguably presents a particularly salient (yet largely underrepresented) dimension of constituents' social background (see the next section for a full discussion of the social background of constituents and their representatives). Therefore, we might also expect that electoral participation in subsequent elections will be higher among constituents who are represented by a deputy with a lower-class background than among those represented by a deputy with a higher-class background.

If the constituents of embedded representatives indeed participate more because their representatives have a direct empowering effect, as theorized above, this also has directly testable implications: increased electoral participation should be preceded by signs that constituents feel more empowered:

**Empowerment hypothesis:** Political efficacy, political interest, and support for political institutions will be higher among constituents represented by an embedded deputy than among those without an embedded representative.

We might also expect these empowering effects to be particularly pronounced among individual constituents with a social background that is similar to that of their embedded representative and among constituents who do not usually participate politically.

Beyond these expectations for *whether* constituents vote, there are also some observable implications for *how* people might vote. For instance, we might expect that the party responsible for improved representation will be rewarded for it in subsequent elections. Given the large proportion of underrepresented, lower-class constituents in Mexico, we might expect the third hypothesis:

**Electoral consequences hypothesis:** The party responsible for improved representation will obtain more electoral support among constituents with an embedded deputy than among those without such representation.

Such an increase in support could be due to two potentially complementary developments. First, it could be the result of mobilization via higher turnout rates, where the "new" voters disproportionately support the party responsible for the improved representation. Second, voters who did not feel adequately represented by traditional parties and their candidates might move to this other party once they have seen that this party's politicians are more "like them." This second mechanism builds on prior observational works that shows how a labor-market outsider status that is shared between politicians and voters can help win over such voters locally (Dal Bó et al. 2022). To the extent that voters leave behind other parties that they would have voted for otherwise, we would expect that these parties—especially those with a similar platform—would receive fewer votes among constituents with an embedded representative.

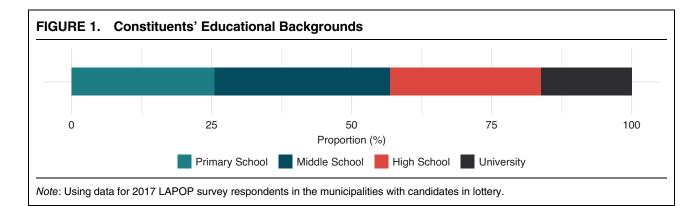
Furthermore, we should also consider whether increases in political participation or party support among constituents with embedded representatives might simply be the result of improved substantive representation, pork-barrel politics, or clientelism. The allocation of federal resources is arguably a particularly relevant way in which the substantive representation of poor constituents might be improved or the biased targeting of public funds might occur. Therefore, one important testable implication of these alternative mechanisms is that constituents represented by embedded deputies should receive more discretionary federal transfers.

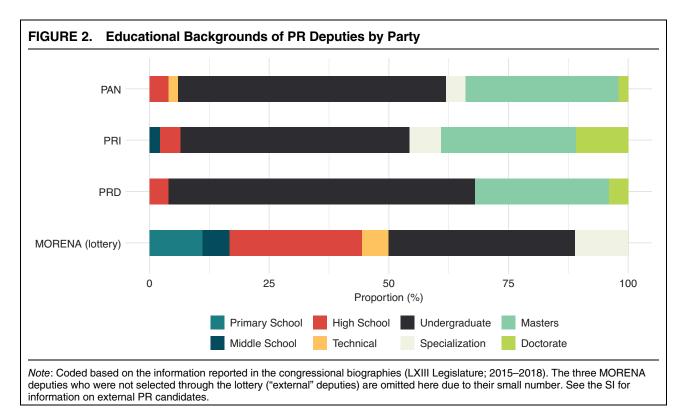
Beyond the allocation of federal funds, other forms of coercive and clientelist mobilization might also bring about increases in vote support and turnout (Nichter 2008; Stokes et al. 2013). In this context, voter coercion and organizationally mediated clientelism constitute another plausible mechanism to explore (Gonzalez-Ocantos et al. 2020; Holland and Palmer-Rubin 2015). Although such forms of voter mobilization are inherently hard to observe, targeted spending of private or illicit funds or improved access to discretionary state programs, such as housing subsidies or business grants (gestión), could yield perceptions of improved living conditions or personal economic outlook among the beneficiaries. Relatedly, we would expect to find no signs that constituents feel more empowered or efficacious.

# Embedded Representation through Lottery Deputies

Before discussing the mechanics of the lottery and the estimation strategy, this section briefly characterizes the background of the lottery deputies and the type of representation they provide. The federal deputies selected via MORENA's party candidate lotteries are fundamental exemplars of embedded representatives. These deputies (as well as the larger set of candidates nominated through the lotteries) have social backgrounds similar to those of their constituents and are part of local organizational networks. This embeddedness contrasts with the representation provided by traditional deputies from other parties—including the Partido de la Revolución Democrática (Party of the Democratic Revolution; PRD), MORENA's closest programmatic and organizational competitor-or who were selected through other procedures.

The difference in social backgrounds between lottery deputies and traditional deputies is particularly stark in terms of their occupational and educational background. Whereas fewer than 20% of Mexican adults (see Figure 1 for information on the educational backgrounds of constituents in localities with lottery





candidates) have studied at university, 94.2% of the PR deputies from the other major parties have university degrees.<sup>2</sup> As the data from their congressional biographies (see Figure 2) illustrate, the educational backgrounds of the MORENA lottery deputies more closely resemble those of their constituents. Although university education is still overrepresented,<sup>3</sup> the group of lottery deputies also contains numerous representatives with only a primary education (11.1%), middle school education (5.6%), or high school education (27.8%). A similar picture emerges when comparing

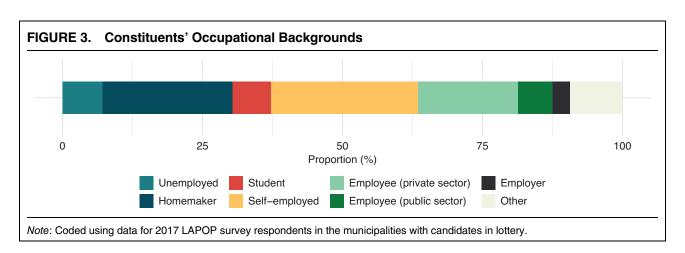
the MORENA lottery candidates with SMD deputies (see Appendix S2).<sup>4</sup>

A similar picture emerges with respect to occupational backgrounds. As in most of Latin America (Portes and Hoffman 2003), the majority of the Mexican adult population works in the informal sector. As Figure 3 illustrates, more than half of the constituents in localities with lottery candidates are unemployed (6.6%), homemakers (23.6%), students (7.3%), or self-employed (26.6%, usually indicating informal sector work in this context). Only 23.6% of constituents are formally employed (17.1% in the private sector; 6.4% in the public sector), and only 3.4% are employers. The distribution of occupational

 <sup>&</sup>lt;sup>2</sup> See Appendix S1 for the characteristics of the full Mexican adult population.
 <sup>3</sup> Half of MORENA lottery deputies received university education,

<sup>&</sup>lt;sup>3</sup> Half of MORENA lottery deputies received university education, compared with 96.0% of PRD deputies, 93.5% of PRI deputies, and 94.0% of PAN deputies. The difference between MORENA lottery deputies and the PR deputies of the other major parties is statistically significant (p < 0.01).

<sup>&</sup>lt;sup>4</sup> The MORENA SMD deputies who–unlike the party's lottery deputies—are selected through traditional nomination methods look much less like their constituents: 73.3% have a university education (including 26.7% who hold doctorates).



backgrounds for the full Mexican adult population looks very similar (see Appendix, Figure A2).

To analyze how closely lottery and traditional deputies resemble their constituents' occupational backgrounds, I coded all candidates' prior occupations based on the information they provided on their candidate registration forms. As Figure 4 shows, most lottery deputies held lower-class occupations prior to assuming office, similar to their constituents. Although a direct comparison with constituents' occupational backgrounds is difficult due to slightly different occupation categories, the most common prior occupations of lottery candidates were self-employed (22.2%), (formal sector) employee (22.2%), homemaker (16.7%), and student (16.7%).

The occupational backgrounds of the lottery deputies are very different from those of the PR deputies from the other major parties. Lower-class occupations were hardly represented among the PAN and PRD deputies.<sup>5</sup> Most PAN deputies held positions as employers/entrepreneurs (22.6%), lawyers (15.1%), state deputies (13.2%), or other political positions (9.4%) prior to being elected. Most PRD deputies indicated that they were previously (formal sector) employees (55.6%) or politicians (14.8%).<sup>6</sup>

My interviews with deputies who came to office through the lottery indicate that most of them had been activists in local civil society organizations prior to assuming office. A Mexican newspaper also captures this point when describing one of the lottery entrants the day after the lottery for the 2015 legislative elections took place:

Seven months ago, the adventure began for doña Olivia and for the rest of the aspirants, who, for the most part, are leaders of [for example] neighborhood associations, taxi driver unions, in short, people who in some way hold influence over the neighbors in the environment. (Gutérrez 2015) In fact, 57% of lottery deputies held leadership positions with a social organization before running for office, according to their congressional biographies (see Figure 5). Although most of these organizations are organized around socioeconomic interests (e.g., local branches of labor unions, such as the Sindicato de Maestros al Servicio del Estado de México), they also include groups organized around other interests/ identities such as local student organizations (e.g., a student movement at the Universidad Autónoma de Chiapas) and women's associations (e.g., Mujeres en Lucha de la Democracia).

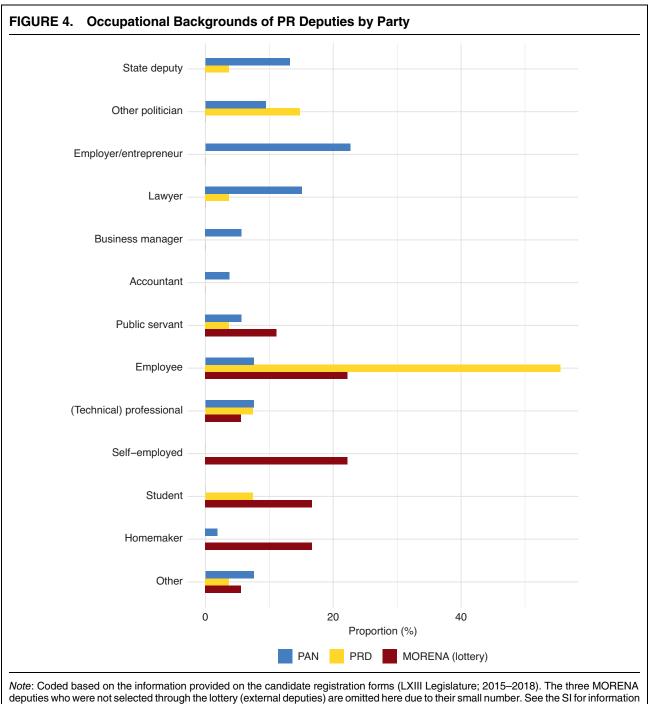
These organizations play two critical roles in empowering and mobilizing lower-class voters. First, they generate crucial connections with popular-class voters, increasing representatives' visibility and providing information about how constituents are being represented by someone like them. This information is crucial because it can inspire efficacy and, ultimately, political participation due to role-model effects (Campbell and Wolbrecht 2006). The interviews revealed that most of the lottery deputies frequently visited their communities "back home" and maintained very active ties to local civil society organizations. In this context, these organizations play a central role in facilitating direct contact between popular class constituents and "their" representatives. As Ariel Juárez Rodríguez, a lottery deputy, explained,

Whenever the organizations make a request, the deputy will be with the people. He will talk with them directly. Not like the traditional politicians who move about with guards and feel like "rock stars." The people cannot approach them because of the security personnel. (interview by author, July 26, 2016)

Second, these organizations constitute important reference groups for their members (and people in their wider social networks) that can reinforce a sense of efficacy and propel people to vote. Given that these organizations bring together people who share attributes that are important to members, such as a shared socioeconomic background, self-categorization theory would suggest that their members are very likely to adopt desirable group attributes and behaviors (Turner

<sup>&</sup>lt;sup>5</sup> Unfortunately, this information is not available for PRI candidates because almost all of them stated "party leader" as their occupation on their registration forms.

<sup>&</sup>lt;sup>6</sup> See Appendix S3 for the occupational backgrounds of PR candidates and Appendix S4 for the occupational backgrounds of SMD candidates and deputies.



on external PR candidates.

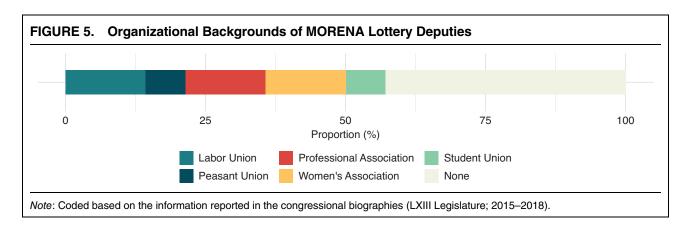
et al. 1987). Put differently, if I perceive "people like me" in the organization to feel empowered and go vote, I might just start doing the same.

#### represents the most ambitious application of the practice to select politicians to date.<sup>7</sup> In this section, I explore how citizens' enhanced political representation brought about by embedded representatives (in some localities) shapes the constituents' subsequent political participation. Because the lottery effectively assigns

### THE CANDIDATE LOTTERY

The idea of randomly selecting leaders by lot (sortition) dates back to fourth-century BC Athens.Yet sortition has rarely been used in contemporary democracies. MORENA's extensive use of candidate lotteries

<sup>&</sup>lt;sup>7</sup> For an excellent discussion of the use of lottery-based procedures in modern parliamentary politics, see Cirone and Van Coppenolle (2019).



(elected) deputies to some localities (and nonelected candidates to other localities), I can estimate the marginal effect of having a lottery deputy in office from that locality on voter mobilization in the same locality in the subsequent election.

#### The Mexican Electoral System and the Candidate Lottery

Mexico uses a mixed-member majoritarian system that combines first-past-the-post voting with party-list PR voting to elect its national deputies. The Chamber of Deputies, the lower house of the Congress of the Union, is made up of 300 seats elected in single-member districts (SMDs) by plurality and an additional 200 seats elected by closed, blocked PR lists in five multimember districts (MMD) of 40 seats each, using the Hare quota. These MMDs are constituencies of multiple, adjacent states.

Within this system, each party decides how to select and nominate its candidates. MORENA has developed a rather unique system of selecting its candidates for the Chamber of Deputies, which combines full-membership votes, delegate assemblies, surveys, and lotteries.<sup>8</sup> Two-thirds of the party's candidates for the legislative positions elected via PR party lists are selected randomly from among local party affiliates through lotteries (Estatuto de MORENA 2014, Art. 44). The remaining third of the party PR lists (occupying every third position on the list) are set aside for "external personalities" and are selected (nonrandomly) by the party's National Council. These positions are used to include well-known public figures and national organizational allies of the party. For federal elections, a separate lottery (blocking on gender) is conducted for each multistate constituency (see Table 1 for an overview of Mexico's electoral and territorial units). It is also important to note that the deputies elected in 2015 were prohibited by law from running for reelection.9 I address the implications of the fact that these are PR candidates that cannot run for reelection in the Mechanisms section.

According to interviews I conducted with members of the early MORENA leadership and federal deputies, the party adopted this unique system of candidate selection in an attempt to mobilize citizens (beyond traditional PRD supporters)<sup>10</sup> to vote for the party by running different "types of candidates," to build a local party presence across the country, and to avoid intraelite self-cooptation and factionalism within the new party. MORENA's use of lotteries also seems to have been spurred by the experience of pervasive factionalism within the PRD (and the Partido Revolucionario Institucional [Institutional Revolutionary Party; PRI] before that), which gave powerful factions considerable influence over the selection and nomination of candidates. The lottery system offers at least a partial remedy to such factionalism and oligarchic tendencies by side stepping the higher-level party apparatus and offering local activists a direct chance to secure nominations.

The names of local activists who were nominated by the party's base committees are entered into the lotteries. Each District Assembly—that is, the meeting of the full membership of all base committees within an electoral district—proposes 10 candidates (5 men and 5 women, selected through a direct and secret vote).<sup>11</sup> There are a total of 300 electoral districts, so 3,000 candidates (across the five multistate constituencies) are entered into the lotteries.

To select the candidates to be included in a multistate constituency's party list out of this set of entries, a randomized block lottery is used: names are randomly drawn in alternation from two receptacles with entries from the constituency—one for female lottery entries and one for male entries.<sup>12</sup> After deciding whether the initial position will be filled by a male or female candidate in a coin toss, a name is drawn from the

<sup>&</sup>lt;sup>8</sup> The party's National Elections Commission oversees the selection of all federal candidates (Estatuto de MORENA 2014, Art. 45).

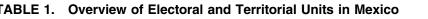
<sup>&</sup>lt;sup>9</sup> Under the 2014 Political Electoral Reform, which eased Mexico's long-standing ban on reelection, only deputies elected in 2018 or later are allowed to run for (consecutive) reelection.

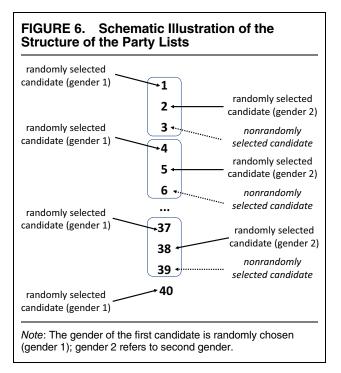
<sup>&</sup>lt;sup>10</sup> Current Mexican President Andrés Manuel López Obrador left the PRD to found MORENA in 2014 and brought a sizeable portion of the PRD leadership, party activists, and voters with him.

<sup>&</sup>lt;sup>11</sup> These assembly meetings are supposed to occur simultaneously. This indeed seems to have been the case for the 2015 election nominations.

<sup>&</sup>lt;sup>12</sup> Under Mexican law, candidacies for federal and local legislators have to be gender balanced.

Number of units	Units	Mean size (voters)
5	Multistate constituencies (for PR lists)	17,789,739
32	Federal entities (31 states + Mexico City)	2,779,647
300	Federal electoral districts (SMDs)	296,496
2,458	Municipalities	38,356
68,436	Electoral sections	1,315
157,859	Polling places	564





corresponding container and another is drawn from the other receptacle. The next position is then reserved for an external candidate. This procedure (maintaining the gender order decided through the initial coin toss) is then repeated until all positions on the list have been filled (up to 40 positions). Each party list is thus composed of a number of candidate triplets, of which the first two slots (within each triplet) are randomly filled (see Figure 6).

This procedure yields a double randomization: (1) whether a name is selected to be included on the party list and (2) the candidate's ranking on this list. This list rank, in turn, establishes whether a given candidate ends up in office. Given that party lists in Mexico are blocked and closed, the only factor that determines how many list candidates are elected is the party's vote share in the multistate constituency. Even though we can only observe the names and outcomes for people who were placed on the list (as the full list of everyone who participated in the lottery is not publicly available), the two-thirds of candidates on the list who are randomly selected constitute a randomly drawn

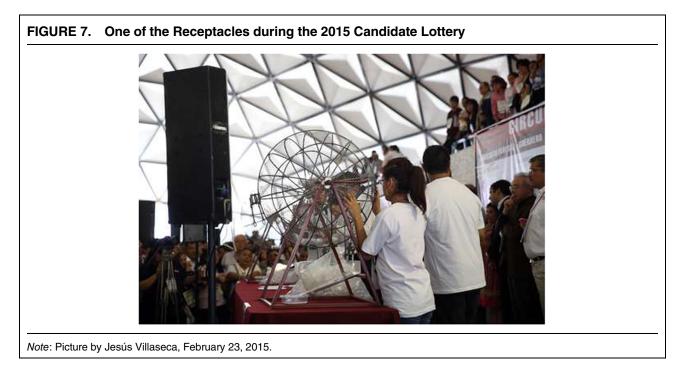
sample of the larger population of lottery participants and should be representative of this larger group. Because each district submits the same number of entries, each district has the same chance of having a candidate drawn to be on the party list or to end up in office. Furthermore, given that electoral districts are proportional to the population, geographic areas with similar population sizes should have a similar chance of being included.

Because the constituencies for the party lists are rather large and composed of multiple states, it is not plausible that an individual party-list candidate's effort in the campaign (e.g., a candidate with a middling position that might end up being near the cutoff) could be sufficient to ensure they are victorious.<sup>13</sup> Moreover, a particularity of the Mexican electoral system further alleviates potential concerns about sorting around the cutoff. As Kerevel points out, "(u)nlike in most other mixed electoral systems, Mexican voters do not cast a separate ballot for deputies elected in the PR tier, and therefore seat allocation is based purely on the number of votes cast in singlemember districts. List deputies therefore do not have to campaign, and their primary loyalty is to the national party, which is in charge of selecting candidates for the lists" (2010, 696).

There are two good reasons to believe that the selection procedure yielded a random assignment. First, the drawings were conducted—under the auspices of public notaries—in a televised national event (see Figure 7).

Second, balance tests of candidate characteristics that were reported on the candidate registration forms that I obtained through information requests provide further evidence that the draw was random: deputies who were elected and candidates who not elected are highly similar on these pretreatment covariates (see Appendix, Table A1).

<sup>&</sup>lt;sup>13</sup> It is also important to point out that the 2015 election examined here was the first to be contested by MORENA. Therefore, party leaders and individual candidates had little reliable information with which to anticipate how many list candidates would be elected in any given constituency. In fact, electoral support in large parts of the country strongly exceeded expectations and outperformed the predictions based on preelection polls.



#### **ESTIMATION STRATEGY AND DATA**

The lottery allows me to explore how embedded representatives' political representation of citizens (in some localities) shapes these voters' subsequent political participation. Because the lottery effectively assigns (elected) deputies to some localities at time t (through the 2015 election), I can estimate the marginal effect of having a lottery deputy in office from that locality on voter mobilization in the same locality at t + 1. The lowest territorial level at which I can connect candidates included on the party list to a geographic area is the municipality. Therefore, I can estimate the marginal effect of "assigning" an (elected) lottery deputy to a municipality on political participation in that municipality in the 2018 election.<sup>14</sup>

I leverage the fact that the randomization procedure effectively assigns any candidate from a given municipality to become either a deputy or a nonelected candidate—by virtue of their randomly determined list positions. Therefore, some municipalities (with randomly drawn candidates on the party list) are assigned deputies (treatment group), whereas others are assigned nonelected candidates (control group).

However, it is important to take into account the different assignment probabilities across municipalities. First, a given candidate's chances of being elected are slightly different across the five multistate constituencies due to the different number of candidates elected across the different constituencies/lists. Second, due to municipality size<sup>15</sup> and random chance, some of

the municipalities ended up with more than one candidate on the list. Therefore, the probability that a given municipality will be assigned to the treatment group (i.e., that it will have at least one elected lottery deputy) is given by the probability that a given candidate on the party list (corresponding to the constituency to which the municipality belongs) will be elected<sup>16</sup> and the number of candidates from that municipality on the list.

I use two different approaches in the estimation to account for these different assignment probabilities. First, I use inverse probability weighting (IPW) based on the exact assignment probabilities. Second, I replicate the main analyses with fixed effects (FE) for the multistate constituency and the number of candidates from a municipality on the list. Because the FE estimates are virtually identical to the IPW estimates, I report the FE models in the appendix.

#### Data

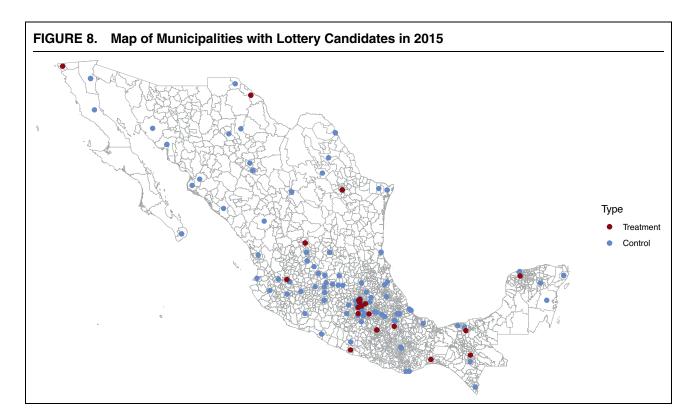
I used the 2015 General Transparency Law to obtain copies of the registration forms for all candidates included on the 2015 MORENA party list through a series of information requests and a lawsuit against the National Transparency Institute (Instituto Nacional de Transparencia) and the National Electoral Institute (INE, Instituto Nacional Electoral). Although parts of each candidate's address were redacted for privacy reasons, the names of the municipalities and states in

<sup>&</sup>lt;sup>14</sup> I use the term *deputy* to refer a candidate who is *elected*, as opposed to a *nonelected candidate*.

<sup>&</sup>lt;sup>15</sup> As discussed in the previous section, each district submits the same number of entries and therefore has the same chance of having a

person drawn to be on the party list or end up in office. Given that these electoral districts are proportional to the population, the chance that larger geographic areas (such as municipalities) are selected increases proportionally with their population size.

<sup>&</sup>lt;sup>16</sup> This probability can be calculated for each multistate constituency by dividing the number of elected deputies (on that list) by the number of candidates (on that list).



which they live were released to me. These registration forms also contain information on candidates' date of birth, sex, time of residence in the municipality, and occupation. To determine which candidates were elected, I used publicly available election returns from the 2015 legislative elections provided by INE.

To estimate the effect of having a deputy in office from a given municipality on voter mobilization in the next election in that municipality, I combined this candidate information with electoral data for the subsequent federal election. I used publicly available precinct-level electoral returns from the general election that took place on July 1, 2018, a little over three years after the 2015 legislative election, to calculate voter turnout (based on the deputy vote) and vote support for the different parties at the municipal level.

As Table 2 shows, the municipalities in the treatment and control groups are very similar with respect to a large series of observable characteristics captured by census and social development data (CONEVAL 2015; INEGI 2016). Although the turnout rate was slightly higher in the treatment group in the last election prior to the lottery (in 2012), this difference is substantively small (0.59%) and only statistically significant in the

Outcome	Control	Treatment	Effect of represent.	SE	р	п
Population ages 0–29	0.3823	0.3869	0.0046	0.0197	0.8157	102
Population ages 30–49	0.2619	0.2498	-0.0121	0.0099	0.2265	102
Population ages 50+	0.3558	0.3633	0.0075	0.0262	0.7753	102
Primary sector workers	0.2132	0.2096	-0.0037	0.0063	0.5636	102
Industrial workers	0.2177	0.2139	-0.0038	0.0209	0.8577	102
Comercial sector workers	0.1607	0.1896	0.0289	0.0173	0.0969	102
Service sector workers	0.3478	0.3627	0.0149	0.0196	0.4498	102
Income-vulnerable population	0.0767	0.0896	0.0129	0.0115	0.2659	102
Turnout (baseline)	0.6251	0.6310	0.0059	0.0009	0.0000	100
Vote share for PRD (baseline)	0.2264	0.2382	0.0119	0.0109	0.2772	100
Vote share for PRI (baseline)	0.2578	0.2478	-0.0100	0.0091	0.2736	100
Vote share for PAN (baseline)	0.2819	0.2475	-0.0344	0.0289	0.2363	100
PRD mayor	0.2303	0.2545	0.0241	0.0930	0.7956	102

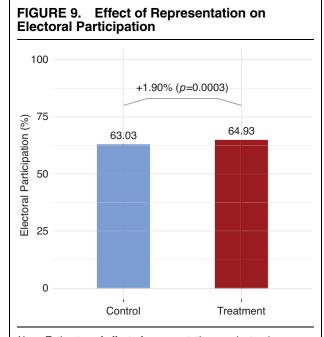
*Note*: Balance statistics for municipality characteristics using IPW, comparing electoral returns (for 2012), mayor party in office at baseline (beginning of 2015), and other municipality characteristics (2015) between municipalities with a MORENA lottery candidate who was elected (in 2015; treatment) to those with a lottery candidate who was not elected (control). Standard errors are clustered by constituency and number of lottery candidates; *p* values are two-tailed.

IPW specification (p in the FE model = 0.2057; see Appendix, Table A2). Furthermore, there are no significant differences in vote choice (during the 2012 elections) between the two groups of municipalities at baseline.

#### FINDINGS FROM THE CANDIDATE LOTTERY

I first present the main results for electoral participation and vote choice and then discuss a series of additional analyses to identify the mechanisms behind the observed effects.

First, the results strongly support the main participation hypothesis, which posits that *electoral partici*pation in subsequent elections is higher among constituents represented by embedded representatives (which I call "represented" constituents/municipalities) than among those without embedded representatives. As Figure 9 shows, voter turnout (in the 2018 election of federal deputies) is significantly higher in municipalities that had been represented by a lottery winner in Congress during the previous three years compared with municipalities with candidates who were also drawn to be nominated but did not end up in office. The difference between these "represented" and "not-represented" municipalities is meaningful in magnitude and statistically significant at conventional levels (1.90% points, p =0.0003).



*Note*: Estimates of effect of representation on electoral participation using IPW, comparing electoral returns (in the 2018 election) from municipalities with a MORENA lottery candidate who was elected in 2015 (treatment) with those with a lottery candidate who was not elected (control). Standard errors are clustered by constituency and number of lottery candidates; *p* values are two-tailed.

Second, the data support the predictions related to vote choice. The electoral consequences hypothesis predicted that the party responsible for improved representation would be rewarded by represented constituents in the subsequent election. Figure 10 shows that MORENA received about 5.10% more votes in represented than in not-represented localities. Furthermore, I find that other programmatically similar parties are punished among represented constituents. Indeed, the party closest to MORENA in programmatic and organizational terms-the PRD-lost significant support: the PRD, which ran parliamentary candidates in an alliance with the PAN and Movimiento Ciudadano in most districts in 2018, received about 4.72% points fewer votes in represented localities (see Appendix, Table A3). Other parties, such as the PRI, were less affected.

These results suggest that representation through lottery deputies helped MORENA mobilize new voters who otherwise would not have turned out as well as win over voters who otherwise would have voted for another party. In fact, at least 88.97% of the increase in turnout went to MORENA, as I show in Appendix S11.

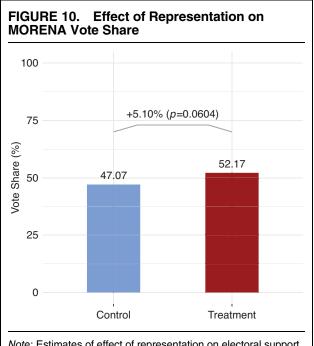
MORENA gained more electoral support in municipalities that were also represented by another deputy (from the same municipality). When comparing constituents who are also represented by another federal deputy (belonging to another party) from their municipality with those who are only represented by the lottery candidate (see Appendix, Table A8), the MORENA vote share is significantly higher among constituents who are also represented by another deputy. These particularly pronounced increases in support for MORENA among constituents who are represented by multiple deputies suggest the importance of relative perceptions: when constituents can directly compare the representation provided by a lottery deputy and a "traditional" deputy, they are particularly likely to reward MORENA in the next election.

As robustness checks to the IPW-based estimates presented here, I also present alternative specifications with fixed effects for constituency and number of candidates from a municipality in Table A4 in the Appendix. The results are virtually identical to those presented here.<sup>17</sup>

#### **MECHANISMS**

To further probe the mechanisms behind this important increase in participation in localities with lottery representatives, I present the findings from a series of additional analyses.

<sup>&</sup>lt;sup>17</sup> Additional robustness checks, using randomization inference, bootstrapped estimates, and difference-in-difference models, also yield very similar results (see Tables A5–A7).



*Note*: Estimates of effect of representation on electoral support for MORENA using IPW, comparing electoral returns (in the 2018 election) from municipalities with a MORENA lottery candidate who was elected in 2015 (treatment) with those with a lottery candidate who was not elected (control). The vote share for MORENA also includes votes for the PT and PES because they ran in an electoral alliance in many districts in 2018. Standard errors are clustered by constituency and number of lottery candidates; *p* values are two-tailed.

## Pork-Barrel Politics, Clientelism, and Improved Substantive Representation

This section examines alternative mechanisms, which hold that increased political participation among constituents with embedded representatives is driven by improved substantive representation, pork-barrel politics, or clientelism. As discussed in the theory section, the allocation of discretionary federal funds is arguably a particularly relevant area in which we might expect to find such an effect. If this alternative mechanism is at play, we might expect more resources to be spent on constituents in represented municipalities.

There are three reasons to believe that the mobilization results cannot simply be explained by pork-barrel politics. Although patronage politics is widespread in Mexico, the specific context in which the lottery took place offered little opportunity (and few incentives) to direct resources to the deputies' home regions. First, during the time in question (2015–2018), MORENA held only a very small number of seats in the Chamber of Deputies (lower house of the Congress), had none in the Senate, and was strongly opposed to the PRI administration under President Enrique Peña Nieto. This lack of legislative and executive control would make it very hard to influence the allocation of funds in favor of specific municipalities. Second, MORENA was not yet in power in any of the state governments. Given Mexico's highly decentralized fiscal system, most non-formula-based funds from the federal level are routed through the states. Without state control, the allocation of discretionary funds to specific localities is hard to accomplish. Last, given that the lottery deputies were PR party-list candidates, the electoral systems literature would suggest that their primary loyalty should be to the party rather than to their district, which in this case is much larger than just their hometown. Therefore, even if they had the opportunity, the lottery deputies should have few incentives to direct resources to the localities from which they were elected.

To empirically test whether the municipalities represented by lottery deputies indeed received more federal resources than they would have without the lottery deputies, I estimate the effect of representation through lottery deputies on the amount of nonformula-based federal transfers (transfers that are part of budgetary item "Ramo 28") that municipalities received, analyzing data from INEGI (2019). As presented in Table 3, there are no significant differences in the changes in transfers after the lottery deputies take office between municipalities with a lottery deputies and those with a lottery candidate who was not elected.<sup>18</sup>

Beyond pork-barrel politics using federal funds, other forms of clientelism, such as vote buying financed through illegal, nonstate funds (e.g., provided by business groups or drug cartels), that are hard to observe could still have occurred. However, there is little reason to expect that such practices would only occur in the treatment municipalities. Furthermore, it is important to recall that the main analysis above focuses on electoral behavior in the subsequent election (in 2018), during which the lottery deputies could not run for reelection (under Mexico's electoral laws at the time).<sup>19</sup>

To further test whether constituents in municipalities represented by lottery deputies might still perceive improvements in their living conditions or economic outlook—for example, as a result of targeted spending not captured by the federal spending data, due to improved access to discretionary state programs, such as housing subsidies or business grants (*gestión*), or stemming from potentially disproportionate credit claiming by lottery deputies for investments in local public goods—I examine additional survey data that measures such attitudes within the population. I use geocoded survey responses from LAPOP (2017), which were collected about 18 months after the lottery deputies took office (and about 18 months before the subsequent election in 2018).<sup>20</sup> Connecting them to the

<sup>&</sup>lt;sup>18</sup> This analysis takes the 2015 budget, which was passed the year before the deputies were elected, as a baseline. For a cross-sectional comparison between municipalities with/without a lottery deputy by year, see Appendix S11.

<sup>&</sup>lt;sup>19</sup> Arguably, these deputies would have very little incentive to invest their own personal funds in this subsequent election where they cannot run for reelection.

<sup>&</sup>lt;sup>20</sup> Fieldwork for the 2016/17 round of the LAPOP AmericasBarometer in Mexico was conducted January 28–March 23, 2017. It used a national, multistage probability sample of 1,563 voting-age adults in

		Transfers (per capita)		
	in 2016	in 2017	in 2018	
	(1)	(2)	(3)	
Constant	1,532*** (87)	1,532*** (87)	1,532*** (87)	
Represented	197	197	197	
Time	(183) 157***	(183) 294***	(183) 571***	
Represented $\times$ Time	(37) -97 (125)	(44) -34 (191)	(62) -138 (211)	
Municipalities	96	96	96	
Observations	192	192	192	

#### Effect of Depresentation on Allocation of Ecderal Transfers (Por Capita)

Note: Estimates of difference-in-differences in federal transfers (in Mexican pesos) to federal entities and municipalities (Ramo 28) using IPW, comparing per capita transfers with municipalities after the lottery to transfers determined prior to the lottery (2015) from municipalities with a MORENA lottery candidate who was elected in 2015 (represented) with those in municipalities with a lottery candidate who was not elected. Standard errors are clustered by municipality. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01 (two-tailed tests).

lottery information, I was able to obtain information on constituent attitudes for 27 municipalities with lottery candidates (7 in treatment and 20 control).<sup>21</sup>

I find that constituents represented by lottery deputies do not appear to perceive improvements in in their living conditions. They are no more more satisfied with the quality of local public goods, such as roads, public schools, and public health services, than are those without such representatives (see Table 4); they might even be slightly less satisfied in some areas. Similarly, represented constituents do not assess the development of the country's economic situation or their personal economic situation more positively than constituents without lottery deputies.

Even though they did not secure additional funding for their constituents and their constituents did not perceive improvements in their living conditions, one could also consider whether lottery deputies were better advocates of their constituents based on the legislation they advocated for in the legislature. To assess this possibility, I examine their legislative behavior by analyzing roll-call votes during the 2015-2018 legislative session (Cantú, Desposato, and Magar 2014).

I find that lottery deputies do not appear to behave differently in Congress in terms of their voting behavior, compared with deputies selected through traditional selection procedures. In fact, lottery deputies voted in line with the majority position of their party 97.2% of the time.<sup>22</sup> Although it might still be possible that lottery deputies advocated certain types of legislation within the legislative caucus that were then supported by all MORENA deputies, such behavior would be hard to observe for constituents.

#### Local Candidate Effects

To assess whether the mobilization effect is simply driven by hometown-boy effects (Key 1949; Talalovich 1975), I test whether the mere running of a local candidate increases electoral participation. I find no evidence of such local candidate effects: turnout among constituents with a lottery candidate from their municipality is no higher than among constituents without such a local candidate (p = 0.9917)<sup>23</sup> Furthermore, representation by *local* lottery deputies without a lower-class background or without organizational ties does not increase political participation significantly (see Figures 11-12).

#### Empowerment through Embedded Representation

As local candidate effects and pork-barrel politics or improved substantive representation might not account for the significant increase in political

<sup>110</sup> municipalities and is representative within each selected municipality. This sample included 506 survey responses from 27 municipalities with lottery candidates. <sup>21</sup> As I show in Table A10 in the Appendix, these two groups of

respondents are very similar with respect to characteristics that should not be affected by the treatment.

 $<sup>^{22}</sup>$  This is very similar to the party's SMD deputies: 95.6% (p =0.2570).

<sup>&</sup>lt;sup>23</sup> For this analysis, I compare turnout in municipalities that had been randomly assigned a candidate through the lottery with turnout in all other municipalities, i.e., municipalities that, by virtue of the drawing of the lists themselves, at random did not have a candidate on the list. Because the exact assignment probability can only be calculated for municipalities with at least one candidate on the list, I use an alternative estimation strategy that controls for the number of registered voters in a given municipality. As each electoral district submits the same number of entries to the initial lottery pool, it thus has the same chance of having a candidate drawn to be on the party list (or end up in office). Given that these electoral districts are (votingeligible) population proportional, the chance that larger geographic areas (such as municipalities) will be selected increases proportionally to their (voting-eligible) population size.

	Outcome:				
		Satisfied with	Satisfied with	Improved	Improved
	Satisfied with local roads	Local public schools	Local public health services	Economic situation of country	Personal economic situation
	(1)	(2)	(3)	(4)	(5)
Represented	-0.085 (0.057)	-0.056*** (0.018)	0.040 (0.040)	0.001 (0.007)	-0.005 (0.025)
Constant	0.580*** (0.034)	0.604*** (0.025)	0.489* <sup>**</sup> (0.048)	0.018*** (0.002)	0.098*** (0.030)
Clusters Observations	27 495	27 470	27 490	27 499	27 500

*Note*: Estimates of effect of representation on survey outcomes using IPW, comparing respondents in municipalities with a MORENA lottery candidate who was elected in 2015 (treatment) with those in municipalities with a lottery candidate who was not elected (control). Outcomes are rescaled (0/1) to indicate agreement with the statement. Standard errors are clustered by municipality and number of of lottery candidates. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01 (two-tailed tests).

participation that we observe when constituents are randomly provided embedded representation through the lottery deputies, I now probe the mechanism through which embedded representation can further empower constituents.

#### Social Background and Embeddedness of Representatives

First, although all of the lottery deputies more closely resemble their constituents than traditional deputies do in terms of their social background, some of them still have a class background that is more similar to the majority of their constituents than others. I explore this variation in the class background of the lottery deputies to test the shared social background hypothesis.

To operationalize the representatives' class backgrounds, I coded their educational attainment, focusing on whether they had received any postsecondary education, which in Mexico continues to be a privilege that lower-class citizens are much less likely to enjoy. Given the relatively small number of units in the two groups (eight deputies with no postsecondary education and nine with some some form of postsecondary education), I use randomization inference based on Fisher's exact test to estimate nonparametric p values.

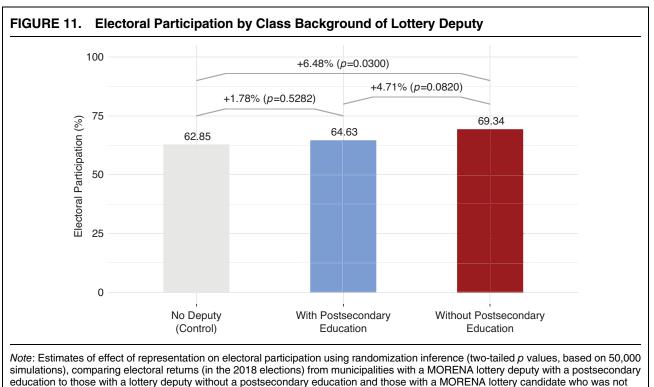
I find that the increase in electoral participation among constituents represented by a lottery deputy is driven by constituents who were represented by a lower-class lottery deputy. Electoral participation among constituents who have been represented by a lottery deputy with no postsecondary education is significantly higher than among those whose lottery candidate was not elected (control). At the same time, participation among constituents with a more highly educated lottery deputy is not significantly different from that of the control group. The difference in participation between constituents who have been represented by a lottery deputy with no postsecondary education and those who were represented by a more highly educated lottery deputy is quite large and statically significant (see Figure 11). Replicating this comparison (between constituents represented by a highly educated deputy versus those represented by a deputy without postsecondary education) using the alternative fixed-effects strategy discussed above yields a similar but somewhat smaller point estimate (1.59% points, p = 0.0164; see Table A15).

Second, although most lottery deputies are deeply embedded within their communities, some of them have particularly close ties to local organizational networks. I explore this variation, comparing the electoral participation of constituents who won representation by a lottery deputy who had held a position in a civil society organization prior to assuming office with those whose lottery deputy did not have such ties.

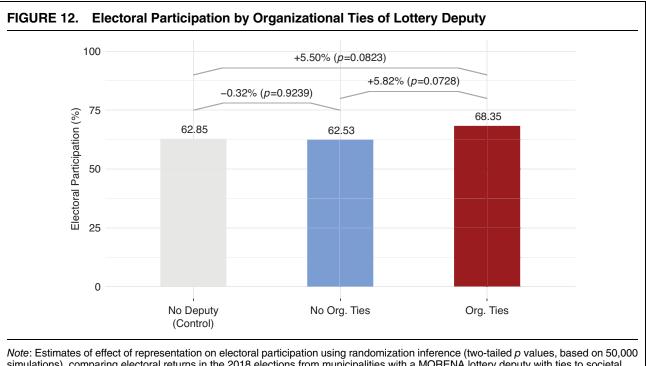
I find that electoral participation among constituents who have a lottery deputy with such organizational ties is significantly higher than it is among those with lottery deputies without such ties (see Figure 12). Replicating this analysis using the alternative FE strategy discussed above yields a slightly smaller point estimate (2.40% points, p = 0.0001, see Table A15).

#### More Direct Evidence on the Empowerment Mechanism

To further test the empowerment hypothesis, which maintains that representation by embedded deputies should increase political efficacy and support for political institutions, I examine additional survey data that measure such attitudes within the population. Drawing on the geocoded survey responses from the 2017 LAPOP survey discussed above, I was able to obtain information on constituent attitudes for 27 municipalities with lottery candidates. Although the number of municipalities (clusters in which treatment assignment occurs) is rather small, I find significant differences in



elected.



simulations), comparing electoral returns in the 2018 elections from municipalities with a MORENA lottery deputy with ties to societal organizations to municipalities with a lottery deputy without organizational ties and municipalities with a lottery candidate who was not elected.

	Outcome			
	Respect for political institutions	Political efficacy	Political interest	
	(1)	(2)	(3)	
Represented	0.361***	0.166***	0.055	
	(0.078)	(0.058)	(0.042)	
Constant	3.979***	3.038***	0.357***	
	(0.009)	(0.059)	(0.042)	
Clusters	27	27	27	
Observations	499	496	504	

 TABLE 5.
 Effect of Representation on Political Attitudes

*Note:* Estimates of effect of representation on survey outcomes using IPW, comparing respondents in municipalities with a MORENA lottery candidate who was elected in 2015 (treatment) with those in municipalities with a lottery candidate who was not elected (control). Standard errors are clustered by municipality and number of of lottery candidates. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01 (two-tailed tests).

political efficacy and support for political institutions between respondents in treatment and control municipalities: constituents who have been represented by lottery deputies express significantly more respect for the country's political institutions and have a stronger sense of political efficacy than those without such representatives (see Table 5).<sup>24</sup>

News consumption displays a similar pattern. When analyzing Google Trends data that capture search queries in Google, I find that constituents in municipalities with a lottery deputy were much more interested in topics related to congressional representation while they were represented by a lottery deputy than were constituents in municipalities without an elected lottery candidate. The proportion of searches for "Chamber of Deputies," "Deputy," and "Candidates" was about twice as large in treatment municipalities as in control municipalities (see Table 6). Similarly, interest in "MORENA" was about 50% greater in treatment municipalities.

Beyond those municipal-level effects, we would also expect empowering effects to be particularly pronounced among individual constituents who share a social background that is the same as the that of the embedded representatives. Therefore, I estimate the effect of lottery deputy representation on individuallevel attitudes among these constituents. As discussed above (see Figure 2), the lottery deputies mostly have a lower-class background and often have not completed any postsecondary education.<sup>25</sup> To determine whether constituents with a similar background develop a stronger sense of political efficacy, come to support the political institutions, and become more interested in politics if represented by a lottery deputy, I interact the representation treatment with whether respondents had received any postsecondary education. I find that such constituents do indeed develop an even stronger sense of political efficacy and become more interested in politics if they are represented by a lottery deputy than do better-educated constituents (see Appendix Table A11). Although the interaction term for the other outcome (respect for political institutions) is not statistically significant, the point estimate is in the expected direction.

Last, to explore whether the representation treatment empowers constituents who do not usually vote thereby, potentially closing participation gaps—I also estimate individual-level effects for survey respondents who did not vote in the previous general elections (in 2012). I find evidence of such an empowering effect: previous nonvoters express significantly more respect for the country's political institutions, become more interested in politics, and have a stronger sense of political efficacy if they are represented by a lottery deputy than do those who voted in the previous election (see Appendix Table A12).

Additional analysis of the effect of representation by lottery deputies by communities' poverty level (using administrative data) reveals a similar picture: the observed increase in electoral participation in subsequent elections is particularly pronounced in localities with a larger share of income-vulnerable residents (Figure 13).<sup>26</sup> Whereas turnout rates among these constituents are usually much lower than among their counterparts in richer areas, representation by a lottery deputy from their community boosts their participation and closes the participation gap.

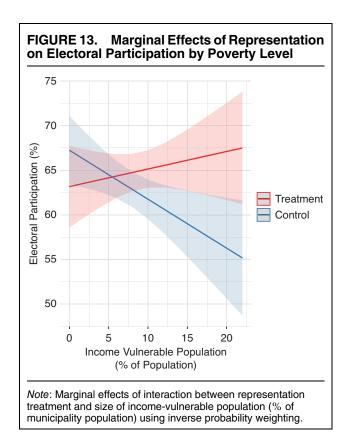
<sup>&</sup>lt;sup>24</sup> Both survey items use seven-point scales, for which higher values indicate stronger agreement. The full questions were "To what extent do you respect Mexico's political institutions?" and "Those who govern the country are interested in what people like you think. To what extent do you agree or disagree with this statement?"

<sup>&</sup>lt;sup>25</sup> Unfortunately, the small number of lottery deputies with a postsecondary education from municipalities in the sample makes it unfeasible to explore additional variation by representatives' background.

<sup>&</sup>lt;sup>26</sup> The share of income-vulnerable residents is balanced between municipalities in treatment and control areas (see Table 2).

	Search term			
	Chamber of Deputies	Deputy	Candidates	MORENA
	(1)	(2)	(3)	(4)
Represented	3.754*** (0.403)	7.704*** (1.575)	13.829*** (3.620)	11.957** (4.577)
Constant	4.326* <sup>**</sup> (1.327)	8.296*** (2.932)	9.329*** (2.607)	19.776 <sup>***</sup> (4.174)
Municipalities	97	97	97	97

*Note*: Estimates of effect of representation on the popularity of different Google search terms between June 15, 2015, and June 30, 2018, using IPW, comparing respondents in municipalities with a MORENA lottery candidate who was elected in 2015 (treatment) with those in municipalities with a lottery candidate who was not elected (control). Higher values indicate a higher proportion of all queries from that location. For "deputy" the Spanish search term used was *diputado*; a separate analysis for searches of *diputada* failed due to very small numbers of searches. Mexico City is not part of the sample because here searches can only be observed at the "state" level, not the municipal (*demarcaciones territoriales*) level. Standard errors are clustered by constituency and number of lottery candidates. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01 (two-tailed tests).



#### CONCLUSION

This paper shows how political representation can breed subsequent political participation. Drawing on a novel natural experiment, I find that representation by politicians who not only share their constituents' social background but are also embedded within the communities they represent are particularly effective at empowering constituents and increasing their political participation.

I show that constituents who randomly receive representation by embedded representatives from their localities are significantly more likely to participate in the next election (supporting the participation hypothesis). Furthermore, I find evidence that the party that provides this "improved" representation is rewarded: it received significantly more votes in the subsequent election (supporting the electoral consequences hypothesis). In additional analyses designed to identify the mechanisms behind this large increase in participation, I find evidence suggesting that representation is particularly empowering when representatives both share constituents' ascriptive characteristics and are embedded within local networks. What is more, I find that represented constituents developed a stronger sense of political efficacy, became more interest in politics, and expressed more support for the country's political institutions prior to their increased electoral participation (empowerment hypothesis).

These findings have far-reaching implications for the political representation of historically marginalized groups. The results suggest that access to an initial "seat at the table" can be a crucial first step toward empowering those represented and promoting their future representation. Therefore, policies to improve the representation of underrepresented populations can help close participation gaps and might improve future substantive representation.

The study also shows that involving grassroots activists—who might lack the political experience of career politicians but have shared experiences with lowerclass citizens—can be a very effective strategy for political parties to mobilize voters. As trust in established parties has decreased across democratic regimes in recent decades, more inclusive and representative candidate selection procedures might be an important way for parties to (re)gain support from voters.

Even though lotteries present an unusual way of selecting candidates, we might expect other selection

procedures that yield embedded representation to have similar effects given that most voters do not appear to pay close attention to selection procedures and instead focus on the candidates themselves. In fact, to the extent that constituents fully understood the complicated lottery system (and its implications for the chances of getting so "lucky" again to be represented by an embedded deputy from their community in the future), this might have depressed the perception of efficacy and the estimates in the paper might represent a lower bound.

There is good reason to believe that embedded representation can have similar empowering and mobilizing effects in other democratic settings. Arguably the situation of constituents in the control group-the absence of embedded representatives-captures the typical experience of most constituents in Mexico and many other highly unequal democracies. Therefore, this group offers a crucial baseline against which to evaluate how the effect of embedded representation and the increase in participation due to embedded representation constitute a positive effect for aggregate participation. Although the nature of the specific characteristics to be represented varies across countries (and parties), the underlying empowerment mechanism appears to be highly relevant across constituent groups. Although much of the recent work on descriptive representation has focused on race/ethnicity or gender, this study suggests that even less visible shared experiences and ties can motivate political engagement.

#### SUPPLEMENTARY MATERIALS

To view supplementary material for this article, please visit http://doi.org/10.1017/S0003055422000533.

#### DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi.org/10.7910/DVN/H90IVD.

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#### **CONFLICT OF INTEREST**

The author declares no ethical issues or conflicts of interest in this research.

#### **ETHICAL STANDARDS**

The author declares the human subjects research in this article was reviewed and deemed exempt by the Office for Protection of Human Subjects at the University of California and certificate numbers are provided in the appendix. The author affirms that this article adheres to the APSA's Principles and Guidance on Human Subject Research.

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