# Leaving a Footprint:

# European Immigration, Political Preferences, and Social Capital in Brazil

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#### **Abstract**

This paper documents the effects of the mass migration episode of the late nineteenth and early twentieth century on social capital and political attitudes in Brazil. We exploit novel data containing the vote shares at the municipality level for the 1960 Presidential elections, the last under the 1946 Constitution, to investigate the medium-run effects of immigration. We find an increase in the vote share for candidates associated with left-wing parties. In the long run, we provide evidence that municipalities with a higher fraction of European immigrants elected legislators more inclined to the left and document persistent impacts on social capital. More specifically, individuals living in high exposed municipalities to immigration are more likely to support democracy, trust neighbors and institutions, and be satisfied with state performance today.

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# 1 Introduction

From the late nineteenth to the early twentieth century, approximately fifty-five million Europeans migrated to the Americas in an unprecedented migratory flow in history (Hatton and Williamson, 1998). Most of these immigrants had the United States as the main destination, but there were also significant flows to Argentina, Canada, and Brazil. A large body of literature has investigated the effects of this episode on several economic and political outcomes in the US (Abramitzky et al., 2014; Abramitzky and Boustan, 2017; Sequeira et al., 2020; Tabellini, 2020), and only a few have considered the long-term impacts within Latin America (Sánchez-Alonso, 2018). Recent research has focused on the link between immigrants' human capital and long-term economic and educational outcomes (Rocha et al., 2017; Droller, 2018; Witzel de Souza, 2018). Yet, we still know much less about the consequences of mass migration on social capital and political attitudes in Brazil.

In this paper, we fill this gap by examining the medium- and long-term effects of historical immigration on Brazilian political outcomes. Between 1870 and 1930, the country received approximately four million European immigrants, mainly from southern Europe. Exploiting the rich information about the nationality of immigrants available in the 1872 and 1920 censuses, we combine variation at the municipality level in the exposure to historical immigration with electoral and individual-level data from modern surveys to measure cultural norms and political attitudes today. To estimate a causal effect, we follow Tabellini (2020) and construct a "leave-out" version of the shift-share instrument to predict the inflows of immigrants between 1872 and 1920 based on preexisting migration patterns in each Brazilian municipality.

Because of Brazil's centralized policy of subsidizing immigration, immigrants had limited choices on where to go, which means that the concerns raised by Jaeger et al. (2018) that municipality-specific conditions may have attracted immigrants from specific origins are less likely in our context. Importantly, this does not imply that preexisting migration networks did not play a role in attracting immigrants. For instance, Witzel de Souza (2019) shows that the credit supplied by landowners allowed for the tying of immigrants via indebtedness. Another potential concern related to the identification strategy is that municipality-specific characteristics associated with the attraction of immigrants from each sending region before 1872 must be uncorrelated with social capital and political attitudes in the long term (Goldsmith-Pinkham et al., 2020; Borusyak et al., 2022). We deal with this concern by including in our baseline specification a vector of municipality characteristics that might have contributed to attracting more immigrants and may have affected long-term ideology. One of such characteristics is the initial share of immigrants, which mechanically predicts higher future immigration via the instrument. By controlling for the initial stock of immigrants, we then identify the effects of immigration exploiting variations in the ethnic composition of the foreign-born population

across municipalities. We also show that results are stable across different specifications.

We begin studying the medium-term political effects of immigration in Brazilian municipalities. From 1945 to 1965, the Electoral Justice published a collection of seven volumes containing information on votes obtained by all candidates in proportional (federal and state deputies) and majority elections (senator, president, vice president, governor, and vice governor) at the state level (TSE, 1963). For the 1960 Presidential elections, the collection provides data on votes for each candidate at the electoral district level, which allows us to construct a unique dataset containing vote shares at the municipality level. Why is this election interesting? First, it was the last one under the 1946 Constitution. Second, the dispute was marked by the victory of Jânio Quadros, the presidential candidate supported by the main right-wing party (*UDN - União Democrática Nacional*), and João Goulart, a vice-president candidate member of a left-wing party (*PTB - Partido Trabalhista Brasileiro*). This unusual combination would be one of the causes of the political crisis of the following years.

We find that the historical presence of immigrants increased the support for left-wing candidates in the 1960 elections. An increase in one standard deviation in the fraction of immigrants led to a 6.7 percentage points increase in the vote share of Henrique Lott, the ruling candidate from the Social Democratic Party supported by center-left parties. This effect corresponds to approximately 19.5% of the candidate's average vote share. The support for the vice-president João Goulart increased by almost the same magnitude (6.2 percentage points, or 15.7% relative to its mean). The coefficient estimated for Jânio Quadros is not statistically significant, but the sign is negative as expected. We argue that the notable presence of immigrants in manufacturing establishments triggered the labor movement at the beginning of the twentieth century, especially in São Paulo and Rio de Janeiro, where large-scale strikes occurred between 1917 and 1920 (Fausto and Fausto, 2014).

We continue our analysis by investigating how immigration affected the ideology of the national and local legislative members in the long run. We document a negative and statistically significant effect of immigration on legislators' ideology in the last twenty years. These effects are economically relevant: one standard deviation increase in the fraction of immigrants decreases the vote-share weighted position ideology of parties in the 2018 elections for the Chamber of Deputies by approximately 0.54 standard deviation. We provide evidence of similar patterns when investigating elections for the municipal councils. In sum, results suggest that voters in municipalities with a higher presence of immigrants tended to elect representatives supporting more redistributive policies. We argue that cultural factors may help to explain these intriguing results.

After documenting the effects of historical immigration on voting behavior in Brazilian municipalities, we show that the political impacts are consistent with immigration having long-lasting effects on social capital and political attitudes in Brazil. More specifically, individuals

living in municipalities with a higher historical immigrant presence are more likely to support democracy, trust neighbors and institutions, and be satisfied with state performance today. This evidence suggests that specific skills or cultural norms associated with immigrants may have been transmitted across generations. Moreover, the experience of living where the functioning of the state worked for years seems to be a relevant factor when it comes to giving opinions on the quality of the state in activities of public interest.

This paper contributes to the growing body of studies investigating the long-lasting effects of historical immigration in Brazil (Carvalho Filho and Colistete, 2010; Stolz et al., 2013; de Carvalho Filho and Monasterio, 2012; Rocha et al., 2017; Witzel de Souza, 2018) in three ways. First, we bring new evidence that immigration had persistent effects on cultural norms and political attitudes. Understanding how a person's values and beliefs are formed and transmitted across generations is very important since cultural traits defined in a distant past can affect today's economic and institutional outcomes (Guiso et al., 2006, 2008, 2016; Alesina et al., 2013). Second, to our knowledge this is the first work to rigorously investigate the consequences of this historical episode in Brazil without spatial restrictions. Although most of the immigrants settled in the state of São Paulo, many spread into other areas as well, especially in the southern part of the country. A notable exception is Cenci et al. (2019), which exploits the presence of immigrant descendants in Brazilian municipalities far from the original locations of the historical immigration to investigate whether the human capital spreads over the receiving country. Third, we establish a strong causal relation of the impact of immigration by using an instrument variable strategy, which helps to alleviate concerns regarding with potentially non-random location of the state-sponsored settlements widely used in literature to study immigration in Brazil.

This paper also speaks to the literature on the Age of Mass Migration. Abramitzky et al. (2014); Abramitzky and Boustan (2017); Abramitzky et al. (2020) investigate both the selection and assimilation of European immigrants in the US, while Droller (2018), Lafortune et al. (2019), and Sequeira et al. (2020) study the short-run and long-run effects of historical immigration on economic development. Focusing on the causes of anti-immigration sentiments in the US, Tabellini (2020) finds that ethnic diversity brought about by European immigrants initially triggered natives' backslash. This paper also contributes to the more general literature on the influence of historical events on cultural norms of behavior, most notably social capital and political attitudes (Nunn and Wantchekon, 2011; Acharya et al., 2016; Guiso et al., 2016; Lowes et al., 2017)

The remainder of the paper is organized as follows. Section 2 describes the historical background. Section 3 presents the data. Section 4 describes the empirical strategy. Section 5 contains the main results on political and social capital outcomes. Section 6 summarizes the main robustness checks, and Section 7 presents some concluding remarks.

# 2 Historical Background

## 2.1 The Age of Mass Migration

Throughout much of the colonial period (1500-1821), the Portuguese government imposed several restrictions and prohibitions upon the immigration of other nationalities to Brazil. The inflow of immigrants to the country started to increase just in 1808 with the court arrival and the consequent opening of the Brazilian ports to the international commerce (Cameron, 1931). With the declaration of independence in 1822, the new government increased its efforts to attract European immigrants into the country by promoting the establishment of small settlements in the Southernmost parts of the country. Such incentive policy gained increased support in the second half of the nineteenth century with the ban on the international slave trade in 1850 and the abolishment of slavery in 1888. At that time, subsidizing European immigration appeared to be the best solution to the increasing demand for free labor due to the rapid expansion of coffee plantations in the Southeast.

The rise of coffee as the main Brazilian export product by the end of the nineteenth century, along with transport improvements, promoted unprecedented economic and political transformations in the country (Naritomi et al., 2012). At the beginning of the coffee expansion, the demand for farm labor in the Paraíba Valley - the principal coffee producer located across the border of São Paulo and Rio de Janeiro - relied heavily on slave labor (Fausto and Fausto, 2014). With the abolishment of international slave trade in 1850, the internal reallocation of slaves from provinces of the Northeast to the coffee-growing regions continued to supply the increasing labor demand in these regions. The increasing abolitionist sentiment and the final abolition in 1888, along with the spread of coffee production to the West of São Paulo, renewed the interest in importing free labor from Southern Europe through transportation subsidies to maintain a constant labor supply (Leff, 1997).

Between 1877 and 1903, the subsidized immigration disseminated in Europe through massive propaganda achieved its objective. Approximately 1.9 million Europeans, mostly Italians (58.49%), entered Brazil (Levy, 1974). São Paulo received majority of the total inflow of European families arriving in the country. The Brazilian immigration policy was specifically intended to sustain the production of coffee and Europeans had to meet well-defined criteria to qualify for a subsidized passage (Sánchez-Alonso, 2018). The official program gave the authorities control over which immigrants entered and their occupation after arrival. The growing concerns in sending countries with the poor conditions of migrants in Brazil led some of them to limit or ban subsidized immigration (Fausto and Fausto, 2014). The "Decreto Prinetti" of 1902, which made subsidized emigration from Italy illegal, is an example of such a restrictive policy that made Brazil no longer an attractive destination for Italians in the following decades.

Despite that, subsidized immigration lasted until 1927. From 1905 to 1929, spontaneous immigration surpassed subsidized immigration, and Brazil received about 2.1 million immigrants with a more diverse nationality distribution. In the first decade of this period, about fifty percent of the foreign-born came from Portugal and Spain. It was also during this period that the first Japanese immigrants arrived. Although WWI drastically reduced the inflow of immigrants, the last significant migration flows occurred in the 1920s with the arrival of immigrants from other regions of Europe, such as Poland, Russia, and Romania (Levy, 1974).

# 2.2 The Impact of European Immigration on Brazil

In recent years, a large body of literature has documented the persistent effects of historical immigration on receiving countries. Linking immigrants' human capital to long-run economic and educational outcomes has been the focus for Brazil. For instance, Rocha et al. (2017) examine the long-run effects of the government-sponsored policy of European immigration to São Paulo. The authors show that municipalities that received state-sponsored settlements have higher income per capita and better educational outcomes today. A higher supply of education inputs and faster transitions in occupations from agriculture to manufacturing and services sectors are the mechanisms driving these long-run effects. In addition to being more educated, literature has suggested that these immigrants demanded higher investment in education and that this had long-term consequences (Colistete, 2016; Witzel de Souza, 2018)

Similarly, immigrants might have brought with them previously acquired manufacturing skills or other cultural traits possibly associated with entrepreneurship that added to the local labor force and affected the long-run development in Brazil. For instance, Dean (1969) argues that immigrants and their children played a relevant role as entrepreneurs in the industrialization of São Paulo, and Pereira (1974) shows that Italians of the first and second generations constituted the largest single ethnic group, even among those whose ancestors were natives. Given the traditional historical association between immigrant labor and the determinants of industrialization and economic development, one may be concerned about the negative consequences for the Brazilian native workers. If Europeans displaced native-born workers they did so in lower proportions than previously believed. Luna et al. (2016) shows a surprisingly high share of native workers in the rural labor force in early twentieth century in São Paulo. National workers represented 45 percent of the rural workforce and were present in two-thirds of the coffee estates.

### 3 Data

To investigate whether mass immigration fostered the formation of social capital and political attitudes in its various dimensions in Brazil, we rely on historical and modern data from several sources. First, we collect municipality-level data from the population censuses to build several municipality characteristics, including the most important explanatory variable that captures the historical presence of European immigrants. Second, we merge this information with individual-level data from modern surveys to measure cultural norms and political attitudes. To investigate the political effects of immigration, we use electoral data at the municipality level and complement all these data with geographic characteristics. We describe the most relevant datasets below. Appendix A provides full details on variables definitions and sources.

Notably, the administrative division in Brazil has become quite fragmented over time. The number of municipalities increased from 642 in 1872 to 5,565 in 2010. To have consistent observations over time despite changes in municipality boundaries, we adjust all data to conform to 1920 boundaries. Appendix A explains in detail the procedure.

#### 3.1 Historical Characteristics

We collect data on population and the number of immigrants by nationality at the municipality level from the Brazilian Demographic Censuses of 1872 and 1920. Since the large-scale inflow of European immigrants to Brazil increased steadily after the abolition of slavery in 1888, we use the 1872 census to examine the preexisting socioeconomic characteristics right before the immigration shock. We construct the following controls: the (i) share of slaves, (ii) share of foreign-born population, (iii) literacy rate of individuals aged five or more, (iv) share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, (v) share of workers in public administration relative to total population, and (vi) population density. From the 1920 census, we build our principal variable of interest: the fraction of immigrants over the municipality population. We also construct from the 1920 census data the land Gini. Differences in land concentration across municipalities may have generated more or less conducive policies to development (Engerman and Sokollof, 1997), confounding our results. Given the persistent effects of economic inequality on long-term development, we thus include the land Gini as an additional control to check whether land inequality drives our results (de Carvalho Filho and Monasterio, 2012).

#### 3.2 Political Variables

One objective of the paper is to investigate the political effects of immigration in Brazil. From 1945 to 1965, the Electoral Justice published a collection of seven volumes containing

information on votes obtained by all candidates in proportional (federal and state deputies) and majority elections (senator, president, vice president, governor, and vice governor) at the state level. For the 1960 Presidential elections, the collection provides data on votes for each candidate at the electoral district level (TSE, 1963), which allows us to build a unique dataset containing vote shares at the municipality level<sup>1</sup>. In addition to the electoral results, we compile data on legislators ideology between 1998 and 2018 from Power and Rodrigues-Silveira (2019) to map each party's position in a left-to-right scale. The index is constructed from congressmen answers to the Brazilian Legislative Survey, and ranks parties from minus one to one. Power and Zucco Jr (2009) argue that lower scores in the index are associated with more redistributive policies. We then combine the ideological positions of Brazilian parties with election results to the national lower house and city councils to map the ideological preferences of Brazilian voters over time<sup>2</sup>.

## 3.3 Social Capital and Political Attitudes

To measure the various dimensions of social capital, we use data at the individual level from the Latinobarómetro for 2002-2020, a nationally representative opinion survey conducted in eighteen countries in Latin America. Those surveys provide a unique database compiling people's perceptions, attitudes and assessments on a broad spectrum of issues relating to politics, the state and its institutions. We focus on ten measures associated with cultural norms and political attitudes in multiple waves of Latinobarómetro and match this information to our municipality-level data. In particular, we measure attitudes toward democracy, acceptance of the functioning of government institutions, interpersonal and institutional trust, and state performance. We normalize the respondent' answers to these questions so that higher values indicate higher support for democratic values and higher satisfaction levels. We discuss these variables in detail below.

$$I_m = \sum_{p=1}^n v_{pm} \cdot i_p,$$

where  $v_{pm}$  represents the vote share of party p in municipality m in (local or national) legislative elections and  $i_p$  is the ideological score for that party in the closest year when the BLS was conducted.

<sup>&</sup>lt;sup>1</sup>After compiling the original data, Regional Electoral Courts (TREs) in each state sent the results to the Superior Electoral Court (TSE), which was responsible for organizing and publishing the final statistics of the elections. Comparing turnout data with the sum of the valid and invalid votes, we found discrepancies in only 45 in a total of 2,721 municipalities. In these cases, we use the sum of votes instead of the total published in the official collection.

<sup>&</sup>lt;sup>2</sup>We calculate a measure of vote-revealed ideology at the municipality level as follows:

## 3.4 Geographic Controls

We include as controls in our regressions geographic characteristics of the municipalities since many regions in Brazil were geographically isolated and had low population density by the late nineteenth century. Thus, we construct the following set of geographical variables based on shapefiles for municipality boundaries in 1920 provided by IBGE (2011): (i) latitude and longitude of each municipality's centroid, (ii) distance to the state's capital, and (iii) population density combining the 1872 census with municipality boundaries in 1872, also from IBGE (2011). We obtain soil information from Embrapa to calculate the share of a municipality covered by terra roxa, a very fertile soil that was sought after by coffee farmers<sup>3</sup>. We also rely on agricultural suitability data from FAO's Global Agro-Ecological Zones (GAEZ) project. Specifically, we use the potential yield for coffee, sugarcane, and maize under rain-fed conditions and the lowest possible level of inputs/technology to be as close as possible to the conditions faced by farmers in that period. FAO-GAEZ reports these variables in kg DW per hectare for each crop on a grid cell level representing a 5-arc-minute resolution. We aggregate the potential yields for each crop at the municipality level by taking the mean value of each grid cell within the 1920 boundaries. Data on average elevation also come from FAO-GAEZ. Finally, we use data on terrain slope from Nunn and Puga (2012) and the Human Mobility Index (HMI) from Ozak (2018, 2010) to compute the average travel time within a municipality.

# 4 Empirical Strategy

To investigate the political effects of European immigration, we exploit variations in a cross-section of Brazilian municipalities. More specifically, we compare municipalities with different levels of historical immigration with similar initial characteristics, and their relationship with political outcomes. We estimate a specification of the form:

$$y_{ms} = \eta_s + \beta Im m_{ms,1920} + X'_{ms} \gamma + u_{ms}, \tag{1}$$

where  $y_{ms}$  refers to the political outcomes for municipality m in state s. Our key variable of interest is  $Imm_{ms,1920}$ , which represents the immigrant population share of the municipality m in  $1920^4$ . The terms  $\eta_s$  and  $X'_{ms}$  are state fixed effects and an array of municipality-level controls encompassing geography (latitude, longitude, altitude, terrain ruggedness, human mobility in-

<sup>&</sup>lt;sup>3</sup>Terra roxa is a type of red latosol that includes the following codes: LVdf1-11, LVef1-3, LVed1-23, and LVe1-2.

<sup>&</sup>lt;sup>4</sup>Appendix B shows that the results are robust to considering the inflow of immigrants between 1872 and 1920 instead of the stock.

dex, distance to the state capital, coffee and maize suitability, and share of municipality area covered by *terra roxa*) and socioeconomic characteristics measured at the baseline in 1872 (share of foreigners, share of slaves, share of literate individuals aged five or more, share of workers in the agriculture and manufacturing sectors, total number of workers in public administration relative to the total population, and population density). We estimate the regressions with the 1920 administrative division and report the standard errors clustered at the 1872 administrative division since these municipalities were originally part of a less fragmented area.

To study the long-run effects of European immigration on social capital and political attitudes in Brazil, we use an alternative dataset that combines respondent-level data from the Latinobarometer for the period 2002-2020 with the historical prevalence of immigration at the municipality level. This specification includes state and survey wave fixed effects and the same geographic and historical controls included in equation (1). We also introduce an additional set of controls covering the respondent's characteristics. The specific model that we estimate is

$$y_{imst} = \eta_s + \phi_t + \beta Im m_{ms,1920} + X'_{ms} \gamma + W'_{imst} \mu + u_{imst}, \tag{2}$$

where i indexes an individual, and t indicates the survey year. Here, the variables  $\phi_t$  and  $W'_{imst}$  represent the survey wave fixed effects and a vector of individual characteristics of the respondents (age, age squared, gender, and indicators for educational attainment, employment, and socioeconomic status). All other terms of the specification are the same as in equation (1).

## 4.1 Instrument for Historical Immigration

For our identification strategy to capture a causal effect of European immigration on long-term ideology, we must assume that conditional to geography, baseline socioeconomic characteristics, and respondent's characteristics, the distribution of immigrant population across municipalities is uncorrelated with the error term. Our baseline specifications include state fixed-effects to absorb unobserved heterogeneity across states, implying that we estimate  $\beta$  by exploiting within-state variations. Nonetheless, including the fixed effects and the controls does not guarantee the validity of the identification assumption. For instance, there may exist within-state confounders that we do not observe driving both the allocation of immigrants and long-term development.

To address these remaining concerns, we complement the analysis with an instrumental variable strategy based on a Bartik-like instrument that exploits two sources of variation. First, it relies on the supply-push component of migration patterns across different nationalities, which is plausibly exogenous to municipality-specific conditions. Second, it exploits cross-section variation in past immigrants' settlements of distinct ethnic groups across Brazilian

municipalities<sup>5</sup>. Following Burchardi et al. (2019) and Tabellini (2020), we thus construct a "leave-out" version of the shift-share instrument so that the predicted number of immigrants received by each municipality m in 1920 is given by:

$$Z_{ms} = \frac{1}{\hat{P}_{m,1872}} \sum_{j} \alpha_{mj,1872} I_{j,1920}^{-m}, \tag{3}$$

where  $\alpha_{mj,1872}$  is the share of immigrants from country j living in municipality m in 1872,  $I_{j,1920}^{-m}$  is the predicted number of immigrants of ethnic group j in 1920, net of those that settled in municipality m, and  $\hat{P}_{m,1872}$  is the 1872 population of municipality m.

An important point to emphasize is that for this empirical strategy to be valid municipalityspecific characteristics associated with the attraction of immigrants from each sending region before 1872 must be uncorrelated with civic culture and political attitudes in the long term (Goldsmith-Pinkham et al., 2020; Borusyak et al., 2022). We deal with this concern by including in our baseline specification a vector of municipality characteristics that might have contributed to attracting more immigrants and may have affected long-term ideology. One of such characteristics is the initial share of immigrants, which mechanically predicts higher future immigration via the instrument. By controlling for the initial stock of immigrants, we then identify the effects of immigration exploiting variations in the ethnic composition of the foreign-born population across municipalities. In Appendix B, we augment our baseline specification by controlling separately for the initial share of immigrants from each European country,  $\alpha_{mi,1872}$ , and for the presence of state-sponsored settlements. These exercises allow us to address the concerns that immigrants from specific nationalities settled in municipalities where they were close to culture or social norms that may have affected the long-run evolution of ideology across Brazil. We also consider alternative ways to construct and show that results are stable across different specifications.

Many immigrants ended up working in coffee farms to substitute slave labor in Brazil's Southeast region. To deal with the possibility that municipality-specific shocks may have affected the inflows of immigrants from each European country, we include in our baseline specification measures for labor demand (Borusyak et al., 2022). More specifically, our vector of controls contains the share of slaves in 1872 and the coffee land suitability index. Furthermore, we believe that this concern related to the identifying assumption is less likely in our context because subsidized immigrants had limited choice on where to go due to a proactive immigration policy decided by the state government.

<sup>&</sup>lt;sup>5</sup>The immigration literature has used similar shift-share instruments to address the endogeneity of immigrants' location. See Burchardi et al. (2019)

# 5 Main Results

In this section, we study the political effects of immigration in Brazilian municipalities. First, we show that the presence of immigrants increased the vote share for candidates associated with left-wing parties in the last election before the dictatorship period. We complement the analysis by examining the long-term effects on ideology, showing that immigration was related to the election of more liberal representatives at the national and local levels today. Finally, we present evidence that these patterns are consistent with the persistent effects of immigration on civic culture and political attitudes.

## 5.1 Immigrants and Presidential Elections in 1960

We begin our analysis by examining the effects of immigration on the 1960 Presidential elections. Table 2 reports the results from our preferred specification, which includes the full set of historical and geographic controls. The historical presence of immigrants had a positive and statistically significant effect on support for left-wing candidates. The 2SLS estimates reported in column (3) of Panel B imply that an increase in one standard deviation (0.0687) in the fraction of immigrants led to a 6.7 percentage points increase in the vote share of Henrique Lott [0.972 × 0,0687], the ruling candidate from Social Democratic Party supported by center-left parties. This effect corresponds to approximately 19.5% of the candidate's average vote share. The positive effect of immigration on the left-wing presidential candidate was accompanied by increasing support for the Vice President candidate João Goulart, considered by the armed forces "the embodiment of trade unionism in government and the opening through which Communists would come to power" (Fausto and Fausto, 2014, p.257). The point estimate of 0.908 in column (6) implies that an increase in one standard deviation in the fraction of immigrants increased Goulart's vote share by 6.2 percentage points, or 15.7% relative to its mean.

Even if the point estimate in column (1) is not statistically significant, the coefficient suggests a negative effect of immigration on the vote share of the elected President Jânio Quadros, the right-wing candidate. One interpretation of these results is that the substantial presence of immigrants in manufacturing establishments triggered the labor movement at the beginning of the twentieth century, especially in São Paulo and Rio de Janeiro, where large-scale strikes occurred between 1917 and 1920 (Fausto and Fausto, 2014). Even though a significant portion of the immigrant workers came from the rural areas of Southern Europe, most of them had some previous experience with political mobilization, labor protests, and unions in Europe, especially the Italians (Grandi, 2014).

# 5.2 Partisanship Ideology in the Long-Run

To continue our analysis, we now investigate how immigration affected the ideology of the national and local legislative members in the long run. Executive offices (president, state governors, and municipal mayors) are the most important in the Brazilian political arena. Nonetheless, the dependence on personalism during the campaigns makes these elections less suitable for ideological preferences studies (Power and Rodrigues-Silveira, 2019). Proportional elections to the legislative involve a larger pool of competitors, which allows us to combine the votes of successful and unsuccessful candidates, giving us an overall view of voter support for political parties in Brazil. Moreover, employing a uniform methodology offers us a practical solution to the problem of how to measure ideology in multilevel political systems.

Focusing on the 2SLS coefficient reported in Panel B of Table 3, immigration had a negative and statistically significant effect on legislators' ideology in the national elections in 1998 (column (1)), 2002 (column (2)), and 2018 (column (6)). These effects are economically relevant: one standard deviation increase in the fraction of immigrants decreases the vote-share weighted position of parties in 2018 by approximately 0.54 standard deviation<sup>6</sup>. These magnitudes are close to those estimated for the 1998 (0.46 standard deviation) and 2002 (0.52) elections. Point estimates in columns (3)-(5) are not statistically significant at the usual levels, but the sign of the impact is in line with those found for the other years.

When it comes to local politics, columns (7) to (11) of Table 3 presents similar patterns. Over time, the share of the valid votes of parties with relative left-wing inclination increased disproportionately more in municipalities with larger fractions of immigrants in 1920. The point estimates are not just statistically significant but also economically meaningfully. In sum, results suggest that voters in municipalities with a higher presence of immigrants tended to elect representatives supporting more redistributive policies. These results are intriguing since one would expect the emergence of a right-leaning ideology given that immigrants had positive effects on income in the long run (Meltzer and Richard, 1981; de Carvalho Filho and Monasterio, 2012; Rocha et al., 2017). However, economic incentives may not be the only component affecting individuals' political preferences. For instance, Piketty (2018) shows that more educated individuals have become more likely to support left-wing parties in many Western countries. As discussed below, cultural factors may help explain these patterns.

<sup>&</sup>lt;sup>6</sup>We calculate this impact multiplying the coefficient in column (6) (Panel B) by one standard deviation increase in immigration (0.069), and dividing through the standard deviation in partisanship ideology index (0.113).

#### 5.3 Civic Culture and Political Attitudes

After documenting the effects of historical immigration on voting behavior in Brazilian municipalities, we now investigate whether immigrants had a long-lasting impact on social capital, which comprises "those persistent and shared beliefs and values that help a group overcome the free rider problem in the pursuit of socially valuable activities" (Guiso et al., 2011, p. 419). In addition to the economic consequences, large inflows of immigrants can have "cultural" effects due to differences in ethnicity, religion, language, race, and social norms, which means that the political and social impacts of immigration depend on some combination of these two effects (Alesina and Tabellini, 2020). Consistent with this idea, de Carvalho Filho and Monasterio (2012) document that the prevalence of Protestantism today is higher in municipalities closer to a state-sponsored colony settled by Germans in Brazil's southernmost state, the Rio Grande do Sul.

We look specifically at attitudes toward democracy (columns (1)-(2)), acceptance of the functioning of government institutions (columns (3)-(4)), interpersonal and institutional trust (columns (5)-(7)), and state performance (columns (8)-(10)). According to columns (1) and (2) of Table 4 (Panel B), historical immigration is associated with stronger support for democracy. One standard deviation increase in the fraction of immigrants is associated with a 2.4% higher probability of responding that "democracy may have its problems, but it is the best system of government" (column (1)) and with a 7.9% higher likelihood of answering that "elections offer voters a real chance to choose between parties and candidates" (column (2)), relative to the sample mean. Citizen support for the democratic system presupposes acceptance of the functioning of state institutions. Column (3) shows that individuals living in municipalities with a higher presence of historical immigrants have greater confidence in the state's capacity to solve problems<sup>7</sup>. Relative to the mean, a 6.87 percentage points increase in the immigrant share (one standard deviation) is associated with a 3.6% higher probability of reporting that the state can save problems in the country, even though the coefficient is statistically significant at the limit of the typical values. The estimated effect on perceptions the relative independence of state institutions (column (4)) is not statistically significant, but suggests a positive impact on individuals view that country is governed for the good of all citizens and not for few powerful groups<sup>8</sup>.

<sup>&</sup>lt;sup>7</sup>We measure confidence in the state's capacity to solve problem using the following question: "It is said that the State can solve the problems of our society because it has the means to do it. Would you say that the State can solve: all problems, most problems, enough problems, only a few problems, the State cannot solve any problem"?

<sup>&</sup>lt;sup>8</sup>We measure perceptions of the relative independence of state institutions with the following question: "In general, would you say the country is governed for the benefit of a few powerful groups or is governed for the good of all"?

Turning our attention to interpersonal trust, we find a positive but not statistically effect on the probability that a respondent answers that most people can be trusted (column (5)). It is worth emphasizing, however, that the question used to assess the generalized level of trust is general enough so that it can not reflect the fact that people are more susceptible to trust in those individuals sharing similar values<sup>9</sup>. Column (6) confirms this intuition. Relative to the mean, one standard deviation in historical immigration is associated with 4.3% percentage point higher probability of trusting neighbors. At the same time, the effects of immigration on institutional trust, measured by the confidence in the national government, are quantitatively similar<sup>10</sup>. Positive views of government and its performance are more likely to occur in

Finally, we examine the link between historical immigration and the perceptions of state performance. More specifically, we investigate individuals' opinions concerning taxes and satisfaction with the public services they receive. According to column (8), individuals living in municipalities with a higher fraction of immigrants are more likely to consider the income distribution fair. A one standard deviation increase in historical immigration is associated with an 8.2 percentage points increase in the probability of responding that income distribution is fair, which corresponds to a sizeable 4.5% increase above the sample mean. State capacities also relate to tax collection, and column (9) suggests that individuals living in municipalities with a larger share of immigration are 2.9% less likely to consider taxes in Brazil too high, relative to the sample mean. Taxes are paid in return for services received, which explains the disposition to pay taxes in regions where public service delivery is efficient. Column (10) provides evidence that the level of satisfaction with education services to which people have access is higher in municipalities with a larger fraction of historical immigration. Relative to the sample mean respondents with a high prevalence of historical immigrants are 4.2% more likely to be satisfied with the public education services as a consequence of a one standard deviation increase in the fraction of immigrants. The higher satisfaction with the performance of education services is in line with the empirical evidence that the long-run effects of immigration in Brazil worked through a greater supply of educational inputs (Rocha et al., 2017).

Overall, the evidence presented in this section is consistent with higher civic engagement in municipalities with a high prevalence of historical immigration, which is consistent with the fact that specific skills or cultural norms associated with these groups may have been transmitted across generations. Moreover, the experience of living where the functioning of the state

<sup>&</sup>lt;sup>9</sup>To measure interpersonal trust, we use the information obtained from the following question: "Generally speaking, would you say that you can trust must people, or that you can never be too careful when dealing with others?"

<sup>&</sup>lt;sup>10</sup>We measure institutional trust using information from the following question: "Confidence in the Government".

worked seems to be a relevant factor when it comes to giving opinions on the quality of the state in activities of public interest.

# 6 Summary of Robustness Checks

In this section, we provide evidence of the robustness of our main results. First, there is evidence that land inequality is relevant in explaining long-term development outcomes (de Carvalho Filho and Monasterio, 2012; Engerman and Sokollof, 1997). We deal with these concerns by controlling for two measures of land Gini in 1920: (i) the standard index based only on landowners; and (ii) the overall land Gini, which incorporates the families of agricultural workers who had no land<sup>11</sup>. Second, to reduce the concerns raised by Goldsmith-Pinkham et al. (2020) that immigrants from specific European countries selected their destinations based on municipality-specific characteristics, we augment our baseline specification by controlling separately for the initial share of immigrants from each European country. We also document that the results are unchanged when controlling for the presence of state-sponsored settlements since municipalities with official colonies were more likely to attract immigrants. Third, we show that results are robust to dropping potential outliers and using an alternative formulation of our leave-out instrument, whereby variables are expressed in differences rather than in levels. Overall, results remain qualitatively the same.

# 7 Concluding Remarks

Despite the large body of literature investigating the effects of historical European immigration on receiving countries, we still know relatively little about the impacts of such large-scale immigration shock on political preferences in Brazil. Recent research has shown positive and enduring effects of the presence of foreign-born immigrants on economic outcomes that worked through a human capital channel (Rocha et al., 2017) or more egalitarian land distribution (de Carvalho Filho and Monasterio, 2012). However, differences in culture, civic traditions, or political experiences brought with these immigrants may also have significant effects on social capital and political ideology today.

In this paper, we study the medium- and long-term effects of historical immigration on political outcomes in Brazil by exploiting variation in the number of immigrants received by Brazilian municipalities between 1872 and 1920. Using a leave-out version of the shift-share instrument and a novel dataset on the Presidential elections in 1960, we document that localities

<sup>&</sup>lt;sup>11</sup>We construct the land Gini coefficient for each municipality using the same methodology as in Nunn (2008). To build the overall Gini, we assume that each family of rural workers has ten members and zero hectares of land.

with a higher presence of European immigrants observed an increase in the vote share for candidates associated with left-wing parties. These effects persist through time since votes in these municipalities migrated towards more liberal representatives at the national and local levels today. We show that the political impacts are consistent with persistent effects on social capital and political attitudes. More specifically, individuals living in municipalities with a higher historical immigrant presence are more likely to support democracy, trust neighbors and institutions, and view state performance as positive today.

The findings of this paper provide a shred of novel evidence that heterogeneity in historical immigration patterns affected local cultural traits in Brazil, which were transmitted through generations over time. Therefore, the presence of a larger foreign population more than one hundred years ago might explain, in parts, the current differences in social capital and political attitudes today. Whereas a large body of empirical literature on this topic has focused on the long-lasting effects of immigration at the state or within-state level, our analysis encompasses the entire territory without spatial restrictions. Thus, the overall results underline the importance of cultural diversity and its consequences on Brazil's long-term political and economic development.

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# **Figures**

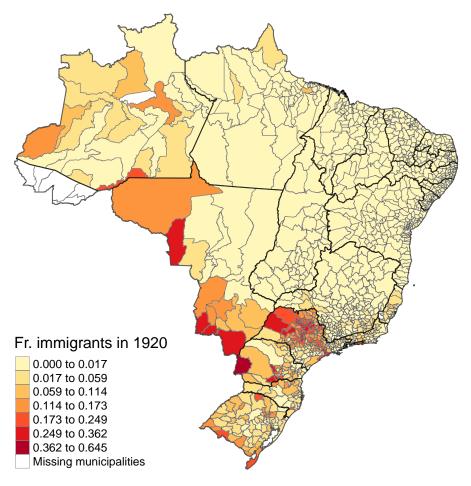
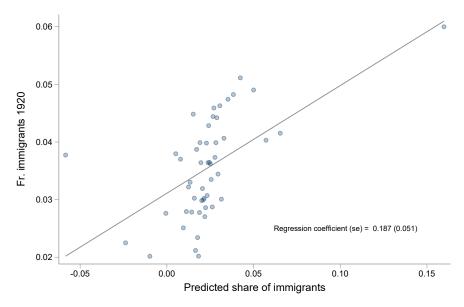


Figure 1: Immigrant Share of the Municipality Population (1920)

*Notes:* This figure presents the foreign-share of total population in 1920. Source: Author's calculations from DGE (1920)

Figure 2: First Stage (Residual Bin-Scatterplot)



*Notes:* This figure displays the binned scatter plot between the actual (y-axis) and the predicted (x-axis) share of foreign-born population in 1920 at the municipality-level. Each point represents the residuals of the two variables, after partialling out state fixed effects, and geographic and historical controls. The solid line refers to the terrain ruggedness of the first stage coefficient. Standard errors are clustered at the 1872 municipality level.

# **Tables**

Table 1: Summary statistics

	Obs	Mean	St. Dev.	Min	Max
Panel A. Historical characteristics					
Fr. immigrants (1920)	1.270	0.036	0.069	0.000	0.645
Land Gini (1920)	1.266	0.618	0.144	0.109	0.961
Overall land Gini (1920)	1.266	0.949	0.061	0.204	0.999
Fr. immigrants (1872)	1.270	0.017	0.042	0.000	0.500
Share slaves (1872)	1.270	0.133	0.096	0.001	0.574
Literacy rate (1872)	1.270	0.157	0.088	0.014	0.625
Share employment in agriculture (1872)	1.270	0.527	0.162	0.013	0.937
Share employment in manufacturing (1872)	1.270	0.133	0.075	0.000	0.461
No. workers in public administration (1872)	1.270	1.036	1.893	0.000	35.249
Population density (1872)	1.270	0.230	0.525	0.000	9.441
Panel B. Presidential elections in 1960					
Jânio Quadros	1261	0.436	0.119	0.000	0.895
Adhemar de Barros	1261	0.136	0.117	0.000	0.656
Henrique Lott	1261	0.342	0.147	0.000	0.985
Fernando Ferrari	1261	0.124	0.103	0.000	0.631
João Goulart	1261	0.398	0.114	0.000	1.000
Milton Campos	1261	0.340	0.130	0.000	0.863
Panel C. Legislators ideology					
Chamber of Deputies (1998)	1270	0.246	0.203	-0.406	0.736
Chamber of Deputies (2002)	1270	0.146	0.174	-0.356	0.594
Chamber of Deputies (2006)	1270	0.102	0.136	-0.400	0.513
Chamber of Deputies (2010)	1270	0.025	0.121	-0.343	0.441
Chamber of Deputies (2014)	1270	0.077	0.126	-0.387	0.499
Chamber of Deputies (2018)	1270	0.099	0.113	-0.280	0.474
Municipal councils (2000)	1270	0.199	0.140	-0.263	0.624
Municipal councils (2004)	1270	0.131	0.105	-0.351	0.588
Municipal councils (2008)	1270	0.056	0.095	-0.312	0.445
Municipal councils (2012)	1270	0.084	0.097	-0.299	0.429
Municipal councils (2016)	1270	0.103	0.089	-0.260	0.394
Panel E. Geography					
Latitude	1270	-15.37	8.38	-33.19	2.43
Longitude	1270	-44.62	5.94	-71.63	-34.85
Elevation	1270	433.94	339.46	-24817	137650
Human mobility index	1270	0.29	0.03	0.22	0.38
Log distance to the state capital (km)	1270	11.82	1.73	0.00	13.96
Terrain ruggedness index	1270	80.68	74.01	1.62	456.35
Coffee attainable yield (kg DW/ha)	1270	229.71	111.70	0.00	568.00
Sugarcane attainable yield (kg sugar/ha)	1270	140232	505.95	0.00	326217
Maize attainable yield (kg DW/ha)	1270	933.08	454.96	110.00	273865
Purple latosol (terra roxa)	1270	0.06	0.18	0.00	1.00

*Notes:* This tables presents descriptive statistics for the main variables used in the paper. Data for historical characteristics for each municipality and year come from the respective census. Geographic variables are originally from IBGE (2011) (latitude, longitude, and distance to the state capital), FAO-GAEZ (elevation, coffee, and maize suitability), Embrapa Solos (purple latosol), Nunn and Puga (2012) (terrain ruggedness), and Özak (2018, 2010) (Human Mobility Index). Data for political variables come from (TSE, 1963) (1960 presidential elections), and Power and Rodrigues-Silveira (2019) (party's ideology position). Social capital and political attitudes from Latinobarómetro. In all panels the sample is based on the 1920 administrative division. For data specific descriptions and sources, see Appendix A.

Table 2: First Stage

		Dep. variable: Fr. immigrants in 1920										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)					
Pred. Fr. immigrants	0.037***	0.048***	0.034**	0.048***	0.048***	0.049***	0.050***					
-	(0.011)	(0.011)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)					
KP F-stat	10.53	19.32	5.29	10.27	10.33	10.92	10.93					
Observations	1,270	1,270	1,270	1,270	1,266	1,266	1,270					
Geographic controls	No	Yes	No	Yes	Yes	Yes	Yes					
Historical controls	No	No	Yes	Yes	Yes	Yes	Yes					
Land Gini	No	No	No	No	Yes	No	No					
Overall Gini	No	No	No	No	No	Yes	No					
Settlements	No	No	No	No	No	No	Yes					

*Notes:* This tables reports the first stage estimates of predicted fraction of immigrants on actual share of immigrants over total population in 1920. KP F-stat refers to the F-stat for weak instruments. All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\*\* p < 0.05, \*\*\* p < 0.01.

Table 3: The Effects of Immigration on Presidential Elections, 1960

		Presid	ent			Vice-Pre	sident	
	Jânio Quadros	Adhemar de Barros	Henrique Lott	Invalid votes	Fernando Ferrari	João Goulart	Milton Campos	Invalid votes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: OLS								
Fr. immigrants	0.100**	-0.043	0.002	-0.060***	0.138***	-0.035	0.031	-0.134***
	(0.050)	(0.049)	(0.048)	(0.023)	(0.052)	(0.047)	(0.053)	(0.036)
Panel B: 2SLS								
Fr. immigrants	-0.413	-0.390	0.972**	-0.169	-0.847	0.908**	0.175	-0.235
_	(0.301)	(0.405)	(0.449)	(0.144)	(0.594)	(0.442)	(0.416)	(0.221)
Controls & FE	All	All	All	All	All	All	All	All
Observations	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261
Mean dep. var.	0.436	0.136	0.342	0.087	0.124	0.398	0.340	0.139
KP F-stat	11.262	11.262	11.262	11.262	11.262	11.262	11.262	11.262

Notes: This table reports the estimated effects of historical immigration on presidential elections in 1960. Dependent variables are the vote share of each candidate at the municipality level. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by terra roxa. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Table 4: The Effects of Immigration on Partisanship Ideology, 1998-2018

		Lower H	ouse of Na	tional Legi	slature		Municipal Councils				
	1998	2002	2006	2010	2014	2018	2000	2004	2008	2012	2016
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: OLS											
Fr. immigrants	-0.481***	-0.316***	-0.254***	-0.113	-0.097	-0.144***	-0.287***	-0.242***	-0.199***	-0.159***	-0.104**
	(0.106)	(0.099)	(0.082)	(0.070)	(0.071)	(0.056)	(0.076)	(0.066)	(0.056)	(0.050)	(0.047)
Panel B: 2SLS											
Fr. immigrants	-1.378*	-1.317*	-0.770	-0.957	-0.276	-0.899**	-0.887*	-0.868**	-1.435***	-1.004***	-0.447
-	(0.724)	(0.703)	(0.714)	(0.726)	(0.674)	(0.456)	(0.488)	(0.350)	(0.439)	(0.385)	(0.356)
Controls & FE	All	All	All	All	All	All	All	All	All	All	All
Observations	1,270	1,270	1,270	1,270	1,270	1,270	1,270	1,270	1,270	1,270	1,270
Mean dep. var.	0.246	0.146	0.102	0.025	0.077	0.099	0.199	0.131	0.056	0.084	0.103
KP F-stat	10.267	10.267	10.267	10.267	10.267	10.267	10.267	10.267	10.267	10.267	10.267

Notes: This table reports the estimated effects of historical immigration on partisanship ideology between 1998 and 2018. Dependent variables are the party ideological index at the municipality level calculated by summing the product of the fractional vote shares won by each party in a given municipality by the respective left-right ideological placement as recorded in Brazilian Legislative Surveys. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by terra roxa. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Table 5: The Effects of Immigration on Social Capital and Political Attitudes, 2002-2020

	Den	nocracy	Govern	ment		Trust		St	ate performa	ance
	View on democracy (1)	Choose in democracy (2)	Gov. solve problems (3)	Country for all (4)	Trust people (5)	Trust neighbors (6)	Trust gov. (7)	Fair income distribution (8)	Taxes are high (9)	Satisfied with education (10)
Panel A: OLS										
Fr. immigrants	0.262** (0.118)	-0.165 (0.253)	-0.039 (0.348)	0.112** (0.049)	0.077*** (0.025)	* 0.742*** (0.280)	0.282** (0.113)	0.007 (0.121)	-0.222 (0.192)	0.305 (0.210)
Panel B: 2SLS										
Fr. immigrants	1.057** (0.492)	3.645** (1.518)	1.649 (0.998)	0.536 (0.395)	0.411 (0.263)	1.634** (0.793)	2.062*** (0.586)	* 1.195* (0.723)	-1.733* (0.913)	1.407* (0.750)
Controls & FE	All	All	All	All	All	All	All	All	All	All
Observations	17,432	5,447	5,826	16,072	18,790	4,732	18,819	12,676	4,709	6,947
Mean dep. var.	3.090	3.173	3.158	0.250	0.059	2.580	2.089	1.795	4.587	2.310
KP F-stat	10.712	11.042	18.767	10.358	10.654	8.321	10.588	11.965	16.079	19.678

Notes: This table reports the estimated effects of historical immigration on social capital and political attitudes. Dependent variables come from Latinobarómetro surveys. See Appendix A for the exact wording of the survey questions. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by *terra roxa*. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. Individual controls include respondents' age, age squared, gender, and indicators for educational attainment, employment, and socioeconomic status All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

# **Appendix A** Data

#### A.1 Definitions and Sources

#### **Outcome variables**

*Presidential elections* The percentage of votes over total number of votes received by each candidate in the 1960 elections. Original data from TSE (1963).

*Partisanship ideology:* Party ideological index at the municipality level calculated by summing the product of the fractional vote shares won by each party in a given municipality by the respective left-right ideological placement as recorded in Brazilian Legislative Surveys. Original data from Power and Rodrigues-Silveira (2019) and TSE.

View on democracy: "Democracy may have its problems, but it is the best system of government". The answer is coded from 1 (Strongly disagree) to 4 (Strongly agree). Original data from Latinobarómetro.

Choose in democracy: "Elections offer voters a real chance to choose between parties and candidates". The answer is coded from 1 (Strongly disagree) to 4 (Strongly agree). Original data from Latinobarómetro.

Government solve problems: "It is said that the State can solve the problems of our society because it has the means to do it. Would you say that the State can solve: all problems, most problems, enough problems, only a few problems, the State cannot solve any problem"? The answer is coded from 1 (The state cannot solve any problems) to 5 (All the problems). Original data from Latinobarómetro.

Country for all: "In general, would you say the country is governed for the benefit of a few powerful groups or is governed for the good of all"? Indicator equal to 1 if "For the good of all". Original data from Latinobarometro.

*Trust people:* "Generally speaking, would you say that you can trust must people, or that you can never be too careful when dealing with others?". Indicator equal to 1 if "Most people can be trusted". Original data from Latinobarómetro.

*Trust neighbors:* "Confidence: You neighbors". The answer is coded from 1 (Nothing) to 4 (Lot). Original data from Latinobarómetro.

*Trust national government:* "Confidence in the Government". The answer is coded from 1 (Not confidence at all) to 4 (A lot of confidence). Original data from Latinobarómetro.

Fair income distribution: "How fair is income distribution". The answer is coded from 1 (Very unfair) to 4 (Very fair). Original data from Latinobarómetro.

Taxes are high: "Taxes in (country) are...". The answer is coded from 1 (They are just right) to

5 (Too high). Original data from Latinobarómetro.

Satisfied with education: "Satisfaction with the education you have access to". The answer is coded from 1 (Not at all satisfied) to 4 (Very satisfied). Original data from Latinobarómetro.

#### **Geographic controls**

Latitude: Latitudinal distance from the equator in decimal degrees, calculated from the centroid of each municipality using GIS software and shapefiles from IBGE (2011).

Longitude: Longitudinal distance from the Greenwhich meridian in decimal degrees, calculated from the centroid of each municipality using GIS software and shapefiles from IBGE (2011).

*Altitude:* Municipality-level average terrain elevation measured in meters. Original data from FAO-GAEZ.

*Terrain rugedness:* Municipality-level average terrain slope measured in degrees. Original data from Nunn and Puga (2012).

Human Mobility Index: Average travel time across a  $1 \text{km} \times 1 \text{km}$  cell within a municipality. Original data from Özak (2010, 2018).

Distance to the state capital: Log of the linear distance to the state capital, calculated from the centroid of each municipality using GIS software and shapefiles from IBGE (2011).

Coffee suitability: The maximum attainable yield for coffee reported in DW kg per hectare per year for each in each grid cell of  $0.083 \times 0.083$  degree averaged at the 1920 municipality level. Original data from FAO-GAEZ.

*Maize suitability:* The maximum attainable yield for maize reported in DW kg per hectare per year for each in each grid cell of  $0.083 \times 0.083$  degree averaged at the 1920 municipality level. Original data from FAO-GAEZ.

*Terra roxa:* Share of a municipality covered by red latosol that includes the following codes: LVdf1-11, LVef1-3, LVed1-23, and LVe1-2. Original data from Embrapa Solos.

#### **Baseline socioeconomic controls**

Share of foreigners: Number of foreigners over total population. Original data from 1872 census.

Share of slaves: Number of slaves over total population. Original data from 1872 census.

*Literacy rate:* Number of literate individuals aged five or more over total population aged five or more. Original data from 1872 census.

Share of workers in agriculture: Number of workers in agriculture over total number of occupied workers. Original data from 1872 census.

*Share of workers in manufacturing:* Number of workers in manufacturing over total number of occupied workers. Original data from 1872 census.

*Public administration:* Number of workers in public administration over total population \*1000. Original data from 1872 census.

Population density: Number of individuals by municipality area. Original data from 1872 census.

## A.2 Adjustment for Changes in Municipality Boundaries

The administrative division in Brazil has become quite fragmented over time, which means that we need to take into account boundary changes to have consistent units of observation. We trace the genealogy of the Brazilian municipalities using the official information on the municipality's partitions and unions from IBGE (2011) to maintain the boundaries defined in 1920 constant over time. To adjust data from 1872 census to the 1920 administrative division, we match each municipality defined in 1920 to the original municipality it belonged to in the 1872 administrative division. To connect the more fragmented divisions from a period t to the merged 1872-1920 variables, we aggregate their data based on the location of the main urban center since the population of a given municipality is concentrated on the capital district.

Some municipalities have been incorporated into others over time. For the permanently merged municipalities, we aggregate their data to those who incorporated them since the first 1872 census. For those temporarily merged, we input the value of the variables for the municipalities that absorbed them to keep the 1920 boundaries unchanged over time.

# **Appendix B** Robustness Checks

## **B.1** Controlling for Land Inequality

Table B1: Robustness Checks: Presidential Elections in 1960 Controlling for Land Gini

	Не	enrique Lott		Jo	ão Goulart	
	(1)	(2)	(3)	(4)	(5)	(6)
Fr. immigrants	0.972**	0.963**	0.863**	0.908**	0.909**	0.815**
	(0.449)	(0.448)	(0.398)	(0.442)	(0.447)	(0.401)
Land Gini		0.003			-0.006	
		(0.025)			(0.025)	
Overall land Gini			0.157***	•		0.134**
			(0.055)			(0.056)
Controls & FE	All	All	All	All	All	All
Observations	1,261	1,257	1,257	1,261	1,257	1,257
Mean dep. var.	0.342	0.342	0.342	0.398	0.398	0.398
KP F-stat	11.262	11.225	11.867	11.262	11.225	11.867

Notes: This table reports the estimated effects of historical immigration on presidential elections in 1960, controlling for alternative measures for land inequality. Dependent variables are the vote share of each candidate at the municipality level. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. Columns (1) and (4) presents the baseline results. In columns (2) and (5) use the traditional land Gini, while columns (3) and (6) use the alternative land Gini (assuming that each family of rural workers has ten members and zero hectares of land). Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by *terra roxa*. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

Table B2: Robustness Checks: Partisanship Ideology 1998-2018 Controlling for Land Gini

		Lower H	ouse of Nat	tional Legis	lature		Municipal Councils					
	1998	2002	2006	2010	2014	2018	2000	2004	2008	2012	2016	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Panel A: 2SLS Con	trolling for I	Land Gini										
Fr. immigrants	-1.256*	-1.259*	-0.739	-0.931	-0.269	$-0.870^*$	-0.847*	-0.842**	-1.411***	-0.974**	-0.457	
-	(0.720)	(0.705)	(0.718)	(0.725)	(0.673)	(0.448)	(0.490)	(0.349)	(0.437)	(0.388)	(0.354)	
Land Gini	-0.084**	-0.042	-0.024	-0.022	-0.008	-0.024	-0.028	-0.019	-0.018	-0.024	0.008	
	(0.034)	(0.028)	(0.025)	(0.024)	(0.023)	(0.021)	(0.026)	(0.021)	(0.025)	(0.023)	(0.018)	
Panel B: 2SLS Con	trolling for (	Overall Land	d Gini									
Fr. immigrants	-1.204*	-1.134	-0.644	-0.837	-0.180	-0.794*	-0.789*	-0.795**	-1.298***	-0.886**	-0.448	
	(0.704)	(0.701)	(0.713)	(0.713)	(0.662)	(0.419)	(0.479)	(0.340)	(0.420)	(0.382)	(0.345)	
Overall land Gini	-0.224**	-0.241***	-0.168***	-0.164***	-0.131**	-0.143**	-0.127*	-0.097**	-0.181***	-0.158***	0.003	
	(0.090)	(0.083)	(0.060)	(0.061)	(0.061)	(0.058)	(0.065)	(0.048)	(0.055)	(0.047)	(0.043)	
Controls & FE	All	All	All	All	All	All	All	All	All	All	All	
Observations	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	1,266	
Mean dep. var.	0.246	0.146	0.102	0.025	0.077	0.099	0.199	0.131	0.056	0.084	0.103	
KP F-stat	10.919	10.919	10.919	10.919	10.919	10.919	10.919	10.919	10.919	10.919	10.919	

Notes: This table reports the estimated effects of historical immigration on partisanship ideology between 1998 and 2018, controlling for alternative measures for land inequality. Dependent variables are the party ideological index at the municipality level calculated by summing the product of the fractional vote shares won by each party in a given municipality by the respective left-right ideological placement as recorded in Brazilian Legislative Surveys. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. In Panel A we use the traditional land Gini, while Panel B uses the alternative land Gini (assuming that each family of rural workers has ten members and zero hectares of land). Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by terra roxa. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

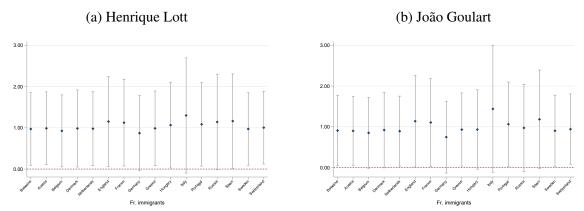
Table B3: Robustness Checks: Social Capital and Political Attitudes 2002-2020 Controlling for Land Gini

	Den	nocracy	Govern	ment	Trust			Sta	ate performa	ance
	View on democracy (1)	Choose in democracy (2)	Gov. solve problems (3)	Country for all (4)	Trust people (5)	Trust neighbors (6)	Trust gov.	Fair income distribution (8)	Taxes are high (9)	Satisfied with education (10)
Panel A: 2SLS Cor	itrolling for La	nd Gini								
Fr. immigrants	1.110**	4.015**	1.306	0.506	0.439	1.590**	2.135***	0.969	-1.691*	1.462*
_	(0.508)	(1.571)	(0.952)	(0.414)	(0.273)	(0.776)	(0.598)	(0.699)	(0.929)	(0.767)
Land Gini	-0.033	-0.514**	0.485**	0.038	-0.020	0.079	-0.052	0.202**	-0.058	-0.099
	(0.081)	(0.233)	(0.207)	(0.051)	(0.026)	(0.141)	(0.132)	(0.086)	(0.140)	(0.132)
Panel B: 2SLS Cor	atrolling for Ov	erall Land Gini								
Fr. immigrants	1.234**	4.428**	0.931	0.465	0.324	1.131	2.574***	1.046	-1.448	1.351*
, and the second	(0.578)	(1.753)	(1.094)	(0.456)	(0.304)	(0.841)	(0.775)	(0.797)	(0.940)	(0.773)
Overall land Gini	-0.194	-1.079	1.196*	0.101	0.108	0.918**	-0.584	0.190	-0.537	0.088
	(0.282)	(0.775)	(0.656)	(0.151)	(0.093)	(0.402)	(0.452)	(0.340)	(0.506)	(0.453)
Controls & FE	All	All	All	All	All	All	All	All	All	All
Observations	17,404	5,433	5,826	16,044	18,762	4,732	18,791	12,648	4,709	6,947
Mean dep. var.	3.090	3.173	3.158	0.250	0.059	2.580	2.089	1.795	4.587	2.310
KP F-stat	8.908	9.519	18.647	8.703	8.955	6.951	8.859	10.377	12.700	18.193

Notes: This table reports the estimated effects of historical immigration on social capital and political attitudes, controlling for alternative measures for land inequality. Dependent variables come from Latinobarómetro surveys. See Appendix A for the exact wording of the survey questions. The variable of interest is the fraction of immigrants over municipality population in 1920. Panel A presents the results from OLS regressions using equation (1), and Panel B exhibits the 2SLS estimates using the predicted fraction of immigrants described in Section 4 as an instrument. In Panel A we use the traditional land Gini, while Panel B uses the alternative land Gini (assuming that each family of rural workers has ten members and zero hectares of land). Geographic controls include latitude, longitude, altitude, terrain ruggedness, human mobility index, distance to the state capital, coffee and maize suitability, and share of municipality area covered by terra roxa. The socioeconomic characteristics in 1872 include the share of slaves, share of foreign-born population, literacy rate of individuals aged five or more, share of workers in the agriculture and manufacturing sectors over the total number of occupied workers, share of workers in public administration relative to total population, and population density. Individual controls include respondents' age, age squared, gender, and indicators for educational attainment, employment, and socioeconomic status All regressions include state fixed effects and are estimated for the 1,270 municipalities based on the 1920 administrative division. Standard errors are clustered at the 1872 municipality level. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

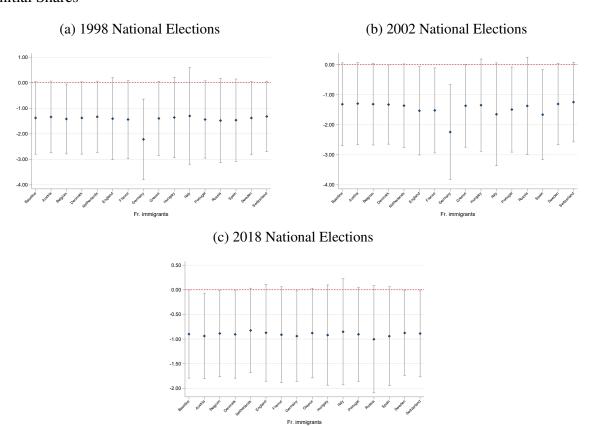
# **B.2** Controlling for Initial Immigrant Shares

Figure B1: Robustness Checks: Presidential Elections in 1960 Controlling for Initial Shares



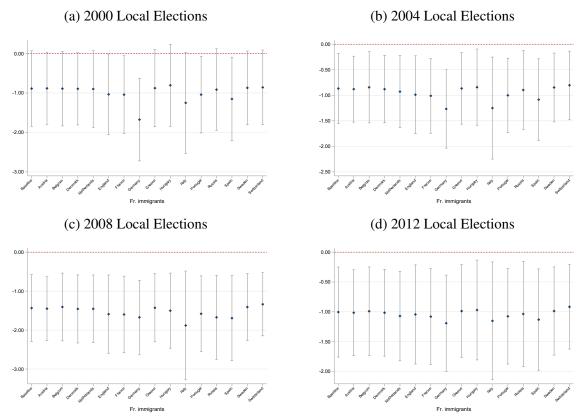
*Notes:* The figure plots the 2SLS point estimate (with corresponding 95% confidence intervals) for the effect of the historical fraction of immigrants augmenting the baseline specification reported in Table 3 with the 1872 immigrant share from each sending country, separately. The first coefficient plotted in the the figure corresponds to the baseline specification.

Figure B2: Robustness Checks: Partisanship Ideology (Chamber of Deputies) Controlling for Initial Shares



*Notes:* The figure plots the 2SLS point estimate (with corresponding 95% confidence intervals) for the effect of the historical fraction of immigrants augmenting the baseline specification reported in Table 4 with the 1872 immigrant share from each sending country, separately. The first coefficient plotted in the the figure corresponds to the baseline specification.

Figure B3: Robustness Checks: Partisanship Ideology (Municipal Councils) Controlling for Initial Shares



*Notes:* The figure plots the 2SLS point estimate (with corresponding 95% confidence intervals) for the effect of the historical fraction of immigrants augmenting the baseline specification reported in Table 4 with the 1872 immigrant share from each sending country, separately. The first coefficient plotted in the the figure corresponds to the baseline specification.