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Abstract: Does international migration affect political participation in origin countries? We study how different channels of international migration – migrant absence, return, circularity, and transnational engagement – affected political participation across Mexican municipalities between 1990 and 2013. Using two different data sources including panel and longitudinal survey data, we find that, generally, international migration has a positive effect on formal political participation in local elections. Results, however, are mixed across specific migratory channels, and the effects are conditional on levels of civic engagement. The study shows that specifying different channels of international migration is key to understanding the conditions under which emigration enhances political and civic participation in the local democratic process in origin countries.

Introduction

For the last four decades, when investigating the consequences of emigration in origin countries, scholars have focused extensively on how emigration affects economic development (Adams and Page 2005; Fajnzylber and López 2007; Durand, Parrado, and Massey 1996). With migrant remittances reaching $601 billion worldwide in 2015 and tripling over the last 15 years (Ratha, Eigen-Zucchi, and Plaza 2016) it is no surprise that international migration's economic consequences have been front and center. More recently, though, a growing body of research has begun to examine international migration's *political* consequences, revealing important implications for democracy. Some research in this vein maintains that emigration depresses democratic functioning (Goodman and Hiskey 2008; Bravo 2008; Germano 2013). Other research is more sanguine and argues that emigration can be a source of democratic diffusion (Levitt 2001; Córdova and Hiskey 2015; Pérez-Armendáriz and Crow 2010; Chauvet and Mercier 2014; Burgess 2016; Pfutze 2012). In this article, we move past a debate about whether migration is "good" or "bad" for democracy and instead analyze the conditions under which different channels of international migration affect a key dimension of democratic functioning – non-migrant citizens' local civic and political participation.

In doing so, we unpack the multiple channels through which international migration shapes

the political participation of non-migrants remaining behind, including how migrant absence, circular migration, return migration, and migrant transnational engagement change citizens' participation in local elections and community associational activities. We conceptualize migrant transnational engagement as the regular cross-border practices in which migrants engage to express social ties, loyalties, and connections to the people and places they leave behind (Glick Schiller, Basch, and Szanton Blanc 1995; Guarnizo, Portes and Haller 2003). While there are many forms of transnational engagement, we study the extent to which two kinds, household and collective remittances, produce observable changes in non-migrants' political behavior.

Household (family) and collective remittances represent individual and collective transnational practices that differ in terms of scope, use, and the entity sending the resources. Household remittances are savings accrued by individual migrants that are sent back to households in the origin country to diversify income for private consumption (Durand, Parrado, and Massey 1996; Kapur 2010; Ratha et al. 2016). By contrast, collective remittances are pooled resources sent by migrants through voluntary civic associations based on members' shared hometown ties and called hometown associations (HTAs). HTAs invest in public goods and services in their places of origin, creating opportunities that can be enjoyed by the entire community, including migrant and non-migrant residents alike (Levitt 2001; Goldring 2002; Smith 2006; Portes, Escobar, and Radford 2007; Iskander 2010; Bada 2014; Burgess 2016; Duquette-Rury 2014, 2016). Compared to household remittances, the volume of collective remittances is much smaller, although systematic data are scarce (Ratha et al. 2016). Despite important research that highlights the ways in which migrants become political change agents by mobilizing both individual and collective resources towards political ends at home (Levitt 2001; Smith 2006; Iskander 2010; Meseguer and Aparicio 2012; Bada 2014; Burgess 2016; Duquette-Rury 2014, 2016), researchers have yet to

empirically examine the diverse political consequences of different remittance flows in a single study. Our study takes up this task.

Additionally, a central finding in previous studies is the association between international migration and civic engagement in migrant hometown communities (Goodman and Hiskey 2008; Bravo 2008; Córdova and Hiskey 2015; Pérez-Armendáriz and Crow 2010), but these same studies find either a negative or no relationship between migration and electoral participation in migrant hometowns. We improve on existing research by examining how civic engagement is affected by migratory processes and whether civic engagement has a conditional, intervening effect on electoral participation. Thus, we not only examine the link between absence, return, circularity, and individual and collective forms of transnational engagement but also evaluate the extent to which civic engagement spurred, in part, by international migration plays a mediating role in citizens' formal participation in local elections.

While previous work has focused primarily on political participation in national elections (Goodman and Hiskey 2008; Bravo 2008; Pérez-Armendáriz and Crow 2010), our study examines citizen participation in local (municipal) elections.[1] We analyze local political engagement because decentralization reforms that devolve administrative, political, and fiscal authority to local government for public goods provision, protection of rights, and social order have been implemented in many countries since the 1990s (Falleti 2005). In decentralized countries, citizens may be more likely to make political demands on the state since they are in closer proximity to elected officials whose decisions directly affect their daily lives (Treisman 2002; Bardhan 2002). As such, it is more important than ever to systematically assess how transnational forces such as

[1] Local (municipal) refers to the lowest level of government in origin countries with decentralized political systems.

international migration affect citizens' ability to make demands on the local state apparatus through formal and informal political participation in migrant origin countries.

We use Mexico as a strategic case for our analyses because the country has experienced substantial emigration while simultaneously undergoing important changes in political institutions likely to affect political participation. The Mexico-United States migration corridor remains the largest in the world, with over 13 million migrants regularly crossing the border and sending more than $25 billion remittances home in 2015 (Ratha et al. 2016). Moreover, while Mexico experienced a national democratic transition in 2000, authoritarian enclaves have persisted across state and local governments, creating vast variation in citizens' interest and ability to participate in local political institutions (Giraudy 2010). Taken together, long-standing and varied emigration across the country, decentralization reforms, and uneven democratic transition make municipalities in Mexico ideal settings in which to study emigration's effects on local political participation.

To examine the political consequences of international migration on local political and civic participation in Mexico, we rely on two different panel data sources and separate statistical analyses. First, we compiled panel data of all Mexican municipalities from 1990 to 2013 from multiple public data sources where disaggregated data on international migration were available for all municipal years.[2] Second, since Mexican government statistics do not include municipal data on civic engagement, we turn to a second data source, the Mexican Family Life Survey (MxFLS), and conduct additional statistical analyses. The MxFLS is a longitudinal, nationally representative survey sample of Mexican localities conducted by researchers from the

[2] Data were compiled for all 2,439 Mexican municipalities, but we exclude 400 municipalities that observe a form of self-government called *usos y costumbres* and do not have complete time-series data on local elections.

Iberoamerican Univeristy (UIA) and Center for Economic Research and Teaching (CIDE) in collaboration with researchers from Duke University. The MxFLS includes a battery of questions about civic associational life such as the types, incidence, and frequency of community-related activities between 2000 and 2013. Capturing change over time, both the panel dataset and the MxFLS data allow us to take temporal dynamics seriously as migration patterns, political institutions, and political participation rates change over time and space. To temper concerns about selection bias often at issue when using observational data, we use both the difference-in-difference (DiD) estimator and fixed effects models with a municipal linear time trend to draw inferences with greater confidence (Watson 2006).

Our findings suggest that as migrant absence, circular migration, and the collective involvement of migrant HTAs in public-goods provision increase, there is a corresponding increase in non-migrant citizens' participation in local elections. By contrast, we find that return migration has a negative effect on political participation, contradicting previous research on Mexico and Mali (Waddell and Fontenla 2015; Chauvet and Mercier 2014; López García 2017). Moreover, we find no evidence that family remittances produce any observable changes in political participation. Finally, results show that civic engagement has a positive, conditional effect on migrant HTA collective involvement in their places of origin but depresses political participation in places characterized by high rates of emigration. Civic engagement is unrelated to family remittances and circular and return migration. Our results provide compelling evidence that international migration's effects are at work simultaneously and that it is imperative to empirically disentangle the competing channels (Kapur 2010) through which emigration changes civic and political participation in local democracy.

To develop these ideas, the article proceeds as follows. In the next section, we review the

existing literature on international migration's political consequences in origin countries. From there, we hypothesize how migrant absence, return, circular migration, and individual and collective forms of migrant transnational engagement are likely to affect political participation. The subsequent section describes our research design and data sources. Following a discussion of the empirical approach, we present the results for each set of statistical analyses, before describing the substantive findings in the discussion section. The conclusion summarizes the main findings and implications for future research.

Political Consequences of International Migration in Origin Countries

The burgeoning interdisciplinary literature examining how international migration affects politics in home countries reveals important consequences for democratic functioning (Itzigsohn 2000; Levitt 2001; Goldring 2002; Smith 2006; Goodman and Hiskey 2008; Piper 2009; Rother 2009; Pérez-Armendáriz and Crow 2010; Careja, Romana and Emmenegger 2012; Pfutze 2012; Pérez-Armendáriz 2014). However, this research also often examines aggregate levels or a single dimension of international migration in a given study, thus obscuring the multiple, and potentially conflicting, mechanisms related to different migration channels that drive change over time (Goodman and Hiskey 2008; Bravo 2008; Waddell and Fontenla 2015; Chauvet and Mercier 2014; López García 2017). The reliance on aggregate, cross-sectional indicators of international migration has been due to data availability, but such approaches cannot effectively adjudicate which aspects of migration affect political change.

On the heels of Goodman and Hiskey's (2008) influential article, which showed that high emigration rates depress formal political participation but enhance civic engagement in Mexico, subsequent research began to disaggregate international migration to study how different channels of influence (migrant absence, return migration, or migrant remittances) affected

different civic and political outcomes in Mexico and beyond (Waddell and Fontenla 2015; Chauvet and Mercier 2014; López García 2017; Germano 2013; Dionne et al. 2014). This work shows, for example, that the circulation of ideas, behaviors, and norms in migrant transnational social networks, called social remittances, can increase informal modes of civic and political engagement (Levitt 2001; Córdova and Hiskey 2015; and Pérez-Armendáriz and Crow 2010). Research on return migration, however, comes to mixed conclusions. Chauvet and Mercier (2014) find that in Mali, places with high percentages of migrant returnees experience more national and local electoral participation, while Pérez-Armendáriz (2014) reports that in Mexico, return migration is related to more political apathy. Research on the role of migrant remittances similarly lacks consensus. Some studies find that remittances are a resource "curse" and weaken non-migrants' electoral participation in Mexico (Bravo 2008; Germano 2013), while others identify a positive link between remittances and informal political participation in an African context (Dionne et al. 2014). While more recent studies push our understanding of how different channels of international migration affect political engagement and attitudes (Chauvet and Mercier 2014; Germano 2013; Rother 2009), examining only one channel in isolation leaves researchers unable to decipher the concurrent and perhaps opposing effects that each channel may have for political engagement.

To date, no single study has disentangled how multiple channels of international migration change political participation across space and time. Our goal here is to do just that - to examine how migrant return, absence, and circularity, as well as individual and collective characteristics of transnational migrations, affect political participation in local elections and civic engagement. In doing so, we help move the existing debate away from discussions about whether migration helps or hurts democracy to study more directly the conditions under which positive and negative effects

on electoral and civic participation are more likely to occur.

International Migration Channels and Political Participation

Addressing international migration's consequences for formal political participation provides a window into the procedures and results of democratic functioning (Diamond and Morlino 2005). Political participation here refers to the extent to which citizens exercise formal voting rights, as well as organize, assemble, protest, lobby, join political parties and civil society associations, and otherwise influence the decision-making process. More formal participation and civic associationalism make democratic systems, in theory, more responsive to a larger share of the population (Putnam 1994; Brady et al. 1995). Examining how different migration channels change local electoral participation and civic engagement, thus, offers insight into how emigration affects the functioning of the local democratic system.

We assess international migration's political consequences for local (municipal) elections in the spirit of Kapur's channels approach (2010). Kapur highlights four channels through which migration affects the origin country: absence, prospective migration, return, and diaspora channels.[3] The absence channel refers to the ways in which the departure of certain sending community members shapes political life at home. The return channel identifies how individual migrants returning home with new skills, capital, access to networks, and ideational resources affect politics. Finally, the diaspora channel refers to how emigrants affect political change from the destination country.

The absence channel is likely to produce effects on the electoral participation of citizens remaining behind. On the one hand, individuals who migrate may be more likely to engage in

[3] Data availability does not permit us to assess the effects of prospective migration, so we focus on the other major channels in this article.

formal politics at home. Thus, the *absence* of more politically engaged citizenry, what Goodman and Hiskey (2008) refer to as 'political brain drain,' may depress political participation in sending communities. On the other hand, the absence of migrant "elite" may create space for new groups to make political inroads by ramping up political participation and influence in electoral politics (Kapur 2010). This leads to our first testable hypothesis:

Hypothesis 1) As more migrants emigrate, citizens remaining behind are less (more) likely to turn out to vote in local elections.

Between 2005 and 2010, more than 1.5 million Mexican immigrants returned to Mexico after long stays in the US (Passell, Cohn, and Gonzalez-Barrera 2012). Many returned voluntarily, while others were forcibly removed from the US. After spending years in a richer democracy, Mexican return migrants are likely to play an important role in shaping the political behaviors of members of their social networks and origin communities by transmitting political ideas, values, and attitudes about democratic participation upon return (Chauvet and Mercier 2014; Rother 2009; Batista and Vicente 2011; Pérez-Armendáriz and Crow 2010; Pérez-Armendáriz 2014; Waddell and Fontenla 2015). Return migrants, exposed to political norms such as electoral participation and political accountability while abroad, may transfer these ideas through political conversations with social contacts in the hometown or lead by example by showing up to the polls and casting a ballot. Return migration may thus have a positive effect on non-migrants' political behavior by exposing them to norms about political engagement in a consolidated democracy such as the US (Rother 2009; Chauvet and Mercier 2014). Moreover, negative experiences in the destination country may spur return migrants' political interest and engagement in local elections in the home country. For example, undocumented immigrants who have political interests but are barred from electoral participation in the US or those who are deported may harbor resentments toward the US political system, which they channel into Mexican political participation upon return by voting

and encouraging other individuals to vote in local elections and attempt to change the political system.

However, migrant return may also have different effects, depending on whether it is more permanent or temporary (López García 2017). If returnees are negatively perceived in the hometown, their own interest in and participation in politics may wane the longer they are at home. Additionally, other hometowners may be less receptive to returnees' opinions, attitudes, and preferences because their return symbolizes failure to succeed abroad (Pérez-Armendáriz 2014). Migrants who participate in circular migration, returning temporarily to the hometown before emigrating once again, may be more influential in shaping participation in politics (López García 2017). Their ability to regularly cross the border, to live in the US, and to bring information home *in situ* may be received by hometowners with more authority and influence, since the information is coming from more "successful" migrants. Finally, returnees' ability to affect electoral participation may be enabled or constrained by the local institutional context, which is likely to vary substantially by levels of socioeconomic status and economic development. Migrants returning to poorer locales where patron-client ties are more entrenched may not participate or encourage their peers to participate in the political process if they do not believe that voting is likely to make a difference (Holzner 2010). The local political institutional context may then temper returnees' interest and ability to transmit positive norms and attitudes concerning electoral participation. This leads the next two testable hypotheses:

Hypothesis 2) As more migrants return from abroad to their hometowns, local voter turnout is likely to decrease (increase).

Hypothesis 3) As more migrants engage in circular migration, local voter turnout is likely to increase (decrease).

Finally, the transnational channel captures the ways in which migrants affect politics in the

hometown from abroad. The two dominant ways in which scholars have operationalized the transnational channel include social and family remittances.[4] When migrants leave yet remain connected to the people and places they leave behind, they transmit ideational and material resources, including ideas, norms, values, and experiences in the destination country (social remittances), through transnational networks (Levitt 1998; 2001), potentially influencing non-migrants' political interest and voting behavior (Córdova and Hiskey 2015; Pérez-Armendáriz 2014). Additionally, migrants send home money, which may increase political participation by increasing household resources – time, money, and civic skills – and therefore the communications and organizational capacity associated with political activity (Brady et al. 1995). By contrast, receiving remittances may also allow migrant households to subsist more independently of the state and encourage them to divest from political participation as they rely more on migrants abroad (Bravo 2008; Germano 2013).

Sending money home to households, however, is not the only kind of cross-border practice likely to increase communication and the organizational capacity of non-migrants at home. We argue that collective remittances, which mobilize and organize migrant transnational collective action in hometown development, are another important channel likely to encourage political participation. Migrant collective engagement through HTAs affects political behavior through two possible mechanisms (Duquette-Rury 2016). If migrant HTAs supporting public-goods projects recruit local citizens into collective remittance-funded projects, citizens may scale up this civic engagement and participate more in the formal electoral process. However, if HTAs and

[4] There are other important ways in which migrants affect hometown politics from abroad, including absentee voting and campaign contributions (Lafluer 2013; Nyblade and O'Mahony 2014). Data restrictions only permit us to analyze remitting practices exemplary of the diaspora channel, although we recognize these other cross-border practices.

government partners exclude local citizens from co-provision activities in the hometown, citizens may respond by either politically mobilizing in reaction to exclusion or losing interest in and disengaging from local electoral politics altogether. This leads to our final hypotheses concerning individual and collective features of the transnational channel:

Hypothesis 4a) As more migrants emigrate, they transmit home ideas, norms, values, and opinions through transnational social networks that increase (decrease) local voter turnout.

Hypothesis 4b) As family remittances increase in Mexican municipalities, local voter turnout is likely to decrease (increase).

Hypothesis 4c) As participation in cross-border collective action in public-goods provision with collective remittances increases, local voter turnout increases (decreases).

Our central objective is to observe how migrant absence, return, circularity, and forms of transnational engagement shape the formal political participation of local citizens in Mexican municipal elections, before turning to their effects on civic engagement. In our analysis, the best proxy for social remittances at the municipal level is the number of migrants who live abroad (absence). However, migrant absence may also indicate the presence of political brain drain from the hometown (Goodman and Hiskey 2008). We are careful to acknowledge in the results and discussion section alternative ways of interpreting the findings on the absence channel, given that it is often a close proxy for migrant contact with relatives abroad and the flow of social remittances across borders that may affect political participation (Pérez-Armendáriz 2014; Córdova and Hiskey 2015). In what follows, we analyze how the intensity of out-migration affects our main indicator of formal political participation between 1990 and 2013, before evaluating how other migratory channels produce political change.

Research Methods, Indicators, and Sources for the Mexican Migration Panel Dataset

In the full panel estimates for the political participation models, our main indicator of political

participation is "voter turnout," the percentage of the voting-age population casting a vote in municipal elections. The denominator is adjusted to reflect the percent of the migrant population living abroad at the time of the municipal election. Voter turnout data were collected from the Municipal Elections Database compiled by CIDE, from the *Centro de Investigación Para el Desarrollo, A.C.* (CIDAC), a prominent Mexican think-tank, over the period 1990-2013 and from state-level public databases for missing years. Mexican municipal elections occur every three years in a staggered electoral calendar across Mexican states.

Our main indicator of international migration (absence) is the percent of the total municipal population living abroad. Our disaggregated indicators of international migration are captured by the percent of municipality households with a migrant returning (return), the percent of households with a migrant circulating between the US and Mexico (circular), and the percent of households receiving remittances from abroad (family remittances) in the previous five-year period. These data are from the *Conteo de Población y Vivienda* (Mexican National Census). We use a linear interpolation technique to convert the five-year estimates into annual municipal-year observations for data consistency.[5]

To test the hypothesis that migrant HTAs' collective participation in public-goods provision affects voter turnout, we use data from the Mexican 3x1 Program. The 3x1 Program is a federal social-spending program, started in 2002, that matches migrant HTAs' collective remittances sent home for public goods provision. Each level of the Mexican government – local,

[5] We also collected and analyzed an index of international migration which is an additive scalar index of migrant return, absence, remittances, and circular migration intensity at the municipal level. These data are 10-year estimates, which only provide data in 2000 and 2010 from which to interpolate missing years. We rely on our five-year estimates to test hypotheses, given the availability of data, and rerun all specifications using the migration intensity index in robustness checks. These results are available by request.

state, and federal – contributes a quarter of the total cost of a public-goods project. We rely on municipal participation in the 3x1 program to account for places that formally engage in collective action for public-goods provision with migrant HTAs.[6] While all three levels of Mexican government co-finance total project budgets, the municipal-level government coordinates project selection, planning, implementation, and monitoring.[7] For all indicators of municipal 3x1 participation, we use data from the Mexican *Secretaría de Desarrollo Social* (Sedesol) database of all approved 3x1 projects from 2002 to 2013.[8] Measuring municipal participation is challenging since municipalities can start, stop, and re-enter the program annually throughout the observation period. To account for these temporal dynamics, our indicators of 3x1 participation reflect whether a municipality participated continually, whether it participated in the previous three-year electoral cycle, and how many times a municipality participated from 2002 to 2013.

The first measure "3x1 Participation" is a dichotomous variable taking the value of one if a municipality participated in the program at least once in any three-year electoral cycle between 2002 and 2013 or zero, otherwise. We also analyze whether a municipality ever participated in the 3x1 program but do not report those results.[9] Since municipalities can start and stop participation in the 3x1 program at will, we assess the systematic difference between those municipalities that participated frequently and those that participated less regularly during the active program period.

[6] This strategy excludes municipalities that may engage in informal forms of coproduction outside the 3x1 program, as well as cases in which migrant HTAs may provide public goods without any involvement of local government. There are no data that allow inclusion of these additional cases.
[7] In the project proposal process, HTAs and local government submit a proposal to the state-level Validation Committees (COVAM), composed of two representatives from the local, state, federal, and migrant co-financing partners that approve or reject proposals. From there, the HTA and local government authorities plan, hire labor, implement, and monitor projects.
[8] Sedesol does not report information about projects that were proposed, but not approved, by the COVAM.
[9] The results for the "ever participate in 3x1 Program" are available by request.

We code regular participation as any municipality that participated in the 3x1 program once every three years. This step is necessary since previous research shows that municipal officials time their participation in the 3x1 program with the three-year electoral cycle to maximize electoral benefits associated with credit claiming of public-goods provision (Simpser et al. 2016).

The second and third measures indicate short-term and cumulative program participation. The short-term indicator, "electoral cycle," accounts for the number of times a municipality participated in the previous electoral cycle.[10] On average, municipalities participated about once each three-year cycle. Finally, we assess how "cumulative participation" in the 3x1 program affects voter turnout. This indicator is a continuous variable measuring the frequency of program participation each year. Half of all 3x1 municipalities participated more than 4 times in the 12-year observation period. For the cumulative indicator, the relevant reference group (control group) combines all municipalities that participated, but less frequently, to isolate the comparison between habitual and irregular participants.

Between 2002 and 2013, 1,234 municipalities participated in the 3x1 program at least once, accounting for half of all Mexican municipalities (50.2 percent). Figure 1 plots total annual new municipalities participating in the 3x1 Program and total municipalities over time. In 2008, for example, while 539 different municipalities participated, only 87 municipalities entered the program for the first time. The number of new municipalities starting the program decreased over the program's duration, indicating that many municipalities repeatedly engaged in the Program rather than indicating diffuse policy adoption across municipalities.

<Figure 1>

[10] Note that our previous electoral cycle includes a year after last year election, last year election, and a year before last year election.

Controlling for Confounders

The statistical analysis also includes additional covariates hypothesized to influence both the baseline change common to all units of observation and the amount of change predicted by our different indicators of international migration. We include several socio-economic, demographic, and political characteristics likely to affect municipal voter turnout. Our first control variable, "poverty," is a continuous index of economic marginalization, which includes data on the percent of the municipal population living without primary education, drainage or toilet, electricity, piped water, the percent who are illiterate, and the percent living with overcrowding, earthen floor, income below the poverty level, and in locations with fewer than 5,000 people. The index captures important levels of income, social infrastructure, and educational attainment in each municipality. A square term for poverty is included because of the curvilinear relationship with political participation. Participation is often lowest in the most affluent cities, slightly higher in the poorest cities, and highest in middle-income cities (Oliver 1999).

Second, we include a measure of the percent of the population that speaks an indigenous language ("indigenous"), since previous research shows that ethno-linguistic fractionalization affects democratic quality (Alesina, Baqir, and Easterly 1999). Third, we include an additional measure for literacy, the percent of the total population over the age of 12 that is literate ("literacy") because studies show that literacy is positively associated with voter turnout (Brady et al. 1995; Hiskey 2003; Cleary 2010) and because we want to assess its independent impact apart from its role in municipal poverty. Finally, "total population" (logged) reflects the socio-demographic profile of municipalities in all specifications and is a standard control in voter turnout models (Powell 1986).

Additionally, we include a vector of political variables. The degree of electoral competition

has been hypothesized to affect trends in political participation (Hiskey 2003; Cleary 2010). We include a measure of multiparty electoral competition, following Laakso and Taagepera's (1979) formula that measures the number of parties effectively competing for office. This strategy helps account for the relative size of effective votes according to the vote share garnered for each competing party in the election. The effective number of parties (ENP) is calculated by the equation:

$$N = \frac{1}{\sum_{i=1}^{n} p_i^2}$$

where N is the number of parties with at least one vote and p_i^2 is the square of each party's proportion of all votes or seats. If all vote shares are equal across parties, N is only slightly larger than one. A hallmark feature of the ENP measure ("number of parties") is that it can detect small shifts likely to be missed otherwise.[11] Also, since different political parties court voters using different strategies, we include the municipal incumbent's party label lagged one electoral cycle in all specifications (Meseguer and Aparicio 2012).

Finally, to control for municipal government capacity and public spending that are likely to affect political interest and participation in local elections, we include a lagged measure of total revenues (per capita). Total revenues measure government budget constraint and include all sources of funding for municipal government (i.e., state, federal, and locally sourced revenue). Elections data were collected from publicly available data sources including the *Centro de Investigación para el Desarrollo* (CIDAC) *Base de Datos Electorales* (and state-level electoral institutes for some states, for some years). Municipal public finance and budget data were collected

[11] We also include an indicator of the margin of victory to measure the level of competition between the first- and second-place winner in municipal elections as a robustness check. Those available are available by request and do not produce changes in the results.

from the *Instituto Nacional de Estadísticas y Geografía* (INEGI) and *Sistema Estatal y Municipal de Bases de Datos* (SIMBAD), and migration, socioeconomic, and demographic indicators were obtained from the *Censo Nacional de Población* (CONAPO), *Conteo de Población y Vivienda* (CONTEO), and INEGI.

Data Sources and Model Specification for the Mexican Family Life Survey

The MxFLS is a longitudinal and multi-thematic survey taken over three panel waves (2002, 2005-2006, 2009-2012). It asks questions about community activities across a random sample of Mexican municipalities, data that are unavailable for all Mexican municipalities in the panel dataset. The MxFLS community questionnaire includes a battery of questions related to community activities, including whether the community organizes activities, meetings, and assemblies and what types of community activities are organized (religious, political, social, or other). It also collects data on whether activities are more recent, occurring over the preceding 12-month period.[12] Over the MxFLS's three panels, the total number of municipalities for which comprehensive data are available is 272, with some missing data. Analysis reveals that about 30 percent of MxFLS municipalities participate in the 3x1 Program during the study period.

To have a comprehensive dataset with all the same controls and explanatory variables in the two data sources, we match the MxFLS sample with municipal data from the full panel dataset we compiled. This allows us to assess how international migration changes the incidence of civic engagement and, in turn, the conditional effects of civic engagement on changes in voter turnout. This is possible because all places included in the MxFLS are matched with the same data from the full panel set. We focus the analysis on the level and recency of community activities to try to

[12] Additional information about the Mexican Family Life Survey is available here: http://www.ennvih-mxfls.org/english/index.html

isolate the conditional effects of migrant absence and 3x1 participation on voter turnout.[13]

We measure the level and recency of community activities in several ways. First, we create an indicator for "recent activity," which is coded one if the municipality reports community activities in the previous 12-month period and coded zero otherwise. Second, "activity level" is a continuous variable reflecting the total number of community activities in which residents are most recently involved. Finally, we construct five separate dichotomous indicators for community civic-engagement level based on the total number of community activities.[14] The first dichotomous indicator (activity level 1) takes the value of one if the community has greater than or equal to the mean level of community activities, which is 10 activities, and zero otherwise; the second indicator (activity level 2) takes the value of one if the community has greater than or equal to 20 activities and zero otherwise; the third indicator (activity level 3) takes the value of one if the community has greater than or equal to 30 activities and zero otherwise; the fourth indicator (activity level 4) takes the value of one if the community has greater than or equal to 50 activities and zero otherwise; and the fifth activity level indicator (activity level 5) takes the value of one if the community has greater than or equal to 100 activities and zero otherwise. In the full sample, minimum number of activities is zero, and the max is 800. About 46 percent of the sample has at least 10 activities, 25 percent has 20 or more, 14 percent 30 or more, 11 percent 50 or more, and 7 percent more than 100. The coding of activity level as different dichotomous variables is for ease of interpretation of the interactions between civic engagement, migration channels, and voter turnout. Observations for all community variables reflect community activities before 2002 (wave

[13] We also construct dichotomous indicators for the type of civic activity, ranging from religious, political, social and other, but they did not reveal any significant findings.
[14] We also evaluate the number and percent of the population involved in community activities but do not report here. Data are available by request.

1), between 2002-2004 (wave 2), and 2005-2008 (wave 3). This yields three separate observations for the civic engagement variables.

In the MxFLS analysis, we also include several indicators of 3x1 Program participation. First, "3x1 participation" is equal to one if the municipality participates in the 3x1 Program in any year in the period before the survey years (wave 2, 2002-2004 and wave 3, 2005-2008) and zero, otherwise. Second, we include a cumulative treatment indicator that reflects the total number of years the municipality participated in the 3x1 Program between panel waves 2 and 3. Finally, since the 3x1 Program database also contains information regarding the number of projects annually completed in each municipality, we include an additional continuous count variable as an indicator of program participation, called "cumulative projects."

Community activity variables, which proxy for local civic engagement, are sourced from the MxFLS, while all other socioeconomic, demographic, public finance, political, and migration indicators are sourced from the panel dataset described previously. All the same controls are included in the civic engagement models; however, controls are averaged for the pre-survey period for each panel wave. Since we have comprehensive data on all Mexican municipalities before and after the start of the 3x1 Program period, we also examine whether survey respondents are systematically different across our dependent and explanatory variables prior to the observation period (2002-2013). Results yield no concerns of selection bias.[15]

Effects of International Migration Channels on Local Voter Turnout

We report descriptive statistics for key variables included in the analysis for all municipalities in the Data Appendix S1 Table A.1. We start our analysis by exploring how international migration (absence) generally affected municipal voter turnout across all Mexican municipalities between

[15] We also ran Durbin-Wu-Hausman to test for endogeneity.

1990 and 2013, using the OLS estimator with municipal and year fixed effects. In Table 1, we observe that over the full sample, international migration had a positive and statistically significant effect on voter turnout. For every 1-percent increase in the number of people emigrating, voter turnout increased by less than a percent, but this is hardly a substantive effect. We then split the sample to analyze how migration affected political participation before and after 2002 (the start of the 3x1 program period). In these models, we find that the positive effect is driven by the post-2002 period, since before 2002 migrants' absence had no systematic effect on participation in local elections.[16] After 2002, every 1-percent increase in international migrants increased voter turnout by 1.5 percent. For municipalities experiencing rapid demographic fluctuations of 10 percent, the corresponding increase in voter turnout would be as much as 15 percent. This positive effect contrasts with findings from previous research on the depressive nature of high migration on formal political participation in national elections (Goodman and Hiskey 2008; Bravo 2008).

< Table 1 >

Initial results could indicate that the absence of specific migrants creates new political space for local citizens to participate in politics. It could also indicate that absence is capturing how social remittance transfers to households through migrant social networks influence the voting behavior of non-migrant recipients. We are unable to adjudicate between these two mechanisms, given the unavailability of a direct measure for social remittances, but the evidence does suggest that the aggregate effect of migrant absence across Mexican municipalities is positively associated with voter turnout. To delve more deeply into how other channels are driving the results, we first

[16] It is also likely that more citizens became involved in politics after the historic 2000 election in which the *Partido Acción Nacional* (PAN) opposition party defeated the *Partido Revolucionario Internacional* (PRI), the major party that held the presidency for 71 years, for the first time. In the upcoming analysis, the positive migrant results hold even after we model the linear time trend.

analyze the full panel (1990-2013) with the DiD estimation and then dive into the post-2002 period, for which we have complete data for the 3x1 program and other channels of international migration.

We examine first how migrant return, circular migration, and family and collective remittances drive voter turnout. Since a key indicator of the transnational channel is municipal participation in the 3x1 program, we must approach the statistical analysis with a different estimator given the likelihood of selection bias often present when using quasi-experimental data. Since our indicator of collective remittances is municipal participation in the 3x1 Program, self-selection into the program may be confounded with the outcomes of interest. The DiD and a fixed effects estimator alleviate many of these concerns.[17] The DiD estimator is a simple and powerful tool for estimating treatment effects with observational data (Ashenfelter 1978; Buckley and Shang 2003; Imbens and Wooldridge 2009).[18] Here, we use it to measure the difference of voter turnout between municipalities that participated in the 3x1 program regularly (treatment group) (i.e. at least once per three years) and those that did not participate regularly (control group). In other words, all fixed, time-constant characteristics, which are correlated with voter turnout and migration, are differenced out, and we reduce concern for unobserved bias.[19] This strategy helps ensure that variables remaining constant over time (but unobserved) and correlated with both the decision to participate in the program and the outcomes of interest do not bias the estimated effect (Buckley and Shang 2003). Figure 2 graphs the time trends between 1990 and 2013 by treatment

[17] Results on OLS specifications for all migration indicators, which are extremely biased, are available by request.
[18] For examples of the DiD approach, see Card and Kruger 2000; Hastings 2004; and Watson 2006.
[19] This is also referred to as the parallel trend assumption. Data on pre-program period should show that the difference between treated and control is stable, not necessarily that the trends are precisely parallel. Moreover, data on post-program periods should show that the difference between treated and control groups is concurrent with program participation.

and control group for voter turnout. As it shows, pre-treatment trends are similar and stable before 2002 but become different after 2002, providing evidence that the data observe the parallel trend assumption.

<Figure 2>

Although our DiD models mitigate migration's selection effects in the full panel, this approach cannot fully consider the temporal dynamics of 3x1 participation. Thus, we also evaluate the effects of 3x1 participation, using fixed effects models with a municipal linear time trend in the post-2002 period. Different from our handling of the DiD models, we focus only on municipalities that participated in the 3x1 program between 2002 and 2013. In this way, we can fully isolate impact from the selection into the 3x1 Program because the comparison is done with only those municipalities that participated in the 3x1 Program.

In the fixed effects and DiD models,[20] we assess how different indicators of international migration affect local participation in municipal elections and present findings in Table 2. The signs are consistent across both sets of models, except for family remittances, which is only significant with the DID approach. Since the DiD approach is mainly used to assess the effects of 3x1 participation on voter turnout, we focus on the fixed effects models to interpret the findings related to other migration channels.[21] First, we find that migrant absence continues to have a positive impact on voter turnout and that the effects are stronger in the restricted period at 6 percent. We also see, however, that another feature of international migration, the return channel,

[20]All fixed effective DiD models were subjected to an AR (1) disturbance in the event of serial autocorrelation and estimated with bootstrapping. No significant differences were found in these specifications.

[21] The reason is that all other variables in the DiD model should be interpreted as controls since the only interaction we model is the difference in the differences between treatment and control for voter turnout.

has significant negative effects. Second, circular migration has a positive, statistically significant, and substantive effect. For every 1-percent increase in households with circular migrants, voter turnout increases by 3 percent. Third, and in contrast, as more migrants return to their households, voter turnout decreases between 4 and 5 percent. Fourth, migrant family remittances have a negative effect on voter turnout in the DiD models but do not reach substantive significance. We find no systematic effect from family remittances, one indicator of the transnational channel, in any of the fixed effects models, which we believe are more robust estimates overall.

<Table 2>

Finally, results in the DiD and fixed effects models show that municipal participation in the 3x1 program has neither a systematic effect on voter turnout across Mexican municipalities nor a short-term (three-year electoral cycle) effect. However, in Table 2 (Column 3), results show that every additional year of participation in the 3x1 program is associated with a 1.4-percent increase in voter turnout. Among municipalities that participated in 3x1, the average number of annual years of participation is 4, suggesting that the cumulative effects of frequent participation would lead to a 6-percent increase in voter turnout. If a municipality participated in the 3x1 program ten times, for example (about 10 percent of total participants), turnout is associated with a 14-percent increase.

Effects of International Migration and Civic Engagement on Local Voter Turnout

In the MxFLS specifications, when the dependent variable is continuous, OLS is used to estimate the effects. Logistic regression is used when the outcome variable is dichotomous. Results presented in Table 3 suggest a positive but weak relationship between the number of 3x1 public-goods projects and the odds of having recent community activities (the reference group is no recent activity). For every additional 3x1 project carried out in a municipality, the odds of having recent

community activity increases by 44 percent.

Results for migrant absence reveal that increasing emigration is not associated with *recent* changes in levels of civic engagement. In fact, this is consistent across all other indicators of migration (return, family remittances, and circularity). Rather, our findings show that the preexisting level of civic engagement is positively associated with increasing emigration, which supports Goodman and Hiskey's (2008) conclusion that as migration intensity increases, local citizens may turn their attention to civic associational life in the hometown. Additionally, since migrant absence is also related to non-migrant social ties to family members in the US, our results additionally indicate that increasing social contact with migrants abroad positively affects the likelihood of community civic engagement. Taken together, results for the civic engagement models provide compelling evidence that after 2002, HTAs were more likely to drive recent changes in local civic engagement, but that high migration and social remittances likely contributed to preexisting "stocks" of civic engagement that often accumulate over time.

<Table 3>

The final analyses using the MxFLS examines if 3x1 Program participation and international migration (absence) affect voter turnout *conditional on civic engagement*. We do not report each migration indicator's conditional effects due to space constraints as they have no observable impact. Table 4 presents the findings of the interaction models and shows significant positive effects on voter turnout. 3x1 Program participation is associated with an 11.9-percent increase in voter turnout, conditional on 10 or more community activities, and a 12.3-percent increase when community activities reach 100 or more. The positive interaction effect is consistent with cumulative participation in the 3x1 Program and total number of projects. Conditional on having 100 or more activities, cumulative 3x1 participation is associated with a 6-percent increase

in local voter turnout. Cumulative 3x1 projects are associated with a 4-percent increase when conditional on 50 or more activities (a quarter of the sample) and a 7-percent increase when conditional on 100 activities or more. As frequency of 3x1 participation increases with civic engagement, voter turnout increases even more.

<Table 4>

Table 5 shows the results for the interaction models with international migration (absence). Results show that migrant absence has the opposite conditional effect on voter turnout in places with high levels of civic engagement. In places with 100 or more community activities, migrant absence is associated with a 16-percent *decline* in voter turnout. Beyond very high levels of community civic engagement, migrant absence has no conditional effects on voter turnout for any other level or type of community activity. In places where citizens are highly engaged in religious, political, and social associations, non-migrant citizens are more likely to withdraw from participation in formal electoral politics with increasing out-migration.

<Table 5>

Discussion

These results provide compelling evidence that international migration has important political consequences for non-citizens' political and civic participation in local democracy. From 1990 to 2013, as international migration intensity increased across Mexican municipalities, we find that more citizens were voting in local elections, especially after 2002. When we look more closely at the post-2002 period, the data show that migrant absence from the hometown continues to explain variation in municipal voter turnout rates but that other migration channels have additional effects, all other things equal. The continued positive and substantive effect of absence suggests that migrants who leave may be creating space for new groups to engage in local politics or that those

who leave are not producing 'political brain drain.' It could also be that emigration's depressing effects on political participation is mitigated by the influx of social remittances – ideas, social capital, norms, and political behaviors transmitted through migrant social networks from abroad. The positive effect of circular migration supports this finding, since circular migrants are likely to transmit ideational resources and human and physical capital *in situ* during their temporary return to the hometown before departing once again for the US.

Our findings also reveal that not all migration channels have the same effect on voter turnout. While family remittances are negatively correlated with voter turnout in the DiD approach, the effect is not substantive and the indicator fails to reach statistical significance in the fixed effects models, which we believe are more robust. Additionally, we find that more permanent return of migrants from the US has a negative relationship with voter turnout, which contrasts with previous studies (Chauvet and Mercier 2014; García 2017; Waddell and Fontenla 2015). One interpretation is that returnees are more likely to be perceived in a negative light upon reintegration into the hometown, and, thus, their political messaging about norms of democratic engagement fall on deaf ears. It could also be that on average, after reintegration, returnees become politically withdrawn over time as a function of the political institutional environment, which may have additional negative spillover effects on their social contacts.

Finally, migrant HTA involvement in public-goods provision in the hometown through the 3x1 Program is associated with a significant increase in local participation in municipal elections and in recent civic engagement, but only with frequent program participation. This result suggests a social and political learning process that happens over time with repeated interactions between migrant groups, resident citizens, and political officials. As municipalities engage in public-goods activities with migrant HTAs more frequently and as citizens become aware of and involved in the

process, they may use the formal political process to reward or punish political officials for their performance during 3x1 project provision. Repeated social interactions between migrants, local political officials, and residents during project coordination bring citizens more into project governance, including decision-making, information sharing, and monitoring of political officials in office, suggesting a strong positive spillover effect on civic and political engagement from continuous migrant transnational collective action in the hometown (Duquette-Rury 2016).

Taken together, these results show that international migration has important effects on citizens' formal participation in local elections but also that certain channels depress voter turnout (return, family remittances) while others encourage more formal political activity (circular migration, migrant cross-border collective action). Moreover, in results not reported, we find additional evidence that migration intensity (all the migration indicators in one scalar index) has a positive relationship with voter turnout in the aggregate. We conducted this additional analysis in the likely case that different channels had spillover effects on non-migrant households. While showing a great deal about how different channels of international migration affect voter turnout, our study evaluates only formal electoral behavior and civic engagement and, thus, does not speak to partisan identity, vote choice, or campaign contributions. These areas are ripe for future research.

Conclusion

Generally, findings from this study suggest that international migration produces different channels that stimulate non-migrant citizens' political participation in local elections. While previous research has identified a positive link between migrant absence and non-electoral forms of political engagement (Goodman and Hiskey 2008; Pérez-Armendáriz and Crow 2010), research has also found either no empirical effect or negative associations between emigration, remittances,

and formal voting behaviors (Goodman and Hiskey 2008; Bravo 2008; Pérez-Armendáriz and Crow 2010; Córdova and Hiskey 2015). In this article, we examined multiple channels through which international migration likely affects non-migrant citizens' formal participation in local elections. In particular, we assessed how circular and return migration, migrant absence, and family and collective remittances change voter turnout across municipalities over time.

We find that migrant absence and return channels have consequences for political behavior across and within Mexican municipalities with significant emigration, but in opposing ways. As migrants return voluntarily or are forced to return home, voter turnout is more likely to decline. By contrast, in places with higher rates of emigration and more circular, temporary migration, more non-migrants are formally participating in local elections. However, circular migration's positive effect on political participation needs to tempered since increased securitization of the US border hampers regular border crossings. Moreover, as the US continues to escalate interior immigration enforcement and more Mexicans are deported, the number of Mexican returnees is likely to continue. As of 2015, more Mexicans were returning to Mexico than crossing the border into the US (Gonzalez-Barrera, 2015). US border and interior immigration policy, thus, has important implications for understanding Mexican political engagement.

This research also reveals that migrant HTAs' involvement in local public-goods provision through the federal 3x1 Program stimulates voting but that family remittances have no systematic effects on voter turnout. To our knowledge, this is the first systematic evidence that migrant cross-border collective action has observable consequences on local civic and political participation in migrant hometowns (see also Duquette-Rury 2016). Future research assessing local political participation in Mexico and beyond will need to take seriously migrant HTAs' collective involvement in local public-goods provision, as this kind of cross-border practice has unintended,

but dynamic, consequences for local democratic participation.

Since existing research identifies an important link between increasing emigration and non-electoral engagement (Pérez-Armendáriz and Crow 2010; Córdova and Hiskey 2015; Goodman and Hiskey 2008), we also looked closely at the ways in which different channels of migration shaped civic engagement. Moreover, we assessed how civic engagement played an intervening role in citizens' participation in local elections. The analysis using a secondary data source, the Mexican Family Life Survey, proved instructive as we learned that only migrant collective involvement in the hometown via the 3x1 Program was associated with recent forms of civic engagement. We also observed that high levels of civic engagement amplified the positive effects of 3x1 participation on local electoral participation but depressed formal voting in high-migration municipalities without 3x1 participation. In 3x1 municipalities, collective engagement in local public-goods provision mobilized by migrant HTAs was one stepping stone to engaging in formal politics. Through the co-provision of public-goods process with migrants and the local government, non-citizens access information and develop interest in political activity, motivating their participation in the formal local democratic process.

While our research has revealed an important association between different channels of international migration and formal political participation in Mexico, there is more research to be done. First, migrant absence, return, and diaspora channels are likely to affect multiparty elections across places with varying rates of out-migration. As more non-migrant citizens become involved in electoral politics, political parties will use different strategies to court their votes or lose out to the opposition. This presents an opportunity to study how migratory pathways affect local electoral competition and which political parties win and lose from a more politically active citizenry. Second, our findings suggest that future research should examine whether different migration

channels affect local democratic quality more generally. Does the increase in electoral participation induced by migration lead to more accountable, responsive local government, or does more citizen involvement simply indicate new clients for local political party patrons interested in corralling more voters to the polls in what has been termed turnout buying (Nichter 2008)? Future research should further investigate the political repercussions of different migratory pathways on other dimensions of local democratic functioning, including partisan identity and mobilization, party competition, and local clientelism.

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Appendix S1. Descriptive Summary Statistics
Appendix S2. Heterogeneous Effects of 3x1 Program on Municipal Voter Turnout
Appendix S3: Fixed Effects Models with State Linear Time Trend
Appendix S4: Formal Equations for Main Regression Models

Tables and Figures

TABLE 1. EFFECTS OF INTERNATIONAL MIGRATION ON VOTER TURNOUT, 1990-2013

	Full Panel	Before 2002	After 2002
International Migrants	0.884***	1.002	1.476***
	(0.246)	(0.770)	(0.224)
Poverty	4.931***	-5.550**	4.676*
	(1.457)	(2.037)	(2.383)
Poverty Squared	-1.192*	0.738	-0.998
	(0.498)	(0.954)	(0.885)
Literacy Rate	-0.410***	0.192	-0.800***
	(0.099)	(0.120)	(0.205)
Indigenous Pop.	0.183*	0.025	0.979***
	(0.072)	(0.066)	(0.193)
Population (Log)	19.392***	-2.716	12.849***
	(1.702)	(2.395)	(3.085)
Number of Parties	3.188***	2.305***	4.445***
	(0.176)	(0.310)	(0.233)
PRI	-0.910**	-1.366***	-1.268*
	(0.305)	(0.288)	(0.545)
PRD	1.831***	0.306	1.198+
	(0.446)	(0.416)	(0.723)
PAN	0.876*	-0.226	1.999**
	(0.359)	(0.297)	(0.704)
Tax Revenue (per cap)	-0.002***	-0.002***	-0.000
	(0.000)	(0.000)	(0.000)
Constant	-92.449***	64.031**	-22.648
	(16.522)	(22.578)	(33.870)
Observations	35,296	17,534	17,762

Robust standard errors in parenthesis. +p <0.1; *p< 0.05; **p < 0.01; ***p < 0.001.
All models include state and time fixed effects.

TABLE 2. DIFFERENCE-IN-DIFFERENCE AND FIXED EFFECTS MODELS, EFFECTS OF 3x1 PROGRAM AND INTERNATIONAL MIGRATION ON VOTER TURNOUT

	Ever Participate 3x1 Program (DID Model)	Electoral Cycle 3x1 Program Participation	Cumulative3x1 Program Participation
3x1 Program	0.482	0.368	1.395**
	(0.317)	(0.316)	(0.453)
Post-2002	-9.731***	-	-
	(0.292)	-	-
3x1 Program*Post-2002	-0.138	-	-
	(0.448)	-	-
International Migrants	2.266***	6.618***	6.125***
	(0.147)	(0.939)	(0.934)
Family Remittances	-0.047**	-0.783	-0.827
	(0.016)	(0.811)	(0.809)
Circular Migrants	0.243***	3.226*	3.011*
	(0.050)	(1.390)	(1.402)
Return Migrants	-0.374***	-5.391***	-4.567***
	(0.068)	(1.108)	(1.102)
Poverty	1.024***	19.464*	20.624*
	(0.173)	(9.308)	(9.245)
Poverty Squared	-0.613***	-11.497**	-11.712**
	(0.073)	(4.033)	(4.048)
Literacy Rate	0.250***	-1.658*	-1.556*
	(0.017)	(0.689)	(0.687)
Indigenous Pop.	0.091***	1.096+	1.011+
	(0.004)	(0.576)	(0.545)
Population (log)	-3.582***	5.598	8.058
	(0.078)	(11.894)	(11.927)
Number of Parties	2.085***	4.745***	4.712***
	(0.088)	(0.376)	(0.373)
PRI	-0.090	-1.163+	-1.083+
	(0.228)	(0.637)	(0.637)
PRD	2.543***	0.990	1.029
	(0.313)	(0.847)	(0.850)
PAN	2.908***	0.834	0.855

	(0.263)	(0.857)	(0.853)
Tax Revenue (per cap)	0.000*	0.001*	0.000*
	(0.000)	(0.000)	(0.000)
Constant	68.689***	119.938	96.558
	(1.621)	(110.068)	(110.024)
Observations	35,296	10,087	10,087

Robust standard errors in parenthesis. +p <0.1; *p< 0.05; **p < 0.01; ***p < 0.001. Note: Fixed effects models with municipal-specific time trend include state fixed effects and municipal-specific time trend.

TABLE 3. EFFECTS OF 3x1 PROGRAM PARTICIPATION ON CIVIC ENGAGEMENT

	Incidence of Recent Civic Engagement			Civic Engagement Activity Levels (>10 activities)		
3x1 Participation	1.082	-	-	0.885	-	-
	(0.647)	-	-	(0.404)	-	-
Cumulative 3x1	-	1.366	-	-	0.899	-
	-	(0.388)	-	-	(0.173)	-
Cumulative Project	-	-	1.440+	-	-	1.089
	-	-	(0.313)	-	-	(0.092)
Voter Turnout	0.995	0.995	0.994	0.986	0.986	0.985
	(0.017)	(0.017)	(0.017)	(0.014)	(0.014)	(0.014)
Victory Margin	1.000	1.000	1.000	1.022*	1.022*	1.022*
	(0.011)	(0.011)	(0.011)	(0.009)	(0.009)	(0.009)
Poverty	0.936	1.015	1.060	0.473	0.461	0.498
	(0.947)	(1.031)	(1.083)	(0.383)	(0.373)	(0.401)
Poverty Squared	1.015	1.048	1.065	1.431	1.421	1.508
	(0.388)	(0.401)	(0.409)	(0.442)	(0.435)	(0.468)
International Migrants	1.014	0.843	0.742	1.785*	1.862*	1.569+
	(0.335)	(0.288)	(0.245)	(0.407)	(0.452)	(0.362)
Literacy Rate	1.099	1.121	1.128	0.936	0.931	0.939
	(0.130)	(0.132)	(0.133)	(0.086)	(0.086)	(0.086)
Indigenous Population	1.005	1.007	1.007	1.027	1.026	1.028
	(0.022)	(0.022)	(0.022)	(0.018)	(0.018)	(0.018)
Population (log)	0.518*	0.496*	0.487**	1.088	1.101	1.053
	(0.141)	(0.137)	(0.134)	(0.197)	(0.201)	(0.192)
Tax Revenue (Per Cap Lagged)	1.002	1.001	1.001	0.999	0.999	0.999
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	1.482	0.457	0.373	23.267	32.061	25.497
	(14.478)	(4.419)	(3.591)	(185.757)	(256.506)	(202.283)
Observations	166	166	166	145	145	145

Robust standard errors in parenthesis. +p <0.1; *p< 0.05; **p < 0.01; ***p < 0.001. Source: Mexican Family Life Survey and panel data collected by authors from Inegi Simbad, Cidac/Cide, Conapo, and Sedesol.

TABLE 4. CONDITIONAL EFFECTS OF 3x1 PROGRAM PARTICIPATION, PROJECTS, AND CIVIC ENGAGEMENT ON VOTER TURNOUT

	3x1 Program Participation			3x1 Cumulative Participation			3x1 Cumulative Projects		
3x1 Program Participation	-2.307	2.148	2.296	-0.316	1.141	1.133	-0.307	0.143	0.242
	(3.734)	(3.209)	(3.144)	(1.783)	(1.494)	(1.485)	(0.891)	(0.547)	(0.566)
Number of Parties	0.200	1.330	1.291	0.487	1.328	1.304	0.367	1.187	1.182
	(2.311)	(2.266)	(2.290)	(2.299)	(2.247)	(2.273)	(2.317)	(2.233)	(2.260)
Poverty	8.932	8.640	8.711	8.490	8.664	8.676	7.377	7.877	8.177
	(6.241)	(6.546)	(6.567)	(6.331)	(6.535)	(6.550)	(6.382)	(6.494)	(6.494)
Poverty Squared	2.559	1.554	1.484	2.338	1.477	1.434	1.859	1.403	1.280
	(2.232)	(2.354)	(2.370)	(2.247)	(2.341)	(2.348)	(2.254)	(2.323)	(2.331)
International Migrants	3.741*	3.283+	3.290+	3.594*	3.047	3.070	4.096*	3.537+	3.475+
	(1.586)	(1.751)	(1.741)	(1.769)	(1.922)	(1.923)	(1.885)	(1.905)	(1.897)
Literacy Rate	1.272+	1.424*	1.424*	1.274+	1.450*	1.445*	1.205+	1.309+	1.352+
	(0.645)	(0.708)	(0.708)	(0.659)	(0.709)	(0.708)	(0.678)	(0.713)	(0.712)
Indigenous Population	0.363**	0.366**	0.368**	0.362**	0.369**	0.369**	0.372**	0.353**	0.359**
	(0.118)	(0.128)	(0.128)	(0.120)	(0.125)	(0.126)	(0.127)	(0.130)	(0.130)
Population (log)	1.048	0.900	1.078	1.039	0.843	0.976	1.122	0.906	1.090
	(1.331)	(1.352)	(1.375)	(1.338)	(1.363)	(1.383)	(1.335)	(1.364)	(1.393)
Tax Revenue (Per Cap)	-0.003	-0.002	-0.002	-0.003	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
10+ Activities	-8.770*	-	-	-6.954*	-	-	-5.879+	-	-
	(3.486)	-	-	(3.244)	-	-	(3.013)	-	-
3x1*10+ Activities	11.940*	-	-	3.246	-	-	0.866	-	-
	(5.143)	-	-	(2.236)	-	-	(0.975)	-	-

50+ Activities	-	0.682	-	-	0.699	-	-	-0.468	-
	-	(4.525)	-	-	(4.484)	-	-	(4.321)	-
3x1*50+ Activities	-	6.167	-	-	5.446	-	-	4.111***	-
	-	(9.429)	-	-	(4.528)	-	-	(1.210)	-
100+ Activities	-	-	0.504	-	-	0.554	-	-	0.112
	-	-	(3.775)	-	-	(3.735)	-	-	(3.684)
3x1*100+ Activities	-	-	12.299*	-	-	6.069*	-	-	7.076**
	-	-	(5.136)	-	-	(2.620)	-	-	(2.250)
Constant	-69.283	-86.151	-87.792	-70.638	-87.561	-88.444	-66.022	-75.760	-81.204
	(53.956)	(58.880)	(58.979)	(55.071)	(58.797)	(58.903)	(56.486)	(59.199)	(59.159)
Observations	145	145	145	145	145	145	145	145	145

Robust standard errors in parenthesis. +p <0.1; *p< 0.05; **p < 0.01; ***p < 0.001.

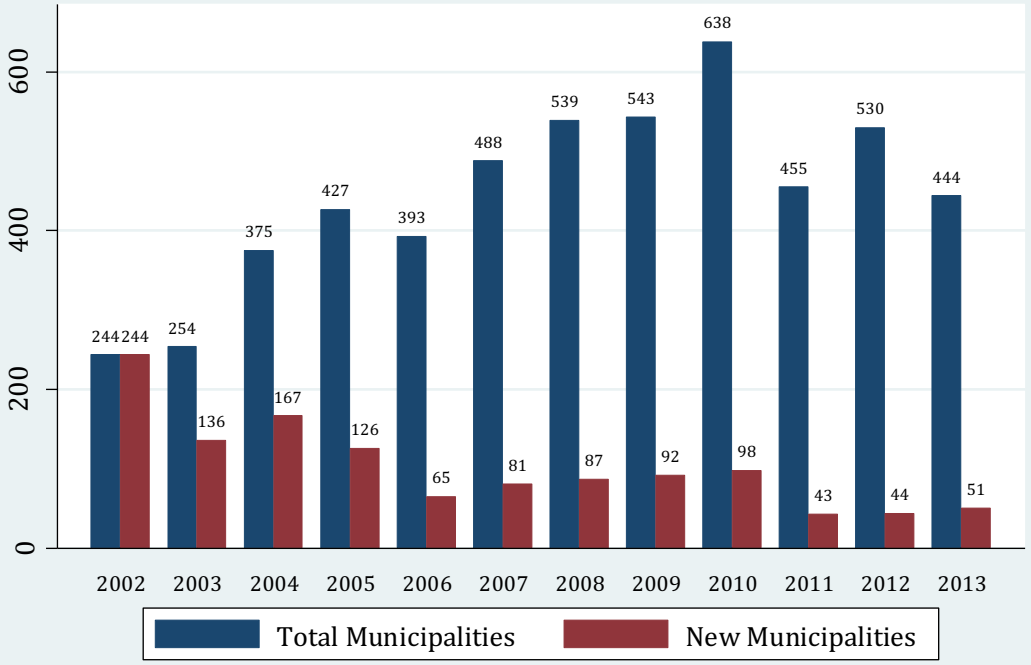
TABLE 5. CONDITIONAL EFFECTS OF INTERNATIONAL MIGRANTS AND CIVIC ENGAGEMENT ON VOTER TURNOUT

	3x1 Program Participation			3x1 Cumulative Participation			3x1 Cumulative Projects		
3x1 Program Participation	2.543	2.829	2.754	1.171	1.410	1.310	0.351	0.301	0.280
	(3.047)	(3.009)	(3.039)	(1.435)	(1.445)	(1.449)	(0.552)	(0.568)	(0.574)
International Migrants	2.972	3.040+	3.171+	2.799	2.759	2.938	3.182	3.259+	3.398+
	(1.916)	(1.715)	(1.728)	(2.020)	(1.880)	(1.900)	(1.950)	(1.882)	(1.902)
Number of Parties	0.594	1.268	1.554	0.608	1.290	1.562	0.464	1.154	1.437
	(2.339)	(2.233)	(2.289)	(2.321)	(2.214)	(2.272)	(2.307)	(2.205)	(2.262)
Poverty	8.165	8.824	8.729	8.088	8.782	8.662	7.560	8.165	8.082
	(6.475)	(6.479)	(6.584)	(6.454)	(6.471)	(6.570)	(6.406)	(6.408)	(6.516)
Poverty Squared	2.041	1.510	1.627	1.963	1.437	1.557	1.849	1.268	1.390
	(2.290)	(2.345)	(2.358)	(2.279)	(2.332)	(2.341)	(2.267)	(2.315)	(2.326)
Literacy Rate	1.297+	1.443*	1.431*	1.317+	1.471*	1.452*	1.228+	1.356+	1.345+
	(0.671)	(0.701)	(0.709)	(0.671)	(0.703)	(0.710)	(0.674)	(0.707)	(0.715)
Indigenous Population	0.377**	0.366**	0.367**	0.378**	0.368**	0.368**	0.370**	0.355**	0.356**
	(0.130)	(0.127)	(0.128)	(0.128)	(0.124)	(0.126)	(0.131)	(0.129)	(0.130)
Population (log)	1.186	0.921	0.884	1.083	0.781	0.772	1.134	0.909	0.881
	(1.353)	(1.357)	(1.355)	(1.346)	(1.353)	(1.356)	(1.357)	(1.373)	(1.371)
Tax Revenue (Per Cap)	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
10+ Activities	-6.062	-	-	-5.965	-	-	-6.099	-	-
	(3.998)	-	-	(3.995)	-	-	(3.991)	-	-
% of Migrants*10+ Activities	1.417	-	-	1.370	-	-	1.221	-	-
	(2.110)	-	-	(2.069)	-	-	(2.102)	-	-
50+ Activities	-	-3.712	-	-	-3.509	-	-	-3.594	-

	-	(8.938)	-	-	(8.903)	-	-	(8.974)	-
% of Migrants*50+ Activities	-	9.590	-	-	9.797	-	-	9.338	-
	-	(12.465)	-	-	(12.559)	-	-	(12.580)	-
100+ Activities	-	-	11.190+	-	-	11.149+	-	-	10.975+
	-	-	(6.063)	-	-	(5.995)	-	-	(6.138)
% of Migrants*100+ Activities	-	-	-15.904*	-	-	-15.798*	-	-	-15.865*
	-	-	(6.820)	-	-	(6.761)	-	-	(7.156)
Constant	-75.080	-87.522	-87.264	-75.588	-88.324	-87.766	-68.072	-79.323	-79.287
	(56.108)	(58.402)	(59.230)	(56.075)	(58.458)	(59.201)	(56.078)	(58.623)	(59.486)
Observations	145	145	145	145	145	145	145	145	145

Robust standard errors in parenthesis. +p <0.1; *p< 0.05; **p < 0.01; ***p < 0.001.

Figure 1: Number of Municipalities that Participates in 3x1



Data based on author's calculations using 3x1 data from Sedesol

Figure 2: Voter turnout Trend