

Immigration without mediation: Brazilians' reactions to an influx of Venezuelans*

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Abstract

How does immigration shock affect natives' voting behavior? While numerous studies explore (a) natives' attitudes toward immigrants and (b) the electoral appeals of anti-immigrant parties, much less is known about how immigration directly impacts the electoral performance of incumbents. Following group threat theory, I argue that voters feel threatened by an immigration influx, leading to political discontent. Consequently, higher exposure to immigration results in a lower voting share for incumbents. I empirically test this argument by analyzing the impact of the Venezuelan immigration influx in Brazil during the 2018 Brazilian national elections. Unlike advanced democracies, no major Brazilian presidential candidate addressed immigration in their 2018 campaign. I use the distance to the border as an instrumental variable to establish a causal link between immigration shock and voting behavior against the incumbent. The findings offer empirical evidence supporting the notion that heightened immigration levels can trigger a political backlash.

Keywords: Immigration | Brazil | Venezuela | Voting behavior

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There are almost three hundred million migrants around the world ([International Organization for Migration, 2022](#)). Consequently, much has been written on natives' attitudes toward immigrants, with the majority of studies indicating that these attitudes tend to be unfavorable due to factors related to economic and/or cultural considerations ([Bansak, Hainmueller, and Hangartner, 2016](#); [Finseraas and Kotsadam, 2017](#); [Hainmueller and Hangartner, 2013](#); [Hainmueller and Hiscox, 2010](#); [Jardina, 2019](#); [Malhotra, Margalit, and Mo, 2013](#); [Ward, 2019](#)). Whether for economic or socio-cultural reasons, the standard narrative in the literature is that fear breeds resentment against the immigrant. However, it is unclear whether the validity of the results of this diverse set of research results from immigration itself.

This narrative of resentment toward immigrants derives from one of the major theories on the relationship between members of an in-group and an out-group: group threat theory. This claims that an influx of the other group, in this case immigrants, results in a sense of threat that, in turn, increases anti-out-group sentiments held by the in-group ([Alesina and Tabellini, 2022](#); [Blalock, 1967](#); [Schlueter and Scheepers, 2010](#); [Whitaker and Giersch, 2015](#)). Hence, the economic and cultural anxieties mentioned above are mechanisms in the immigration literature that support group threat theory.

However, most of the research underscoring the validity of group threat regarding how natives react to immigrants relies on empirical research in advanced democracies. In these countries, populist radical right parties and leaders have used immigration for political gain for many years ([Bustikova, 2014](#); [Colantone and Stanig, 2018](#); [Ignazi, 1992](#); [Meguid, 2005](#); [Van Der Brug, Fennema, and Tillie, 2005](#)). Hence, it is difficult to isolate the effect of immigration on voters' views, absent the confounding propaganda from extremists. In this paper, I empirically test the direct impact of immigration on electoral behavior, focusing on

a case where political elites have not politicized immigration.

I test the validity of group threat theory in the particular case of the Venezuelan immigration shock in Brazil. Venezuela's diaspora is one of the largest human displacements in the history of the Western Hemisphere, with around six million Venezuelans—almost one-fifth of Venezuela's population—leaving the country (R4V, 2022). In Brazil, it was sudden and significant. More than 260,000 Venezuelans emigrated to Brazil in a short period, making the Venezuelan diaspora an immigration shock without parallel, at least since Brazil's redemocratization in 1985. More importantly for this research, Brazil is a country where no current party or politician advocates an anti-immigration agenda. Consequently, the Brazilian case is a special and relevant case: It allows the evaluation of the direct impact of immigration on political behavior, since there was little to no interference from the political elite to influence how voters should perceive immigrants, in contrast with the countries used in the literature to analyze immigration (e.g., Dennison and Geddes, 2019; Dustmann, Vasiljeva, and Pil Damm, 2019; Hjorth and Larsen, 2022; Mayda, Peri, and Steingress, 2022).

I assembled an original dataset that combines information on Brazilian municipalities where all Venezuelan migrants who applied for a Brazilian visa reported living with electoral and socioeconomic data at the municipal level. I test the effect of Venezuelan migrants on the electoral performance of the Workers' Party (PT). PT, a center-left party, ruled the country from 2003 to 2016 and is widely perceived as the strongest party in Brazil (Klašnja and Titiunik, 2017; Mainwaring, Power, and Bizzarro, 2018; Novaes, 2018; Samuels and Zucco, 2018). I perform a national analysis of the election for president, and for federal and state deputies.¹ In addition, I do an analysis of gubernatorial elections in two states that were

¹Elections for senators and governors are missing. Although both positions represent the entire state, the

highly exposed to the immigration shock. Presidential, federal, and state elections differ greatly regarding the types of candidates, the salient issues, and the level of public interest; this increases the likelihood that my empirical evidence shows the effect of immigration on incumbents in general rather than a specific candidate or political group.

I use the distance of Brazilian cities from the Venezuelan border as an instrumental variable to arrive at a valid causal inference. I find that the presence of Venezuelan immigrants significantly decreased the PT's vote share in various elections held in 2018. To increase confidence in my results, I perform the same model for the 2014 election, before the immigration shock, as a placebo test. In addition, I perform an interaction regression model on two gubernatorial elections where the incumbents were not from the PT to show that the effect was against the incumbent, not against the PT alone. The combination of this diverse set of empirical tests provides a robust evaluation that immigration, by itself, has a meaningful political impact.

This study makes three contributions. First, I present a test of the direct effect of immigration on electoral preferences in the absence of cues derived from party elites, who had not, to this point, sought to exploit the Venezuelan immigration crisis for political gain. Second, this article provides essential information on the effects of the massive displacement of Venezuelans over the past decade, effects that still need to be better understood. Finally, I contribute to our understanding of the impact of immigration on developing countries, notably in Latin America, which have received relatively little attention in the previous literature.

dynamic in coalition formation for elections in Brazil could result in the lack of a PT candidate at the ballot box in some cities.

The impact of immigration shocks on voting behavior

The debate in the literature on how in-groups (natives) deal with out-groups (immigrants) comprises two theories. On the one hand, the “contact theory” proposes that a more neutral to positive intergroup interaction decreases anti-out-group sentiments (Allport, Clark, and Pettigrew, 1954; Schlueter and Scheepers, 2010; Wagner et al., 2003). On the other hand, the group threat theory proposes that an increase in the out-group population results in more anxiety by the in-group due to an increasing sense of threat (Alesina and Tabellini, 2022; Blalock, 1967; Schlueter and Scheepers, 2010; Whitaker and Giersch, 2015).

Although each theory results in opposite conclusions, they are not mutually exclusive. In fact, there is evidence that they occur simultaneously (Dustmann, Vasiljeva, and Piil Damm, 2019; Schlueter and Scheepers, 2010). Moreover, the effect of one of the theories being more prevalent than the other could be due to individual and societal heterogeneity (Hainmueller and Hangartner, 2013; Homola and Tavits, 2018; Schlueter and Scheepers, 2010; Wagner et al., 2003). Therefore, we would expect that determining which theory best assesses the impact of immigration in a particular case will be unclear.

Nevertheless, the literature on immigration largely supports group threat theory and agrees that an immigration influx results in anti-immigrant sentiments. This body of literature identifies two primary mechanisms that explain this rejection of immigration: the political economy and the socio-cultural (Alesina and Tabellini, 2022; Hainmueller and Hopkins, 2014). The political economy mechanism proposes that opposition to immigration stems from concerns that immigrants will lead to lower wages due to increasing labor-market competition (Alesina and Tabellini, 2022; Malhotra, Margalit, and Mo, 2013) or a higher fiscal

burden due to the increasing demand for welfare services ([Hainmueller and Hiscox, 2010](#)).

The explanation using cultural mechanism proposes that the opposition to immigration is driven by anxieties related to cultural and national identity. Native-born individuals perceive immigrants as more distinct and, consequently, less likely to fit with their national culture, making natives more likely to reject immigrants ([Hainmueller and Hangartner, 2013; Ward, 2019](#)).

An overlooked risk in this large consensus in favor of group threat theory is the fact that, in the countries analyzed in this literature, politicians actively political use immigration. For this reason, it is possible that immigration—by itself—does not play a major role, but that some political elites are the real generators of anti-immigrant sentiment among natives. In Western Europe and North America, where the vast majority of the literature is focused ([Whitaker and Giersch, 2015](#)), there is a history of anti-immigration radical right parties: parties “that employ the immigration issue as the core political concern in political campaigns or that are considered by elites of other parties to do so” ([Van Der Brug, Fennema, and Tillie, 2005](#), 538). For decades, these parties have been promoting the rejection of immigration flows ([Ignazi, 1992](#)). These radicals have also forced establishment parties to be more anti-immigrant ([Berman, 2021; Hjorth and Larsen, 2022](#)). Therefore, political elites might play a fundamental role in shaping public opinion on immigration.

Consequently, the literature lacks more empirical evidence on the direct effect of immigration on native behavior in general and voting behavior in particular. It is not clear whether the group threat theory remains valid in a context where immigration is not on the political agenda.

The lack of anti-immigrant political elites also results in doubts about whether immi-

gration has positive or adverse effects on incumbents' electoral performance. The existence of these elites results in two meaningful implications for voting behavior. First, these radical parties 'nationalize' the immigration issue, even affecting the behavior of voters who do not have any contact with immigrants. Those voters who do not have direct contact with immigrants rely heavily on party cues to define their position (see [Conover and Feldman, 1989](#); [Snyder and Ting, 2002](#)). Second, it is unclear whether political leaders who use anti-immigrant language are genuinely motivated by the public's perceived threat from immigrant groups, or if the politicians influence the public's opinions through rhetoric that generates this sense of threat in the public.

I argue that group threat theory is valid in cases where there is no political elite mediating the impact of immigration on natives. An important difference between group threat theory and contact theory is the differences in cost and time for the two to take effect. Neutral to positive continuous interactions requires time and, in some cases, effort. It might take months to years to have a high enough number of interactions for the effect of contact to occur. Furthermore, these interactions are more difficult in a context where members of the in-group and out-group do not speak the same language, as is the case among Brazilians and Venezuelans. A sense of threat, however, is instantaneous and can be reinforcing. The threat that the increasing number of out-group members challenges the *status quo* and the economic and cultural capital of the natives, can occur almost simultaneously with immigrants arriving at the border.

Following my argument that group threat theory is valid in these contexts, I put forward the theory that immigration directly affects voting behavior. I argue that natives in regions exposed to immigrants will be anxious that the immigration influx will result in higher

competition for jobs and that public welfare will be distributed to immigrants more than to natives. Natives also will be anxious about the perspective of cultural and demographic changes. If the voters have these anxieties without a political elite channeling and using it for political gain, as the case of radical right parties in Europe, then it translates to an anti-status quo response. Therefore, immigration has a localized effect on voting behavior by making voters in regions exposed to immigration more favorable to political change, generating an anti-incumbent sentiment. Consequently, *I expect that a greater influx of immigrants will decrease the voting share of the incumbent party.*

Case context

The way Brazilians have responded to the arrival of Venezuelan immigrants provides a case for empirically testing the direct influence of immigration on voting behavior. The current Venezuelan crisis generates one of the largest human displacements in the history of the Western Hemisphere. Some estimate that about one-fifth of Venezuelans have left the country ([R4V, 2022](#)).

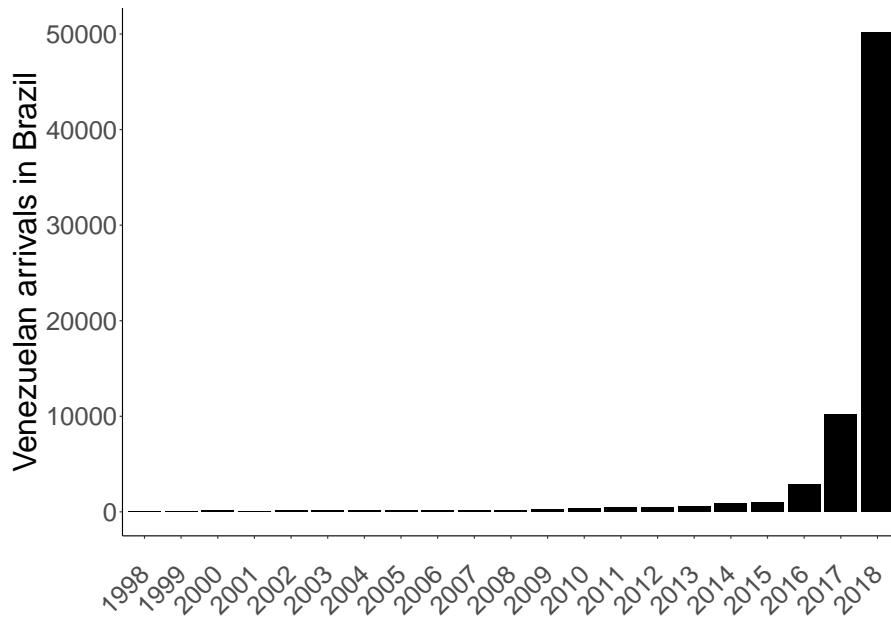
This massive Venezuelan diaspora occurred in three waves.² ([Vivas and Paez, 2017](#)) The first wave occurred between 2000 and 2012. It mainly comprised relatively wealthy Venezuelans who had enough resources to emigrate to the United States and Europe ([Vivas and Paez, 2017](#)). The second wave was from 2012 to 2015 and comprise a mixture of middle-class and low-income Venezuelans. They emigrated to the United States, Europe, Colombia, and Panama ([Vivas and Paez, 2017](#)). Finally, the last wave, from 2015 to today,³

²A short summary of the reasons for this large diaspora is in the Appendix.

³The emigration was severely disrupted by the COVID-19 pandemic.

included mainly low-income Venezuelans who were escaping the scarcity of essential goods and medications and the lack of any perspective for political change. The participants in this wave were willing to emigrate to any viable place. More than 261,000 decided to emigrate to Brazil ([R4V, 2022](#)). The data in Figure 1 provide a sense of the flow of Venezuelan immigration to Brazil over time.

Figure 1: Distribution of Venezuelans who request Brazilian visas



Note: The number represents only the Venezuelans requesting a Brazilian visa.

Nevertheless, the attitudes of Brazilians toward Venezuelans were not as heavily influenced by the rhetoric and cues presented by political elites and parties. The scarce literature on recent immigration to Brazil shows a limited impact of elite signaling to alter Brazilian views on immigrants ([Lloyd and de Oliveira, 2022](#)). Consequently, the Brazilian political elites have not, in a consistent way, instrumentalized this crisis for their political gain. To my knowledge, this is different from all the cases used to assess the importance of immigration on voting behavior ([Alesina and Tabellini, 2022](#); [Hainmueller and Hopkins, 2014](#); [Hjorth and](#)

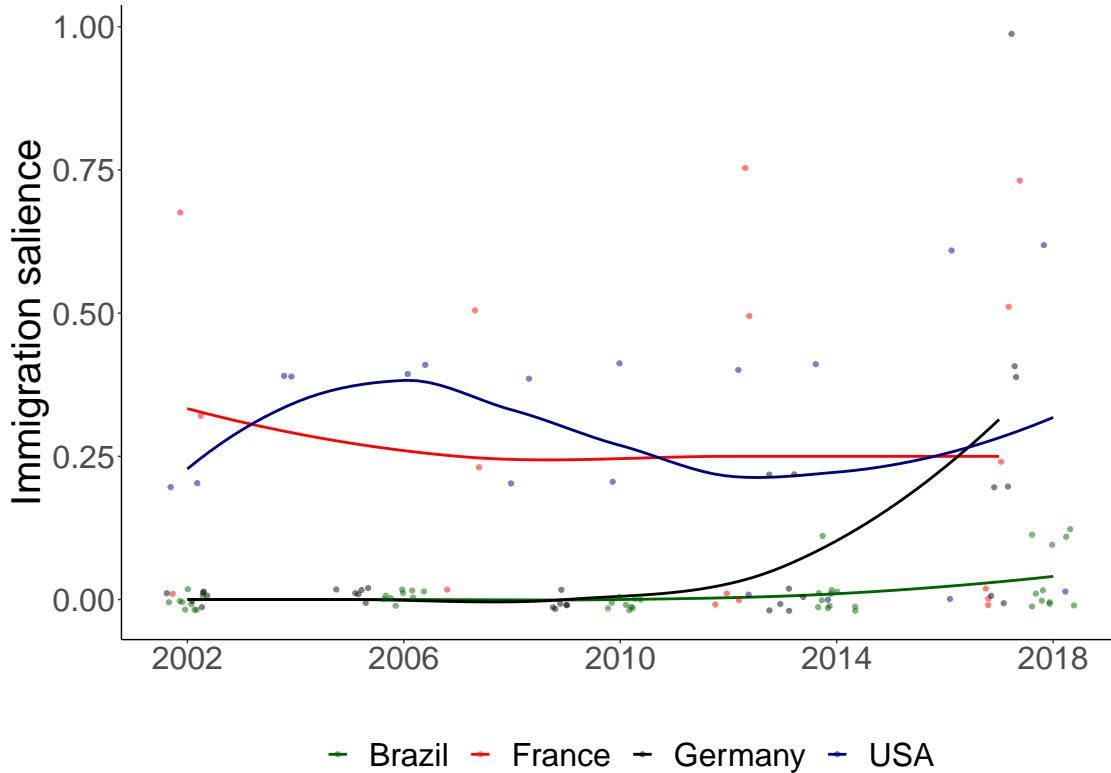
Larsen, 2022; Mayda, Peri, and Steingress, 2022; Schmidt-Catran and Czymara, 2023; Van Der Brug, Fennema, and Tillie, 2005; Whitaker and Giersch, 2015). Figure 2 shows how immigration is comparatively less important to Brazilian parties than to a selected group of advanced democracies in the V-Party dataset⁴ (Staffan. I. Lindberg et al., 2022).

Figure 2 shows three different contexts. France and the United States have a tradition of relevant parties where immigration is an important topic: the National Front and the Republican Party, respectively. Germany and Brazil do not have a similar history of immigration saliency. However, the Alternative for Germany (AfD) Party made immigration a critical topic on the agenda during recent German elections. There is no similar trend in Brazil, despite the influx of Venezuelans in recent years (see Figure 1).

The link between immigration and partisanship being less effective in Brazil than in many democracies is due, in part, to Brazil's weak party system (Klašnja and Titiunik, 2017; Novaes, 2018). The Workers' Party (PT)—a strong party similar to the center-left parties in advanced democracies—is the exception. Like many European social-democratic parties, the PT has significant ties to organized labor, but has become increasingly similar to a catch-all party to appeal to a larger set of voters (Hunter, 2010). Hence, the effect of immigration on voting behavior against the PT is comparable to that in many democratic countries, especially against social-democratic parties in advanced democracies. The PT ruled the country from 2003 to 2016, winning four presidential elections. Consequently, the PT is not only the most successful Brazilian party since re-democratization, it is also the strongest.

⁴The V-Party is a dataset of experts' responses. In this case, the data are the proportion of experts who said that immigration is an important topic for each party in the country's party system.

Figure 2: Parties concerned with immigration (selected countries)



Note: Immigration saliency is measured as the proportion of experts who agreed that immigration is a salient topic for each party that disputed the national election. Each dot represents a party in the party system, and the line is a LOESS regression to highlight the different trends among the countries.

In 2018, the PT was still at the center of the Brazilian political debate, even with the economic crisis that desolated the country. The PT centrality results in the fact that the main partisanship in the country are those in favor and those against the party ([Samuels and Zucco, 2018](#)). The public's perception of the PT is central to Brazilian voting behavior.

Another reason why the link between immigration and partisanship is weak in Brazil is the particular dynamics among the PT, Venezuela, and Bolsonaro—the radical right-wing candidate who won the 2018 presidential election. Lula's victory in 2002 occurred in the context of a wave of electoral successes for left-wing parties in Latin America, including

Venezuela. As the social, political, and economic situation deteriorates in Venezuela, the PT refuses to make any public criticism of the Venezuelan government, and some segments of the party even praise the Venezuelan regime (e.g., [PT, 2021](#)).

This relationship between the PT and Venezuela is a major reason that Bolsonaro was ambivalent about the Venezuelan diaspora and immigration in general. On the one hand, Bolsonaro attacked the pro-immigration piece of legislation approved before his presidency ([VEJA, 2018](#)). On the other hand, he maintained the need to protect Venezuelans fleeing the country and entering Brazil ([de Andrade, 2018](#)). This ambivalence forced him to avoid the topic during the 2018 campaign, setting Bolsonaro apart from right-wing populists across the globe who were and are famous for lionizing a clear anti-immigration stance with a nativist ideology ([Mudde, 2007](#)). The lack of a clear policy position from Bolsonaro, as well as being a candidate from a small and weak party, resulted in his voters having no party cues regarding immigration.

Empirical strategy

My goal is to understand the direct impact of immigration on voting behavior. For this reason, my dependent variable is the PT's vote share at the municipality level for state deputy, federal deputy, and president in the 2018 national election. The choice to focus solely on the PT is twofold. First, the PT was the country's largest representation of political continuity in 2018. Although the PT was no longer in the presidency in 2018 due to the impeachment of Dilma Rousseff in 2016, the party had won the four previous presidential elections.⁵ Further-

⁵In 2002, 2006, 2010, and 2014.

more, the PT was perceived primarily as having the lion's share of responsibility for the poor situation of the country in 2018 ([Hunter and Power, 2019](#)). Finally, Michel Temer, who became president after the impeachment, did not run for reelection. Consequently, the PT was the party that Brazilians saw as the main representation of the political establishment and continuity, while Bolsonaro was the outsider. Second, the PT is a strong party, allowing this analysis to be comparable with other democracies under strong party systems. Despite some damage to the party label due to corruption scandals and increasing personalism around the party leader, Lula, the PT remains at the center of the Brazilian political debate ([Samuels and Zucco, 2018](#)). For these reasons, a vote for the PT in 2018, had all the attributes of a vote for an incumbent, while a vote for Bolsonaro represented change.

My explanatory variable is the Immigration Exposure Index (IEI), which represents the degree of impact the immigration influx had in each municipality. To generate IEI, I use the Migration National Registration System (SISMIGRA), which has data on all foreigners who request a Migration National Register (RNM). In this dataset, 68,831 Venezuelans requested an RNM from 1998, when Chávez took power, to 2018.⁶ This dataset provides the municipality in which the foreigner declared they lived when requesting the visa. There are 320⁷ municipalities in the dataset with at least one Venezuelan who reported living there.

The RNM, like any visa, facilitates the life of the immigrant in the new country. It provides easier access to public goods and services and allows one to legally work in Brazil. In the case of Venezuelans, there is little to no risk of deportation when requesting the RNM, since Venezuelans could apply safely for refugee status. Consequently, and importantly for

⁶In 2018 alone, 50,212 Venezuelans requested RNMs.

⁷There are Venezuelans who declared that they lived in Brasília. However, Brasília is the federal district and is not legally a city. For this reason, I excluded it from the analysis.

this investigation, the RNM does not generate any bias that would make any group of the Venezuelan diaspora overrepresented within the population of visa holders.

However, two characteristics of the RNM data lead to attenuation bias and, consequently, make my results conservative. The RNM data do not include all Venezuelans in the country (see the data from [R4V \(2022\)](#) for reference). As a result, the RNM data only allow me to analyze a segment of the Venezuelan diaspora in Brazil. Therefore, my results underestimate the impact of the presence of Venezuelans in the cities. The second bias arises from the fact that many Venezuelans may have moved away from where they registered when requesting the RNM. Staying a short period does not reduce the effect of immigration on the cities where migrants request the visa, since a short contact can result in a negative bias against immigrants ([Hangartner et al., 2019](#)). Also, short stays could have exposed more cities in Brazil to the Venezuelan diaspora than I am able to account. In summary, RNMs provide a reliable but partial account of the Venezuelan shock in Brazil; consequently, the effect of immigration could be greater than what I can assess.

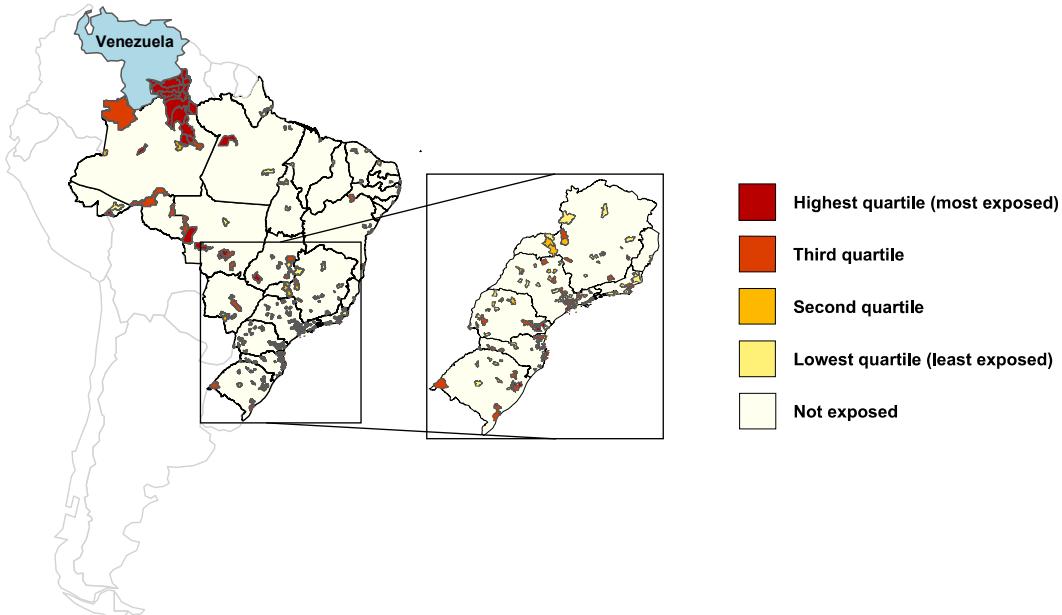
To estimate IEI, I use the ratio of Venezuelans in a municipality over its population (i.e.,

$$IEI = \frac{\text{Venezuelans}}{\text{Venezuelans} + \text{Brazilians}}$$

the *IEI* is a value that ranges from 0 to 1). All cities with an *IEI* equal to 0 are non-exposed cities; any municipality with an *IEI* greater than 0 is in the group of cities exposed to immigration. The municipality with the most significant share of Venezuelans was the neighboring municipality of Pacaraima in the state of Roraima, where, in 2018 alone,

Venezuelans represented almost 29% of the total population.⁸ The map in Figure 3 shows how Venezuelans were geographically distributed throughout Brazil.

Figure 3: Map of the distribution of Venezuelans in Brazil



Note: The quartiles indicate the number of Venezuelans in the municipality as a function of the city's population.

I combine these immigration data from RNMs with socio-demographic and electoral data at the municipality level, resulting in a new dataset that links Brazil's vote share and immigration flows aggregated at the municipality level. The municipal level is the smallest political unit in Brazil, making it an appropriate choice for evaluating behavior differences between regions exposed and not exposed to immigration. The electoral data is from the Brazilian Electoral Supreme Court (TSE). TSE organizes the electoral process and provides data on the electoral results. I use data from the 2010 Brazilian census for the socio-demographic measurement. Finally, I also combined the official estimate of municipalities'

⁸A table showing the summary statistics of *IEI* is in the Appendix.

population in 2018 to analyze the impact of the Venezuelan immigration shock as a function of the population of the municipality.

I use an Instrumental Variable (IV) approach to perform a causal evaluation. IV allows the creation of a valid reduced-form regression that can produce a valid causal link “when the researcher has access to a variable (the instrument, which we’ll call z_i), that is correlated with the causal variable of interest s_i , but not correlated with any other determinants of the dependent variable” ([Angrist and Pischke, 2009](#), 85). Here, this means using an instrument—border distance—to study the causal impact of immigration on voting behavior with the expectation that the border distance is uncorrelated to unobserved variables relevant to defining voting behavior. I use the logarithm of the smallest distance (in kilometers) between all Brazilian municipalities’ polygon centroid and Venezuela’s border⁹ as my instrumental variable. The map in Figure 3 shows that most of the municipalities in the fourth quartile—the cities most exposed to the immigraiton shock—are close to the Venezuelan border. In fact, the entire state of Roraima, which borders Venezuela, is in the fourth quartile.

The choice for using an instrumental variable derives from a well-known problem of endogeneity in studies about immigration (for a methodological overview, see [Alesina and Tabellini, 2022](#)). The literature considers that this endogeneity problem is generally associated with the preference of immigrants to go to municipalities or regions with more economic opportunities and/or where they will feel welcomed ([Alesina and Tabellini, 2022; Dustmann, Vasiljeva, and Piil Damm, 2019](#)). For example, more than a third of Brazilian emigrants to the United States live in three metropolitan areas¹⁰ ([Waters and Batalova, 2022](#)) where

⁹I transform Venezuela’s polygon into a multipoint geographical object using the `st_cast()` function from the R package `sf()`. Then, I calculate the distance of the municipality centroid to all points that comprise the Venezuelan border and select the minimal value as my instrument.

¹⁰Boston, Miami, and New York.

they join existing Brazilian communities and feel more welcomed in the United States. The factors that motivate an immigrant to choose one municipality over another “may be related to the same factors that affect voting behavior and/or are directly caused by the political preferences of populations in the receiving regions” ([Dustmann, Vasiljeva, and Piil Damm, 2019](#), 2036).¹¹

Therefore, using an instrumental variable approach is an effort to circumvent those confounding variables, allowing a causal evaluation of the impact of the immigration shock on voting behavior in municipalities exposed to immigrants. Nevertheless, the instrumental variable must satisfy several assumptions. [Sovey and Green \(2011\)](#) provide an overview of the use of instrumental variables in political science and indicates six issues that must be addressed when using an instrumental variable.

The first issue is the model itself. The model follows the common practice of using an instrument variable in the study of immigration (e.g., [Alesina and Tabellini, 2022](#); [Dustmann, Vasiljeva, and Piil Damm, 2019](#); [Hangartner et al., 2019](#); [Mayda, Peri, and Steingress, 2022](#)). More specifically, this research follows the same rationale as in [Hangartner et al. \(2019\)](#), where they evaluate the impact of the Syrian refugee crisis in Greece using the distance between the Greek’s islands and Turkey as an instrument. Finally, the use of geographical factors or natural phenomena is commonly used in instrumental variable models in many types of research (for example, [Stokes, 2016](#); [Theil and Finke, 1983](#)). Consequently, my approach to using distance as an instrument variable aligns with previous work, resulting in more substantial confidence in the reliability of the model.

¹¹Appendix C shows a schematization of the problem of using an OLS and greater discussion on the logic of using IV.

Two additional concerns are the independence assumption and the exclusion restriction. Both refer to the instrument's lack of direct impact on the dependent variable's potential outcome. I assume that the distance to the border cannot affect the PT's vote share in any way, except through the Venezuelan immigration rate. Although some literature emphasizes the effect of a border on individual behavior (e.g., Abramson, Carter, and Ying, 2022), I use the results of the previous election (in 2014¹²) to control for possible electoral trends that might generate a spurious relationship between the treatment and the PT's electoral results. Furthermore, I perform a placebo test of results using the 2014 election, and I do a sensitivity analysis that tests the impact of a hypothetical unknown covariate on my results. These evaluations provide confidence in the strength of my results and diminish the risks of a spurious relationship between my instrument and my outcome variable.

Another risk of a violation of IV assumptions is that the crisis in Venezuela affects the border through other flows (e.g., contraband and drug trafficking) that have also influenced voting behavior. Due to its illegal nature, it is difficult to know the magnitude of these waves; however, data on cocaine trafficking show that it reached its peak in Venezuela in 2017 after continuously increasing since 2012 (Ramsey and Smilde, 2020). Hence, it does not match the immigration flow that peaked only in 2018. Moreover, the flow of cocaine in Venezuela is only a fraction of the Colombian flow (Ramsey and Smilde, 2020). Due to the high value of cocaine, I argue that other illegal markets have behaved similarly on the Brazilian-Venezuelan border. Therefore, these possible waves have had a more prolonged impact (since around 2012) and, for this reason, have already affected voting behavior in

¹²In the Appendix, there is a map with the PT's voting distribution in 2014 to show that the party's votes were not regionally sorted. See, as well, the robustness check section.

elections before 2018, while Venezuelan immigration could only affect voting behavior in the 2018 election.

Finally, there is the significant risk that the instrument is linked to several other factors that could affect election results beyond immigration, many of which had the potential to be prominent in the 2018 election. This risk is particularly acute given that the Venezuelan border is in the Amazon region, which is significantly different from the remaining region of Brazil in many important aspects, such as rural conflict or the presence and protection of more indigenous communities than in the rest of the country. In order to address this concern, I have a discussion in the results and in the Appendix, analyzing data solely from the “Legal Amazon”¹³

The fourth issue is the strength of the instrument. If the instrument is too weak, there are significant risks of bias in the results ([Sovey and Green, 2011](#)). Table 1 shows the first-stage regression. The F-statistic in all elections that I analyze is above 20, well above the necessary threshold to ensure that it is not a weak instrument ([Sovey and Green, 2011](#)).

The last two issues are monotonicity and the Stable Unit Treatment Value Assumption (SUTVA). The monotonicity assumption holds because there are no capable defiers. No Brazilian municipality was or is capable of rejecting Venezuelans or any immigrant, as it is a national matter where local politicians have little to no power to intervene. However, there is a concern that the effects of the immigration shock spill over to neighboring municipalities. Affected citizens might go to these municipalities looking for jobs in a less competitive job market or to public goods that are more available. Nevertheless, this risk is significantly

¹³“Legal Amazon” (*Amazônia Legal*) is a Brazilian legal definition of all states that are in the Amazon basin.

Table 1: First-stage regression

	<i>Dependent variable:</i>		
	Immigration Exposure Index		
Instrument	−0.014*** (0.001)	−0.014*** (0.001)	−0.014*** (0.001)
MHDI	0.015 (0.024)	0.024 (0.023)	0.015 (0.024)
Gini index	−0.011 (0.012)	−0.011 (0.012)	−0.011 (0.012)
Rural proportion	0.006 (0.006)	0.005 (0.006)	0.006 (0.006)
Poor proportion	−0.0001 (0.0001)	−0.0002 (0.0001)	−0.0001 (0.0001)
Female proportion	0.119* (0.062)	0.105* (0.061)	0.119* (0.062)
Presidential 2014	−0.007 (0.005)		
State legislature 2014		0.001 (0.006)	
Fed. legislature 2014			−0.007 (0.005)
Constant	0.047 (0.031)	0.047 (0.031)	0.047 (0.031)
Observations	528	528	528
R ²	0.227	0.225	0.227
Adjusted R ²	0.217	0.214	0.217
Residual Std. Error	0.011 (df = 520)	0.011 (df = 520)	0.011 (df = 520)
F Statistic	21.836*** (df = 7; 520)	21.513*** (df = 7; 520)	21.836*** (df = 7; 520)

Note:

*p<0.1; **p<0.05; ***p<0.01

reduced by the use of matching, which is necessary to circumvent the zero-inflated regression in the first-stage regression of my two-stage least-squares (2SLS) framework where the regression equations are as follows:

$$\text{IEI} = \alpha_1 + \beta_1 Z + C' \gamma_1 + \varepsilon_1 \quad (1)$$

$$\text{PT's vote share} = \alpha_2 + \beta_2 \widehat{\text{IEI}} + C' \gamma_2 + \varepsilon_2 \quad (2)$$

where Z is the distance to Venezuela. C is a vector of covariates composed of a set of socio-demographics from the 2010 census and the PT's vote share in 2014 to account for possible electoral trends.¹⁴

In the first-stage regression, IEI has the problem of being a zero-inflated variable. I have electoral data from virtually all Brazilian municipalities (more than 5,000), but only 320 municipalities have been exposed to the Venezuelan diaspora, resulting in a higher quantity of 0 in the vector of values of my dependent variable. One possible approach to solve this problem is to randomly select a sample of municipalities not exposed, as is often done in case-control studies. However, there is the risk of getting a sample filled with “extreme counterfactuals” or other biases that cast doubt on the validity of the results.¹⁵ To manage with this problem and to ameliorate concerns about violating the SUTVA assumption, I match treated and control municipalities based on observables.

I process the data through matching to solve the zero-inflated problems because matching has some key advantages. This method removes “extreme counterfactuals” that diverge too significantly from municipalities where Venezuelan immigrants settled (King and Zeng, 2006; Lyall, 2010) without human intervention, which may result in “cherry-picking.” Furthermore, the selection is less model dependent (Ho et al., 2007). Finally, matching reduces bias, variance, and mean square errors (Ho et al., 2007).

The selection of covariates for matching derives from the concern to reduce the impact of underlying socioeconomic differences between municipalities. Brazil is known to have deep and historical regional inequalities (Naritomi, Soares, and Assunção, 2012). However,

¹⁴See the robustness checks for a further discussion on the risks of the results being only electoral trends.

¹⁵Nevertheless, I run the same model that I show in the results using a random sample instead of matching. The results are robust to those using matching. See the Appendix D.

the matching process reduces the risk that these inequalities are the underlying reason for my results, since it provides me with a relatively balanced dataset. All covariates come from the 2010 census. They are the municipality's (i) population, (ii) the municipal Human Development Index (MHDI), (iii) household Gini index, (iv) average income per capita, (v) the proportion of the population below the poverty line, (vi) proportion of adults that graduated at least from middle school, (vii) proportion of the rural population, and (viii) proportion of the female population. I match using the Mahalanobis distance between pre-immigration shock covariates.¹⁶ Table 2 displays the post-matching statistics.

Table 2 shows that the matching group is more balanced than before matching data processing. Nevertheless, exposed municipalities and non-exposed municipalities are statistically different for many of these covariates. Since matching is flexible enough to be unrelated to my model selection (Ho et al., 2007), I included these covariates as controls in my 2SLS models.

Results

Figure 4 displays the coefficients of a 2SLS regression of the PT voting share on variables of interest.¹⁷ Given the relatively small influx of immigrants, the results are not major. Nevertheless, the results indicate that the Venezuelan immigration influx harmed the voting share of the PT in all elections in 2018. The estimated IEI coefficient for the presidential candidate was -1.855 ($se = 0.448$). In the case of legislative elections, the estimated IEI

¹⁶I use the R package ‘Matching.’ The Mahalanobis distance is similar to the Euclidean distance equation but with the variance-covariance matrix of the covariates to ensure that all covariates are on the same scale, making it the most appropriate method in this case.

¹⁷The second-stage regression table is in the Appendix E.

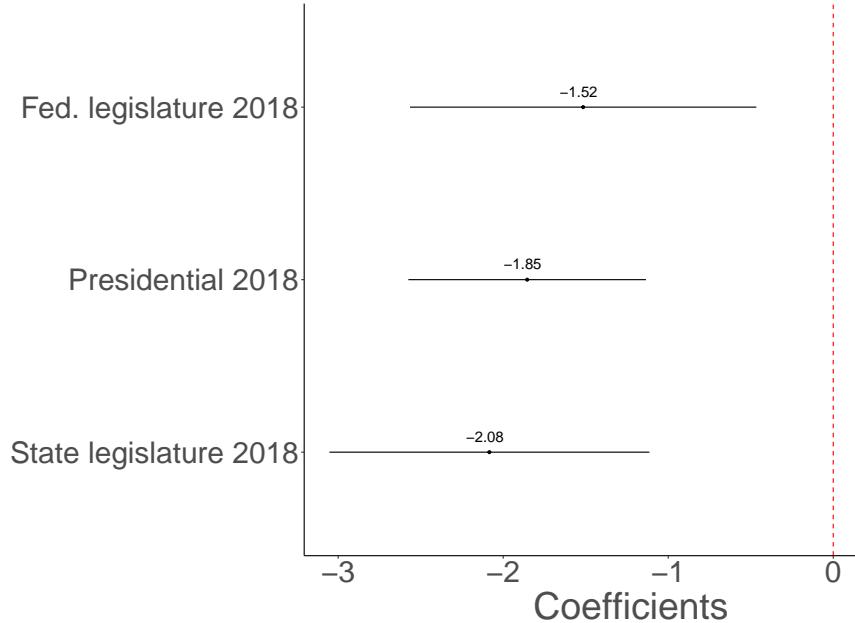
Table 2: Matching statistics

Covariates	Mean treated	Mean control	Std. mean diff.	t-test(p-value)	KS
Before matching					
Population	322587.57	20103.84	35.26	0	0.69
MHDI	809.00	474.13	109.62	0	0.52
Gini index	0.74	0.65	143.95	0	0.53
Avg. income per capita	0.51	0.49	24.79	0	0.09
Poverty (%)	10.49	23.99	-104.98	0	0.390
Education (%)	0.57	0.39	186.73	0	0.66
Rural population (%)	0.12	0.38	-149.00	0	0.59
Female population (%)	0.50	0.49	86.19	0	0.44
After matching					
Population	322587.57	152777.47	19.80	0.000	0.24
MHDI	809.00	775.06	11.11	0.000	0.11
Gini index	0.74	0.74	2.97	0.13	0.06
Avg. income per capita	0.51	0.50	17.21	0.000	0.14
Poverty (%)	10.49	10.02	3.63	0.00	0.08
Education (%)	0.57	0.56	13.84	0.000	0.11
Rural population (%)	0.12	0.12	-0.52	0.72	0.11
Female population (%)	0.51	0.51	-0.80	0.69	0.07

Note: Post-matching statistics of Brazilian municipalities socio-demographic data. The pre-matching sample size was 5,564 and the post-matching sample size was 564.

coefficients were -1.515 ($se = 0.686$) and -2.084 ($se = 0.768$) for the federal and state deputies' elections, respectively. The results show a consistent impact of immigration despite the differences among these elections. They vary in importance, with the presidential election receiving significant attention from the media and concern from the voters, while the state legislature received minimal attention. These elections also differ by their electoral systems. The presidential election happens in a two-round single-member district, and both legislative elections are proportional representation elections with open lists. The negative and statistically significant results provide support for group threat theory and my hypothesis that immigration results in a decrease in the incumbent's voting share. These results align with other findings that underscore that immigration results in a political backlash.

Figure 4: 2SLS coefficients of the impact of Venezuelan immigrants in the 2018 election



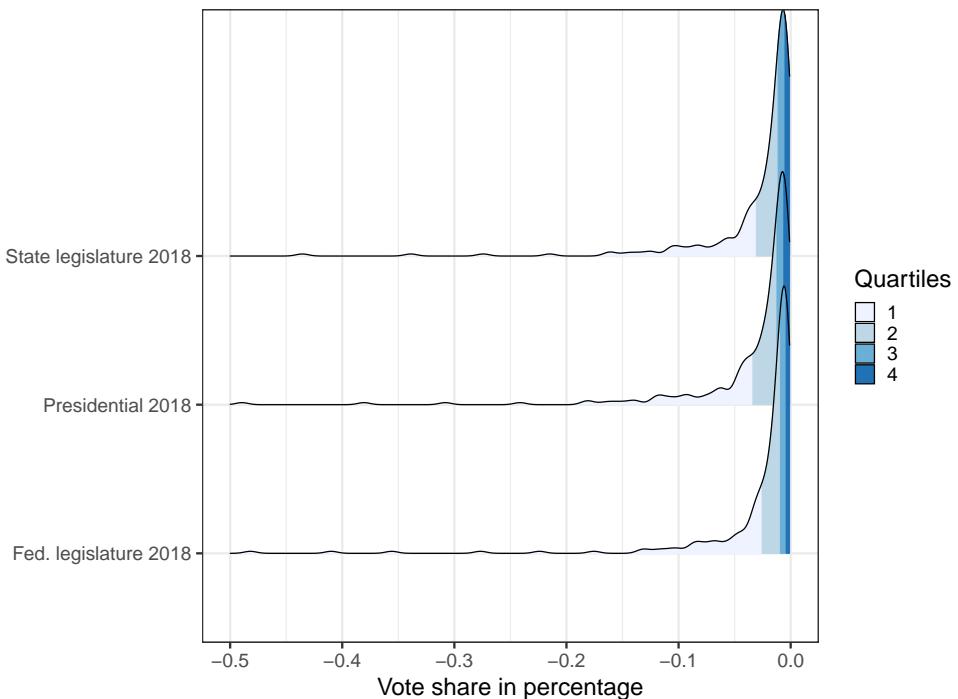
Note: 95% confidence intervals. This model uses the previous election and socio-demographic factors as control variables. The full regression table is in the Appendix E.

Moreover, these results suggest some variation in the size of the effect of immigration on voting behavior. The municipality with the smallest value for IEI—Niterói—barely differs in its voting share from those not exposed to the immigration shock. Niterói is a large municipality (511,786 inhabitants in 2018) in the Rio de Janeiro metropolitan area, and only one Venezuelan declared that they lived there. Consequently, my theoretical perspective accounts for the fact that the results from Niterói would not be distinguishable from municipalities not exposed to immigration flow. Conversely, the results suggest highly consequential effects in Pacaraima, the municipality with the highest exposure to immigration shock. Pacaraima is a smaller municipality (15,580 inhabitants in 2018) located on the Brazilian-Venezuelan border and, for this reason, received 6,226 Venezuelans in 2018 alone. In the case of Pacaraima, the results indicate that the shock implies a decrease of 0.5% in the

PT's vote share in the presidential election. This difference would be enough to change the results of the 2022 election and cause Lula, the PT candidate, to lose to Bolsonaro.¹⁸ This difference corroborates the hypothesis linking municipalities highly exposed to immigration shock to greater anti-incumbent sentiment.

Figure 5 shows the change in the vote share for each election as a function of the changes in IEI for the cities that received at least one Venezuelan. As expected, the results are skewed to 0 since the majority of the cities follow the same pattern as Niterói described above. However, the cities where IEI is more significant have a meaningful political impact, indicating that if the influx was greater or it occurred for a longer time, then the Venezuelan immigration would have a profound impact on Brazilian politics.

Figure 5: Predicted effect of IEI on voting share



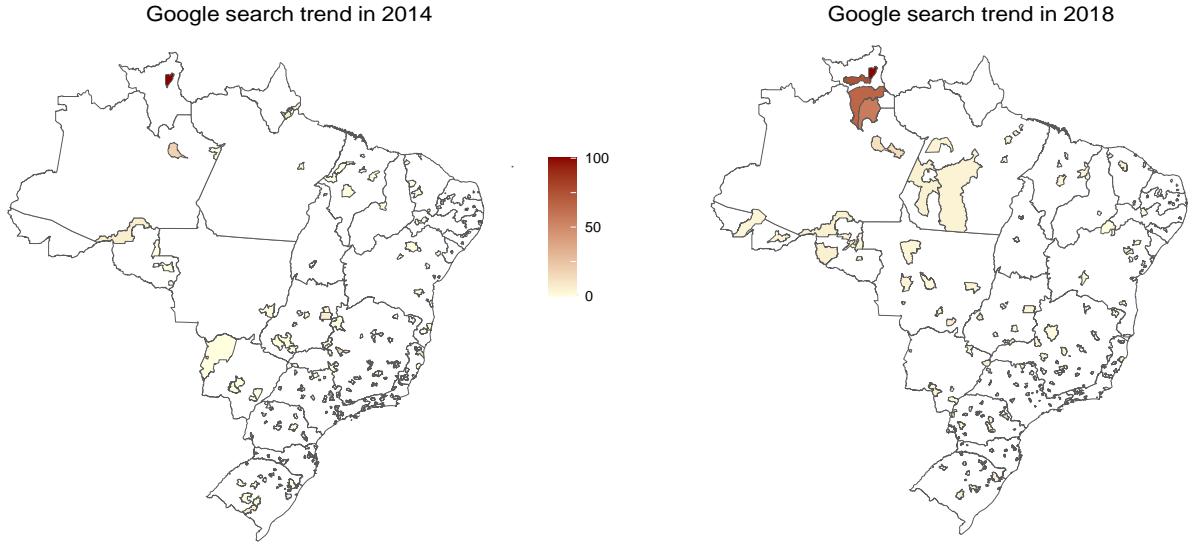
¹⁸These results only account for the Venezuelans who arrived in Brazil in 2018, making it likely that the effects are underestimated since there was a significant influx of Venezuelans in 2017. This fact and the attenuation bias described previously make these results considerably conservative.

Therefore, the evidence indicates that the impact of immigration is real but limited. This finding is reasonable because, despite being unprecedented, the influx was small in comparison to the size of Brazil and to other international immigration influxes across the globe. Nevertheless, even small, but sudden, local influxes can generate political reactions ([Hopkins, 2010](#)). To provide some evidence that there was increasing prominence of the topic in the most affected areas, I used data from Google Trends for the word “Venezuela.” Google Trends are public data showing where a term was searched more often. I choose “Venezuela” because it better encompasses the various dimensions linked to the Venezuelan diaspora, such as, for example, the situation in the country that motivated mass emigration. Figure 6 shows the variation in the number of searches for word “Venezuela” in 2014 and 2018.

The two maps show how the word “Venezuela” was much more salient in the areas that were more affected by the Venezuelan influx in 2018. The number of northern municipalities that appear in the 2018 data is greater than it was in 2014. Due to Brazilian regional inequalities ([Naritomi, Soares, and Assunção, 2012](#)), northern municipalities are poorer, less educated, have worse infrastructure, and are less populated. Despite these hindrances that make these municipalities less likely to appear in Google’s Trends data, the number of searches increased from one election to the next. Consequently, this provides some evidence of a higher salience of Venezuelan immigration in the municipalities exposed to it.

Therefore, the results show that the PT performed significantly worse in exposed municipalities. This result is noteworthy, especially considering the general context of the 2018 elections. The 2018 election was particularly bad for the PT, which lost not only the presidential election after four victories in a row but also thirteen deputies and four senators,

Figure 6: Google Trends search for the term “Venezuela” in Brazil in 2014 and 2018



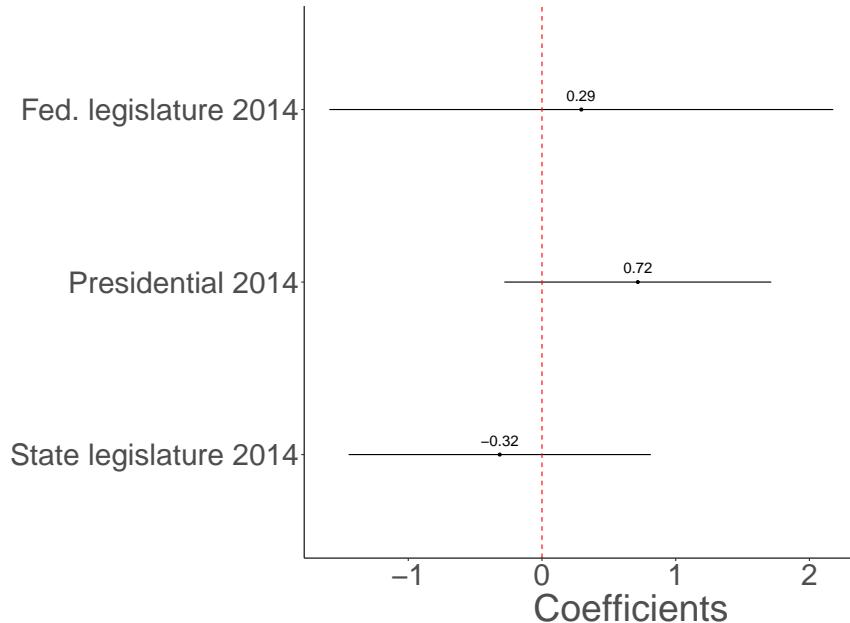
Note: The Google search results are normalized with the highest city being 100.

a reduction of 19% and 33% in the party seats in the lower and higher chambers, respectively. The general reasons for the party’s downfall are a ‘perfect storm’ of subpar economic performance along with corruption scandals ([Hunter and Power, 2019](#)). The results indicate that, despite the existence of a predisposition to reject the PT, in the 2018 election, the immigration influx was capable of impacting the exposed municipalities and, exacerbating the poor performance of the PT adding another justification to reject the party.

To provide additional evidence on the impact of immigration on the share of the PT’s votes, I perform a placebo analysis. A possible concern about the validity of the results of this study is that municipalities hosting Venezuelan immigrants have historically held anti-PT sentiment (*antipetismo*). One could argue that Venezuelans went to municipalities with strong *antipetismo* due to the notorious link between the PT and the Venezuelan regime, resulting in self-selection that would exaggerate the size of the immigration effect. To test

whether the municipalities exposed to the immigration shock were already against the PT (instead of using the 2018 election), I used the PT voting share in 2014 (with 2010 as a control)—the last election before the Venezuelan immigration shock—as my main outcome of interest. Figure 7 shows the results.

Figure 7: 2SLS coefficients of the impact of Venezuelan immigrants in the 2014 election



Note: 95% confidence intervals. This model uses previous election and socio-demographic factors as control variables. The full regression table is in the Appendix F.

As expected, the results are not significant. Moreover, these results indicate that municipalities exposed to Venezuelan immigrants were not less favorable to the PT than those not exposed to the immigration shock, even if we disregard statistical significance. These empirical results are consistent with the theory of voting behavior outlined in this paper. The exposed municipalities that, in 2014, were not significantly more inclined toward the PT changed course four years later. Although Brazilians nationwide changed their mood from the 2014 to the 2018 electoral cycle, the results indicate that the Venezuelan immigration

shock further aggravated the PT's poor performance in municipalities exposed. These results also eliminate the concern that Venezuelans chose these municipalities because their citizens were against the PT. Consequently, this analysis makes possible a more confident rejection of the alternative explanation that the results were due to a prior *antipetismo* in the exposed municipalities to Venezuelan immigrants. Therefore, these results reinforce the significant impact of immigration in 2018 as something unparalleled in recent Brazilian political history.

Finally, I provide additional evidence that the immigration influx results in anti-incumbent sentiment by analyzing some gubernatorial elections. As mentioned above, I did not analyze the performance of the PT in the gubernatorial elections because there was no PT gubernatorial candidate in every state. Luckily, the two states, Amazonas and Roraima, bordering Venezuela had governors seeking reelection in 2018.¹⁹ Neither governor was running under the PT label nor had a history of alliance with the party. In Amazonas, the governor was Amazonino Mendes, a notorious local politician; in Roraima, the governor was Suely Campos, the wife of a notorious local politician. The two states are highlighted in Figure 8.

In the case of these gubernatorial elections, the causal strategy of using distance as the instrument is not applicable due to the small sample size. Hence, I do an observational analysis and regress the incumbent governors' voting share to the interaction between IEI and election year (2014 and 2018) with state fixed-effects and IDHM as control.²⁰ Figure 9 shows the marginal effect of IEI on incumbents in 2018.²¹

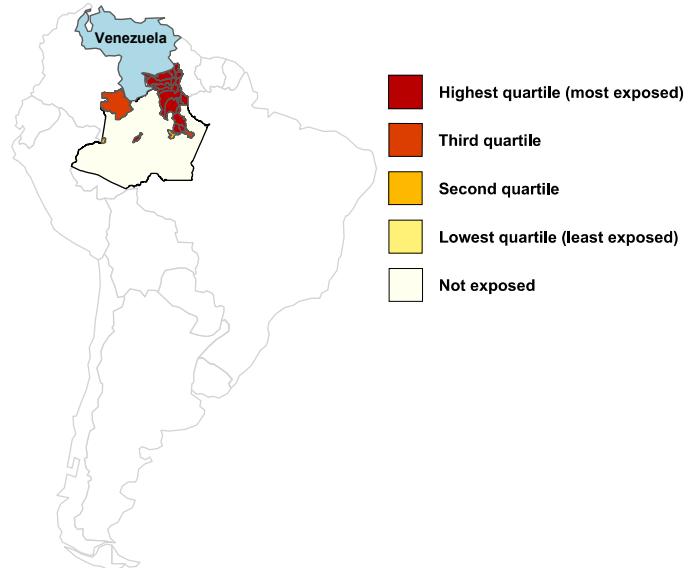
The graph shows that IEI also resulted in an anti-incumbent vote in the gubernatorial elections. As exposure to the Venezuelan diaspora increased, the voting share the governors

¹⁹In the case of Amazonas, the governor was elected in 2017 in a by-election.

²⁰Due to the smaller sample size, I limited the use of covariates.

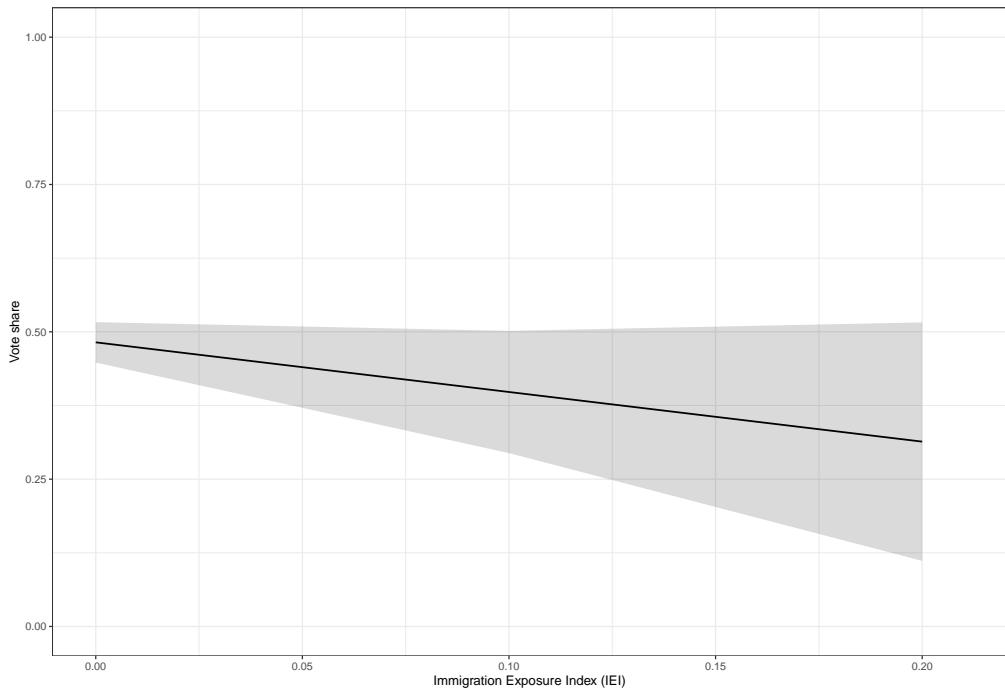
²¹The regression table is in the appendix.

Figure 8: Map of the distribution of Venezuelans in Amazonas and Roraima



Note: The quartiles indicate the number of Venezuelans in the municipality as a function of the city's population.

Figure 9: Marginal effect of Exposure Immigration Index (IEI) on Amazonas's and Roraima's incumbent governors in 2018



obtained decreased. An illustrative example of the possible correlation between the Venezuelan influx and the change in voting behavior is Manaus, the capital of Amazonas. In the short period of one year, from the 2017 by-election to the 2018 general election, Amazonino Mendes voting share decreased by more than 13% in Manaus. This municipality received 6,845 Venezuelans in 2018, almost five times more than it received in the previous year. Although not conclusive, this result indicates that Brazilian reaction to the Venezuelan influx was not directed solely against the PT.

In summary, the empirical evidence from two different 2SLS and a regression with an interaction validate my hypothesis and provide evidence in favor of my theory. The relevance of these results is derived from the fact that they provide a novel case to assess the direct relationship between immigration and voting behavior. In most cases in the literature, it is unfeasible to estimate this relationship because political elites mediated it. Consequently, the Brazilian-Venezuela case contributes to our understanding of how immigration affects voting behavior in the absence of any external cues from the political elite.

In addition, the results suggest that the political elites in countries where immigration is a salient topic beyond the exposed regions did not create this anti-immigration sentiment. Instead, they might only have taken advantage of local animosity, capitalized on it, and eventually amplified it. Currently, the topic of immigration is deeply intertwined with the parties and partisanship in these countries. These results also reinforce contemporary interpretations of Brazilian political behavior ([Samuels and Zucco, 2018](#)) and interpretations of the 2018 election ([Hunter and Power, 2019](#)).

However, the results have some limitations. They do not allow me to fully understand the mechanisms that motivate Brazilians to penalize the PT due to their exposure to Venezuelan

immigration. Nevertheless, the results contribute to improving our understanding of the relevance of immigration in politics by showing a country where there is no active anti-immigration party.

Robustness check

The validity of the 2SLS results relies upon the assumption that the distance from the border can only affect the voting behavior of Brazilians through the created Immigration Exposure Index (IEI). Even though I believe this to be a reasonable assumption, there is a concern about the existence of one or a plethora of unobserved variables that might violate two assumptions: exclusion restriction or ignorability of the instrument. For this reason, I conduct a sensitivity analysis that measures the risk of invalidating my results given potential violations of either assumption. Overall, these robustness checks provide more confidence in the validity of the results.

I employ [Cinelli and Hazlett \(2022\)](#)'s approach for this analysis, which uses two separate sensitivity analyses²² on the first-stage and the reduced-form regression.²³. The sensitivity analysis tests how strong a hypothetical unknown variable must be to make the results insignificant. I focus on the reduced-form regression because it allows the use of the 2014 election as a benchmark. This choice derives from the expectation that the 2014 electoral results greatly predict the 2018 electoral results. Hence, using the 2014 election as a benchmark produces a conservative result since it indicates that not even adding an unobserved covari-

²²I perform them using the R package `sensemakr` ([Cinelli, Ferwerda, and Hazlett, 2020](#)).

²³Although the results are mathematically the same, this approach means two sets of functions that are different from the 2SLS. In this case, one regresses the outcome variable on the instrumental variable (the reduced-form function) The ratio between the coefficients on the effect of the instrument on the treatment and on the outcome is the causal impact of interest.

ate as strong as the 2014 electoral results would make IEI statistically insignificant. These results suggest that a much stronger and, consequently, improbable unobserved covariate would be necessary to invalidate my findings.²⁴

Conclusion

Despite the large interest in immigration and its effects, we know little about how and if immigration directly affects national voting behavior. Most of the literature argues that the natives' reaction to immigration follows what is known as group threat theory, in which natives feel threatened by the immigrants' impact on the job market, on access to welfare and state resources, and/or on the cultural and ethnic framework of the country. However, it is unclear whether this sense of threat is derived from immigration or is mediated by political elites who voice anti-immigrant rhetoric. Past research has focused primarily on studying immigration in Western Europe and North America ([Hainmueller and Hopkins, 2014](#); [Whitaker and Giersch, 2015](#)), regions where political elites have been encouraging an anti-immigrant narrative for years or decades ([Ignazi, 1992](#)). Consequently, this article helps fill a gap by explaining the direct effect of immigration on voter behavior.

Throughout this article, I argue that this sense of threat derives directly from immigration. I propose that it is less costly and “triggers” more quickly than alternative explanations. The fear is almost immediate, while other possible, and more positive, interactions between natives and immigrants take time. These negative perceptions, in turn, translate into voting behavior against the incumbent or the political establishment, which are perceived to be

²⁴The figures and tables of the sensitivity analysis can be found in the appendix H.

linked to the immigration shock. Consequently, immigration directly and negatively impacts the incumbent’s voting share.

I test this argument by evaluating the impact of the Venezuelan immigration shock on Brazilians’ voting behavior for the country’s most important party: the Workers’ Party (PT). This is a case where immigration was not on the electoral agenda, making it possible to disentangle immigration from the actions of political elites. The causal effect of Venezuelan immigration on the PT’s vote share is estimated by using the municipality’s distance to the border as an instrumental variable. I conclude that the Venezuelan diaspora had a detrimental impact on the vote share of the PT in the 2018 election compared to municipalities that were not exposed to immigration. Therefore, the findings presented suggest that immigration has a political effect, even if immigration is not an issue articulated by any political actor.

These results provide empirical evidence in favor of group threat theory and my hypothesis on the negative effect of immigration on the incumbent’s vote share. This new evidence contributes to the debate about which theory best explains the reaction of natives to an immigration influx. The findings here reinforce the arguments of group threat theory and large parts of the literature that emphasize the political rejection of immigrants. In addition, these results show a direct link between immigration influx and anti-incumbent sentiment. These results amount to a diverse set of empirical findings that cast doubt on the political viability of the increasing movement of people. Even if globalization forces have a positive result in aggregate, the empirical results exposed here reinforce several findings that indicate the existence of “loser” regions where these shocks have a detrimental effect.

This research raises important questions about what factors make group threat theory

effective. The literature has concluded that socio-cultural factors are more important than economic factors ([Alesina and Tabellini, 2022](#)). However, these factors suffered from the same problem focused on here: their importance is also mediated by the political elites. Moreover, these studies are conducted, in large part, in developed countries where “post-material” concerns are higher than in other parts of the world. One possible dynamic is that economic or socio-cultural concerns about immigration are a function of the economic heterogeneity of countries. If this argument holds, we expect people in developing countries, such as Brazil and most of the countries affected by the Venezuelan diaspora, to worry more about the economic impact of immigration than people in western European countries affected by immigration waves. Future research should investigate these and other possibilities.

References

- Abramson, Scott F., David B. Carter, and Luwei Ying. 2022. “Historical Border Changes, State Building, and Contemporary Trust in Europe.” *American Political Science Review* pp. 1–21.
- Alesina, Alberto, and Marco Tabellini. 2022. The Political Effects of Immigration: Culture or Economics? Technical report National Bureau of Economic Research.
- Allport, Gordon Willard, Kenneth Clark, and Thomas Pettigrew. 1954. “The Nature of Prejudice.” .
- Angrist, Joshua David, and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist’s Companion*. Princeton: Princeton University Press.
- Bansak, Kirk, Jens Hainmueller, and Dominik Hangartner. 2016. “How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers.” *Science* 354(October): 217–222.
- Berman, Sheri. 2021. “The Causes of Populism in the West.” *Annual Review of Political Science* 24(1): 71–88.
- Blalock, Hubert M. 1967. *Toward a Theory of Minority-Group Relations*. Vol. 325 New York: Wiley.
- Bustikova, Lenka. 2014. “Revenge of the Radical Right.” *Comparative Political Studies* 47(October): 1738–1765.
- Cinelli, Carlos, and Chad Hazlett. 2022. “An Omitted Variable Bias Framework for Sensitivity Analysis of Instrumental Variables.” *SSRN Electronic Journal* .
- Cinelli, Carlos, Jeremy Ferwerda, and Chad Hazlett. 2020. “Sensemakr: Sensitivity Analysis Tools for OLS in R and Stata.” *SSRN Electronic Journal* .
- Clark, William Roberts, Matt Golder, and Sona N. Golder. 2017. “The British Academy Brian Barry Prize Essay: An Exit, Voice and Loyalty Model of Politics.” *British Journal of Political Science* 47(October): 719–748.
- Colantone, Italo, and Piero Stanig. 2018. “The Trade Origins of Economic Nationalism: Import Competition and Voting Behavior in Western Europe.” *American Journal of Political Science* 62(October): 936–953.
- Conover, Pamela Johnston, and Stanley Feldman. 1989. “Candidate Perception in an Ambiguous World: Campaigns, Cues, and Inference Processes.” *American Journal of Political Science* 33(November): 912.
- de Andrade, Hanrikson. 2018. “‘Venezuelano não é mercadoria para ser devolvido’, diz Bolsonaro.” .

- Dennison, James, and Andrew Geddes. 2019. “A Rising Tide? The Salience of Immigration and the Rise of Anti-Immigration Political Parties in Western Europe.” *The Political Quarterly* 90(January): 107–116.
- Dustmann, Christian, Kristine Vasiljeva, and Anna Piil Damm. 2019. “Refugee Migration and Electoral Outcomes.” *The Review of Economic Studies* 86(October): 2035–2091.
- Finseraas, Henning, and Andreas Kotsadam. 2017. “Does personal contact with ethnic minorities affect anti-immigrant sentiments? Evidence from a field experiment.” *European Journal of Political Research* 56(3): 703–722.
- Hainmueller, Jens, and Daniel J. Hopkins. 2014. “Public Attitudes Toward Immigration.” *Annual Review of Political Science* 17(1): 225–249.
- Hainmueller, Jens, and Dominik Hangartner. 2013. “Who Gets a Swiss Passport? A Natural Experiment in Immigrant Discrimination.” *American Political Science Review* 107(February): 159–187.
- Hainmueller, Jens, and Michael J. Hiscox. 2010. “Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment.” *American Political Science Review* 104(February): 61–84.
- Hangartner, Dominik, Elias Dinas, Moritz Marbach, Konstantinos Matakos, and Dimitrios Xefteris. 2019. “Does Exposure to the Refugee Crisis Make Natives More Hostile?” *American Political Science Review* 113(May): 442–455.
- Hjorth, Frederik, and Martin Vinaes Larsen. 2022. “When Does Accommodation Work? Electoral Effects of Mainstream Left Position Taking on Immigration.” *British Journal of Political Science* 52(April): 949–957.
- Ho, Daniel E., Kosuke Imai, Gary King, and Elizabeth A. Stuart. 2007. “Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference.” *Political Analysis* 15(3): 199–236.
- Homola, Jonathan, and Margit Tavits. 2018. “Contact Reduces Immigration-Related Fears for Leftist but Not for Rightist Voters.” *Comparative Political Studies* 51(November): 1789–1820.
- Hopkins, Daniel J. 2010. “Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition.” *American Political Science Review* 104(February): 40–60.
- Human Rights Watch. 2021. “Venezuela: Events of 2021.” In *World Report 2022*.
- Hunter, Wendy. 2010. *The transformation of the Workers' Party in Brazil, 1989-2009*. New York: Cambridge University Press.
- Hunter, Wendy, and Timothy J. Power. 2007. “Rewarding Lula: Executive Power, Social Policy, and the Brazilian Elections of 2006.” *Latin American politics and society* 49(1): 1–30.

- Hunter, Wendy, and Timothy J. Power. 2019. "Bolsonaro and Brazil's Illiberal Backlash." *Journal of Democracy* 30(1): 68–82.
- Ignazi, Piero. 1992. "The silent counter-revolution: Hypotheses on the emergence of extreme right-wing parties in Europe." *European journal of political research* 22(1): 3–34.
- International Organization for Migration. 2022. "Data and Research." .
- Jardina, Ashley. 2019. *White identity politics*. Cambridge, United Kingdom: New York, NY, USA : Cambridge University Press.
- King, Gary, and Langche Zeng. 2006. "The Dangers of Extreme Counterfactuals." *Political Analysis* 14(2): 131–159.
- Klašnja, Marko, and Rocío Titiunik. 2017. "The Incubency Curse: Weak Parties, Term Limits, and Unfulfilled Accountability." *American Political Science Review* 111(February): 129–148.
- Klašnja, Marko, and Rocío Titiunik. 2017. "The Incubency Curse: Weak Parties, Term Limits, and Unfulfilled Accountability." *American Political Science Review* 111(February): 129–148.
- Levitsky, Steven, and James Loxton. 2013. "Populism and competitive authoritarianism in the Andes." *Democratization* 20(January): 107–136.
- Lloyd, Ryan, and Amâncio Jorge de Oliveira. 2022. "Immigration and Public Opinion in Brazil: Taking Stock of New Waves of Migration and Polarization." In *Comparative Public Opinion*. Routledge pp. 217–240.
- Lyall, Jason. 2010. "Are Coethnics More Effective Counterinsurgents? Evidence from the Second Chechen War." *American Political Science Review* 104(February): 1–20.
- Mainwaring, Scott, Timothy J. Power, and Fernando Bizzarro. 2018. "The Uneven Institutionalization of a Party System: Brazil." In *Party Systems in Latin America*, ed. Scott Mainwaring. 1 ed. Cambridge University Press pp. 164–200.
- Malhotra, Neil, Yotam Margalit, and Cecilia Hyunjung Mo. 2013. "Economic Explanations for Opposition to Immigration: Distinguishing between Prevalence and Conditional Impact." *American Journal of Political Science* 57(April): 391–410.
- Mayda, Anna Maria, Giovanni Peri, and Walter Steingress. 2022. "The Political Impact of Immigration: Evidence from the United States." *American Economic Journal: Applied Economics* 14(January): 358–389.
- Meguid, Bonnie M. 2005. "Competition Between Unequals: The Role of Mainstream Party Strategy in Niche Party Success." *American Political Science Review* 99(August): 347–359.
- Mudde, Cas. 2007. *Populist Radical Right Parties in Europe*. Cambridge, UK ; New York: Cambridge University Press.

- Naritomi, Joana, Rodrigo R. Soares, and Juliano J. Assunção. 2012. “Institutional Development and Colonial Heritage within Brazil.” *The Journal of Economic History* 72(May): 393–422.
- Novaes, Lucas M. 2018. “Disloyal Brokers and Weak Parties.” *American Journal of Political Science* 62(January): 84–98.
- PT. 2021. “Saudação às eleições gerais venezuelanas de novembro de 2021.”
- R4V, UN Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela. 2022. “Refugees and Migrants from Venezuela | R4V.”
- Ramsey, Geoff, and David Smilde. 2020. Beyond the Narcostate Narrative. Technical report WOLA.
- Samuels, David, and Cesar Zucco. 2018. *Partisans, anti-partisans and non-partisans: voting behavior in Brazil*. Cambridge, United Kingdom ; New York, NY: Cambridge University Press.
- Schlueter, Elmar, and Peer Scheepers. 2010. “The Relationship between Outgroup Size and Anti-Outgroup Attitudes: A Theoretical Synthesis and Empirical Test of Group Threat-and Intergroup Contact Theory.” *Social Science Research* 39(March): 285–295.
- Schmidt-Catran, Alexander W., and Christian S. Czymara. 2023. “Political Elite Discourses Polarize Attitudes toward Immigration along Ideological Lines. A Comparative Longitudinal Analysis of Europe in the Twenty-First Century.” *Journal of Ethnic and Migration Studies* 49(January): 85–109.
- Snyder, James M., and Michael M. Ting. 2002. “An Informational Rationale for Political Parties.” *American Journal of Political Science* 46(January): 90.
- Sovey, Allison J., and Donald P. Green. 2011. “Instrumental Variables Estimation in Political Science: A Readers’ Guide.” *American Journal of Political Science* 55(1): 188–200.
- Staffan. I. Lindberg, Nils Düpont, Masaaki Higashijima, Yaman Berker Kavasoglu, Kyle L. Marquardt, Michael Bernhard, Holger Döring, Allen Hicken, Melis Laebens, Juraj Medzihorsky, Anja Neundorf, Ora John Reuter, Saskia Ruth-Lovell, Keith R. Weghorst, Nina Wiesehomeier, Joseph Wright, Nazifa Alizada, Paul Bederke, Lisa Gastaldi, Sandra Grahn, Garry Hindle, Nina Ilchenko, Johannes Von Römer, Steven Wilson, Daniel Pemstein, and Brigitte Seim. 2022. “V-Party Dataset v2.”
- Stokes, Leah C. 2016. “Electoral Backlash against Climate Policy: A Natural Experiment on Retrospective Voting and Local Resistance to Public Policy.” *American Journal of Political Science* 60(October): 958–974.
- Theil, Henri, and Renate Finke. 1983. “The distance from the equator as an instrumental variable.” *Economics Letters* 13(4): 357–360.

Van Der Brug, Wouter, Meindert Fennema, and Jean Tillie. 2005. “Why Some Anti-Immigrant Parties Fail and Others Succeed: A Two-Step Model of Aggregate Electoral Support.” *Comparative Political Studies* 38(June): 537–573.

VEJA. 2018. “Bolsonaro ataca lei de migração e diz que Brasil não sabe o que é ditadura.” .

Vivas, Leonardo, and Tomas Paez. 2017. “The Venezuelan Diaspora, Another Impending Crisis?” .

Wagner, Ulrich, Rolf Dick, Thomas Pettigrew, and Oliver Christ. 2003. “Ethnic Prejudice in East and West Germany: The Explanatory Power of Intergroup Contact.” *Group Processes & Intergroup Relations* 6(January): 22–36.

Ward, Dalston G. 2019. “Public Attitudes toward Young Immigrant Men.” *American Political Science Review* 113(February): 264–269.

Waters, Jaret, and Jeanne Batalova. 2022. “Brazilian Immigrants in the United States.” .

Whitaker, Beth Elise, and Jason Giersch. 2015. “Political Competition and Attitudes towards Immigration in Africa.” *Journal of Ethnic and Migration Studies* 41(August): 1536–1557.

Appendix

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A Brief summary of Venezuelan context and the reasons for the diaspora

The Venezuelan diaspora is the consequence of President Hugo Chávez's political legacy. Despite initial success, Chávez's and Maduro's, his successor, governments resulted in a sizeable socioeconomic crisis since the end of the last commodity boom cycle (around 2010). After its end, Venezuela's economy entered into disarray with stagflation and a shortage of fundamental goods like food and medicine, with substantial social consequences, like the sharp increase in violence. Consequently, the country is in dire socio-economic situation for many years now.

In parallel, *Chavismo* promoted a profound political change in Venezuela. Chávez sponsored a new constitutional assembly in 1999, which “closed Congress, purged the judiciary, and appointed new electoral authorities” ([Levitsky and Loxton, 2013, 125](#)). Moreover, there are several denunciations against Maduro's government with accusations of human rights abuses, persecution of the opposition, and tampering with the elections ([Human Rights Watch, 2021](#)). Therefore, the odds of an opposition victory nowadays are slim, making any political change in Venezuela through elections difficult. In sum, Chávez's regime's political persecution, corruption, and mismanagement of the Venezuelan economy result in a large-scale humanitarian crisis. Consequently, the ‘natural’ decision for many Venezuelans was to *exit* the country ([Clark, Golder, and Golder, 2017; Vivas and Paez, 2017](#)). More than 6 million Venezuelans have left the country ([R4V, 2022](#)) – almost one-fifth of the country's population, resulting in one of the biggest displacements in the American continent's history.

B IEI summary statistics

Table 3: IEI summary statistics

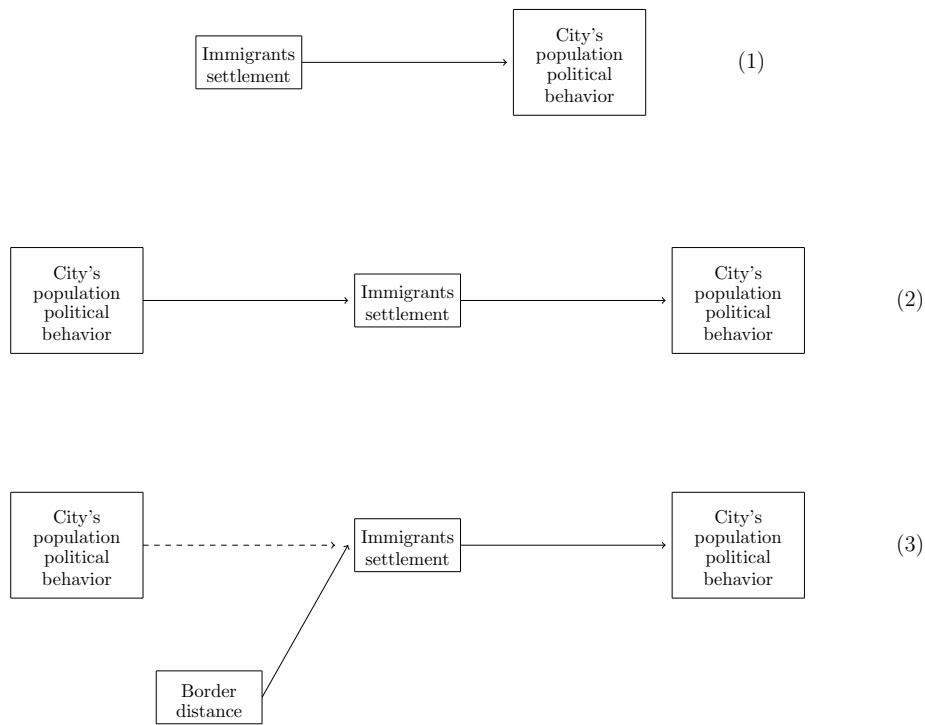
Immigration Exposure Index (<i>IEI</i>)	
Minimum	0.000002
Median	0.000064
Mean	0.002021
Standard deviation	0.018133
Maximum	0.285518

C Further discussion on the use of instrument variable and its justification

Figure 10 shows a schematization of the problem of using OLS and how using the distance to the border as an instrumental variable helps to circumvent this problem.

Figure 10 has three logical flows. The first represents the direct impact of immigration on political behavior, the objective of this analysis. Reality, however, is arguably closer to the second logical flow since the political behavior in municipalities also causes the choice of settlement. Hence, the best viable option is the third logical flow, where the border distance diminishes the risk of reverse causality. The border distance instrument breaks this cyclical dynamic in the second logical flow, allowing more confidence in the evaluation of the causal effect of Venezuelan immigration on Brazilian voting behavior.

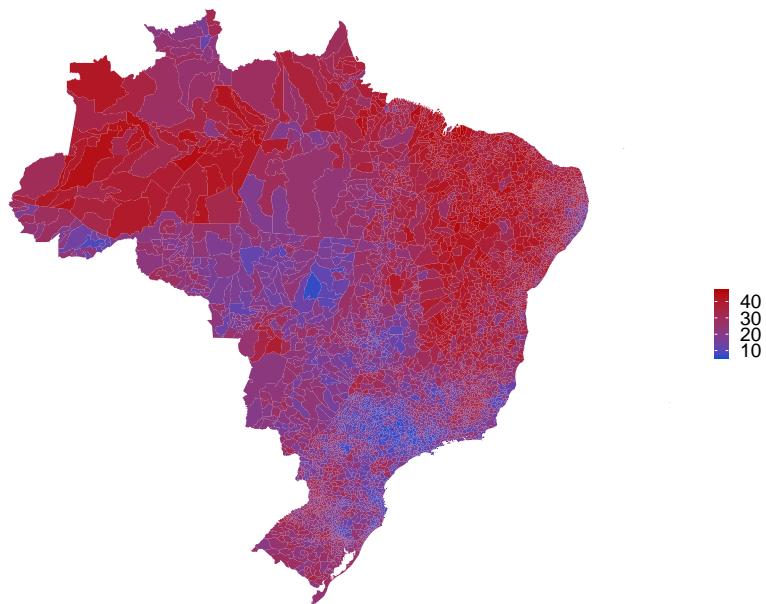
Figure 10: Instrumental variable justification



D Map of PT's presidential voting share in 2014

The map highlights that the most affected area by the Venezuelan influx does not have an electoral pattern. The map show a clear preference for PT in the northeast and a rejection of the party in the southeast, as already identified by the literature ([Hunter and Power, 2007](#))

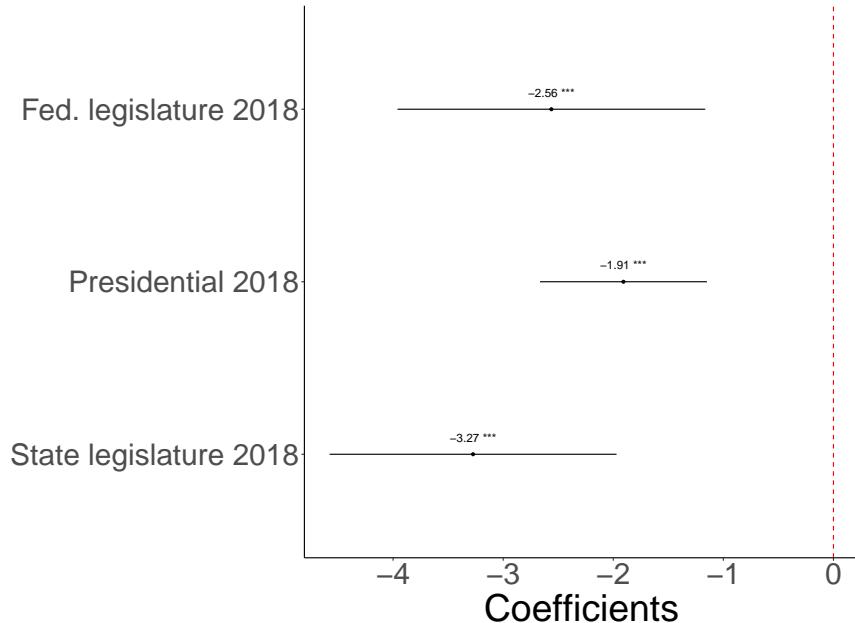
Figure 11: Map of the PT presidential voting in 2014



Note: Variation in percentage.

E Model using a random sample

Figure 12: 2SLS Regression Estimates of the impact of Venezuela's immigrants using a random sample



Note: *** $p < 0.05$. Confidence intervals for 95%

Table 4: First stage regression – random sample

Instrument	<i>Dependent variable:</i>		
	Immigration	Exposure Index	
MHDI	0.033 (0.021)	0.033 (0.021)	0.039* (0.021)
Gini index	-0.019* (0.011)	-0.019* (0.011)	-0.018* (0.011)
Rural proportion	0.007* (0.004)	0.007* (0.004)	0.006 (0.004)
Poor proportion	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
Female proportion	0.107** (0.050)	0.107** (0.050)	0.102** (0.050)
Presidential 2014	-0.008* (0.005)		
State legislature 2014		-0.008* (0.005)	
Fed. legislature 2014			0.002 (0.005)
Constant	0.020 (0.024)	-0.085	0.019
Observations	528	528	528
R ²	0.211	0.211	0.207
Adjusted R ²	0.200	0.200	0.196
Residual Std. Error	0.012 (df = 520)	0.012 (df = 520)	0.012 (df = 520)
F Statistic	19.879*** (df = 7; 520)	19.879*** (df = 7; 520)	19.391*** (df = 7; 520)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 5: Second stage regression – random sample

	<i>Dependent variable:</i>		
	Presidential 2018	State legislature 2018	Fed. legislature 2018
Immigration Exposure Index	−1.908*** (0.448)	−3.274*** (0.686)	−2.562*** (0.768)
Presidential 2014	0.299*** (0.019)		
State legislature 2014		0.497*** (0.034)	
Fed. legislature 2014			0.505*** (0.032)
Constant	0.380*** (0.088)	−0.086 (0.154)	−0.358** (0.154)
Observations	517	517	517
R ²	0.839	0.393	0.418
Adjusted R ²	0.837	0.385	0.410
socio-economic controls	YES	YES	YES
Robust Standard errors	YES	YES	YES
Residual Std. Error	0.042 (df = 509)	0.073 (df = 509)	0.074 (df = 509)
F Statistic	379.961*** (df = 7; 509)	47.090*** (df = 7; 509)	52.273*** (df = 7; 509)

Note:

*p<0.1; **p<0.05; ***p<0.01

F Second stage regression

Table 6: Second stage regression

	<i>Dependent variable:</i>		
	Presidential 2018	State legislature 2018	Fed. legislature 2018
Immigration Exposure Index	-1.855*** (0.448)	-2.084*** (0.686)	-1.515*** (0.768)
Presidential 2014	0.308*** (0.016)		
State legislature 2014		0.461*** (0.026)	
Fed. legislature 2014			0.381*** (0.025)
Constant	0.149*** (0.094)	-0.486 (0.140)	-0.456** (0.141)
Observations	522	522	517
R ²	0.809	0.440	
Adjusted R ²	0.806	0.432	
socio-economic controls	YES	YES	YES
Robust Standard errors	YES	YES	YES
Residual Std. Error	0.035 (df = 514)	0.051 (df = 514)	
F Statistic	311.102*** (df = 7; 514)	57.630*** (df = 7; 514)	

Note:

*p<0.1; **p<0.05; ***p<0.01

G Second stage table using 2014 election results

Table 7

	<i>Dependent variable:</i>		
	State legislature 2014	Fed. legislature 2014	Presidential 2014
	(1)	(2)	(3)
Immigration Exposure Index	-0.316 (0.577)	0.294 (0.961)	0.717 (0.509)
State legislature 2010	0.502*** (0.027)		
Fed. legislature 2010		0.623*** (0.028)	
Presidential 2010			0.806*** (0.027)
Constant	-0.352* (0.182)	-0.262 (0.173)	-0.280* (0.159)
Observations	528	528	528
R ²	0.412	0.506	0.826
Adjusted R ²	0.404	0.499	0.823
Residual Std. Error (df = 520)	0.068	0.064	0.059
F Statistic (df = 7; 520)	51.947***	76.003***	351.928***

Note:

*p<0.1; **p<0.05; ***p<0.01

H Gubernatorial interaction regression

In order to have some robustness of these results, I run the regression with and without the electoral results from Amapá, the other northern state with an incumbent governor seeking reelection..

Table 8

	<i>Dependent variable:</i>	
	Voting share	
	(1)	(2)
Immigration Exposure Index	427.771** (181.615)	384.986** (176.457)
2018	0.064*** (0.023)	0.031 (0.021)
Amapá		-0.010 (0.031)
Roraima	-0.162*** (0.032)	-0.165*** (0.031)
IDHM	-0.635*** (0.203)	-0.538*** (0.188)
IEI × 2018	-428.614** (181.570)	-385.761** (176.412)
Constant	0.782*** (0.116)	0.744*** (0.107)
Observations	154	186
R ²	0.305	0.254
Adjusted R ²	0.281	0.229
Residual Std. Error	0.142 (df = 148)	0.138 (df = 179)
F Statistic	12.960*** (df = 5; 148)	10.150*** (df = 6; 179)

Note:

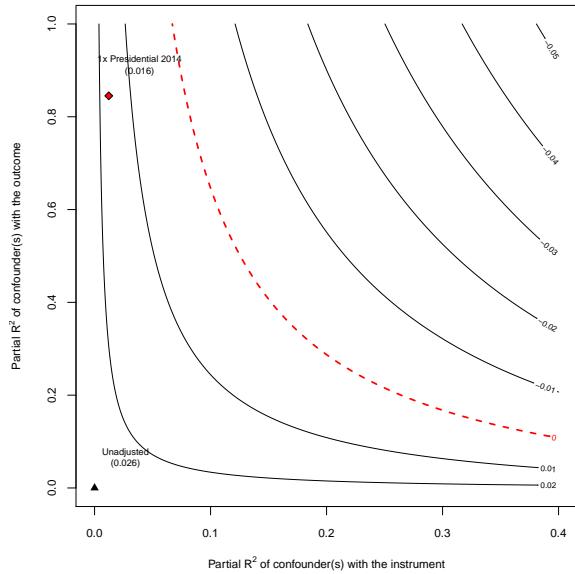
*p<0.1; **p<0.05; ***p<0.01

Table 9

I Sensitivity analysis table

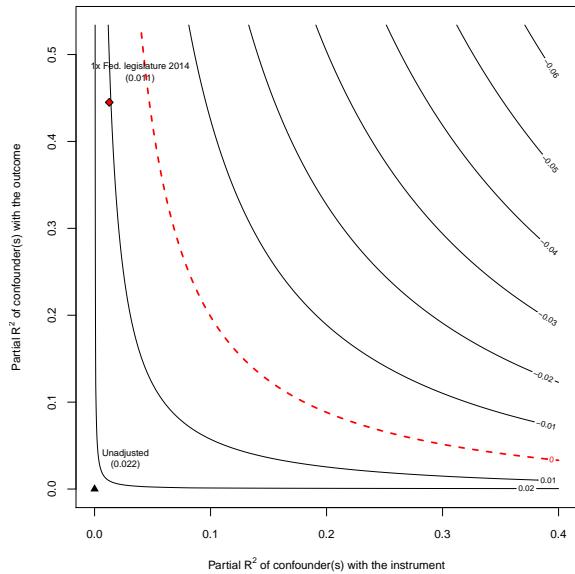
The graphs' axes show the partial R^2 of the confounder with the instrument and with the 2018 PT's voting share. The red dashed line indicates the critical threshold where the impact of the cofounder would make the estimate equal to zero (the null hypothesis). The black triangle is the estimate without any unobserved covariate, and the red diamonds are the value of the estimate if we “add” to the regression function a covariate with prediction power equal to the 2014 election. “Adding” a strong confounder to the regression, the results – for all elections – remain statistically different from zero. Consequently, these analyses indicate that a much stronger and, in consequence, improbable unobserved covariate would be necessary to invalidate the results.

Figure 13: Sensitivity analysis on the presidential results



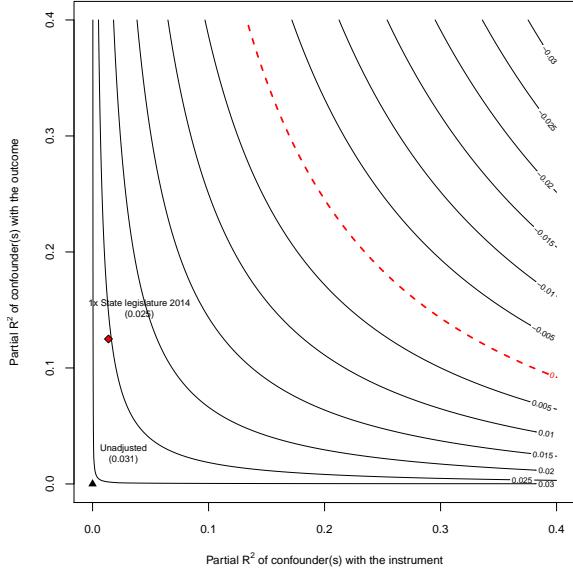
Note: *** $p < 0.05$. Confidence intervals for 95%

Figure 14: Sensitivity analysis on the Fed. legislature results



Note: *** $p < 0.05$. Confidence intervals for 95%

Figure 15: Sensitivity analysis on the state legislature results



Note: *** $p < 0.05$. Confidence intervals for 95%

Outcome: *treat*

Treatment:	Est.	S.E.	t-value	$R_{Y \sim D \mathbf{X}}^2$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$	
<i>index</i>	-0.014	0.001	-10.055	16.3%	35.4%	29.7%	
df = 520				Bound (4x 'Presidential 2014'): $R_{Y \sim Z \mathbf{X}, D}^2 = 1.5\%$, $R_{D \sim Z \mathbf{X}}^2 = 6.2\%$			

Outcome: *Presidential 2018*

Treatment:	Est.	S.E.	t-value	$R_{Y \sim D \mathbf{X}}^2$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$	
<i>index</i>	0.026	0.004	6.076	6.7%	23.4%	16.6%	
df = 514				Bound (1x 'Presidential 2014'): $R_{Y \sim Z \mathbf{X}, D}^2 = 84.5\%$, $R_{D \sim Z \mathbf{X}}^2 = 1.2\%$			

Outcome: *treat*

Treatment:	Est.	S.E.	t-value	$R_{Y \sim D \mathbf{X}}^2$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$	
<i>index</i>	-0.014	0.001	-10.254	16.8%	36%	30.3%	
df = 520				Bound (4x 'Fed. legislature 2014'): $R_{Y \sim Z \mathbf{X}, D}^2 = 0\%$, $R_{D \sim Z \mathbf{X}}^2 = 4.1\%$			

Outcome: *Fed. legislature 2018*

Treatment:	Est.	S.E.	t-value	$R^2_{Y \sim D \mathbf{X}}$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$
<i>index</i>	0.022	0.006	3.367	2.2%	13.8%	6%
df = 514	<i>Bound</i> (1x ‘Fed. legislature 2014’): $R^2_{Y \sim Z \mathbf{X}, D} = 44.5\%$, $R^2_{D \sim Z \mathbf{X}} = 1.3\%$					

Outcome: *treat*

Treatment:	Est.	S.E.	t-value	$R^2_{Y \sim D \mathbf{X}}$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$
<i>index</i>	-0.014	0.001	-10.224	16.7%	35.9%	30.2%
df = 520	<i>Bound</i> (4x ‘State legislature 2014’): $R^2_{Y \sim Z \mathbf{X}, D} = 0\%$, $R^2_{D \sim Z \mathbf{X}} = 6.3\%$					

Outcome: *Presidential 2018*

Treatment:	Est.	S.E.	t-value	$R^2_{Y \sim D \mathbf{X}}$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$
<i>index</i>	0.031	0.005	5.614	5.8%	21.9%	14.8%
df = 514	<i>Bound</i> (1x ‘State legislature 2014’): $R^2_{Y \sim Z \mathbf{X}, D} = 12.5\%$, $R^2_{D \sim Z \mathbf{X}} = 1.4\%$					