

Zuchowski, David

Working Paper

Pro-immigrant legislation and financial inclusion: The effects of sanctuary policies on the mortgage market

Ruhr Economic Papers, No. 1053

Provided in Cooperation with:

RWI – Leibniz-Institut für Wirtschaftsforschung, Essen

Suggested Citation: Zuchowski, David (2023) : Pro-immigrant legislation and financial inclusion: The effects of sanctuary policies on the mortgage market, Ruhr Economic Papers, No. 1053, ISBN 978-3-96973-222-9, RWI - Leibniz-Institut für Wirtschaftsforschung, Essen, <https://doi.org/10.4419/96973222>

This Version is available at:

<https://hdl.handle.net/10419/280425>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

David Zuchowski

Pro-immigrant Legislation and Financial Inclusion: The Effects of Sanctuary Policies on the Mortgage Market

Imprint

Ruhr Economic Papers

Published by

RWI – Leibniz-Institut für Wirtschaftsforschung

Hohenzollernstr. 1-3, 45128 Essen, Germany

Ruhr-Universität Bochum (RUB), Department of Economics

Universitätsstr. 150, 44801 Bochum, Germany

Technische Universität Dortmund, Department of Economic and Social Sciences

Vogelpothsweg 87, 44227 Dortmund, Germany

Universität Duisburg-Essen, Department of Economics

Universitätsstr. 12, 45117 Essen, Germany

Editors

Prof. Dr. Thomas K. Bauer

RUB, Department of Economics, Empirical Economics

Phone: +49 (0) 234/3 22 83 41, e-mail: thomas.bauer@rub.de

Prof. Dr. Ludger Linnemann

Technische Universität Dortmund, Department of Business and Economics

Economics – Applied Economics

Phone: +49 (0) 231/7 55-3102, e-mail: Ludger.Linnemann@tu-dortmund.de

Prof. Dr. Volker Clausen

University of Duisburg-Essen, Department of Economics

International Economics

Phone: +49 (0) 201/1 83-3655, e-mail: vclausen@vwl.uni-due.de

Prof. Dr. Ronald Bachmann, Prof. Dr. Manuel Frondel, Prof. Dr. Torsten Schmidt,

Prof. Dr. Ansgar Wübker

RWI, Phone: +49 (0) 201/81 49-213, e-mail: presse@rwi-essen.de

Editorial Office

Sabine Weiler

RWI, Phone: +49 (0) 201/81 49-213, e-mail: sabine.weiler@rwi-essen.de

Ruhr Economic Papers #1053

Responsible Editor: Ronald Bachmann

All rights reserved. Essen, Germany, 2023

ISSN 1864-4872 (online) – ISBN 978-3-96973-222-9

The working papers published in the series constitute work in progress circulated to stimulate discussion and critical comments. Views expressed represent exclusively the authors' own opinions and do not necessarily reflect those of the editors.

Ruhr Economic Papers #1053

David Zuchowski

**Pro-immigrant Legislation and Financial
Inclusion: The Effects of Sanctuary Policies
on the Mortgage Market**

Bibliografische Informationen der Deutschen Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available on the Internet at <http://dnb.dnb.de>

RWI is funded by the Federal Government and the federal state of North Rhine-Westphalia.

<http://dx.doi.org/10.4419/96973222>

ISSN 1864-4872 (online)

ISBN 978-3-96973-222-9

David Zuchowski¹

Pro-immigrant Legislation and Financial Inclusion: The Effects of Sanctuary Policies on the Mortgage Market

Abstract

Does pro-immigrant legislation improve financial inclusion? This paper examines how granting safe havens for immigrants impacts Hispanics' financial behavior and discrimination against them in the U.S. mortgage market. To identify the effect, I take advantage of the staggered implementation of sanctuary policies across counties between 2010 and 2021. Using an event study approach, I find that sanctuary policies increase the demand for mortgages among Hispanics. I also find evidence of a decrease in the rejection rates of mortgage loans requested by Hispanics in counties that implemented sanctuary policies. Politically volatile and Republican-leaning states are the main drivers of the reduction in this potential discriminatory behavior. Taken together, the findings underscore the importance of inclusive public policies in promoting financial inclusion of immigrants.

JEL-Codes: G21, J15, J68, K37, R21

Keywords: Sanctuary policies; immigration policy; mortgages; financial inclusion

November 2023

¹ David Zuchowski, RWI and University of Duisburg-Essen. – I am grateful to Amanda Agan, Ronald Bachmann, Julia Bredtmann, Roman Klauser, Sebastian Otten, and RWI internal seminars for helpful comments and suggestions. I also thank Ferenc Ackermann and Rachel Kühn for excellent research assistance. I declare to have no relevant or material financial interests that relate to the research described in this paper. – All correspondence to: David Zuchowski, RWI, Hohenzollernstr. 1-3, 45128 Essen, Germany, e-mail: david.zuchowski@rwi-essen.de

1 Introduction

Policies aimed at deporting irregular immigrants are on the rise. Amid the globally increasing number of refugees, policymakers are intensifying their focus on strengthening immigration enforcement. For instance, the United States has recently resumed deportations to Venezuela under the Biden administration (U.S. Department of Homeland Security, 2023) and similar patterns are emerging globally.¹ Overall, in the United States, which is estimated to be home to more than 11 million unauthorized immigrants, nearly 5 million deportations have been carried out since 2008 (Migration Policy Institute, 2023).

Against this background, a counteractive movement has emerged advocating the introduction of local sanctuary policies. These policies comprise pro-immigrant laws and regulations that limit local cooperation with the U.S. Immigration and Customs Enforcement (ICE), the federal immigration enforcement authority.² This has triggered a heated political debate. Opponents of the sanctuary policy argue that such measures make it more difficult for federal agents to apprehend undocumented immigrants, and therefore potentially jeopardize public safety. Proponents argue that providing safe havens for immigrants helps to maintain trust among immigrant communities and local law enforcement.

This paper examines the impact of sanctuary policies on the financial inclusion of Hispanics.³ In particular, I use the staggered implementation of sanctuary policies across the U.S. counties to analyze their impact on the financial behavior of Hispanics and discriminatory behavior against them in the mortgage market. The analysis in this paper focuses on the financial inclusion of Hispanics in the mortgage market for several

¹For instance, the United Kingdom may soon detain and deport unauthorized arrivals without the chance to seek asylum (UK Parliament, 2023), while Germany aims to ensure faster deportations of individuals who have not been granted refugee status (Federal Ministry of the Interior, 2023), and Peru recently enacted a new law to facilitate the expulsion of irregular immigrants (Estado Peruano, 2023).

²For example, in Middlesex County (New Jersey), ICE detainers are only honored if an individual is charged with a severe crime, identified as a known gang member, or has received a final order of removal from ICE, whereas Hall County (Nebraska) does not honor ICE detainers without a warrant in general (ICE, 2017).

³In this paper, I consider as “Hispanics” all individuals that during the mortgage application process were assigned the ethnicity “Hispanic or Latino”, irrespective of their native language, nationality, or country of origin.

reasons. Homeownership remains one of the most important ways for households, especially low-income households, to accumulate wealth (Wainer and Zabel, 2020) and serves as an indicator of financial security (Goodman and Mayer, 2018). An examination of the behavior of mortgage lenders and minority borrowers is therefore necessary to understand this potential tool for promoting financial inclusion.⁴ Furthermore, the focus on Hispanics in the United States offers insights from a significant and growing minority group that encounters challenges in achieving financial inclusion.

The Hispanic population is the largest racial or ethnic minority in the United States, accounting for around 19 percent of the total population (U.S. Census Bureau, 2023). Notably, Hispanics account for around 80 percent of the estimated over 11 million undocumented immigrant population in the United States (Migration Policy Institute, 2023), making them and their families the most likely to be affected by sanctuary policies. Furthermore, approximately 30 percent of Hispanics either do not use or use only limited banking services, compared to 13 percent among non-Hispanic whites. Hispanics have almost two times higher credit rejection rates, and the homeownership rate among individuals between 30 to 59 is around 20 percentage points lower among Hispanics than non-Hispanic whites (Federal Reserve Board, 2022).

There are several reasons one might expect a relationship between the introduction of sanctuary policies and the outcomes of Hispanics in the local mortgage markets. By limiting local cooperation with federal immigration authorities, such pro-immigrant laws signal strong local acceptance of irregular immigrants and their families. This increase in perceived security, in turn, could increase the demand for mortgages among Hispanics who now feel safer and more welcomed in such communities. However, if counties introducing sanctuary laws are already well-known to be pro-immigrant, this signaling effect may be negligible. Furthermore, the implementation of sanctuary policies could potentially

⁴The importance of financial inclusion has been highlighted in several academic studies. For empirical evidence, see, for example, Burgess and Pande (2005), Beck *et al.* (2007), and Bruhn and Love (2014) on income inequality and poverty reduction, Aguila *et al.* (2016) and Ajefu *et al.* (2020) on mental health, Mani *et al.* (2013) on decision making, Garg *et al.* (2023) on entrepreneurship, Banerjee *et al.* (2015) on firm creation, as well as Ahamed and Mallick (2019) and Ahamed *et al.* (2021) on bank stability and efficiency.

decrease the demand for mortgages if Hispanics are hesitant to settle in communities that might attract (further) irregular immigrants.

Similar reasoning applies to the rejection rates of mortgage loan applications requested by Hispanics. The local signal of a pro-immigrant attitude might lead to a decrease in rejection rates, for example, through perceived social pressure or a decrease in the perceived default probability. However, if counties introducing sanctuary laws are already known to be pro-immigrant, the signaling effect might again be negligible. Furthermore, it might also lead to an increase in rejection rates as a result of a backlash from inhabitants with anti-immigrant sentiments, potentially intensifying their discriminatory practices in local financial markets. Moreover, changes in the composition of applicants could also influence rejection rates. Consequently, the direction of the potential impact of sanctuary policies on outcomes for Hispanics in the mortgage market is not clear.

To empirically examine the impact of sanctuary policies on the outcomes of Hispanics in the local mortgage markets, I take advantage of loan-level data from the Home Mortgage Disclosure Act available for the period 2010 to 2021. I merge it with further administrative data on the county level and employ an event study approach. For identification, I exploit plausibly exogenous variation in the timing of the introduction of sanctuary policies across counties. To overcome concerns arising from staggered treatment implementation (Goodman-Bacon, 2021), I employ the dynamic difference-in-differences approach developed by Callaway and Sant’Anna (2021).

The results indicate that the implementation of sanctuary policies increases the local demand for mortgages among Hispanics. Notably, although imprecisely estimated, the long-term impact is particularly pronounced in counties in Republican-leaning states. There is also evidence of a decrease in the rejection rates of mortgage loan applications from Hispanic applicants. This reduction in potentially discriminatory practices is particularly pronounced in Republican-leaning states and in so-called swing states, which are characterized by their lack of a clear political leaning. Overall, the results show a clear pattern: providing safe havens for immigrants can contribute to the financial inclusion of immigrants in the local mortgage markets.

By providing evidence on the impact of pro-immigrant laws that establish safe havens for immigrants, this paper contributes to the research on the effects of immigration policies and immigration enforcement. Asad (2020) finds that although the majority of Hispanics living in the United States are not directly in fear of being deported themselves, deportation fears have increased substantially since the 2016 presidential elections due to concerns for their families and other members of their communities. Recent studies show, for example, that the intensification of interior immigration enforcement increases the probability of school dropout and grade repetition among Hispanic youth (Amuedo-Dorantes and Lopez, 2015, 2017a) and decreases the electoral participation of U.S. citizens in households with at least one irregular migrant as a family member (Amuedo-Dorantes and Lopez, 2017b). Conversely, programs such as the Deferred Action for Childhood Arrivals (DACA), which offers (temporal) protection from deportation, improve the mental health of children whose parents are irregular immigrants (Hainmueller *et al.*, 2017). Further studies show that DACA increases insurance coverage (Giuntella and Lonsky, 2020), enhances immigrants' sleep patterns (Giuntella *et al.*, 2021), and leads to more independent housing arrangements for DACA-eligible immigrants (Gihleb *et al.*, 2023). However, we know little about the impact of pro-immigrant laws on financial inclusion.

This paper further contributes to the growing literature evaluating the impact of sanctuary policies by providing first evidence from the mortgage market. Previous studies have focused mainly on the impact of sanctuary policies on crime and have found either no or negative effects.⁵ Hausman (2020), for instance, finds no impact of sanctuary policies on crime. Moreover, when focusing on deportations, the study reveals that providing safe havens in the form of local sanctuary policies decreases the deportations of people with no criminal background by half, while having no impact on deportations of people with violent convictions. In line with these results, Amuedo-Dorantes *et al.* (2022) find that sanctuary policies do not impede immigration enforcement in securing custody of convicted criminals. Consistent with those studies, Otsu (2021) finds no evidence of an increase in

⁵See Martínez *et al.* (2018) for an extensive literature review. Most recent studies include O'Brien *et al.* (2019), Hausman (2020), Otsu (2021), and Manning and Burkhardt (2022).

crime. However, he finds evidence of a decrease in property crime, pointing out an increase in trust between the residents and police as a potential mechanism behind this result. Interestingly, he finds no evidence of an increase in migrant inflows after the introduction of sanctuary policies. Corral (2021) also finds no supporting evidence that sanctuary policies lead to improved educational outcomes for Hispanic undocumented youth. The author emphasizes that the reduction in uncertainty resulting from the counteracted immigration enforcement is insufficient to improve educational outcomes.

Overall, the literature finds rather positive effects of pro-immigrant laws and the restriction of interior immigration enforcement. However, several studies report either no or only negligible effects of sanctuary policies. This study adds to this growing body of literature by providing the first evidence on the impact of sanctuary policies on financial inclusion in the mortgage markets.

The remainder of this paper is organized as follows. Section 2 discusses the empirical strategy and potential identification issues. Section 3 introduces the underlying data. In Section 4, I present and discuss the empirical results, examining their robustness in Section 4.2 and exploring the heterogeneity of effects in Section 4.3. Section 5 concludes.

2 Empirical strategy

To investigate the impact of sanctuary policies on the outcomes of Hispanics in the local mortgage markets, I employ a dynamic difference-in-differences approach. The baseline analysis uses the following specification:

$$y_{ct} = \sum_{\tau} \beta_{\tau} \mathbb{1}(\tau = t - \textit{EnactmentYear}_c) + \delta_c + \gamma_t + \varepsilon_{ct}. \quad (1)$$

Depending on the specification, the outcome variable y_{ct} is either defined as the share of mortgage applications by Hispanics in all mortgage applications in year t in county c , or as the rejection rate of mortgage applications submitted by Hispanics standardized by the rejection rate of mortgage applications submitted by non-Hispanics in year t in county

c .⁶ $EnactmentYear_c$ is the year in which the county c adopts sanctuary policies. β_τ is the coefficient of interest that provides event study estimates of the effect of sanctuary policy introduction on the outcomes of Hispanics on the mortgage market. δ_c and γ_t represent county and year fixed effects, respectively. ε_{ct} is the error term.

For identification, similarly to Otsu (2021), I exploit variation in the timing of the introduction of sanctuary policy. Figure 1 illustrates the rollout of sanctuary policies at the county level in the time frame of the analysis. In the presence of effect heterogeneity, this staggered treatment implementation of sanctuary policies makes a conventional (dynamic) difference-in-differences approach unreliable (Goodman-Bacon, 2021). To address this concern, I employ the (dynamic) difference-in-differences approach developed by Callaway and Sant’Anna (2021).

The (dynamic) difference-in-differences approach requires that the treated and the comparison groups would have followed parallel trends over time in the absence of the treatment. However, counties that decide to implement sanctuary policies are likely to differ from those that do not adopt such policies. Table A1 provides descriptive statistics for both non-sanctuary and sanctuary counties. On average, sanctuary counties, have a higher share of Hispanics, lower homicide rates, and lower unemployment. Most importantly, sanctuary counties are more likely to be governed by the Democratic Party and are more often located in states also governed by Democrats. These differences suggest that sanctuary and non-sanctuary counties are likely to have different development paths.

To address this issue, I use not-yet-treated units, so counties that have not yet been treated but will eventually adopt sanctuary policies, as a comparison group. Early-treated counties are still different from late-treated counties in various socio-economic characteristics, as shown in Table A2. However, they are more similar in terms of their political leanings, which makes the timing of the introduction of sanctuary policies more plausibly exogenous. Importantly, using the event study approach, I find no evidence of parallel trend violation between early and later treated groups. Lastly, the results are

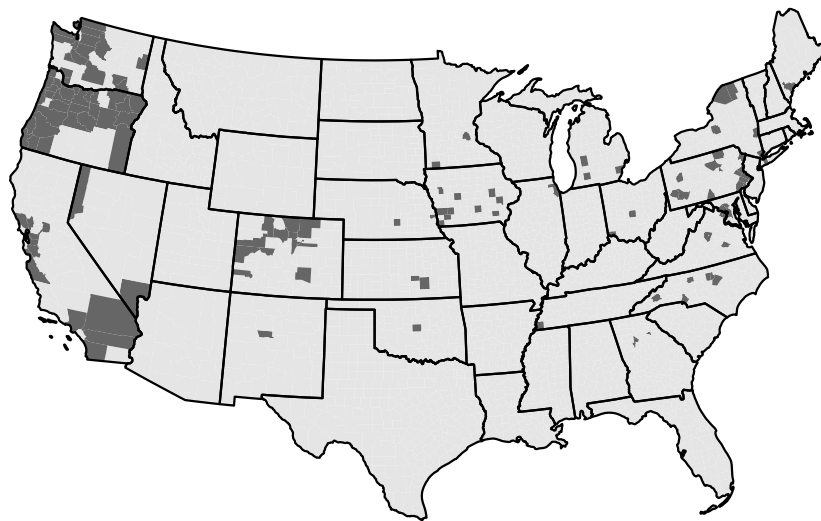
⁶This definition of outcomes allows me to isolate the effect of sanctuary policy introduction on Hispanics from other potential factors that impact both outcomes of Hispanics and non-Hispanics in the local mortgage markets.



(a) 2010



(b) 2015



(c) 2021

Figure 1: ROLLOUT OF SANCTUARY POLICIES ACROSS COUNTIES OVER TIME

Notes: The shading highlights counties that have implemented sanctuary policies at the county level.

robust even when controlling for the observable socio-economic characteristics, thus relying on conditional parallel trends only.

3 Data

This paper relies on panel data that covers the period from 2010 to 2021 on counties within the mainland United States and draws on data from the following data sources.⁷

Mortgage market data is constructed using the information on mortgage applications and loans originated under the Home Mortgage Disclosure Act.⁸ This legislation obligates most mortgage lending institutions to disclose information on mortgage loans they originate or purchase on an annual basis. To construct a yearly panel of U.S. counties, I aggregate individual mortgage-level data on mortgage applications and mortgage loans originated in the primary mortgage market.

The introduction of sanctuary policies implies reduced cooperation with ICE, for example, by impeding the information exchange between the local authorities and the federal immigration officers. However, there is no unilateral definition of sanctuary policies in general. For the analysis in this paper, I draw on data on sanctuary policies at the county level, derived from information provided by the Center for Immigration Studies (2023), FAIR (2017), and public reports from local governments and ICE. Thus, the definition of sanctuary policies in this paper comprises pro-immigrant laws and regulations that limit local cooperation with federal immigration enforcement authorities on the county level.

For robustness checks, I use data on county-specific demographic characteristics, as the share of Hispanics, the share of Black Americans, the share of the elderly population, and the unemployment rate. This data is based on the American Community Survey and is obtained from U.S. Census Bureau (2023). Additionally, data on homicides is gathered

⁷The only exceptions are counties in the state of Oregon, which was excluded from the analysis due to its introduction of sanctuary policy as early as 1987. Thus, the final data set includes 3,067 U.S. counties. The availability of the outcome variables limits the span of the analysis. This results in a final sample size of 36,804 observations.

⁸Most recent data from 2018 to 2021 is obtained from the Federal Financial Institutions Examination Council (FFIEC, 2023), while earlier records are collected from the Consumer Financial Protection Bureau (CFPB, 2023).

from the National Archive of Criminal Justice Data (NACJD, 2023). Furthermore, I use data on local elections at the county level as a control variable and data on federal elections for heterogeneity analysis. This data is retrieved from the MIT Election Lab (2023) and the Federal Election Commission (2023), respectively.

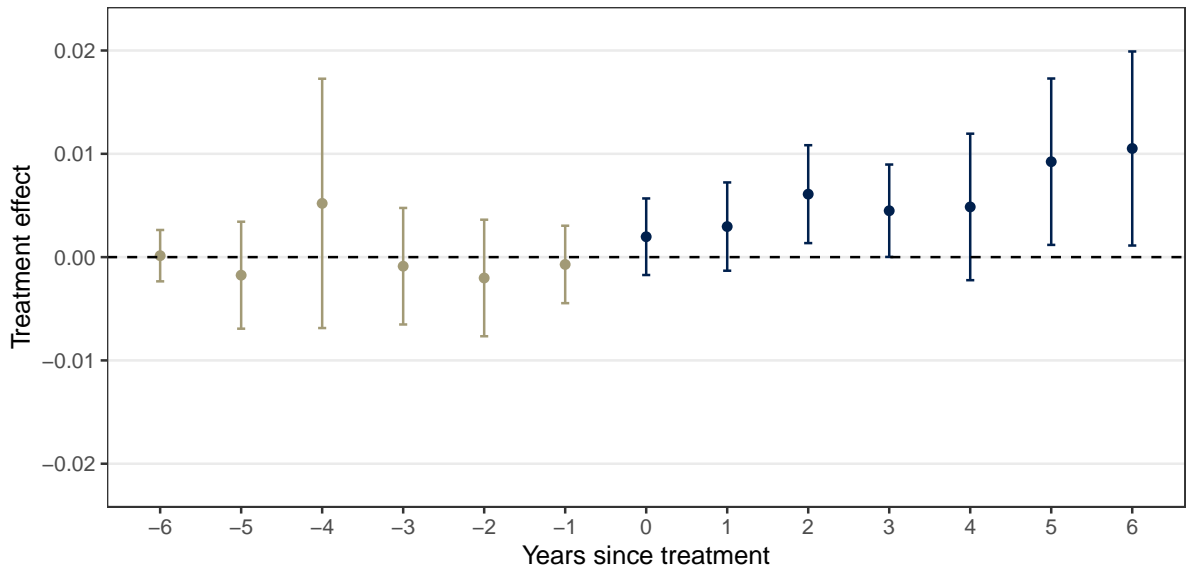
4 Results

4.1 Baseline results

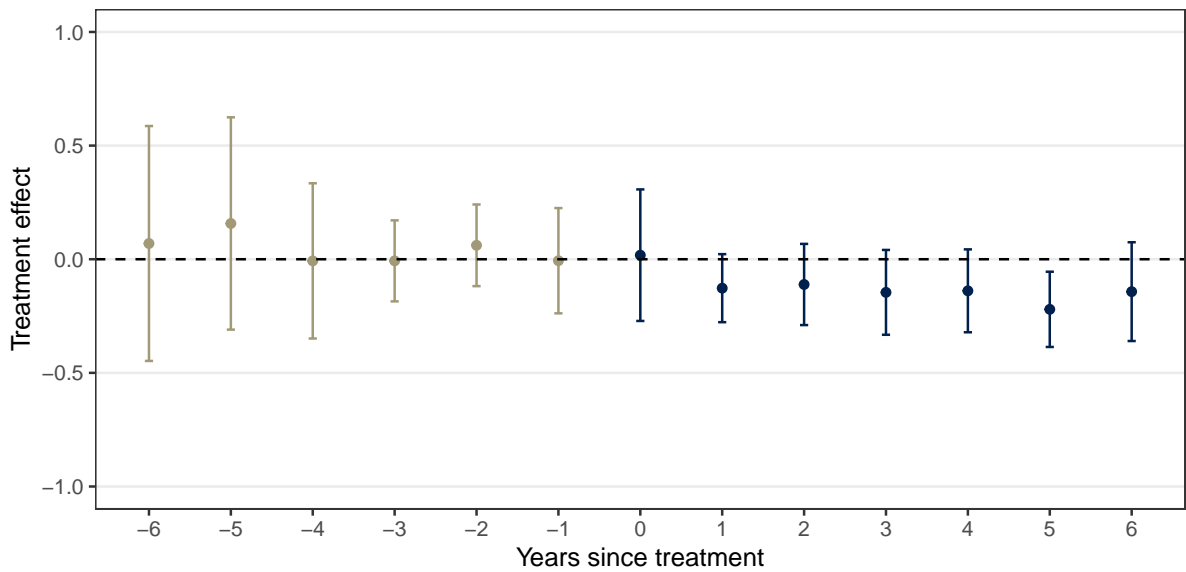
Figure 2 presents the baseline results using dynamic difference-in-differences. I employ the estimation approach developed by Callaway and Sant’Anna (2021) and use not-yet-treated units as comparison groups. Both panels report event study coefficients and their corresponding 95 percent confidence intervals from separate regressions using two different dependent variables.

Figure 2a shows the results with the dependent variable defined as the share of mortgage applications by Hispanics among all mortgage applications, as defined in Section 2. The pre-treatment coefficients are not statistically significant at any conventional level, and there is no observable trend before the adoption of sanctuary policies.⁹ While not always statistically significant at the 5 percent level, the post-treatment coefficients consistently exhibit positive values, indicating a clear pattern of sanctuary policies positively impacting the relative demand for mortgages among Hispanics. This effect seems to intensify over time, starting with an increase of approximately 0.5 percentage points in the initial years and reaching around 1 percentage point in the fifth year after the policy introduction. This substantial rise in the mortgage demand among Hispanics relative to the overall local demand for mortgages (the mean of the outcome variable is 6.6 percent), shows that providing safe havens for immigrants stimulates the demand for mortgages among Hispanics.

⁹However, the point estimate of one pre-treatment coefficient is noticeably high. This can be attributed to an outlier value in Nobles Country, Minnesota. Figure A1a shows the results when excluding this outlier from the analysis.



(a) MORTGAGE DEMAND



(b) MORTGAGE REJECTION

Figure 2: SANCTUARY POLICY ENACTMENT AND THE MORTGAGE MARKET

Notes: The graphs are based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups. Coefficients are depicted with 95% confidence intervals.

Figure 2b shows the results with the dependent variable measuring the mortgage rejection rate of Hispanics relative to the rejection rate of non-Hispanics, as defined in Section 2. Again, pre-treatment coefficients are not statistically significant at any conventional level, and there is no observable trend before the adoption of sanctuary policies. While almost no point estimate is statistically significantly different from zero at the 5 percent level, the post-treatment coefficients consistently exhibit negative values. The lack of statistical significance may be caused by effects going in opposite directions. On one side, the adoption of sanctuary policies may provide a local signal of a pro-immigrant attitude that could lead to a decrease in rejection rates due to perceived social pressure or a decrease in the perceived default probability for Hispanics. However, it may also lead to an increase in anti-immigrant sentiment among inhabitants who disagree with the new policies, resulting in higher rejection rates due to an increase in discriminatory practices in local financial markets. Additionally, changes in the composition of Hispanic applicants could also influence their average rejection rates. As the previous results have shown, the number of Hispanic applicants has increased, which may have led to a higher share of lower-quality applications, potentially driving up the share of rejections. However, the consistently positive point estimate suggests that the positive effect of this pro-immigrant signaling outweighs the potential negative effect resulting from changes in composition or an increase in discriminatory behavior.

Overall, the baseline results show that sanctuary policies have a positive impact on the financial inclusion of Hispanics in the local mortgage markets. In the next two sections, I check the robustness of the baseline results and examine the heterogeneity of the results.

4.2 Sensitivity analyses

I first examine if the results are sensitive to using an alternative comparison group. In the baseline approach, I use the not-yet-treated units as a comparison group, relying on the parallel trends assumption between the treated and not-yet-treated units. Figure A2 in the Appendix shows that the results are robust to the alternative use of the never-treated

units as a comparison group, thus relying on an alternative assumption of parallel trends between treated and never-treated counties.

As a next step, I test if the results are robust to controlling for several pre-treatment controls potentially related to the local introduction of sanctuary policies and both outcome variables. Specifically, I include controls for the share of Hispanics, the share of Black Americans, the share of the elderly population, the homicide rate, the unemployment rate, and the political party winning the local election. By doing so, I examine if the results hold under the condition that the parallel trends assumption holds only conditionally, rather than unconditionally. Figure A3 shows that the inclusion of several pre-treatment covariates has no impact on the overall patterns and only a small impact on the size of the point estimates. However, due to lower statistical power, the confidence intervals are larger for the measure of mortgage demand.

To ensure sufficiently high statistical power, the baseline specification does not include state fixed effects. Now, I examine if the results are sensitive to focusing the analysis on the within-state variation. Figure A4 shows that, although less precisely estimated, the overall patterns from the baseline results are robust to the inclusion of state fixed effects. However, the negative point estimates for mortgage rejection are smaller when utilizing the within-state variation, suggesting that this result should be interpreted with more caution.

4.3 Heterogeneous effects by political leanings

To provide further evidence on the impact of sanctuary policies on outcomes of Hispanics in the mortgage market, I examine the heterogeneity of the results by political leanings. Examining the heterogeneity of the effects in states with different political leanings is crucial, as there are profound differences in approaches toward immigration policy between Republicans and Democrats. While Republicans focus on strengthening border security and deporting undocumented immigrants, Democrats prioritize creating pathways to legal status for irregular immigrants (Pew Research Center, 2022). This could influence the

magnitude of the effect. If a region is governed by a pro-immigrant party, the signaling effect of introducing sanctuary policies might be negligible. Conversely, if a county in a Republican state implements sanctuary policies, such a signaling effect could be substantial.

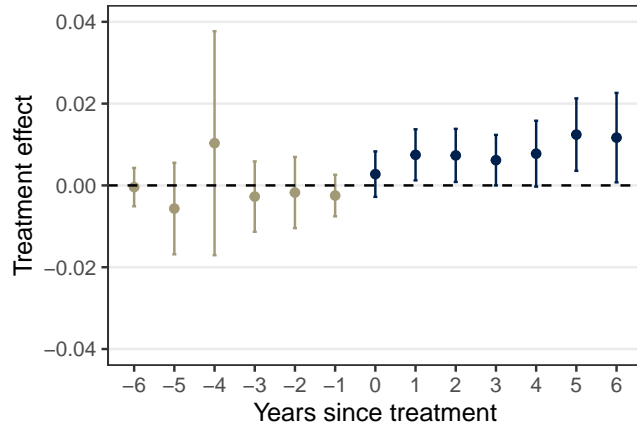
To distinguish between Republican-leaning and Democrat-leaning states and to account for political stability in the period considered in this paper, I classify states based on the results of the presidential elections that took place in 2008, 2012, 2016, and 2020. I label a state as a Blue or Red state if, in all four elections, the Democratic or Republican candidate, respectively, gained the most votes in the state. If, in at least one of the elections, a candidate of another party gained the most votes, I label such a state as a swing state. Table A3 presents the final categorization of states.

Panels (a) to (c) in Figure 3 show the results, using the measure of mortgage demand among Hispanics as the dependent variable, for blue, swing, and red states, respectively. The results reveal that the increase in the demand for mortgages among Hispanics after the introduction of sanctuary policies is driven by counties located in Red and Blue states.¹⁰ Notably, the magnitude of the long-term impact is particularly pronounced in Republican-leaning states but its estimation is highly imprecise. The broader confidence intervals, however, are likely a result of limited statistical power, given that only six counties in red states ever introduced sanctuary policies.¹¹

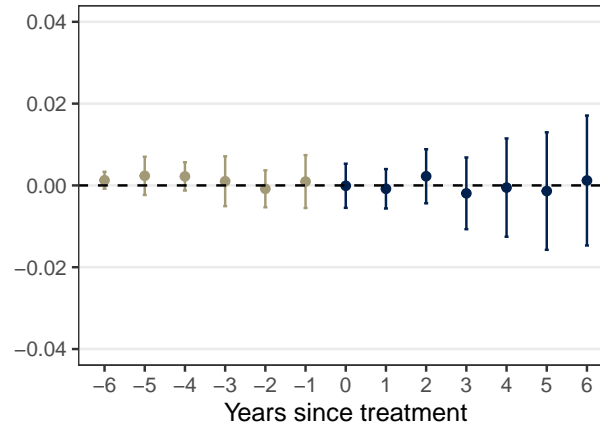
Similarly, Panels (d) to (f) in Figure 3 show the results, using the measure of mortgage rejections as the dependent variable, for blue, swing, and red states, respectively. While almost no point estimate is statistically significantly different from zero at the 5 percent level, in line with the baseline results, there is a clear pattern of a decrease in the rejection rates of mortgage loans requested by Hispanics. Politically volatile swing states and Republican-leaning states are the drivers of the reduction in this potential discriminatory behavior.

¹⁰Similarly to the baseline results, there is no evidence of pre-treatment trends and the point estimate of one pre-treatment coefficient in the results, here for blue states, is noticeably high. This is caused again by the outlier value in Nobles County, Minnesota. Figure A5 shows the results when excluding this outlier from the analysis.

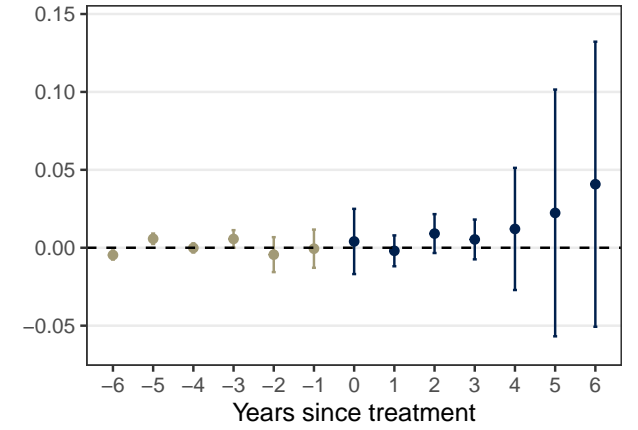
¹¹In comparison, there are 65 counties in Blue states and 38 in swing states.



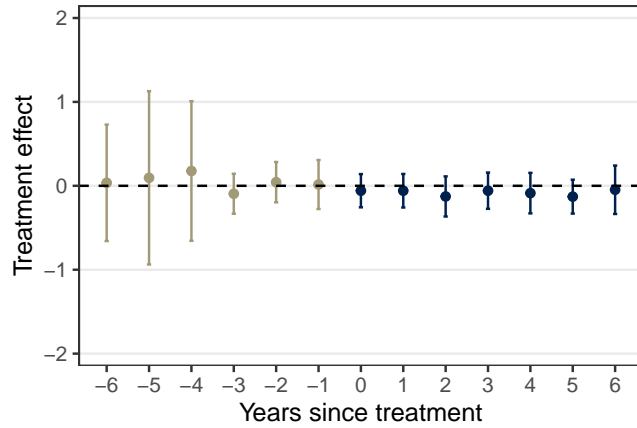
(a) MORTGAGE DEMAND - BLUE STATES



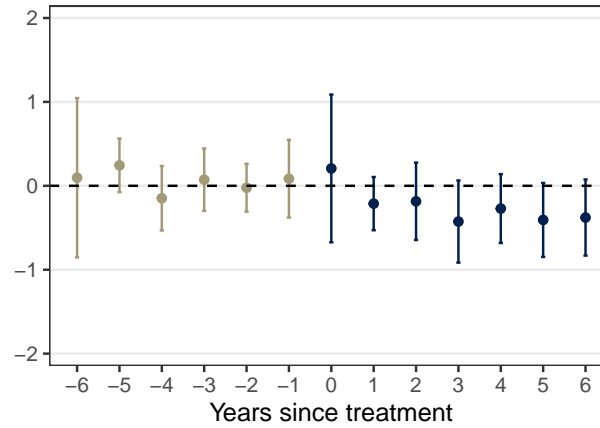
(b) MORTGAGE DEMAND - SWING STATES



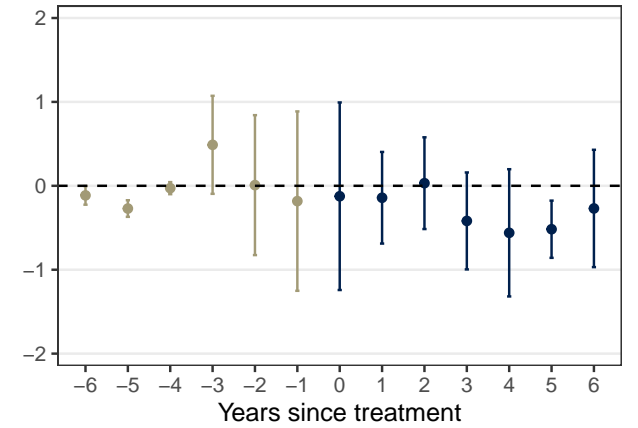
(c) MORTGAGE DEMAND - RED STATES



(d) MORTGAGE REJECTION - BLUE STATES



(e) MORTGAGE REJECTION - SWING STATES



(f) MORTGAGE REJECTION - RED STATES

Figure 3: HETEROGENEITY BY POLITICAL LEANINGS

Notes: The graphs are based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups. Coefficients are depicted with 95% confidence intervals.

5 Summary and Concluding Remarks

This paper investigates the impact of policies designed to create safe havens for immigrants on financial inclusion. Specifically, taking advantage of the staggered implementation of the sanctuary policies, I employ an event study approach to examine how the local introduction of sanctuary policies affects the financial inclusion of Hispanics in the local mortgage markets in the United States.

The findings reveal that the local adoption of sanctuary policies has a positive impact on the financial inclusion of Hispanics. In particular, the results show an increase in the local demand for mortgages among Hispanics after the local introduction of sanctuary policies. I also find evidence of a local decrease in the rejection rates of mortgage loans requested by Hispanics. Politically volatile and Republican-leaning states are the main drivers of the reduction in this potentially discriminatory behavior.

This paper has important policy implications, particularly given the challenges in fostering the financial inclusion of immigrants and the increasing attention of policymakers on measures to strengthen internal immigration enforcement. In line with the existing literature, that highlights the local increase in trust following the introduction of sanctuary policies, this paper shows that implementing pro-immigrant policies can play an important role in promoting financial inclusion in the mortgage market. Particularly in regions commonly perceived as less supportive of immigrants, implementing local inclusive pro-immigrant legislation, such as sanctuary policies, can impact the financial behavior of the immigrant population and serve as a tool to enhance financial inclusion.

References

- AGUILA, E., ANGRISANI, M. and BLANCO, L. R. (2016). Ownership of a bank account and health of older hispanics. *Economics Letters*, **144**, 41–44.
- AHAMED, M. M., HO, S. J., MALLICK, S. K. and MATOUSEK, R. (2021). Inclusive banking, financial regulation and bank performance: Cross-country evidence. *Journal of Banking & Finance*, **124**, 106055.
- and MALLICK, S. K. (2019). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behavior & Organization*, **157**, 403–427.
- AJEFU, J. B., DEMIR, A. and HAGHPANAHAN, H. (2020). The impact of financial inclusion on mental health. *SSM - Population Health*, **11**, 100630.
- AMUEDO-DORANTES, C. and LOPEZ, M. J. (2015). Falling through the cracks? Grade retention and school dropout among children of likely unauthorized immigrants. *American Economic Review*, **105** (5), 598–603.
- and — (2017a). The hidden educational costs of intensified immigration enforcement. *Southern Economic Journal*, **84** (1), 120–154.
- and — (2017b). Interior immigration enforcement and political participation of us citizens in mixed-status households. *Demography*, **54** (6), 2223–2247.
- , PUTTITANUN, T. and LOPEZ, M. (2022). Immigration, sanctuary policies, and public safety. *International Migration Review*, **56** (3), 668–701.
- ASAD, A. L. (2020). Latinos’ deportation fears by citizenship and legal status, 2007 to 2018. *Proceedings of the National Academy of Sciences*, **117** (16), 8836–8844.
- BANERJEE, A., DUFLO, E., GLENNERSTER, R. and KINNAN, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, **7** (1), 22–53.

- BECK, T., DEMIRGÜÇ-KUNT, A. and LEVINE, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth*, **12**, 27–49.
- BRUHN, M. and LOVE, I. (2014). The real impact of improved access to finance: Evidence from Mexico. *The Journal of Finance*, **69** (3), 1347–1376.
- BURGESS, R. and PANDE, R. (2005). Do rural banks matter? Evidence from the Indian social banking experiment. *American Economic Review*, **95** (3), 780–795.
- CALLAWAY, B. and SANT’ANNA, P. H. C. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, **225** (2), 200–230.
- CENTER FOR IMMIGRATION STUDIES (2023). Sanctuary Cities, Counties, and States. <https://cis.org/Map-Sanctuary-Cities-Counties-and-States>.
- CFPB (2023). Download HMDA data. Consumer Financial Protection Bureau. <https://www.consumerfinance.gov/data-research/hmda/historic-data/>.
- CORRAL, D. (2021). The relationship between immigration enforcement and educational attainment: The role of sanctuary policies. *AERA Open*, **7** (1), 1–17.
- ESTADO PERUANO (2023). Superintendencia Nacional de Migraciones: Ejecutivo aprueba DL que modifica la Ley de Migraciones y fija procedimiento excepcional para expulsiones. Press release from November 14, 2023.
- FAIR (2017). Sanctuary Policies across the U.S. A Report by FAIR’s State and Local Department. Federation for American Immigration Reform.
- FEDERAL ELECTION COMMISSION (2023). Election results and voting information. <https://www.fec.gov/introduction-campaign-finance/election-results-and-voting-information/>.
- FEDERAL MINISTRY OF THE INTERIOR (2023). Bundesregierung beschliesst Gesetzentwurf zur Verbesserung der Rueckfuehrung. Press release from October 25, 2023.
- FEDERAL RESERVE BOARD (2022). Economic well-being of U.S. Households in 2021. Board of Governors of the Federal Reserve System.

- FFIEC (2023). The Home Mortgage Disclosure Act. Federal Financial Institutions Examination Council. <https://ffiec.cfpb.gov/>.
- GARG, S., GUPTA, S. and MALLICK, S. K. (2023). Financial access and entrepreneurship by gender: Evidence from rural India. STEG Working Paper Series, WP062, CEPR: London.
- GIHLEB, R., GIUNTELLA, O. and LONSKY, J. (2023). Dreaming of leaving the nest? Immigration status and the living arrangements of DACAmented. *European Economic Review*, **156**, 104447.
- GIUNTELLA, O. and LONSKY, J. (2020). The effects of daca on health insurance, access to care, and health outcomes. *Journal of Health Economics*, **72**, 102320.
- , —, MAZZONNA, F. and STELLA, L. (2021). Immigration policy and immigrants' sleep. Evidence from DACA. *Journal of Economic Behavior & Organization*, **182**, 1–12.
- GOODMAN, L. S. and MAYER, C. (2018). Homeownership and the American dream. *Journal of Economic Perspectives*, **32** (1), 31–58.
- GOODMAN-BACON, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*, **225** (2), 254–277.
- HAINMUELLER, J., LAWRENCE, D., MARTÉN, L., BLACK, B., FIGUEROA, L., HOTARD, M., JIMÉNEZ, T. R., MENDOZA, F., RODRIGUEZ, M. I., SWARTZ, J. J. and LAITIN, D. D. (2017). Protecting unauthorized immigrant mothers improves their children's mental health. *Science*, **357** (6355), 1041–1044.
- HAUSMAN, D. K. (2020). Sanctuary policies reduce deportations without increasing crime. *Proceedings of the National Academy of Sciences*, **117** (44), 27262–27267.
- ICE (2017). Enforcement and Removal Operations. Weekly Declined Detainer Outcome Report. U.S. Immigration and Customs Enforcement. https://www.ice.gov/doclib/ddor/ddor2017_01-28to02-03.pdf.

- MANI, A., MULLAINATHAN, S., SHAFIR, E. and ZHAO, J. (2013). Poverty impedes cognitive function. *Science*, **341** (6149), 976–980.
- MANNING, D. T. and BURKHARDT, J. (2022). The local effects of federal law enforcement policies: Evidence from sanctuary jurisdictions and crime. *Contemporary Economic Policy*, **40** (3), 423–438.
- MARTÍNEZ, D. E., MARTÍNEZ-SCHULDT, R. D. and CANTOR, G. (2018). Providing sanctuary or fostering crime? A review of the research on ”sanctuary cities” and crime. *Sociology Compass*, **12** (1), 1–13.
- MIGRATION POLICY INSTITUTE (2023). A turning point for the unauthorized immigrant population in the United States. <https://www.migrationpolicy.org/news/turning-point-us-unauthorized-immigrant-population>.
- MIT ELECTION LAB (2023). Massachusetts Institute of Technology Election Data + Science Lab. <https://electionlab.mit.edu/>.
- NACJD (2023). National Archive of Criminal Justice Data. <https://www.icpsr.umich.edu/web/pages/NACJD/index.html>.
- O’BRIEN, B. G., COLLINGWOOD, L. and EL-KHATIB, S. O. (2019). The politics of refuge: Sanctuary cities, crime, and undocumented immigration. *Urban Affairs Review*, **55** (1), 3–40.
- OTSU, Y. (2021). Sanctuary cities and crime. *Journal of Economic Behavior & Organization*, **192**, 600–615.
- PEW RESEARCH CENTER (2022). Republicans and Democrats have different top priorities for U.S. immigration policy. <https://www.pewresearch.org/short-reads/2022/09/08/republicans-and-democrats-have-different-top-priorities-for-u-s-immigration-policy/>.
- UK PARLIAMENT (2023). Illegal Migration Act 2023. <https://bills.parliament.uk/bills/3429>.

U.S. CENSUS BUREAU (2023). Annual estimates of the resident population by sex, race, and Hispanic origin for the United States. <https://www2.census.gov/programs-surveys/popest/tables/2020-2022/national/asrh/nc-est2022-sr11h.xlsx>.

U.S. DEPARTMENT OF HOMELAND SECURITY (2023). United States to Resume Removals of Venezuelans Who Do Not Have a Legal Basis to Remain in the United States to Venezuela. <https://www.dhs.gov/news/2023/10/05/us-resume-removals-venezuelans-who-do-not-have-legal-basis-remain>.

WAINER, A. and ZABEL, J. (2020). Homeownership and wealth accumulation for low-income households. *Journal of Housing Economics*, **47**, 101624.

Appendix

Table A1: NON-SANCTUARY VERSUS SANCTUARY COUNTIES

	non-sanctuary		sanctuary	
	Mean	StD	Mean	StD
Loan demand ^a	0.065	(0.113)	0.094	(0.092)
Loan demand size ^b	0.057	(0.102)	0.075	(0.074)
Rejection rate ^a	1.376	(1.262)	1.479	(0.754)
Share of Hispanics	0.087	(0.136)	0.145	(0.133)
Share of Black Americans	0.090	(0.146)	0.086	(0.127)
Share of old age population	0.448	(0.299)	0.435	(0.314)
Homicide rate	0.297	(0.705)	0.265	(0.265)
Unemployment rate	0.062	(0.028)	0.059	(0.025)
Democrats win election, county	0.182	(0.386)	0.680	(0.467)
Democrats win election, state	0.316	(0.465)	0.769	(0.422)
Observations	35568		1236	

Notes: ^aas defined in Section 2; ^bas defined in Section 2, but using the volume of mortgage demand instead of mortgage demand.

Table A2: EARLY VERSUS LATE TREATED

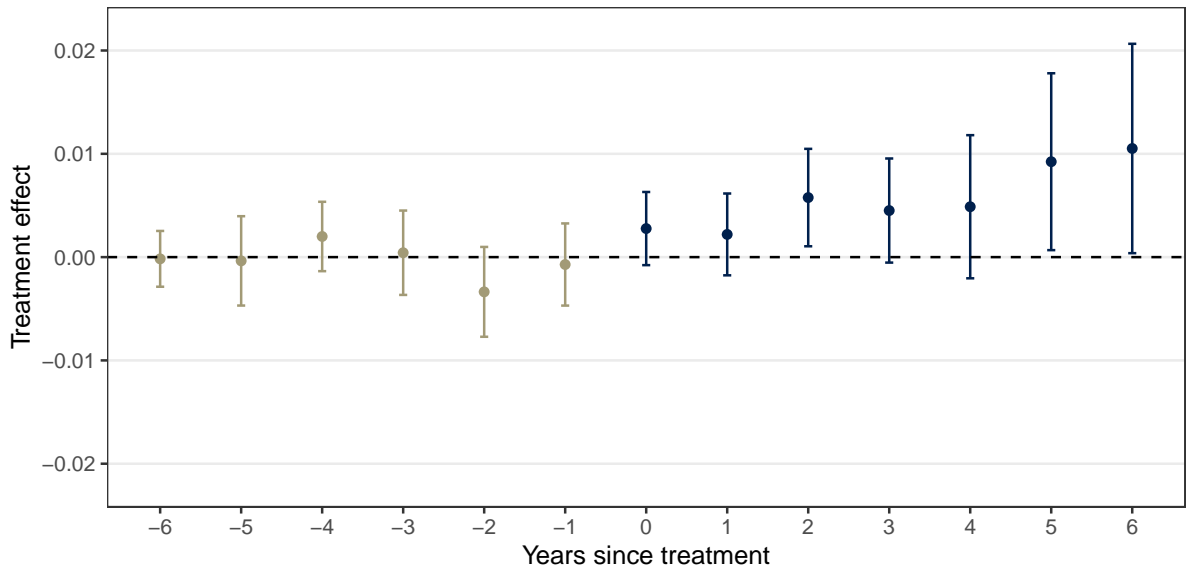
	before 2015		2015 or later	
	Mean	StD	Mean	StD
Loan demand ^a	0.100	(0.100)	0.071	(0.048)
Loan demand size ^b	0.080	(0.080)	0.057	(0.045)
Rejection rate ^a	1.433	(0.763)	1.643	(0.698)
Share of Hispanics	0.154	(0.145)	0.112	(0.062)
Share of Black Americans	0.075	(0.131)	0.124	(0.104)
Share of old age population	0.436	(0.312)	0.431	(0.322)
Homicide rate	0.266	(0.265)	0.262	(0.264)
Unemployment rate	0.060	(0.025)	0.056	(0.023)
Democrats win election, county	0.642	(0.480)	0.818	(0.386)
Democrats win election, state	0.802	(0.398)	0.644	(0.480)
Observations	972		264	

Notes: ^aas defined in Section 2; ^bas defined in Section 2, but using the volume of mortgage demand instead of mortgage demand.

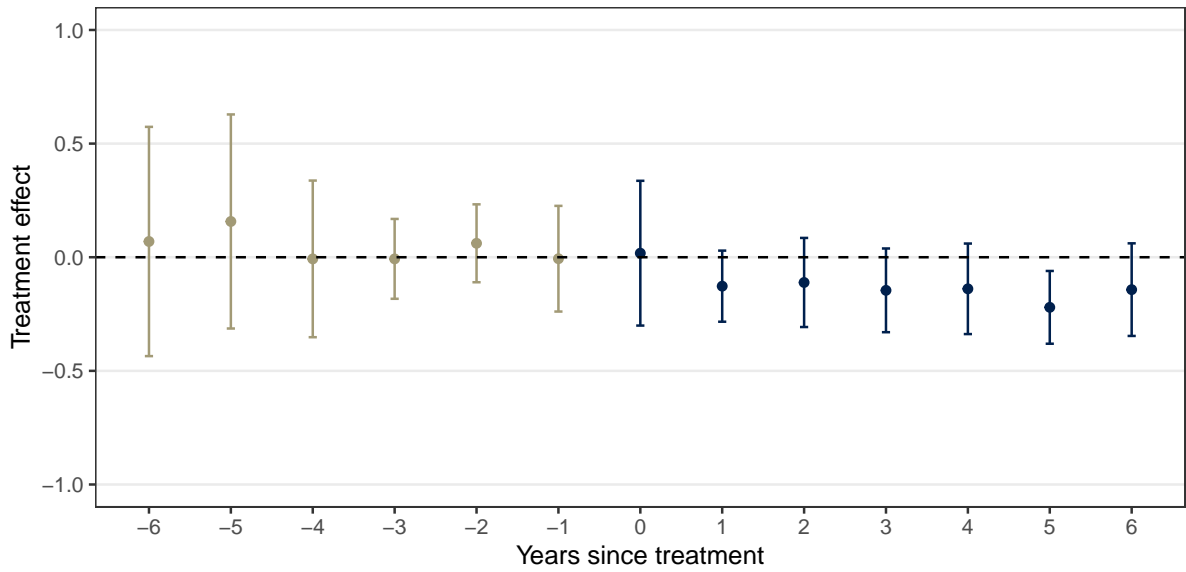
Table A3: POLITICAL LEANINGS OF STATES

Blue states	Red states	Swing states
California	Alabama	Arizona
Colorado	Arkansas	Georgia
Connecticut	Idaho	Indiana
Delaware	Kansas	North Carolina
District of Columbia	Kentucky	Florida
Illinois	Louisiana	Iowa
Maine	Mississippi	Ohio
Maryland	Missouri	Michigan
Massachusetts	Montana	Pennsylvania
Minnesota	Nebraska	Wisconsin
Nevada	North Dakota	
New Hampshire	Oklahoma	
New Jersey	South Carolina	
New Mexico	South Dakota	
New York	Tennessee	
Rhode Island	Texas	
Vermont	Utah	
Virginia	West Virginia	
Washington	Wyoming	

Notes: I classify states based on the results of the presidential elections that took place in 2008, 2012, 2016, and 2020. I label a state as a Blue or Red state if, in all four elections, the Democratic or Republican candidate, respectively, gained the most votes in the state. If, in at least one of the elections, a candidate of another party gained the most votes, I label such a state as a swing state. Alaska, Oregon, and Hawaii are excluded from the analysis and are thus not listed here.



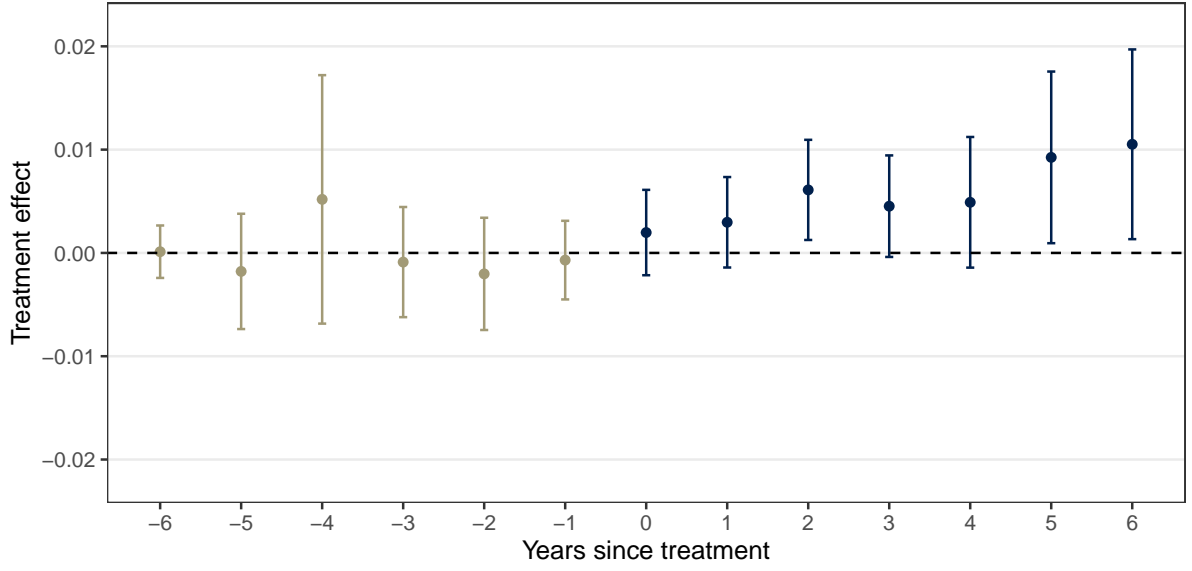
(a) MORTGAGE DEMAND



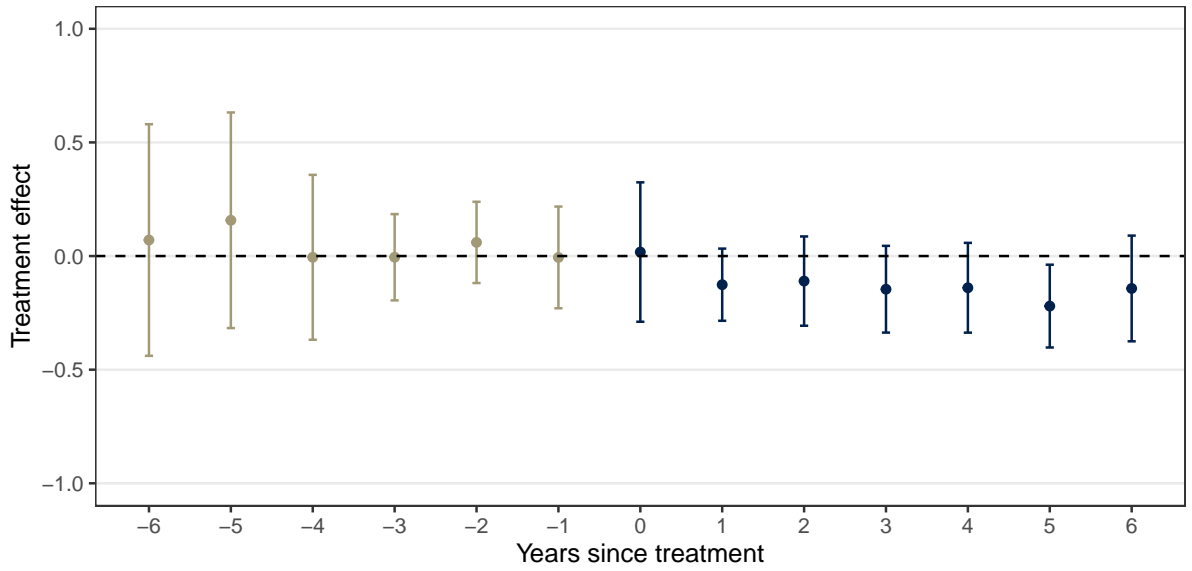
(b) MORTGAGE REJECTION

Figure A1: ROBUSTNESS: EXCLUDING NOBLES COUNTY

Notes: The graphs are based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups. Coefficients are depicted with 95% confidence intervals.



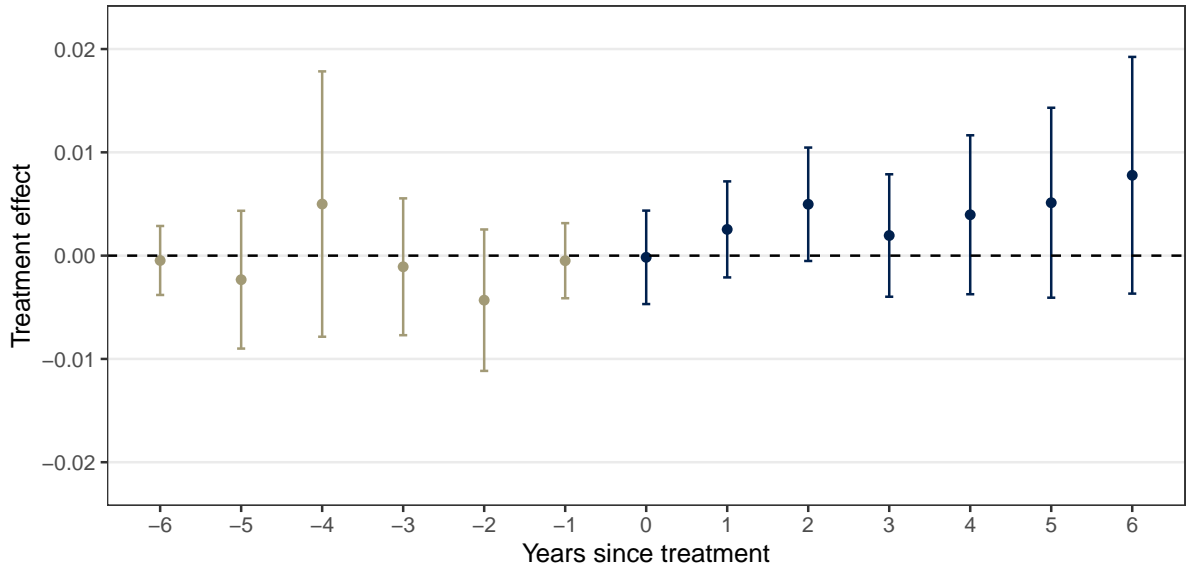
(a) MORTGAGE DEMAND



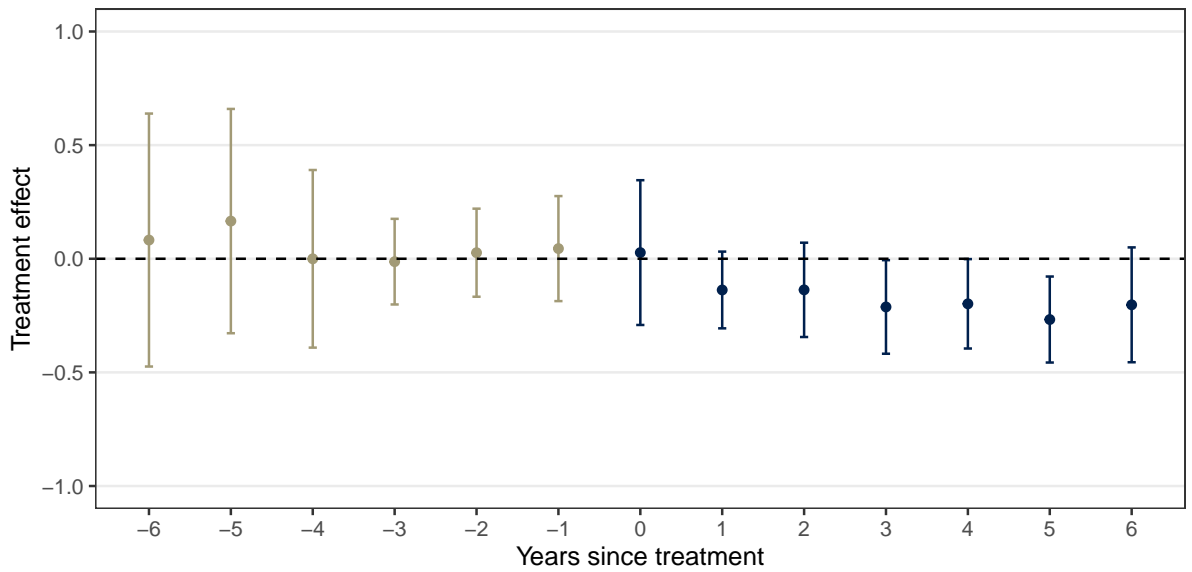
(b) MORTGAGE REJECTION

Figure A2: ROBUSTNESS: NEVER TREATED AS COMPARISON GROUP

Notes: The graphs are based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using never-treated units as control groups. Coefficients are depicted with 95% confidence intervals.



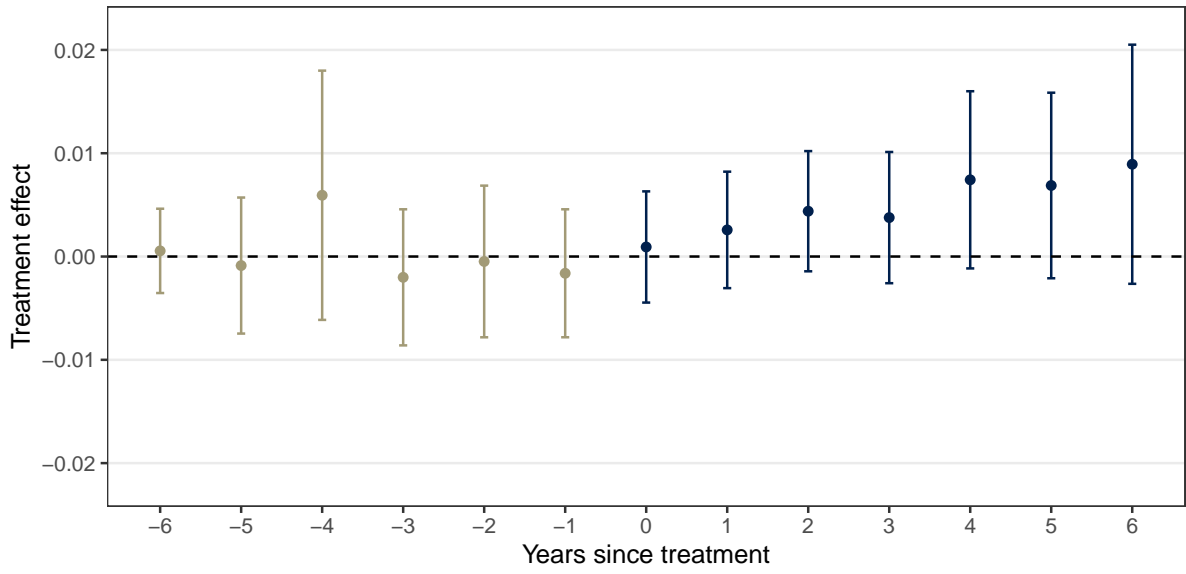
(a) MORTGAGE DEMAND



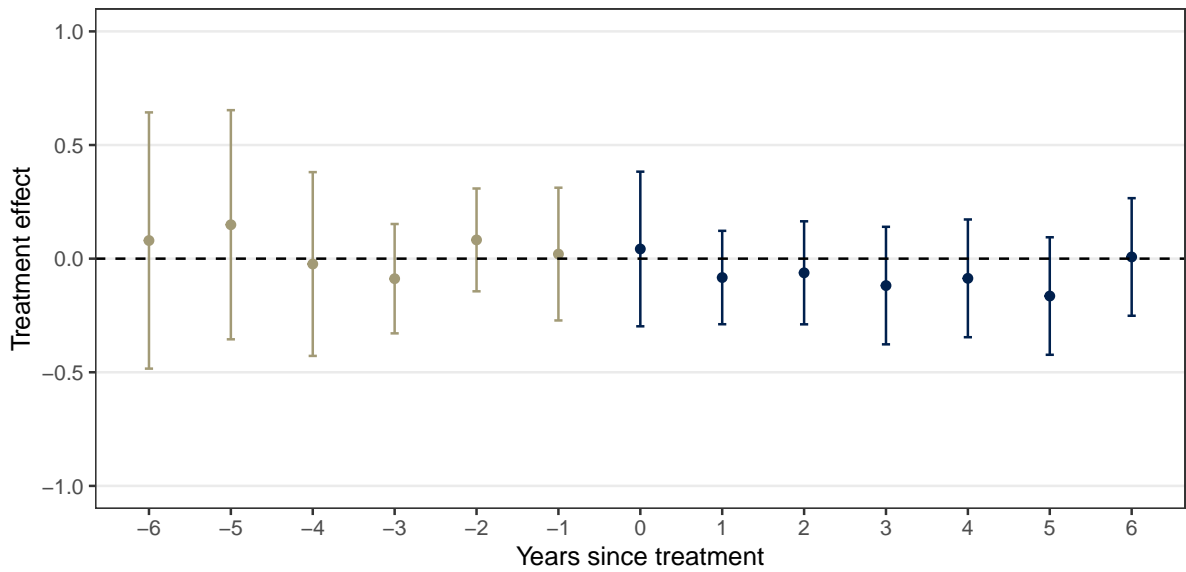
(b) MORTGAGE REJECTION

Figure A3: ROBUSTNESS: INCLUDING PRE-TREATMENT COVARIATES

Notes: The graphs are based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups and including pre-treatment controls for the share of Hispanics, the share of Black Americans, the share of the elderly population, the homicide rate, the unemployment rate, and the political party winning the local election. Coefficients are depicted with 95% confidence intervals.



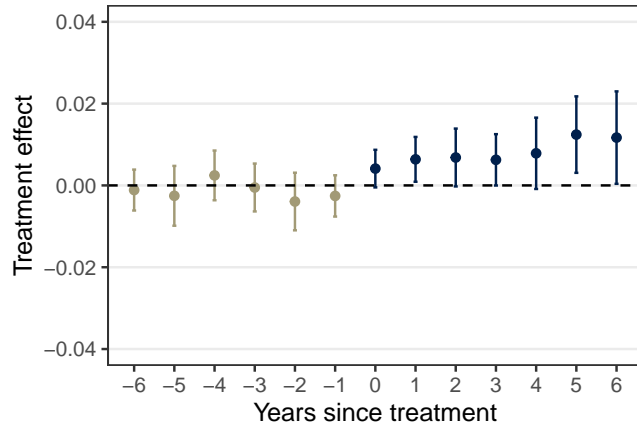
(a) MORTGAGE DEMAND



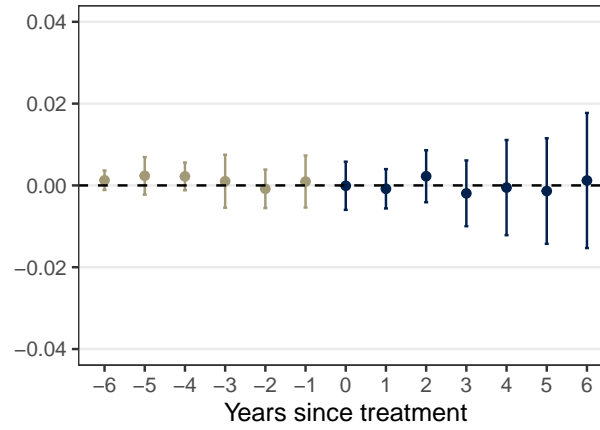
(b) MORTGAGE REJECTION

Figure A4: ROBUSTNESS: WITHIN STATE VARIATION

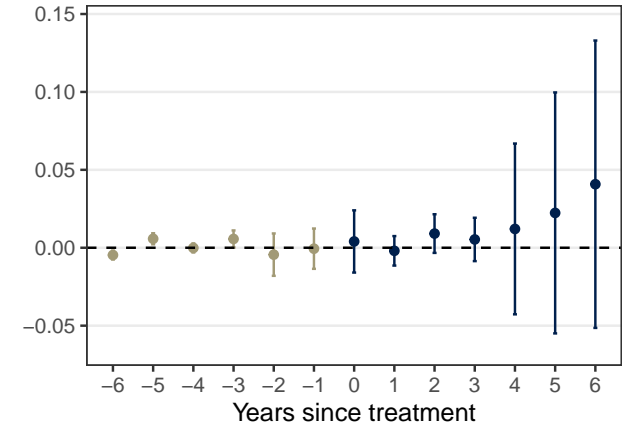
Notes: The graph is based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups and including state fixed effects. Coefficients are depicted with 95% confidence intervals.



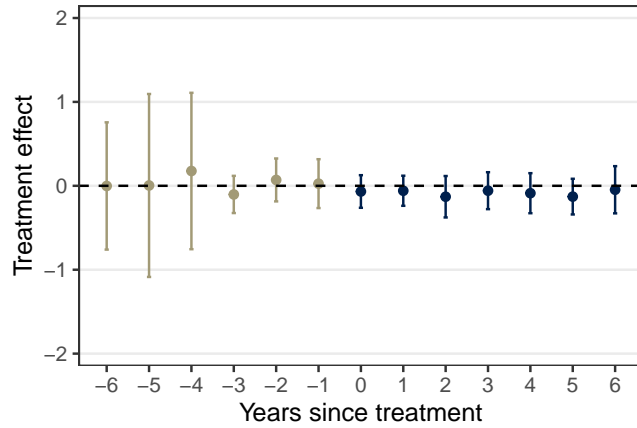
(a) MORTGAGE DEMAND - BLUE STATES



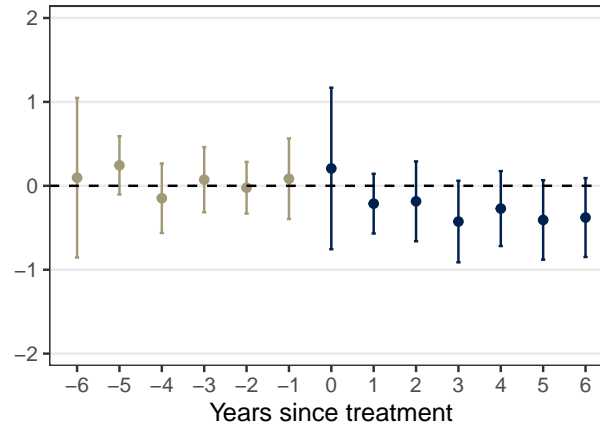
(b) MORTGAGE DEMAND - SWING STATES



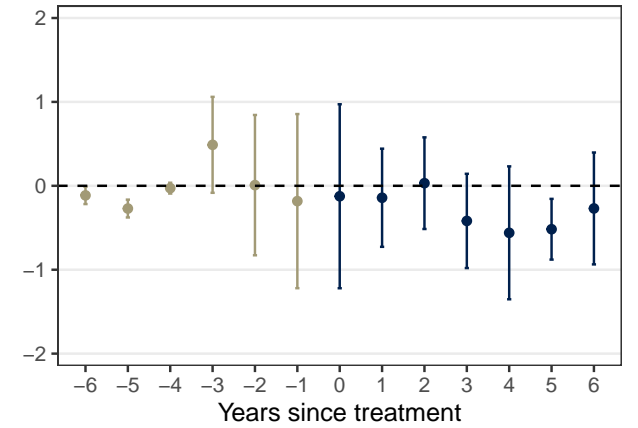
(c) MORTGAGE DEMAND - RED STATES



(d) MORTGAGE REJECTION - BLUE STATES



(e) MORTGAGE REJECTION - SWING STATES



(f) MORTGAGE REJECTION - RED STATES

Figure A5: ROBUSTNESS: HETEROGENEITY BY POLITICAL LEANINGS EXCLUDING NOBLES COUNTY

Notes: The graph is based on the dynamic difference-in-differences estimator introduced by Callaway and Sant'Anna (2021) using not-yet-treated units as control groups. Coefficients are depicted with 95% confidence intervals.