Moral Force: Leaders' Actions and Public Health Compliance in Crisis*

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Abstract

Charismatic leaders shape public sentiment and moral direction but can weaken institutions by prioritizing personal appeal over trust in government. During the COVID-19 pandemic, the Mexican president disregarded his administration's stay-at-home guidelines. We analyze the impact of his actions on social distancing compliance using granular mobility and electoral data. A dynamic difference-in-difference design reveals increased mobility in pro-president areas, leading to 22% more COVID-19 cases and 30% more deaths. Our findings suggest the president's example, rather than partisan differences, drove these effects, highlighting the critical need for leaders to align personal conduct with public policy.

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1 Introduction

Political figures at the head of government play a crucial role beyond the policies they enact; they provide moral and ethical leadership and influence public sentiment. However, the prominence of charismatic politicians can also weaken established institutions by prioritizing the leader's personal appeal over institutional integrity and trust in other branches of government. This threat is particularly evident among populist leaders who often attempt to centralize power, undermine the judiciary, and diminish the role of independent media, leading to significant economic, institutional, and social norm consequences (Guriev and Papaioannou, 2022; Funke et al., 2023).

Still, a charismatic political leader might not need to enact authoritarian policies to undermine the effectiveness of other government institutions. Populist politicians are different from "establishment politicians" - but so are the groups that typically vote such candidates/parties. Then it is particularly important to understand if effects are driven by the supply or the demand side, or perhaps both.

We investigate whether the actions of a populist leader affected compliance with a social distancing policy enacted by his government during the COVID-19 health emergency, and the impact on social distancing patterns, contagions, and deaths during the early stages of the pandemic. While the Mexican government announced a national social distancing policy urging citizens to stay at home, President Andrés Manuel López Obrador (henceforth AMLO) kept business as usual. The president traveled, made several public appearances with large crowds, and refused to wear a mask. He downplayed the seriousness of the pandemic and sent mixed messages about the severity of the disease at a time were information about its evolution, treatment, and consequences was scant.

A few days after the social distancing policy announcement, during one of the president's widely mediatized daily press conferences, journalists questioned the COVID-19 spokesman, Hugo López-Gatell, about the risk of contagion that the president's public appearances posed. The COVID-19 lead coordinator, appointed by the president himself, condoned AMLO's actions and stated: "The President's strength is moral in nature; his force is not that of contagion." The president continued his public appearances and constantly undermined the importance of the pandemic with his declarations and refusal to wear a face mask (El Universal, 2020). We argue that these contradictory signals around the policy announcement effectively created two different government guidelines on social distancing. The president's actions undermined citizens' willingness to comply with the official recommendation, particularly among his followers.

We use a dynamic difference-in-difference (DID) research design to estimate how the president's supporters adjust their social distancing practices following the policy announcement. To capture changes in social distancing, we utilize daily mobility rank indicators calculated at the 0.75 km^2 grid-level mapped with 2018 presidential election vote share data at the electoral section level, the smallest electoral spatial unit within a municipality, or electoral precinct in U.S. terms. We thus contrast within-city out-of-home mobility rank patterns in pro-government precincts, those with a 2018 vote share exceeding the sample mean (51.28%), treated precincts, with those in the control group both before and after the policy announcement.

The assumption is that treated precincts' mobility trends would mimic control precincts' in the absence of conflicting directives from the President and the COVID-19 spokesman. We show evidence that supports the (conditional) parallel trends assumption considering the new challenges highlighted by some recent advances in econometrics (Kahn-Lang and Lang, 2020; de Chaisemartin and D'Haultfœuille, 2023; Roth et al., 2023) and estimate an inverse probability weighted (IPW) DID (Abadie, 2005).

Our results show that after the policy announcement, treated precincts exhibited lower compliance with social distancing compared to their control counterparts. Within a municipality on a given day, treated electoral sections increased their out-of-home mobility ranking by 2.5% compared to the control precincts one month after the policy announcement. Consistent with these findings, we also analyzed daily subway inflows in Mexico City, revealing that metro stations surrounded by treated electoral sections experienced higher inflows after the policy announcement. Our results remain robust across various tests, including the use of a continuous treatment variable, deviations from pre-trends, spatial auto-correlation, and alternative DID estimators (Sant'Anna and Zhao, 2020; Arkhangelsky et al., 2021). Moreover, we find consistent results when examining between-municipality variations in mobility changes: municipalities with more presidential support exhibited a 14.4% higher mobility compared to control municipalities.

Next, we investigate the impact of reduced social distancing on the evolution of the COVID-19 pandemic. Using official administrative data on COVID-19 new cases and deaths at the municipal level, and our previous identification strategy, we find that treated municipalities had 29.8% and 22.3% more COVID-19 cases and deaths per hundred thousand people, respectively. These patterns are not driven by differences in testing and are robust to spatial spillovers. The results imply that, on average, treated municipalities reported 7,500 additional cases and 700 extra deaths per hundred thousand people during the first two months of the pandemic.

We investigate two potential mechanisms for lower compliance with social distancing among the president's supporters. One possibility is that the president's actions directly influence the behavior of his followers, consistent with prior research on the impact of populist leaders' examples and actions (Ajzenman et al., 2023). Alternatively, characteristics within the president's supporter base, such as differences in attitudes towards risk or trust in science, may independently drive changes in behavior (Allcott et al., 2020), or motivate the president's actions.

We provide evidence that supports the hypothesis that the president's supporters are reacting to his example. First, support for the president only affected mobility in areas with high access to medical services, suggesting that, on average, people were taking into account the risk of the disease in their mobility choices and that the president supporters were using his actions as information signals. Additionally, treatment precincts with greater access to internet, television, and radio showed increased mobility, influenced by the president's example, aligning with recent research on the impact of media consumption on responses to populist leaders (Guriev et al., 2020). Second, mobility patterns respond to the president's rhetoric. Aguilar-Gomez et al. (2022) indicate that overall mobility decreases when the president's speeches convey disgust and increases with expressions of joy. Lastly, evidence from the 2021 mid-term elections suggests that municipalities with more COVID-19 cases were less likely to vote for the president's party, indicating a form of accountability. These findings suggest that while the president's supporters initially mirrored his behavior, they eventually held his party accountable for its performance.

Our work contributes to two main strands of literature. First, we add to the extensive research on the political economy of COVID-19. Non-Pharmaceutical Interventions (NPI) were implemented to control the pandemic (Miguel and Mobarak, 2022; Alexander and Karger, 2023; Hansen and Mano, 2023). Social scientists have highlighted how media (Bursztyn et al., 2020; Ananyev et al., 2021, 2022; Ash et al., 2023), political partisanship (Allcott et al., 2020; Grimalda et al., 2023; Wallace et al., 2023), and social norms (Bazzi et al., 2021; Durante et al., 2021; Egorov et al., 2021) influenced compliance with social distancing behavior, COVID-19 contagion rates, and vaccination rates.

We also contribute to the literature studying how leaders serve as information aggregators and signal followers to coordinate behavior (Jones and Olken, 2005; Acemoglu and Jackson, 2015; Verdier and Zenou, 2015, 2018; d'Adda et al., 2017; Bassi and Rasul, 2017; Dube and Harish, 2020; Ajzenman, 2021). There is growing interest in how leaders, including celebrities (Alatas et al., 2024; Alsan and Eichmeyer, 2024), and political figures, such as populist leaderships (Guriev and Papaioannou, 2022; Funke et al., 2023), affect economic outcomes. Leadership during the COVID-19 pandemic was crucial (Banerjee et al., 2020; Bruce et al., 2022), with evidence suggesting that populist leaders implemented fewer health measures against COVID-19 (Fancourt et al., 2020; Kavakli, 2020). Closely related to our paper, Ajzenman et al. (2023) show how president Bolsonaro's anti-scientific rhetoric decreased social distancing compliance among his supporters in Brazilian municipalities. Unlike the Brazilian case and other populist governments, the Mexican federal government enacted various health measures to combat the pandemic and promote social distancing with the president's endorsement. However, the president's personal actions were powerful enough to persuade his supporters to emulate him instead of following his government's guidelines.

Our paper builds on the existing literature and makes four main contributions. First, by using granular mobility and election data, we address the challenge of accounting for municipal-day unobserved heterogeneity and within-city access to essential amenities during the pandemic. This is important given the within-city nature of social-distancing behavior and COVID-19 contagion rates (Almagro and Orane-Hutchinson, 2022; Bisin and Moro, 2022; Brotherhood et al., 2022; Glaeser et al., 2022; Sheng et al., 2022). Second, after confirming the effect of leaders' behavior on social distancing, we examine its indirect effects on COVID-19 cases and deaths, documenting a 29.8% and 22.3% increase in COVID-19 cases and deaths per hundred thousand people, respectively. Third, we show suggestive evidence on how the effect are driven by a supply side, the leader, rather than demand side, its base. Finally, we illustrate that the influence of populist leaders transcends ideologies, with the left-wing rhetoric and actions of AMLO producing effects akin to those of Trump or Bolsonaro. Beyond the content of their policies, the prominence of populist leaderships can have negative consequences by prioritizing the leader's appeal at the expense of people's trust in other government institutions.

The rest of the paper proceeds as follows. Section 2 presents the context. Section 3 presents the data. Section 4 outlines the identification strategy. Section 5 discusses out-of-home mobility and COVID-19 results. Section 6 explores mechanisms. Section 7 concludes.

2 Context

AMLO is a charismatic politician who fits various definitions of populism, commonly labeled as a left-wing populist (Mudde and Kaltwasser, 2017; Illades, 2020; Guriev and Papaioannou, 2022; Funke et al., 2023). He enjoys significant popular legitimacy, maintaining high approval ratings of around 60% throughout his presidency (Fisher and Abi-Habib, 2022; Lopez, 2023). Two key aspects of his political persona contribute to his charisma.

First, the president frequently embarks on tours around Mexico. During his political career, he has visited all 2,467 municipalities at least twice, actively engaging with ordinary citizens at his public events, portraying himself as a charming leader. Secondly, he has embraced a new platform called *La Mañanera*, a daily morning press conference since assuming office in December 2018. These conferences typically last over an hour and provide the president with a platform to update the public on his government's activities, discuss critical national issues, and engage with political adversaries (AP, 2021; Vigna, 2023). Snippets from these widely broadcasted conferences circulate daily on mainstream news programs and social media, particularly featuring breaking news or controversial segments.

COVID-19. Mexico faced severe impacts from COVID-19, with one of the highest excess mortality rates globally, estimated at 38.2% for 2020-2021, comparable to Russia, India, and Brazil (Palacio-Mejía et al., 2022).

The federal government spearheaded efforts by appointing experts to devise NPIs led by Dr. Hugo López-Gatell, the official spokesperson. The country's first imported case was confirmed on February 27 and the government announced Phase 1 of its COVID-19 response aiming at surveying imported cases without local transmission (Suárez et al., 2020; Rojas-Valdés, 2021). Evening press conferences were implemented from March 1st, following the morning press conferences' format, where Dr. López-Gatell and his team provided information about the evolution of the pandemic in the country.

On March 14, Dr. López-Gatell announced a series of NPIs that would be implemented as part of Phase 2 beginning in a few days. The most notorious was *Jornada Nacional de Sana Distancia* (JNSD), aimed at mitigating local transmission and promoting social distancing. The measures recommended a temporary suspension of non-essential activities starting on Monday, March 23, and urged people to stay at home but did not enforce restrictions on mobility.

The president constantly contradicted his government's social distancing and stay-at-home recommendations by holding several public events during the early stages of the pandemic. After the JNSD announcement, images of the president walking through crowds of supporters, hugging and kissing them circulated widely in the media (Grillo, 2020).[1] In the morning press conference of March 16, the COVID-19 spokesman was questioned on whether the President would undergo a COVID-19 test, given his public appearances and the risk of contagion. Dr. López-Gatell argued that AMLO did not need to take a test: "The President's strength is moral in nature; his force is not that of contagion", he stated. The president continued his public appearances and consistently downplayed the significance of the pandemic with his declarations and refusal to wear a face mask

[1] The president himself uploaded the videos to his Twitter account. For instance, videos on public appearances in the state of Guerrero on Saturday March 14 and on Monday March 16. Later on public appearances in the state of Oaxaca, on Saturday, March 21.

(Sánchez-Talanquer et al., 2021).

The first COVID-19-related death was reported on March 18, leading to the cancellation of all school activities from March 20 onward. Phase 2 of the pandemic was officially initiated by the federal government on March 24, following the identification of local infections. This phase entailed the suspension of certain economic activities, restrictions on mass gatherings, and recommendations for the general population to stay at home. On March 30, a national health emergency was declared due to the rising trend in the evolution of cases, hospitalizations, and deaths.

Still, the president constantly contradicted his government's social distancing and stay-at-home recommendations by holding several public events. Between March 14 and April 5, he attended at least ten public events in municipalities across the country, including 5 after the beginning of JNSD. By late April, Mexico ranked third globally in the number of recorded infections and deaths, trailing behind the USA and Brazil (Galindo-Pérez et al., 2022).

To analyze the sudden attention drawn to the president's actions after the JNSD announcement, we examine YouTube views of AMLO's morning press conferences, as well as the government channel broadcasting the daily COVID-19 spokesman's night press conferences.[2] Figure 1 provides a visual representation of the viewership trends of the president's morning press conferences on YouTube, denoted in red. We document a significant increase in viewership on March 16, the first press conference after the announcement, reaching 516 thousand views, a notable increase of 53% from the median rating before that date. The president himself claimed that this conference broke his previous rating records (Aristegui, 2020). We also document the evolution of COVID-19 evening press conferences, depicted in green. The press conference of March 16 garnered nearly 400 thousand views. Viewership of the COVID-19 press conferences, anchored by Dr. López-Gatell, surged as the pandemic worsened. By March 23, the evening press conferences were consistently receiving more views than the morning ones.

The viewership trends suggest that while the president's conferences initially captured significant attention, the focus gradually shifted towards expert-led press conferences on COVID-19 as the pandemic unfolded.

3 Data

Mobility Data. We use UNDP-GRANDATA for within-city mobility. From March 2, 2020, GRANDATA collected geolocations of smartphones using a Mobile Advertising ID "hash" (UNDP-GRANDATA, 2020). The data tracked the mobility patterns of smartphone users for a sizeable sample of the Mexican population.[3] For each unique user, a person's most frequented location was assumed to be that person's residence, all other geolocations were hence labeled as outings or "out-of-home". UNDP-GRANDATA constructed mobility indicators by dropping all home events and adding the number of "out-of-home" events for a particular region.

We use geo-referenced mobility data for homogeneous 0.74 km^2 hexagon-shaped mosaics (H3,

[2]Since there is no publicly available television ratings data, we argue that YouTube views provide insight into the overall demand for information from the government, especially considering that over 70% of the population in Mexico has internet access, and a significant share use it for social media and news consumption (INEGI, 2020*b*).

[3]In Mexico, out of those who own a mobile-phone 95% own a smartphone (INEGI, 2020*b*).

2020). This level is small enough to allow analysis between different neighborhoods and city areas. The indicators for the hexagon areas consist of each hexagon's percentile or rank in the mobility distribution for a particular date taking into account all other hexagons in the corresponding state. Mobility indicators thus capture the extent of human displacement in a particular geographical area relative to the same day and state. To account for differences in agglomeration patterns, we reweight the percentiles by 2020 population density (CIESIN - Columbia University, 2018).[4] Figure 2 panel (a) shows the H3 Mobility indicators for Mexico City on March 14, 2020.

Electoral Data. We measure AMLO's political support leveraging data on the 2018 presidential election voting outcomes at the electoral section level provided by the *Instituto Nacional Electoral* (INE), Mexico's autonomous electoral authority with a constitutional mandate to organize and oversee all elections in the country (INE, 2018). There are approximately 67,650 electoral sections. Each municipality encompasses a mean (median) of 27 (9) electoral sections, with a mean (median) population of 1,833.2 (1,294) inhabitants per precinct. Figure 2 panel (b) depicts AMLO's vote share for electoral sections within Mexico City.

We combine mobility and electoral data at the electoral section level. For each date, we map the mean population weighted mobility percentile from the hexagons to the corresponding electoral sections. For our baseline results, we create a balanced panel at the day and electoral section level, for 56,744 electoral sections, representing approximately 89% of the population, spanning from March 3rd, 2020, to April 15, 2020.

To account for potential confounders, we include socio-economic variables from the 2020 National Census (INEGI, 2021). We also account for access to essential activities during COVID-19 (hospitals, pharmacies, supermarkets, *abarrotes* or neighborhood shops, etc.) by measuring each electoral section centroid distance to the nearest economic unit classified as essential following the National Statistical Directory of Economic Units (DENUE) (INEGI, 2020*a*).

COVID-19. We leverage publicly available administrative data on COVID-19 incidence regularly updated by Mexico's Health Ministry (Secretaría de Salud, 2020). For each date and municipality, we capture the number of laboratory tests conducted, positive cases identified, and cases resulting in death, all per hundred thousand inhabitants to account for differences in population between municipalities. We also construct the positivity rate, the ratio between the total number of positive tests by the total number of tests conducted, and the case-fatality rate, the ratio between the number of positive cases resulting in death by the total number of positive cases.

Finally, we aggregate electoral and census data at the municipal level and construct the political support indicators. As a result, we assemble a balanced panel at the day-municipality level for 1,955 municipalities, from the first confirmed COVID-19 case on February 27 up to June 2020, when the social distancing policy finished and well before the arrival of COVID-19 vaccines in Mexico, by December 2020.

4 Empirical strategy

We aim to evaluate whether the president's actions, which contradicted the government's social distancing policy during the early stages of the COVID-19 pandemic, led his followers to engage less

[4] Raw mobility percentiles overestimate mobility patterns in low agglomeration areas, see Figure A.1.

in social distancing, specifically by increasing their out-of-home mobility. We employ a dynamic difference-in-differences (DID) or event-study econometric specification:

$$y_{i(m)t} = \alpha_i + \gamma_{mt} + \sum_{\tau=-k}^{K} \beta_\tau \cdot \mathbb{1}(D_i) \cdot \mathbb{1}(t = \tau) + \varepsilon_{i(m)t} \tag{1}$$

where $y_{i(m)t}$ is the seven-day moving average of out-of-home mobility for electoral section i, in municipality m, on day t. The term α_i represents electoral section fixed effects. To control for fine-grained unobserved heterogeneity in social distancing policies within a day, we include a municipality-day fixed effect, γ_{mt}. Following recommendations in the DID literature (de Chaisemartin and D'Haultfœuille, 2023; Roth et al., 2023), our baseline inference uses clustered standard errors at the level at which treatment is independently assigned: the electoral section level.

The term $\mathbb{1}(D_i)$ is an indicator variable taking the value of one if the AMLO vote share in the precinct is above the national mean (51.28%), the treatment. For ease of comparison and interpretation, our baseline specification uses a discrete measure of political support given the challenges in interpreting estimates with continuous treatment measures (Callaway et al., 2024). The indicator variable $\mathbb{1}(t = \tau)$ is equal to one if the day t is k periods away from March 14, the day of the social distancing policy announcement. All treated units are treated at the same time. Coefficients β_τ capture the dynamic treatment effect, the parameters of interest.

The identifying assumption for the event study specification 1 relies on parallel trends. Specifically, treated electoral sections are expected to have a similar mobility rate trend to their counterparts had they not been exposed to the president's actions contradicting the official social distancing recommendations. While event studies allow us to test for statistically significant deviations of pre-trends from zero, insignificant pre-trends do not inherently imply parallel (counterfactual) post-treatment trends (Kahn-Lang and Lang, 2020; Roth, 2022; Roth and Sant'Anna, 2023).

One concern arises from the potential differences in observed and unobserved characteristics among electoral sections supporting the president, which may affect the validity of the parallel trends assumption. To address this, we compare precincts within the same municipality and employ inverse probability weighted (IPW) DID methods to ensure balance in pre-treatment observables (Abadie, 2005). Specifically, we utilize LASSO regression to identify the best predictive variables of AMLO's vote share at the precinct level using census data and amenity access. Subsequently, we construct entropy balancing weights (Hainmueller, 2012) to mitigate potential biases.[5]

5 Results

5.1 Out-of-home-mobility

We observe a rise in various mobility measures in president-supporting areas following the JNSD policy announcement. Figure 3, Panel (a), illustrates the estimates for the dynamic DID specification. Before the JNSD announcement, treated electoral sections show a declining trend in out-of-home mobility ranking. However, post-March 14, there is a notable uptick in mobility ranking within these precincts. We note a 1.5 percentile increase in within-city mobility one

[5] We construct weights using Hainmueller (2012) instead of Graham et al. (2012) as entropy balancing supports weights for continues measures and have broader support.

week after the policy announcement. By the one-month mark, treated precincts exhibit significantly higher out-of-home mobility rankings, approximately 2.5 percentiles above the control group. These results suggest that pro-president areas increase their out-of-home mobility within the distribution for a given day and state relative to the control group.

The parallel trends assumption might not hold if treated and control electoral sections differ in observable and unobservable characteristics. Figure 3 panel (b) shows the results for the IPW-DID. After ensuring balance in AMLO's vote share best predictors (Figure A.2), treated electoral sections increased their within-city out-of-home mobility by up to 1.5 percentiles two weeks later, and 2 percentiles one month after.

The static IPW-DID estimate implies that treated electoral sections increase their out-of-home mobility by 1.1 percentiles relative to the control group. Given the mean control percentile after March 14 is 45, this implies treated electoral sections increase their mobility ranking by 2.43%. These results mirror those of the standard DID: the static DID estimate is 1.3 (Table A.1). We fail to reject that the DID and IPW-DID estimates are different (p-value = 0.605).

5.1.1 Robustness

Continuous treatment. Our results are similar when using a continuous political support measure. Replicating our IPW-DID estimates with the continuous AMLO vote share, Figure A.3 shows a one percent increase in AMLO vote share leads to a 0.058 percentile rise in out-of-home mobility. This results in a 1.39 percentile difference between the 25th and 75th percentiles, or a 3% increase, consistent with our discrete measure findings.

Metro Inflows. We verify our within-city findings using an alternative mobility measure. We use daily inflows data from the Mexico City metro system, measuring the number of people using the station as their commute's origin (ADIP and SEMOVI, 2024). We create one-kilometer buffers around each of the 185 metro stations, calculate the AMLO vote share for neighboring precincts (Figure A.4), and classify a station as treated if its buffer's vote share is above the mean (54%). We adjust daily inflows by station population and use a seven-day exponential moving average on inflows per capita.

Figure 3, panel (c), shows the IPW-DID results using metro inflows. In the 30 days before the policy announcement, inflows between treated and control stations were similar. Post-announcement, treated stations saw an 8.2% increase in inflows, roughly 1800 extra per station, mirroring the nationwide out-of-home mobility data.

Alternative Political Support Measure. We validate our findings using alternative measures of AMLO's support, classifying precincts as pro-government based on his 2012 presidential vote share (29.89%) or higher. Figure A.5 presents similar IPW-DID event study results for AMLO's strongholds (pro-government since 2012) and electoral migrants (pro-government in 2018).[6]

Pre-trends and sensitivity analysis. We conduct a sensitivity test for our post-treatment coefficients using differences in pre-trends following Rambachan and Roth (2023). We calculate sensitivity results for nationwide out-of-home mobility estimates nine days after JNSD began,

[6]We use 2012 vote shares instead of 2006 data because electoral sections have changed, and we aim to maintain the most harmonized set of electoral data between 2012 and 2018.

$\beta_{\tau=9}$, using relative magnitude bounds. With pre-treatment patterns from Figure 3, we impose a decreasing monotonicity restriction. Figure A.6 shows our DID and IPW-DID estimates remain robust even with violations of parallel trends up to four times the maximum pre-treatment violation.

Inference. We test our results' robustness to different inference methods. Table A.1 columns (1) and (2) present our DID and IPW-DID estimates with three standard errors: clustered at the precinct level (baseline), municipal level, and Conley (1999) standard errors accounting for spatial autocorrelation. All estimates remain statistically significant across methods.

Alternative Estimators. We verify our results with alternative estimators, using Sant'Anna and Zhao (2020) Doubly Robust DID (DR-DID) and Arkhangelsky et al. (2021) Synthetic DID (SDID) (Figure A.7). Table A.1, columns (3) and (4), show coefficients and q-values testing estimates' equivalence (Anderson, 2008). The DID, IPW-DID, and SDID estimates are statistically similar. The DR-DID estimate is smaller but statistically significant.

5.1.2 Magnitude

To assess the magnitude of the effect, we replicate our estimates at the municipal-day level using UNDP-GRANDATA's aggregated daily mobility index, benchmarked against March 2, 2020. Before the JNDS announcement, mean municipal mobility was stable but dropped by 24.2 percentage points afterward (Figure A.8).

We modify specification 1 at the municipal level using IPW-DID, including municipal and time fixed effects, and controlling for municipal-day social distancing policies (Enríquez et al., forthcoming).[7] This analysis utilizes variation in AMLO support and mobility changes across municipalities.

After confirming balance between treated and control municipalities (Figure A.9), we find that pro-government municipalities reduced mobility less than control groups following the social distancing announcement. Figure 3, panel (d), shows that treated municipalities had 2.7 percentage points higher mobility, with a standard error of 1.1, compared to a 23.5 percentage point decline in control municipalities—an 11.5% higher mobility in treated areas.

For comparison, Ajzenman et al. (2023) found a 1.5 percentage point decrease in social distancing in pro-Bolsonaro municipalities in Brazil. Our estimates are 1.8 times larger, though not statistically different (p-value = 0.291).

5.2 COVID-19

We assess whether the rise in mobility among AMLO supporters impacts new COVID-19 cases and deaths per hundred thousand people. We use the municipal-day level specification, employing a log-like transformation shutting off the extensive margin (Chen and Roth, 2023).

Aligned with the out-of-home mobility results, pro-government municipalities show a surge in new COVID-19 cases per hundred thousand people, as depicted in Figure 4, panel (a). Over the first two months of the pandemic, treated municipalities had almost 38% more new COVID-19 cases per hundred thousand people. This means that treated municipalities had more than 9.5 thousand

[7] For detailed specification and municipal-day social distancing indicators, see Appendix A.1.

additional cases per hundred thousand people compared to control municipalities, where the mean dependent variable was 0.252.

The results are not driven by differences in testing, as we do not find significant differences in daily tests per hundred thousand people between treated and control municipalities (Figure A.10). The positivity rate (positive cases over total tests) also mirrors our findings using new COVID-19 cases per capita (Figure 4, panel (b)).

The severity of COVID-19 was higher in treated municipalities, which exhibited elevated deaths and case-fatality rates. Following the JNSD announcement, treated municipalities experienced 21.3% more COVID-19 related deaths per hundred thousand people than control municipalities (Figure 4, panel (c)). Control municipalities had 0.034 COVID-19 related deaths per hundred thousand people, implying that treated municipalities had more than 700 extra COVID-19 related deaths per hundred thousand people during the first two months of the pandemic. The case-fatality rate results are consistent (Figure 4, panel (d)).

Our results are robust to accounting for spatial auto-correlation in the error term using Conley (1999) standard errors (Table A.2) and for spatial spillovers in the dependent variable using Mínguez et al. (2020) Spatial Autoregressive Model (Table A.3).

5.2.1 Magnitude

Using ZIP code-week level data for NYC and an IV strategy, Glaeser et al. (2022) find that a one percentage point decrease in two-week lagged mobility results in a 0.050 to 0.066 log-point decline in per capita COVID-19 prevalence between March 14 and May 1, 2020 (Table 3, Panel B).

Our municipal-day level DID estimates for pro-president areas suggest that a one percentage point increase in mobility leads to a 0.103 log-point increase in COVID-19 prevalence over the same period. This comparison indicates that the effect of mobility on COVID-19 prevalence among the president's supporters at the national level in Mexico is approximately 1.5 to 2 times larger than the effect observed in NYC by Glaeser et al. (2022). This discrepancy may be due to differences in the unit and time of analysis, public health infrastructure, population density, compliance with mobility restrictions, and the political context, including the president's contradictory signals regarding social distancing.

6 Mechanisms

Our findings suggest two potential mechanisms to explain the observed changes in mobility patterns among the president supporters. First, there is a supply-side explanation: it's plausible that AMLO's actions directly influence his partisans, aligning with existing research on leaders' impact. Alternatively, the leaders's actions could respond to a demand of his constituency. Differences within the president's partisanship composition, such as attitudes towards risk or trust in science, could independently drive changes in behavior, irrespective of the president's actions.

We provide three different set of suggestive evidence showing that people follow AMLO's rhetoric and there isn't an inherent tendency in his electorate to behave differently during COVID-19.

Heterogeneity in electoral section out-of-home mobility. We explore heterogeneity in pre-treatment characteristics among electoral sections and use IPW-DID to uncover potential underlying mechanisms explaining differences in out-of-home mobility.

First, if political partisanship inherently predisposed individuals to engage in less social distancing, we would expect these patterns to persist regardless of people's risk from a COVID-19 infection. To investigate this, we divide our sample based on the population share lacking access to medical services as a proxy for the risk of complications and death from COVID-19, Figure 5 (panel a). For precincts with low access to medical services, treated precincts exhibit minimal differences in out-of-home mobility relative to the control precincts. However, for precincts with high access to medical services, treated precincts have substantially higher out-of-home mobility rates relative to those in the control. The influence of the president's example varies with the individual's COVID-19 risk, suggesting that his supporters mobility behavior is not fixed but depends on their beliefs about the threat that the disease poses, which is based on people's characteristics like access to health services and might also be influenced by AMLO's actions.

Consistent with Guriev et al. (2020), Ajzenman et al. (2023) suggest that areas with higher social media access tend to follow the populist leader's behavior more closely. While we lack fine-level social media access data, we construct an information and communication technology (ICT) index based on household access to various media.[8] Figure 5 panel (b) reveals that for electoral sections with high ICT penetration, treated precincts have substantially higher mobility relative to the control group. For precincts with low ICT access, treated precincts have smaller out-of-home mobility rates relative to the control group, but also relative to treated precincts with higher access to ICT. These findings suggest that electoral sections aware of the president's actions undermining the stay-at-home recommendations are the ones responding to the president's example.

Leader's rhetoric. According to Aguilar-Gomez et al. (2022), during the initial stages of the pandemic, the public's behavior reacted to the president's rhetoric. Employing sentiment analysis, topic modeling, and municipal-level mobility data, the study indicates that instances when the president conveyed joy or surprise in his morning press conferences were associated with increased mobility. Conversely, expressions of disgust from the president tended to coincide with decreased municipal mobility. These findings imply that a leader's rhetoric can aggregate information and influence the broader public.

Electoral Accountability. If partisanship outweighs the influence of a leader's example, AMLO's supporters might minimize the pandemic's negative effects and not hold the government accountable in the immediate elections (Eggers, 2014).

Given Mexico's no-reelection rule for presidents and six-year election cycles, we examine shifts in votes for the president's party, MORENA, in the 2021 mid-term election for the lower chamber, comparing them to the 2018 results at the municipal level. Although there is a strong correlation, the party's vote share in 2021 declined compared to 2018, as did AMLO's 2018 municipal vote share for the presidency (Figure A.11).

While factors such as the president's absence from the ballot or other unobserved variables may explain the decline, there is suggestive evidence linking it to COVID-19 cases. Aggregating cumu-

[8]The ICT index is constructed via Principal Component Analysis using the electoral section's share of households with radio, television, cable TV, internet, and cellphone.

lative COVID-19 cases per hundred thousand people by municipality as of June 6, 2021 (election day), we regress them against the change in MORENA's municipal House of Representatives vote share between 2018 and 2021. In Figure 5, panel (c), controlling for state fixed effects and electoral turnout, a one percent increase in cumulative COVID-19 cases per hundred thousand people correlates with a 1.3 percentage point decrease in MORENA's vote share compared to 2018, suggesting short-term electoral accountability for the federal government.

To further support electoral accountability, we conduct a placebo exercise. We test whether MORENA's increased electoral support between the 2015 mid-term and 2018 elections varied across municipalities with different cumulative COVID-19 cases in 2021. Regressing cumulative COVID-19 cases per hundred thousand people against the change in MORENA's municipal vote share, we find no relationship between COVID-19 cases and the increase in vote share between 2018 and 2019 (Figure A.12), consistent with electoral accountability in areas with higher COVID-19 severity.

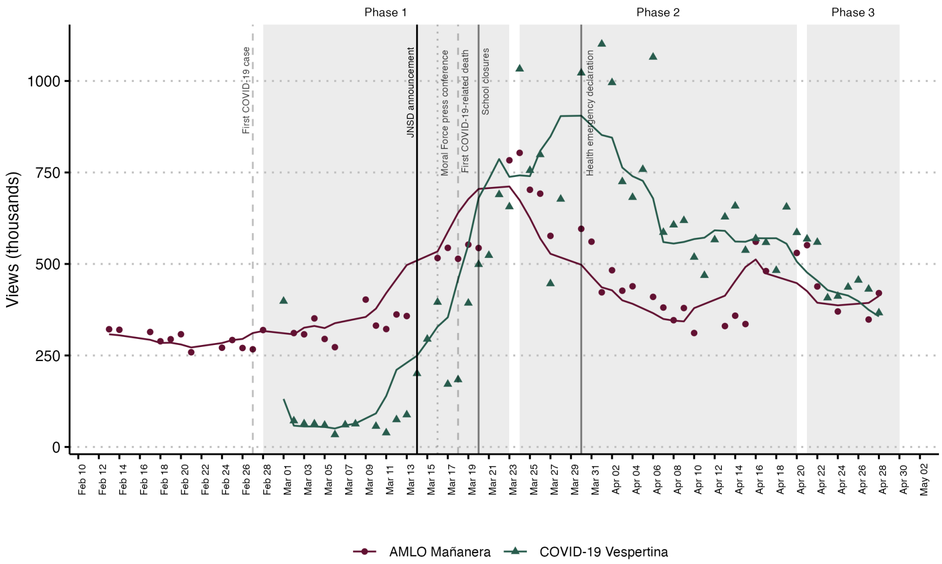
These results suggest that while the president's supporters initially followed his example, leading to increased out-of-home mobility and more severe COVID-19 cases, they ultimately held his party accountable for these outcomes in the short term.

7 Conclusion

This paper examines how a populist leader influenced compliance with his government social distancing guidelines among supporters during the early COVID-19 pandemic. Our findings show that after the social distancing policy announcement, amidst conflicting signals from government officials, Mexican president's supporters increased out-of-home mobility and experienced elevated COVID-19 cases and deaths. The effects are driven by the leader's example, rather than by demand-side factors from his political supporters.

These results underscore populist leaders' influential role in shaping economic outcomes, particularly in influencing health-related behaviors during crises. They also highlight the risks when government institutions lose public trust to charismatic leadership. Further research is needed to understand and mitigate the impact of populist leaders and boost evidence-based decision-making in governance and public health.

Figure 1: YouTube views before and after Moral Force press conference

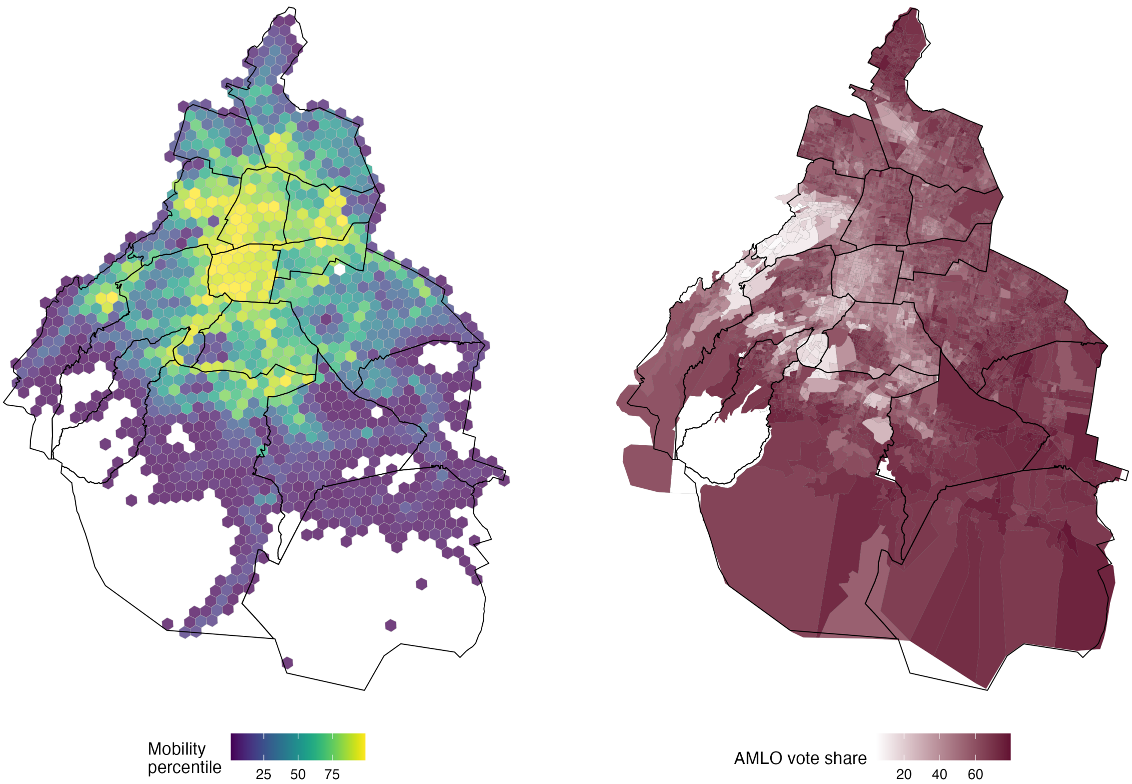


Notes: Daily YouTube views for AMLO's morning press conferences (*AMLO Mañanera* in red) and the evening COVID-19 press conferences hosted by COVID-19 spokesman Dr. López-Gatell (*COVID-19 Vespertina* in green). The dots and triangles represent daily views, while the lines show the moving average. The x-axis represents the date, and the y-axis shows the number of views in thousands. The solid black line indicates the JNSD announcement on March 14, 2020. The solid grey lines represent other policy actions, such as school closures and the health emergency declaration. The remaining grey dashed lines mark key dates in the evolution of the COVID-19 pandemic in Mexico, as described in the context section. The grey areas represent the different phases of the COVID-19 pandemic as defined by the Mexican government.

Figure 2: Mobility and electoral data - Mexico City example

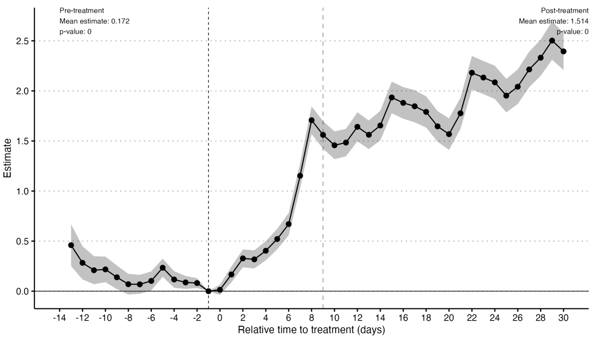
(a) H3 Daily mobility indicators

(b) AMLO vote share at the electoral section level

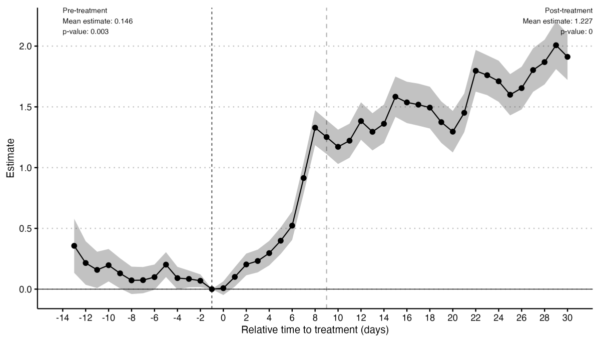


Notes: Based on UNDP-GRANDATA (2020) and INE (2018). Panel (a) shows the H3 0.74 km^2 daily out-of-home mobility population-weighted percentile indicators for March 14, 2020. The percentile represents the rank in the mobility distribution for a specific date, relative to all other hexagons in Mexico City. Panel (b) displays the electoral sections in 2018 along with the corresponding AMLO vote share in Mexico City. The thick black lines indicate the municipal boundaries. The national mean (median) AMLO vote share is 51.29% (52.96%).

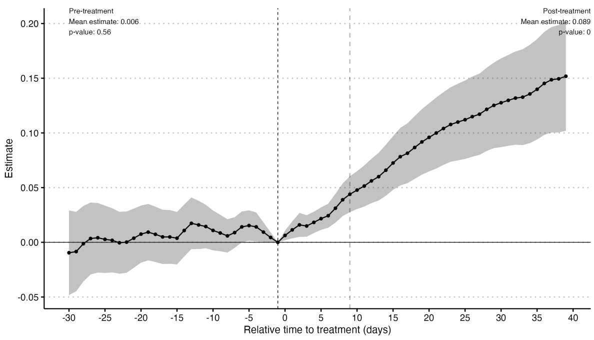
Figure 3: Out-of-home mobility for pro-president geographies



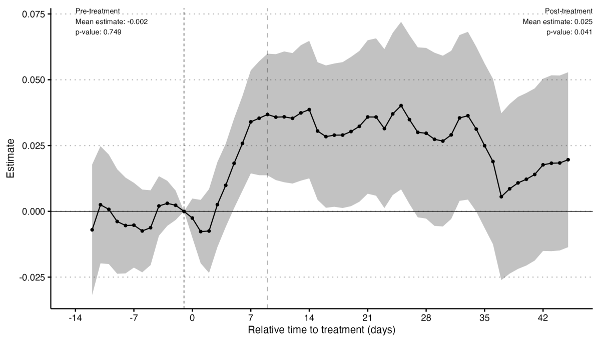
(a) DID: Within-municipality mobility percentiles



(b) IPW-DID: Within-municipality mobility percentiles



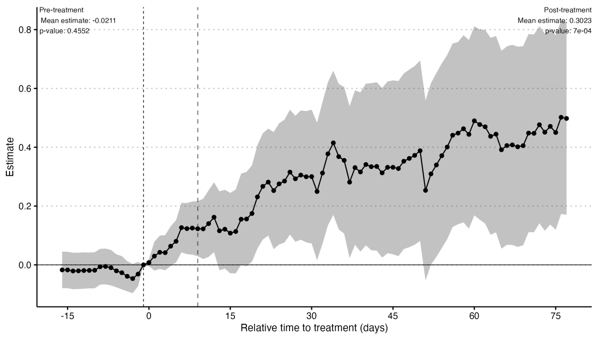
(c) IPW-DID: CDMX Metro Inflows



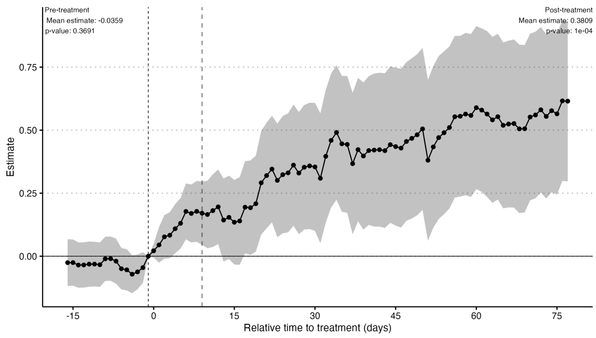
(d) IPW-DID: Municipal mobility changes

Notes: Event studies use specification 1. The x-axis represents the relative time in days to the JNSD announcement (March 14, 2020). The y-axis represents the estimates for each panel's dependent variable. Panel (a) shows DID results for nationwide out-of-home within-city mobility, with the dependent variable being the seven-day moving average mobility percentile at the electoral section-day level. Panel (b) presents IPW-DID results using Hainmueller (2012) entropy balancing weights for nationwide within-city mobility, where the dependent variable is the seven-day moving average mobility percentile at the electoral section-day level. Panel (c) displays IPW-DID results using entropy balancing weights for Mexico City Metro system data, with the dependent variable being the seven-day moving average inflow per capita at the metro station-day level. Panel (d) provides IPW-DID results for nationwide between-municipality mobility, with the dependent variable being the seven-day moving average mobility change relative to March 2, 2020. The treatment equals one if AMLO's vote share is above the mean (51.28% for electoral sections; 50.79% for municipalities). The period before the JNSD announcement (March 14, 2020) is normalized to zero at $t = -1$, marked by the first dashed line. The second dashed line represents the start of social distancing on March 23, 2020. Confidence intervals are at 95%, with standard errors clustered at the electoral section level (Panel (c) at the metro station level; Panel (d) at the municipal level). The annotations in the top-left (top-right) indicate the mean pre-treatment (post-treatment) estimate and the corresponding joint significance p-value.

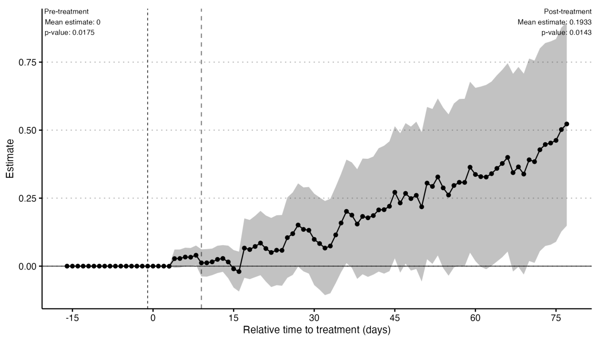
Figure 4: COVID-19 rates for pro-president municipalities



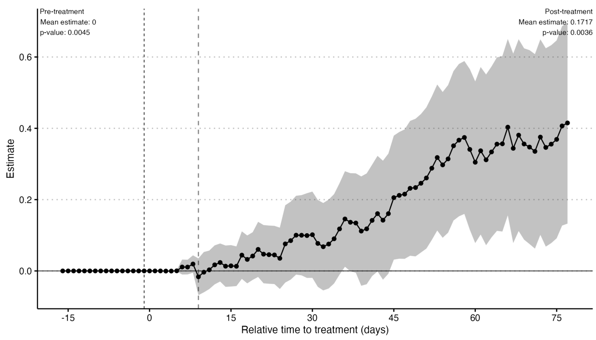
(a) Daily new COVID-19 cases per 100 thousand people



(b) Positivity rate



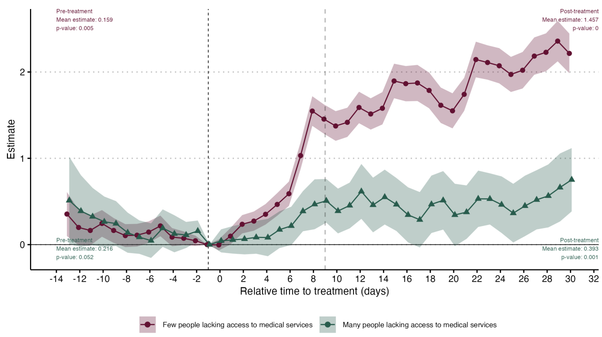
(c) Daily COVID-19 deaths per 100 thousand people



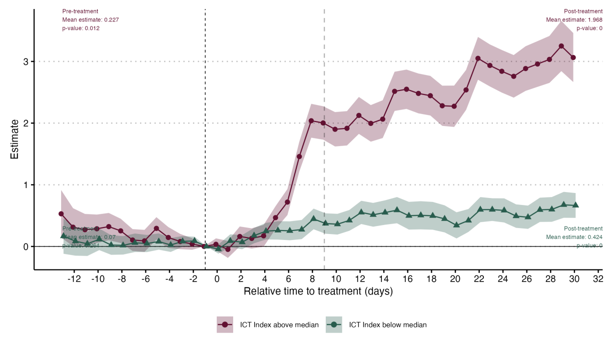
(d) Case-fatality rate

Notes: Event studies are based on specification 2 and IPW-DID results using Hainmueller (2012) entropy balancing weights. The x-axis represents the relative time in days to the JNSD policy announcement (March 14, 2020). The y-axis represents the seven-day moving average of each panel's dependent variable. Panel (a) shows the daily new COVID-19 confirmed cases per hundred thousand people. Panel (b) displays the COVID-19 positivity rate (total positive cases over total lab tests) trend at the municipal level; when no tests are conducted, the positivity rate is zero. Panel (c) presents the daily COVID-19 confirmed deaths per hundred thousand people. Panel (d) illustrates the COVID-19 case-fatality rate (deaths among positive cases) trend at the municipal level; when there are no positive cases, the case-fatality rate is zero. The treatment variable equals one if the municipal AMLO vote share is above the mean (51.28%). The period before the JNSD policy announcement on March 14, 2020, is normalized to zero at $t = -1$, marked by the first dashed line. The second dashed line represents the start of social distancing on March 23, 2020. Confidence intervals are at 95%, with standard errors clustered at the municipal level. The annotations in the top-left (top-right) indicate the mean pre-treatment (post-treatment) estimate and the corresponding joint significance p-value.

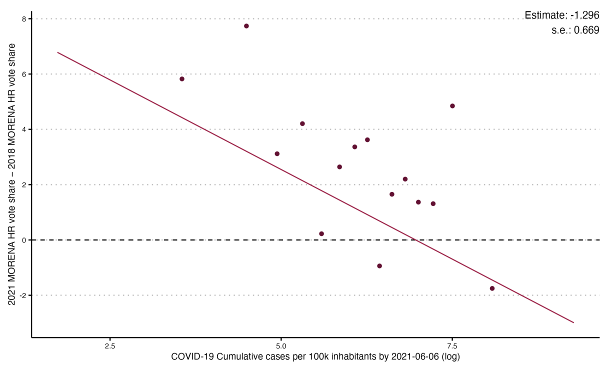
Figure 5: Mechanisms



(a) Out-of-home mobility heterogeneity: Health



(b) Out-of-home mobility heterogeneity: ITC Access



(c) Electoral accountability: COVID-19 cases and changes in support for the president's party

Notes: Panels (a) and (b) present event studies using specification 1 and IPW-DID results based on Hainmueller (2012) entropy balancing weights for nationwide out-of-home mobility indicators at the electoral section level. The x-axis represents the relative time in days to the JNSD announcement (March 14, 2020). The y-axis represents the seven-day moving average mobility percentile at the electoral section-day level. The treatment variable equals one if the electoral section AMLO vote share is above the mean (51.28%). The period before the JNSD announcement on March 14, 2020, is normalized to zero at $t = -1$, marked by the first dashed line. The second dashed line represents March 23, 2020, when the JNSD policy began. Confidence intervals are at 95%, with standard errors clustered at the electoral section level. The annotations in the corners indicate the mean pre-treatment and post-treatment estimates and the corresponding joint significance p-value for each subsample. Panel (c) presents the electoral accountability results using binscatter plots (Cattaneo et al., 2024). The x-axis represents the (log) cumulative COVID-19 cases per 10,000 by June 6, 2021—the day before the mid-term election. The y-axis shows the difference between MORENA's House of Representatives vote share in 2021 and 2018 at the municipal level. The label in the top-right displays the correlation estimate, accounting for state fixed effects and municipal turnout in both elections. Standard errors are clustered at the municipal level.

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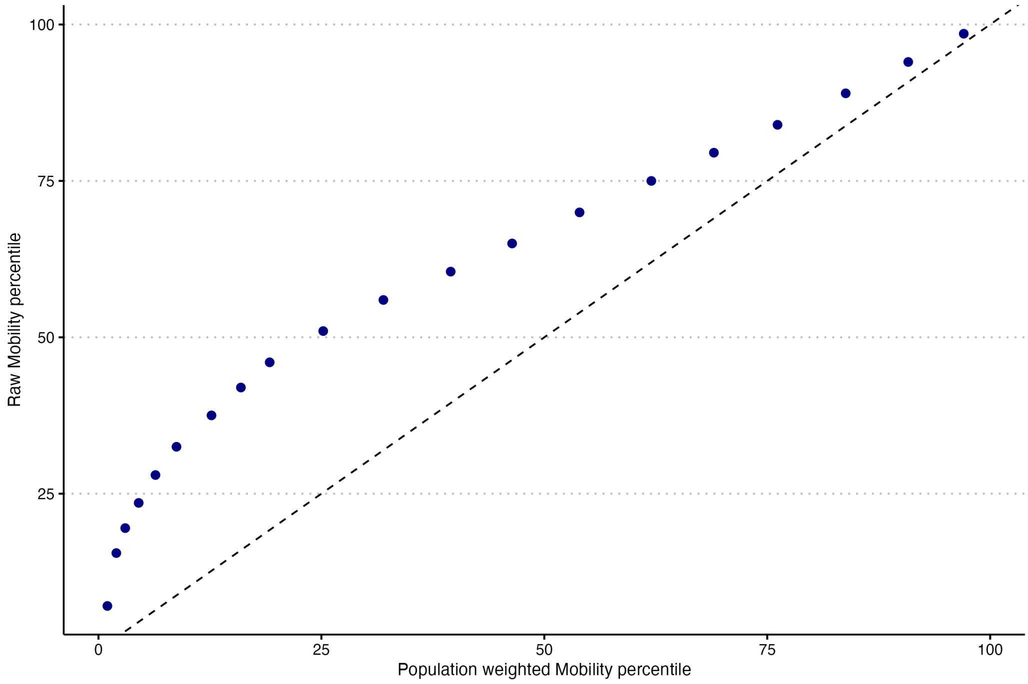
A Appendix

Figure A.1: Mobility indicators: raw and population weighted



Notes: Binscatter plots using Cattaneo et al. (2024). Data for Mexico City on March 14, 2020. The x-axis represents the population weighted mobility percentile using CIESIN - Columbia University (2018) 2020 population density rasters. The y-axis represents the raw mobility percentile as per UNDP-GRANDATA (2020).

Table A.1: DID estimators: Out-of-home mobility at electoral section level

	DID (1)	IPW-DID (2)	DR-DID (3)	SDID (4)
pro-president × After March 14, 2020	1.354	1.093	0.566	0.938
	(0.0562)	(0.0573)	(0.0528)	(0.0513)
	[0.1854]	[0.1510]		
	{0.2976}	{0.2165}		
Dep. var. mean control (percentile)	45	45	45	45
% change	3.00%	2.43%	1.25%	2.08%
Electoral precinct FE	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Municipal × Date FE	Yes	Yes	No	No
IPW	No	Yes	Yes	No
Observations	2,496,736	2,496,736	2,496,736	2,496,736
Electoral precincts	56,744	56,744	56,744	56,744
Dates	44 days	44 days	44 days	44 days
R^2	0.983	0.984		
q-value $H0 : \beta \neq \beta_{DID}$		0.323	0.024	0.145
q-value $H0 : \beta \neq \beta_{IPW-DID}$			0.029	0.323
q-value $H0 : \beta \neq \beta_{DR-DID}$				0.001

Notes: Static DID using specification 1. The dependent variable is the seven-day moving average mobility percentile or rank at the electoral section-day level. pro-president indicator equal to one if the electoral section AMLO vote share is above the mean (51.28%). After March 14, 2020, indicator equal to one if the date is after the JNSD announcement. DID uses standard OLS. IPW-DID uses weighted OLS with entropy balancing weights Hainmueller (2012).. DR-DID stands for Doubly Robust DID using Sant'Anna and Zhao (2020). SDID stands for Synthetic DID using Arkhangelsky et al. (2021). Standard errors at the default level by each software in parenthesis: for columns 1 and 2, it is at the electoral section level; for column 3 it is the analytical standard error (Sant'Anna and Zhao, 2020); for column 4 is the jackkniffe standard error Arkhangelsky et al. (2021). Clustered standard errors at the municipal level in box brackets. Conley (1999) standard errors using 10 km cutoffs in curly brackets. Hypothesis testing q-values constructed using the most conservative standard errors for each estimate and Anderson (2008).

Table A.2: IPW-DID: COVID-19 at municipal level

	Tests per 100k	Cases per 100k	Deaths per 100k	Positivity rate	Case-fatality rate
	(1)	(2)	(3)	(4)	(5)
pro-president × After March 16, 2020	0.2143	0.3220	0.1933	0.4145	0.1717
	(0.1143)	(0.0926)	(0.0789)	(0.1027)	(0.0589)
	[0.1269]	[0.0643]	[0.0576]	[0.0769]	[0.0289]
Dep. var. mean control	1.050	0.252	0.0346	0.040	0.006
Change in levels	0.250	0.096	0.007	0.021	0.001
Municipal FE	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes
State × Date FE	Yes	Yes	Yes	Yes	Yes
Municipal lockdowns	Yes	Yes	Yes	Yes	Yes
IPW	Yes	Yes	Yes	Yes	Yes
Observations	183,770	183,770	183,770	183,770	183,770
Municipalities	1,955	1,955	1,955	1,955	1,955
Dates	94 days	94 days	94 days	94 days	94 days
R^2	0.73307	0.69230	0.58094	0.70366	0.58113

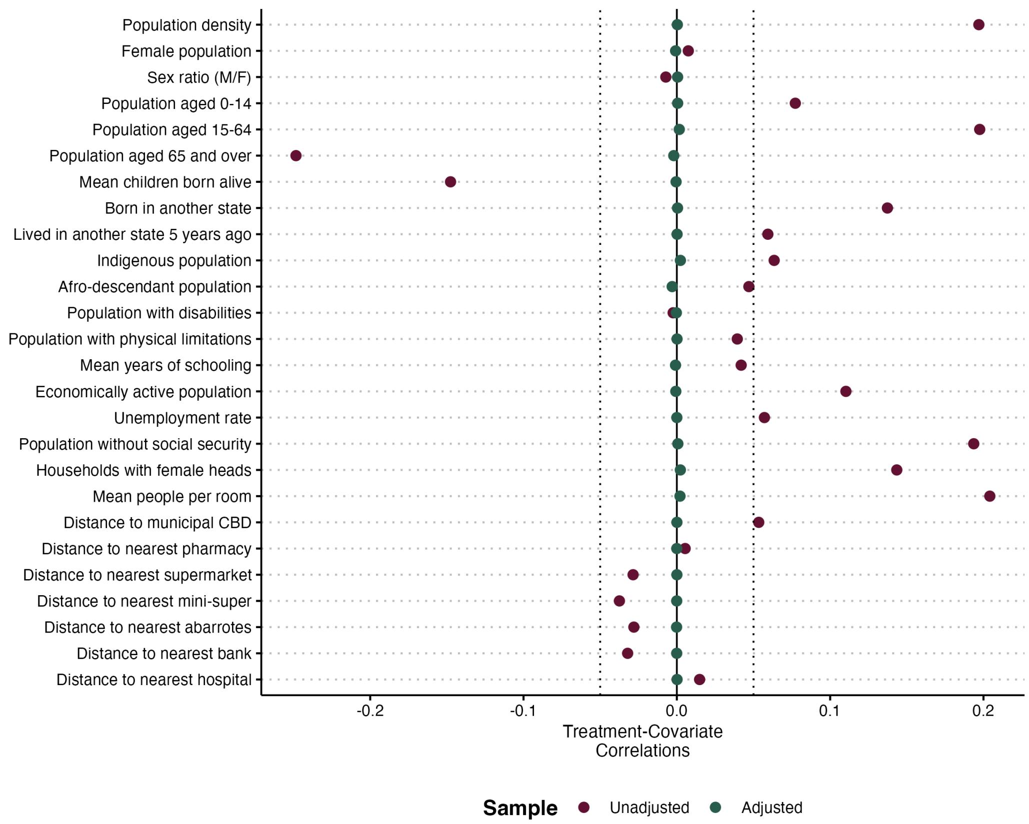
Notes: Static IPW-DID using specification 2 and Inverse Probability Tilting weights Hainmueller (2012). The dependent variable is the seven-day moving average of each COVID-19 indicator at the municipal-day level. We use a log-transformation shutting off the extensive margin following Chen and Roth (2023). Estimates in log-points. pro-president indicator equal to one if the municipal AMLO vote share is above the mean (50.79%). After March 14, 2020, indicator equal to one if the date is after the JNSD announcement. Standard errors at the municipal level in parenthesis. Conley (1999) standard errors using 140 km cutoffs in curly brackets.

Table A.3: SAR: COVID-19 at municipal level

	Tests per 100k	Cases per 100k	Deaths per 100k	Positivity rate	Case-fatality rate
	(1)	(2)	(3)	(4)	(5)
pro-president × After March 16, 2020	0.060	0.293	0.151	0.394	0.162
	(0.025)	(0.022)	(0.020)	(0.022)	(0.014)
ρ	0.096	0.228	0.190	0.217	0.224
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Dep. var. mean control	1.050	0.252	0.0346	0.040	0.006
Municipal FE	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes
State × Date FE	Yes	Yes	Yes	Yes	Yes
Municipal lockdowns	Yes	Yes	Yes	Yes	Yes
IPW	Yes	Yes	Yes	Yes	Yes
Observations	183,770	183,770	183,770	183,770	183,770
Municipalities	1,955	1,955	1,955	1,955	1,955
Dates	94 days	94 days	94 days	94 days	94 days

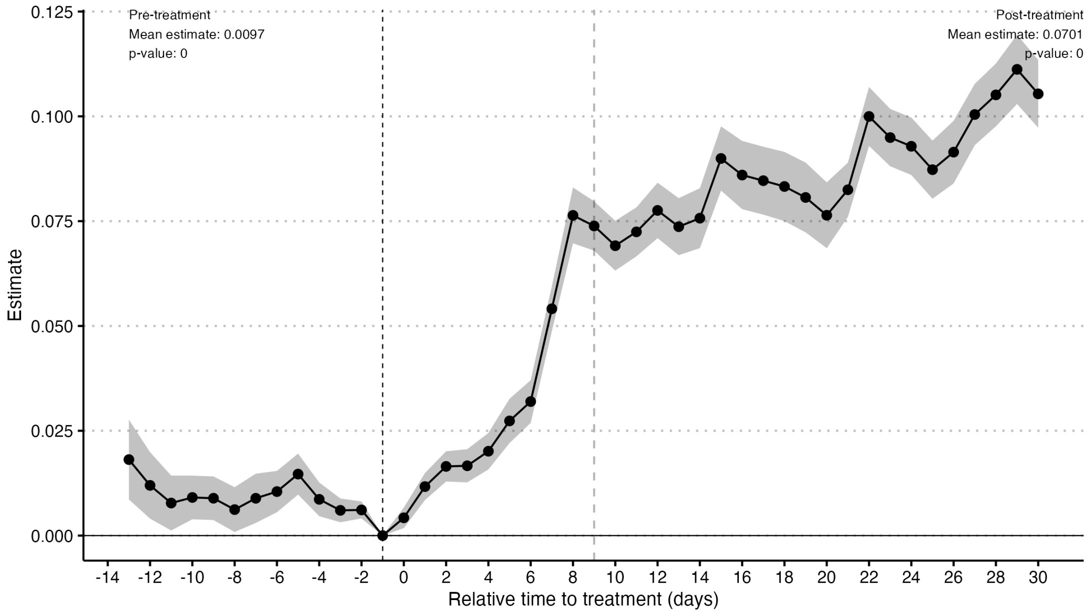
Notes: Static Spatial Autoregressive Model using the econometric specification in Table 2, entropy balancing weights Hainmueller (2012), and Mínguez et al. (2020) semiparametric estimation method. The dependent variable is the seven-day moving average of each COVID-19 indicator at the municipal-day level. We use a log-transformation shutting off the extensive margin following Chen and Roth (2023). Estimates in log-points. pro-president indicator equals one if the municipal AMLO vote share is above the mean (50.79%). After March 14, 2020, indicator equals one if the date is after the JNSD announcement. Standard errors in parenthesis.

Figure A.2: Balance in covariates at electoral section before and after IPW



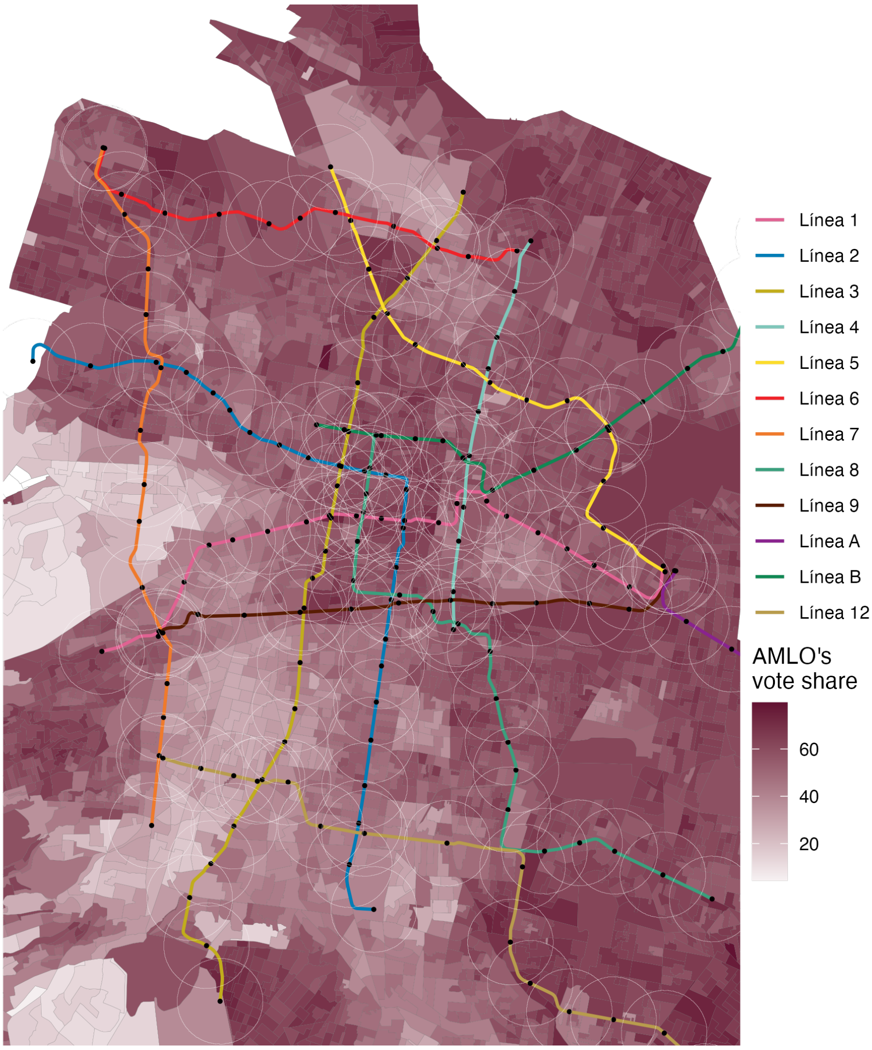
Notes: Balance on best AMLO vote share predictors at electoral section level, selected through LASSO. The y-axis shows different covariates at the electoral section level. The x-axis shows the correlation between AMLO vote share and each covariate. Red dots show unadjusted correlations. Green dots shows correlations adjusted after IPW using entropy balancing weights (Hainmueller, 2012). AMLO vote share at the electoral section level as per INE (2018). Pre-treatment out-of-home mobility represents the mobility indicators before March 14, 2020, as per UNDP-GRANDATA (2020). Socio-economic characteristics at the electoral section level as per INEGI (2021). Distance to different amenities are measured by the electoral section centroid to the nearest economic unit as per INEGI (2020*a*).

Figure A.3: Out-of-home mobility by AMLO vote share at electoral section



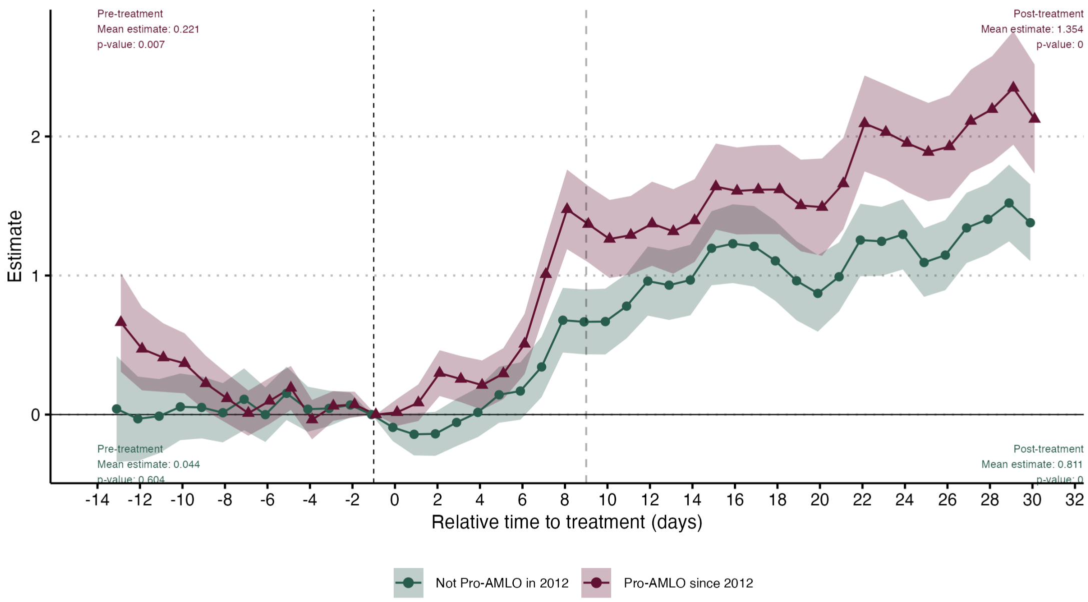
Notes: Event study using specification 1 and IPW-DID results using Hainmueller (2012) entropy balancing weights for nationwide out-of-home mobility where the dependent variable is the seven-day moving average mobility percentile or rank at the electoral section-day level. The treatment is the AMLO vote share at the electoral section level. The period before the JNSD policy announcement, March 14, 2020, is normalized to zero at $t = -1$, coinciding with the first dashed line. The second dashed line represents March 23, where social distancing begins. Confidence intervals are at 95 percent using standard errors clustered at the electoral section level. The annotations in the top-left (top-right) indicate the mean pre-treatment (post-treatment) estimate and respective joint significance p-value.

Figure A.4: Mexico City Metro stations and electoral section's AMLO vote share

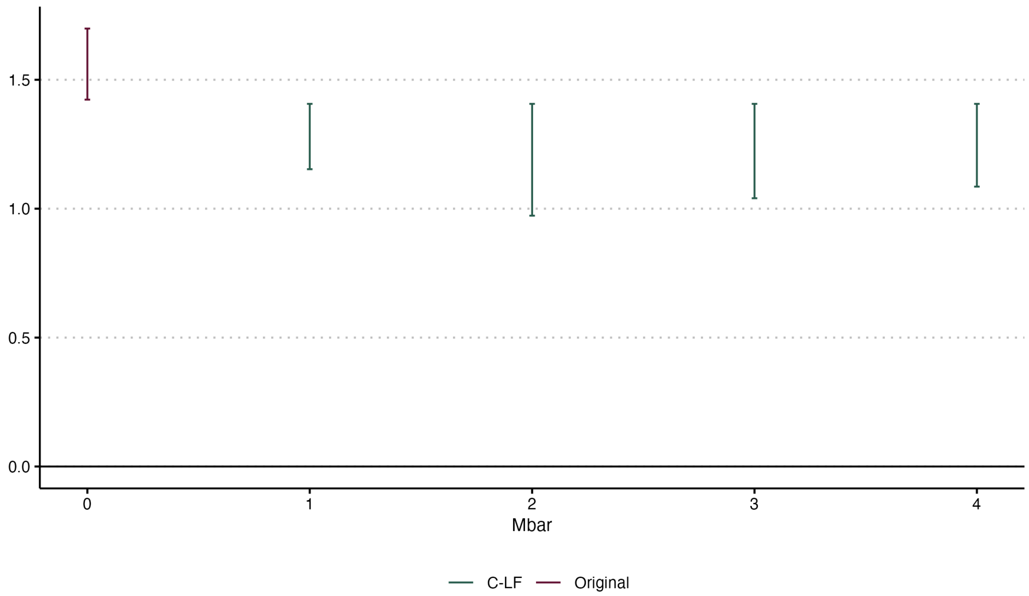


Notes: Based on ADIP and SEMOVI (2024) Mexico City metro lines, stations and station inflows, and INE (2018) data on 2018 presidential election AMLO vote share at the electoral section leve. The color lines represent the twelve metro lines in Mexico City. Each black dot represents a metro station. The white circle around each metro station represent a one-kilometer buffer around each station. The colored polygons represent Mexico City electoral sections and its respective 2018 AMLO vote share.

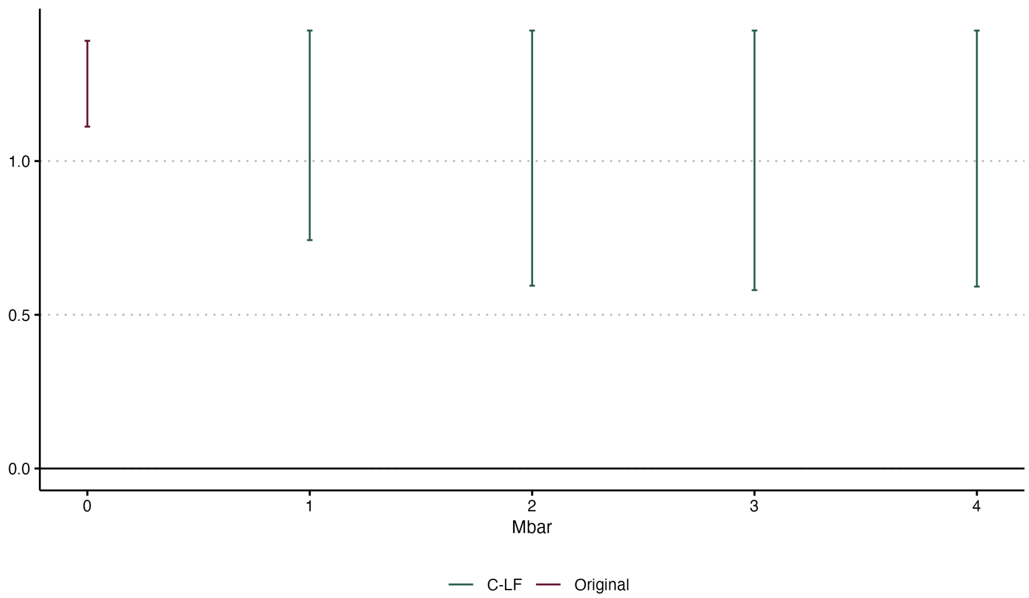
Figure A.5: Out-of-home mobility for pro-president geographies in 2012 and 2018



Notes: Event study using specification 1 and IPW-DID results using Hainmueller (2012) entropy balancing weights for nationwide out-of-home mobility where the dependent variable is the seven-day moving average mobility percentile or rank at the electoral section-day level. The treatment for the red triangles equals one if the electoral sections have been pro-president since 2012. This criterion is met if AMLO's vote share for the 2012 election was above the mean for that election and if his vote share for the 2018 election was also above the mean for that election. The treatment for the green dots equals one if the electoral sections where not pro-president in 2012 but they were by 2018. This criterion is met if AMLO's vote share for the 2012 election was below the mean for that election and if his vote share for the 2018 election was above the mean for that election. The period before the JNSD policy announcement, March 14, 2020, is normalized to zero at $t = -1$, coinciding with the first dashed line. The second dashed line represents March 23, where social distancing begins. Confidence intervals are at 95 percent using standard errors clustered at the electoral section level. The annotations in the top-left (top-right) indicate the mean pre-treatment (post-treatment) estimate and respective joint significance p-value.



(a) DID

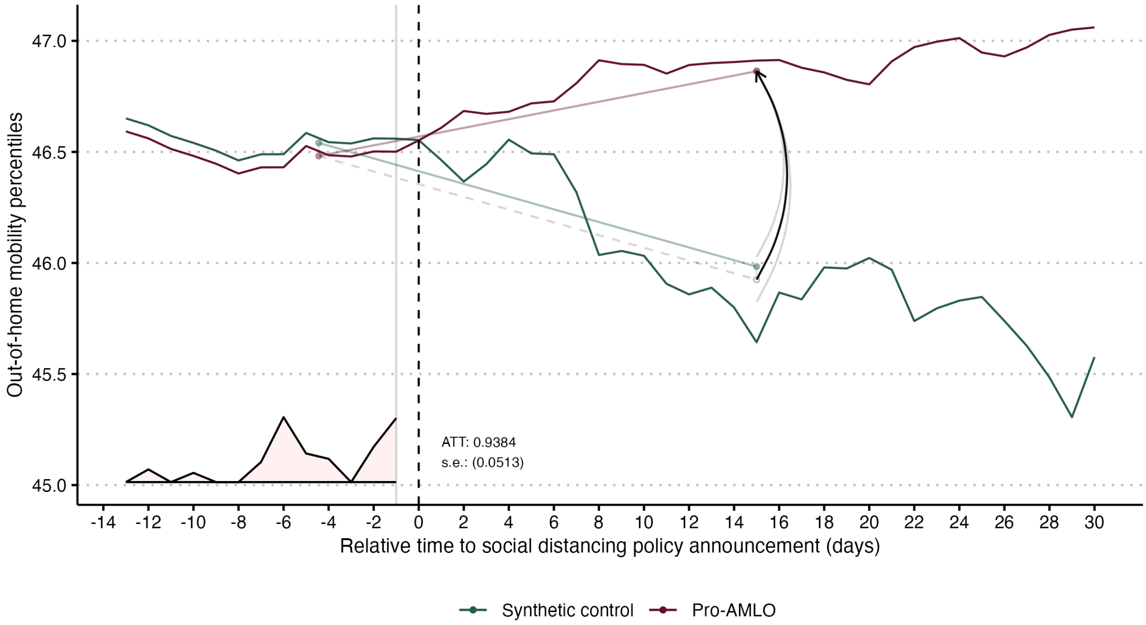


(b) IPW-DID

Figure A.6: Rambachan and Roth (2023) sensitivity bounds for $\beta_{\tau=7}$

Notes: Rambachan and Roth (2023) relative magnitude sensitivity bounds for our nationwide out-of-home mobility estimates nine days after the JNSD announcement, $\beta_{\tau=9}$. We impose a decreasing monotonicity restriction. Panel (a) shows sensitivity bounds for our $\beta_{\tau=9}$ DID estimate. Panel (a) shows sensitivity bounds for our $\beta_{\tau=9}$ IPW-DID estimate. The x-axis represents the relative size of the max violation in the pre-treatment period, Mbar. The y-axis represents the $\beta_{\tau=9}$ estimates confidence intervals under different Mbar values.

Figure A.7: Arkhangelsky et al. (2021) 2x2 DID diagram

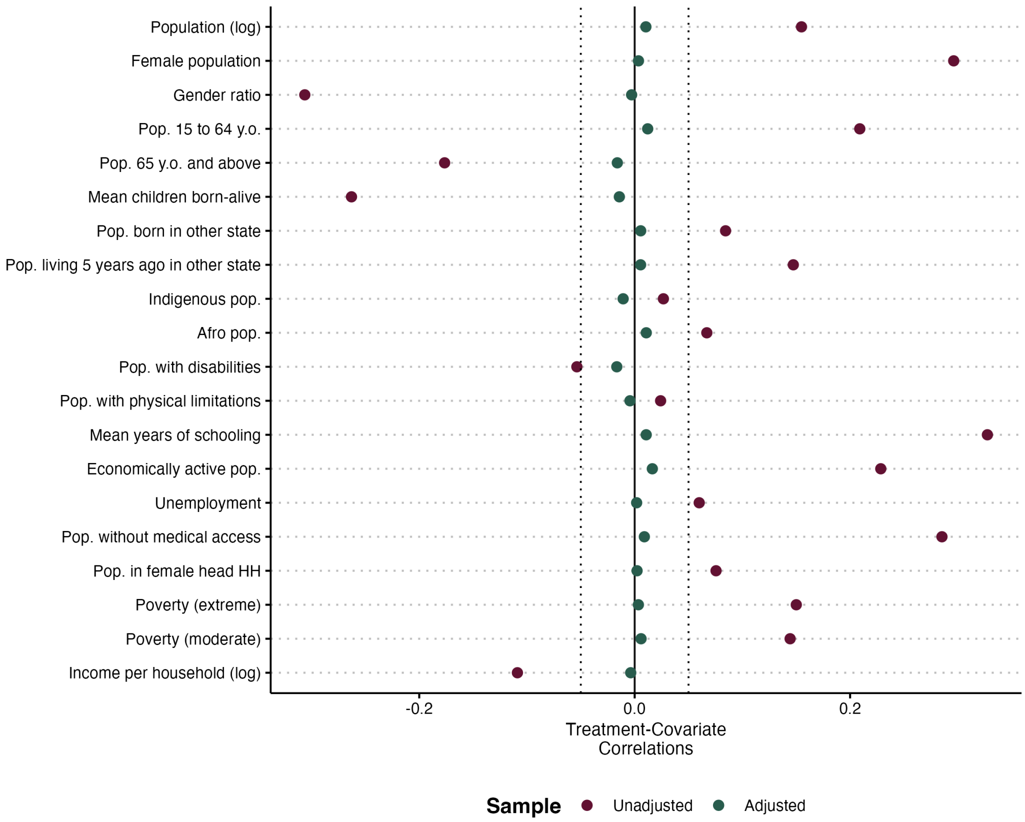


Notes: Synthetic Difference-in-Difference 2x2 diagram as per Arkhangelsky et al. (2021). The x-axis represents the relative time in days to the JNSD announcement (March 14, 2020). The y-axis represents the seven-day moving average mobility percentile or rank at the electoral section-day level. The red line represents the average seven-day moving average mobility percentile or rank for pro-president electoral section, where AMLO vote share is above the mean (51.28%). The green line represents the synthetic control using optimal time and unit weights. The bottom label represents the SDID ATT and standard error using the jackknife procedure.

Figure A.8: Out-of-home mobility: Municipal level indicators

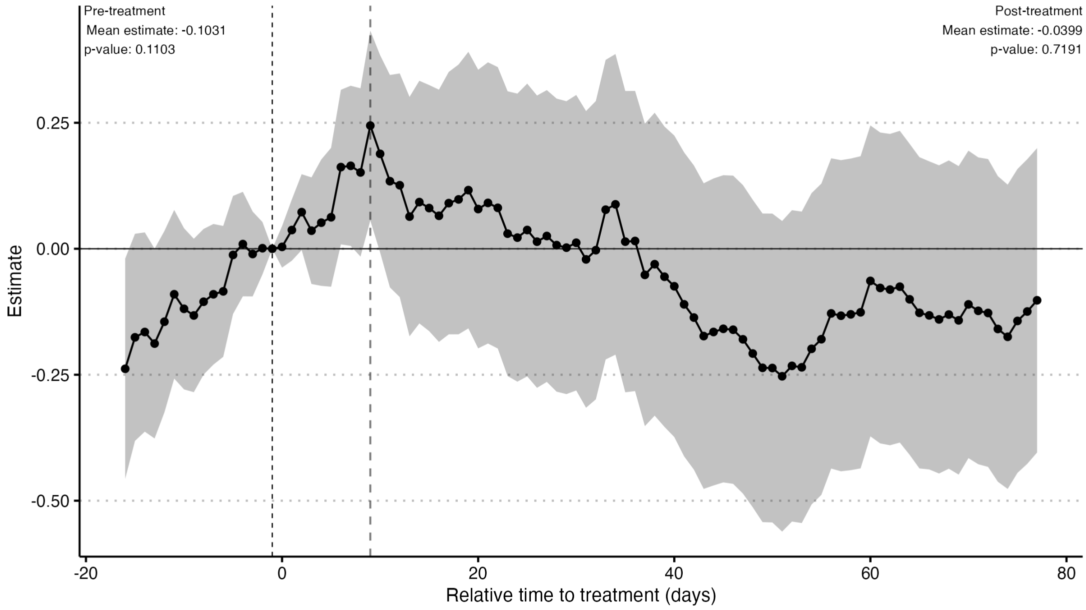
Notes: UNDP-GRANDATA municipal mobility indicator. National mean weighted by municipal population. The mobility indicator compares the municipal level of movement with respect to March 2, 2020. The first solid black line represents the

Figure A.9: Balance in covariates at municipal level before and after IPW



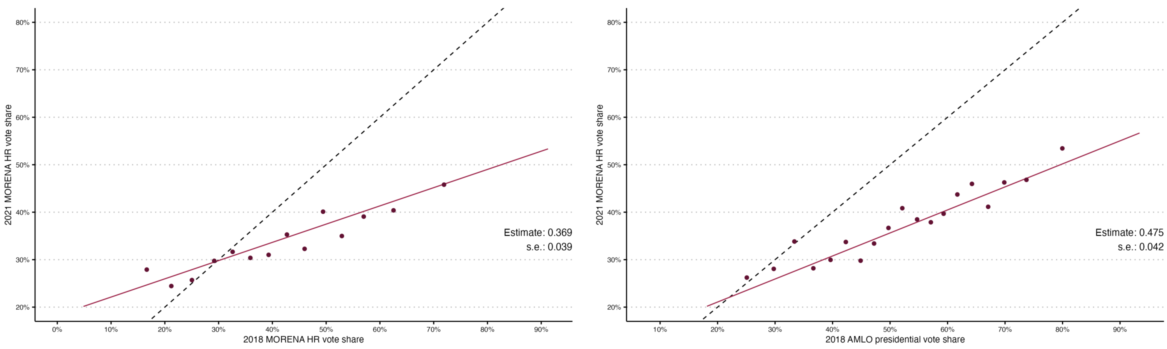
Notes: Balance on best AMLO vote share predictors at municipal level, selected through LASSO. The y-axis shows different covariates at the municipal level. The x-axis shows the correlation between AMLO vote share and each covariate. Red dots show unadjusted correlations. Green dots shows correlations adjusted after IPW using entropy balancing weights (Hainmueller, 2012). AMLO vote share at the municipal level as per INE (2018). Socio-economic characteristics at the municipal level aggregating those at the electoral section level as per INEGI (2021).

Figure A.10: Testing per hundred thousand people



Notes: Event studies using specification 2 and IPW-DID results using Hainmueller (2012) entropy balancing weights. The x-axis represents the relative time in days to the JNSD policy announcement (March 14, 2020). The y-axis the daily number of test per hundred thousand inhabitants. The treatment is equal to one if the municipal AMLO vote share is above the mean (51.28%). The period before the JNSD policy announcement , March 14, 2020, is normalized to zero at $t = -1$ coinciding with the first dashed line. The second dashed line represents March 23, 2020, the social distancing beginning. Confidence intervals are at 95 percent using standard errors clustered at the municipal level. The annotations in the top-left (top-right) indicate the mean pre-treatment (post-treatment) estimate and respective joint significance p-value.

Figure A.11: Electoral accountability

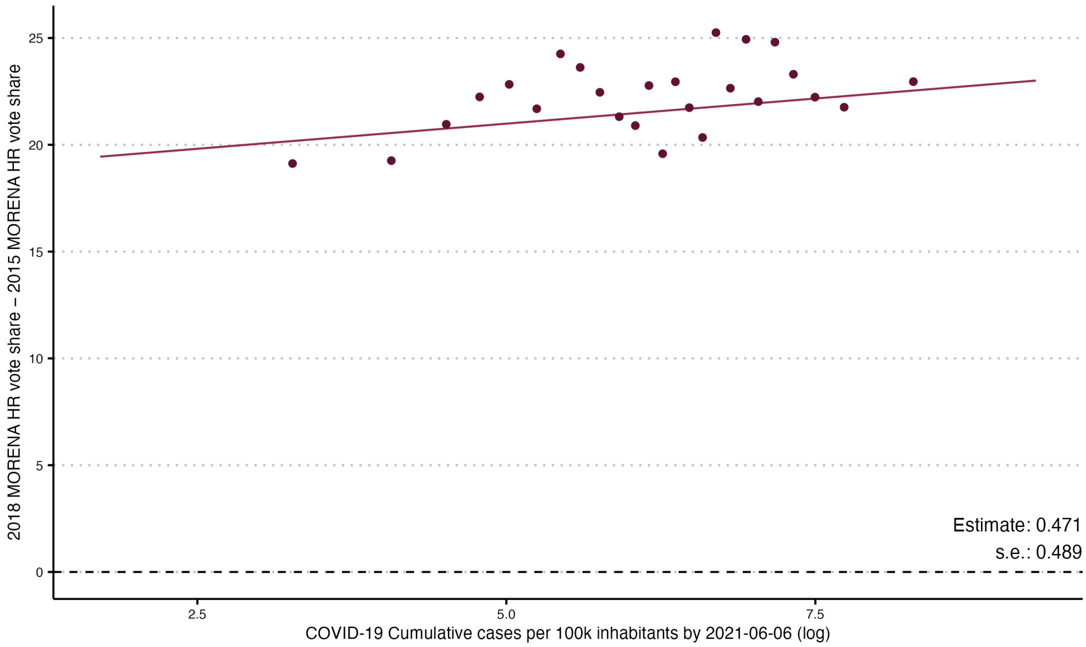


(a) 2021 vs. 2018 MORENA's House of representatives vote share

(b) 2021 MORENA's House of representatives vote share vs. 2018 AMLO's presidential vote share

Notes: Binscatter plots using Cattaneo et al. (2024). The y-axis represents MORENA's 2021 House of Representatives vote share at the municipal level. For panel (a), the x-axis represents MORENA's 2018 House of Representatives vote share at the municipal level. For panel (b), the x-axis represents AMLO's 2018 presidential vote share at the municipal level. The dashed line represents the identity map. The label in the bottom-right shows the correlation estimate accounting for state fixed effects and turnout for each election. Standard errors clustered at the municipal level.

Figure A.12: Electoral accountability: Placebo



Notes: Binscatter plots generated using Cattaneo et al. (2024). The x-axis represents the (log) cumulative COVID-19 cases per 10,000 by June 6, 2021—the day before the 2021 mid-term election. The y-axis shows the change in MORENA's House of Representatives vote share at the municipal level between 2018 and 2015. The label in the top-right corner provides the correlation estimate, adjusted for state fixed effects and municipal turnout in both elections. Standard errors are clustered at the municipal level.

A.1 Municipal level empirical and identification strategy

For the results in Sections 5.1.2 and 5.2, we adapt the event-study specification in Equation 1 for the municipal-day level:

$$y_{mt} = \alpha_m + \gamma_t + \sum_{\tau=-k}^{K} \beta_\tau \mathbb{1}(\textit{pro-president}_m) \cdot \mathbb{1}(t=\tau) + \Gamma' \mathbf{X}_{mt} + \varepsilon_{mt} \tag{2}$$

where y represents the outcome (i.e. mobility change, new COVID-19 cases per hundred thousand people) in municipality m at day t. The terms α_m and γ_t represent municipal and day fixed effects. The term $\mathbb{1}(\textit{pro-president}_i)$ represents the treatment, which is an indicator variable taking the value of one if the AMLO vote share is above the mean (51.28%). The indicator variable $\mathbb{1}(t=\tau)$ equals to one if the day t is k periods away from March 14, the JNSD announcement day.

We include municipal-day indicators on social distancing, $\mathbf{X}_{mt}$, as per Enríquez et al. (forthcoming). These indicators include bans on alcohol sales; closure of "non-essential" businesses; restrictions on mobility via nighttime curfews; bans and restrictions to mass gatherings and other type of social events where multitudes of people reunite; economic and/or criminal sanctions for not complying with social distancing measures; mandatory use of face masks; bans on visits to public spaces; restrictions to private and public transportation; and points of inspection where public health professionals observe and ask travelers for symptoms, perform temperature checks, collect travel information and contact history, and provide information about the signs and symptoms of COVID-19. We use LASSO regression to select the social distancing policies that predict the best changes in municipal mobility, which are the sanctions and control points.