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Latin American brotherhood? Immigration and preferences for redistribution

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Latin American Brotherhood? Immigration and Preferences for Redistribution*

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August, 2020

Abstract

The effect of immigration on preferences for redistribution has been recently studied in the context of developed countries receiving migrants from poorer countries with very different cultural backgrounds. In this paper we explore this issue in the context of migration across similar Latin American countries. To this aim, we exploit data at the provincial level from a large attitudinal survey (LAPOP) and match it to immigration data from different sources. We follow three approaches: first, we implement an instrumental variables approach in a cross-section of censuses; second we estimate fixed effects models with data from a large sample of harmonized national household surveys, and third we exploit the massive inflow of Venezuelan refugees into the border country of Colombia with an instrumental variables methodology. Our results suggest a significant, negative and non-monotonic relationship between the share of immigrants at the provincial level and the support for redistribution policies. This anti-redistribution effect is larger among those individuals with higher income.

JEL Classification: D63, O15, N36.

Keywords: Migration, Inequality, Redistribution, Latin America

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1 Introduction

Preferences for redistribution are key determinants of the type and size of public policies and ultimately of the level of inequality in a country. Researchers in Economics and other fields are trying to understand the factors that shape these social preferences. A recent strand of this literature has studied the potential negative effect of immigration on the support for redistribution (Alesina, Murard, and Rapoport, 2019; Dahlberg, Edmark, and Lundqvist, 2012; Razin, Sadka, and Swagel, 2002; Tabellini, 2018, 2019). So far, the studies have focused on the case of developed countries receiving migrants from poorer countries with very different cultural backgrounds. Instead, in this paper we explore this issue in a different context: migrations across Latin American countries. The context is different at least for two relevant reasons. First, we focus on migration across countries that are economically and culturally much more homogeneous than those analyzed in the previous literature. Second, we study this phenomenon in one of the two most unequal regions in the world (the other is sub-Saharan Africa) with levels of income inequality much higher than those in the developed countries analyzed in previous papers (Alvaredo and Gasparini, 2015). We believe this is the first paper that extends the analysis of immigration and social preferences to this context.

The issue is also relevant considering the recent reduction in the support to redistribution policies in Latin America. Although the evidence suggests that redistributive policies played a significant role in reducing income inequality in the 2000s, and although inequality is still very high, the support for redistribution seems to have fallen in the 2010s. In fact, since 2010, the percentage of individuals that show significant support for strong policies to reduce income inequality decreased more than 28% (Figure A1 in Appendix A). At the same time, immigration has increased substantially; in particular migration across Latin American countries. Today intra-regional immigrants represent 70% of total migration in Latin America.

In this paper we empirically analyze the relationship between immigration and preferences for redistribution in Latin America.¹ To this aim, we exploit data at the provincial level from a large attitudinal survey –the biannual 2008-2018 Latin American Public Opinion Project (LAPOP) survey– and match it to immigration data from different sources.²

We use three different research strategies. First, we build a novel dataset of immigration shares at the province level from harmonized census data (IPUMS International) matched to LAPOP data. This allows us to conduct a cross-sectional analysis with 12 countries and 222 provinces. In order to address the potential endogeneity of migrants’ location decision, we follow an instrumental variables approach similar to Card (2001) by considering the past geographical distribution of immigrants by country of origin. Our results suggest a negative relationship between the province share of immigrants and preferences for redistribution of the resident population. Detailed demographic and socio-economic information in census and LAPOP data

¹ Alesina and Stantcheva (2020) provide a novel conceptual framework to think the relationship between support for redistributive policies and immigration where (mis)perceptions and bias per se against immigrants play a crucial role.

² Hereafter, we refer to states, departments or provinces of the different countries –depending on countries’ political division– simply as provinces.

allow us to look for heterogeneous responses to immigration both from the respondent and the immigration sides. We find that the anti-redistribution effect of immigration is larger for both high-income and high-skilled respondents and in receiving countries with higher public spending. We also find that the negative effect is, indeed, mainly driven by immigrants coming from other Latin American countries.

As a second strategy we estimate a fixed-effects model with microdata from a large sample of harmonized national household surveys (SEDLAC) over time. Despite its limitations this strategy provides some useful information on the short-run association between immigration and social preferences. In particular, estimates of the two-way fixed effects model show again a negative anti-redistribution effect of local exposure to immigrants.

Finally, in a third approach, we exploit a recent case of massive intra-regional immigration in Latin America: the Venezuelan exodus to Colombia. We use an instrumental variables strategy for the share of Venezuelan immigration relative to departmental population based on the distance between Venezuelan and Colombian departments. This enclave instrument has been typically used in previous work analyzing episodes of forced migration, including the Venezuelan case (Del Carpio and Wagner, 2015; Morales, 2018; Caruso, Canon, and Mueller, 2019). We find that Venezuelan immigration into Colombia significantly lowers the support for redistribution. The effect is greater compared to the effect found on average for Latin America with the other two alternative approaches.

This paper is most closely related to a growing body of literature for the United States and Europe showing that immigration reduces population support for redistributive policies and government tax revenues and spending (Alesina, Murard, and Rapoport, 2019; Dahlberg, Edmark, and Lundqvist, 2012; Razin, Sadka, and Swagel, 2002; Tabellini, 2018, 2019). Specifically, Alesina, Murard, and Rapoport (2019) find that immigration exposure in Europe regions lowers natives' preferences for redistribution with a stronger effect when immigrants are from Middle-Eastern and Eastern European countries.

We contribute to this strand of literature by trying to answer the research question about immigration and support for redistribution in a very different context. Contrary to that existing literature –which has focused on immigration coming from developing to developed countries–, we analyze a case characterized essentially by intra-regional migratory flows in one of the most unequal regions in the world (Alvaredo and Gasparini, 2015). This means that immigration comes from countries with relatively similar cultural backgrounds in terms of language, political and economic history. Both high inequality and not-too culturally distant immigrants can attenuate the potential negative effect of immigration on individual preferences for redistribution.

However, we find that there is still a large negative effect of immigration on the support for redistribution. Indeed, we obtain coefficients that are similar in magnitude to those found by Alesina, Murard, and Rapoport (2019). To the best of our knowledge, there is no evidence on this relationship in developing countries. We go a step further and contribute by studying a particular case of border countries: the Venezuelan massive exodus to Colombia. In this case of mass immigration in a very short period of time we find a substantially higher anti-redistribution effect.

This paper is also related to the literature studying the effects of immigration on the emergence of far-right political candidates (Barone, D’Ignazio, de Blasio, and Naticchioni, 2016; Becker, Fetzer, et al., 2016; Brunner and Kuhn, 2018; Edo, Giesing, Öztunc, and Poutvaara, 2019; Dinas, Matakos, Xefteris, and Hangartner, 2019; Dustmann, Vasiljeva, and Piil Damm, 2019; Halla, Wagner, and Zweimüller, 2017; Harmon, 2018; Otto and Steinhardt, 2014; Steinmayr, 2020). In the case of Colombia, Rozo and Vargas (2019) show that Venezuelan migration flows shift votes to right-wing political parties. Our results shed some light on the mechanism underlying the electoral impacts found in the literature: an increase in immigration reduces preferences for redistributive policies among voters and, through this channel, may increase chances of extreme right-wing candidates to winning elections.

The rest of the paper is organized as follows. In Section 2 we briefly describe the main data sources and comment on the patterns of immigration and redistribution preferences in Latin America. The following three sections present the methodology, the data and the results of three different strategies: an instrumental variable analysis based on cross-country census data (Section 3); a fixed-effect model based on a panel of microdata from national household surveys (Section 4); and an analysis of the massive forced migration of Venezuelans in Colombia (Section 5). Section 6 ends with some concluding remarks.

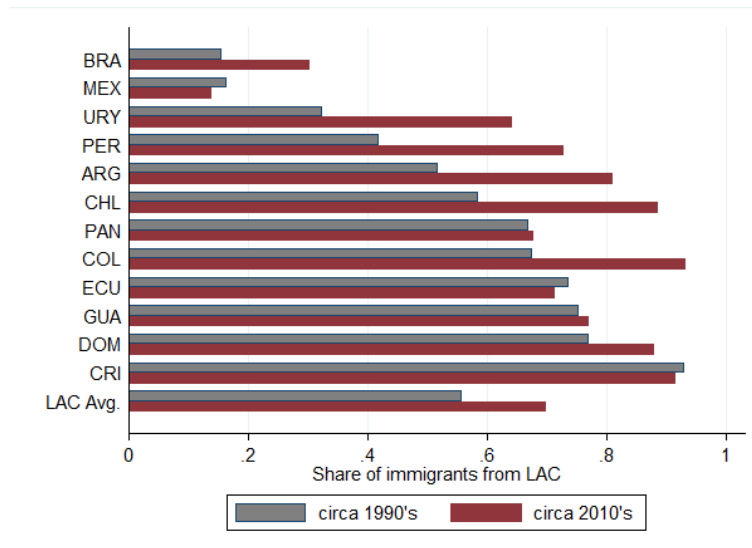
2 Immigration and Support for Redistribution in Latin America

There has been a noticeable change in the nature of immigration in Latin America. Over the last decades, immigration has increasingly become an intra-regional phenomenon, i.e. countries receiving migrants from other Latin American countries. On average, intra-regional immigration went from representing 55% of total immigration in the 1990s to almost 70% in the 2010s (Figure 1).³

This process was particularly strong in Argentina, Chile, Colombia, Peru and Uruguay. Intra-regional migrations were exacerbated in the last years by social and economic crises in countries such as Honduras, Haiti and Venezuela. The fact that, in contrast to Europe and the United States, immigration in Latin America is mostly intra-regional may imply a different relationship between immigration and support for redistribution.

³The average total percentage of immigrants went from 2.2% to 2.9% in the same period which highlights the compositional change.

Figure 1: Intra-regional immigration in Latin America



Notes. Source: Own elaboration based on census data. See Table B4 for details on data sources and years considered.

2.1 Data

In order to analyze the support for redistribution policies we use the Latin American Public Opinion Project (LAPOP) surveys for the 2008-2018 period. The survey is available every two years and is representative at the national level. It contains socioeconomic and attitudinal information at the individual level for almost all the countries in the region. We focus on individuals between 18 and 65 years old.

In order to measure preferences for redistribution we use a question that captures the degree of agreement with the State intervention to reduce income inequality. More specifically, respondents answer on a scale of 1 to 7, where 1 indicates “Strongly disagree” and 7 “Strongly agree”, the following question: “The (Country) government should implement firm policies to reduce income inequality between the rich and the poor. To what extent do you agree or disagree with this statement?”. Appendix B provides some descriptive statistics of the individuals sampled in LAPOP.⁴

Regarding immigration data, we use census data from IPUMS International in order to build a novel database with the share of immigrants in the population at the province level for 12 Latin American countries. We use the latest available census for each country which corresponds to

⁴One limitation of our paper is that we can not distinguish immigrants and natives in LAPOP respondents. However according to our calculations, Latinobarometer, a similar survey with information on country of birth shows that in 2018 immigrants represent a very small share of respondents (on average 1.27%) that could rarely be driving the results.

the 2010s.⁵ Immigrant status is defined by individual’s birthplace (i.e. being born in a foreign country).

We then merge attitudinal and immigration data. Since LAPOP data contains precise information about respondents’ residence, we merge individual level data with immigration shares at the province level. More specifically, we pool 2008-2018 LAPOP surveys and matched them with the most recent available census. The final sample consists of 85,088 individuals for 12 countries and 222 provinces.

As an alternative to census data, we use information drawn from the national household surveys. In particular, we use the Socio-Economic Database for Latin America and the Caribbean (SEDLAC) in order to build a unique and harmonized database of immigrants’ shares at the province level for most Latin American countries over time (not-only-census years). SEDLAC is built by CEDLAS and the World Bank by carrying out a process of harmonization of national household surveys and, therefore, making them comparable across countries. These repeated measures of immigration allow us to estimate a fixed-effects model. In this case, the merge is more straightforward: we merge each LAPOP wave with the immigration shares at the province level from household surveys for the corresponding year. These data allow us to analyze 11 countries and 193 provinces in Latin America.⁶

Finally, we also rely on household surveys from SEDLAC to construct socio-demographic variables at the province level. From this source we obtain total population, unemployment rate, average household per capita income and the Gini Coefficient.

3 Cross-sectional analysis

3.1 Empirical strategy

To analyze the relationship between immigration and support for redistribution our first approach is to estimate the following regression model:

$$R_{ipct} = \alpha + \beta_1 M_{pc} + \beta_2 M_{pc}^2 + X'_{ipct} \theta + Z'_{pct} \phi + \lambda_{ct} + \epsilon_{ipct} \quad (1)$$

where R_{ipct} is individual’s i support for reduction in income differences in province p country c and LAPOP wave t ; M_{pc} is the immigration share in province p at country c measured at

⁵ For some recent census in which IPUMS data are not available, we use the raw census information from official websites. To obtain immigrants in the past for constructing the instrument we also rely on IPUMS data. See Table in Appendix B for details on data sources.

⁶ We restricted the sample to the provinces that appear on all waves of the LAPOP survey to work with a balanced panel of provinces over time. Due to data availability, there are some exceptions on the LAPOP-household surveys years matches (See Table B5 Appendix B for details on countries and years availability). In addition, one drawback of this source of information is that immigration data are noisier than with census data. However, in Appendix B, Figure B1 shows that there is a strong correlation between both sources of information for a sample of countries. The coefficient of a regression of both variables with country fixed effects is 0.87. This suggests that household surveys reflect the actual share of immigrants.

the latest available census year as described in the Data section; X_{ipct} is a vector of individual controls (years of education, age, sex, race, marital status, employment activity status, urban status, income scales, subjective income mobility and a self-reported variable for an insecurity episode) and Z_{pct} a vector of provincial controls (log of native population, unemployment rate, mean of household per capita income and Gini coefficient); λ_{ct} are country-year fixed effects. Standard errors are clustered at the province-year level to account for possible correlation within this level.

This specification exploits variation of immigrants within a country-year. To put it simply, in a specific country-year, it compares support for redistribution policies between provinces with a relatively high share of immigrants to those with a relatively low share.

We follow a quadratic specification for the share of immigrants to capture the non-linearity in the relationship between the number of immigrants and attitudes. [Alesina, Murard, and Rapoport \(2019\)](#) shows that this specification fits the data well. Intuitively, it allows the share of immigrants to affect preferences negatively but with a marginally decreasing rate. It is based on the idea that societies may end up assimilating immigrants and is consistent with the discussion of contact versus exposure ([Steinmayr, 2020](#)). According to social psychology, groups with higher levels of contact (in our case natives and immigrants), are more likely to reduce prejudice towards the other group. Therefore, when the share of immigrants is above a certain level, contact between natives and immigrants will be more frequent and therefore prejudice and rejection against immigrants can be reduced (For an extensive review of the *intergroup contact theory* see, for instance, [Pettigrew, Tropp, Wagner, and Oliver, 2011](#)).

The migration literature has long discussed the potential endogeneity of migrants' location choice (see, for instance, [Altonji and Card, 1991](#); [Sasin and McKenzie, 2007](#)). In our case, the main concern is that unobserved factors may affect both immigration and preferences for redistribution. For example, if migrants flow to destinations with more generous welfare systems (the so-called "welfare magnets"), which may be the result of population's preferences, we can expect a positive bias ([Borjas, 1999](#)). This specific endogeneity concern implies a lower bound for our estimates.

On the other hand, province's economic growth and upward mobility perspectives may be influencing immigrant's location decisions. We include some provincial controls such as unemployment rate, mean of household per capita income and the Gini coefficient to try to mitigate this concern. We also exclude capital cities as a robustness check.

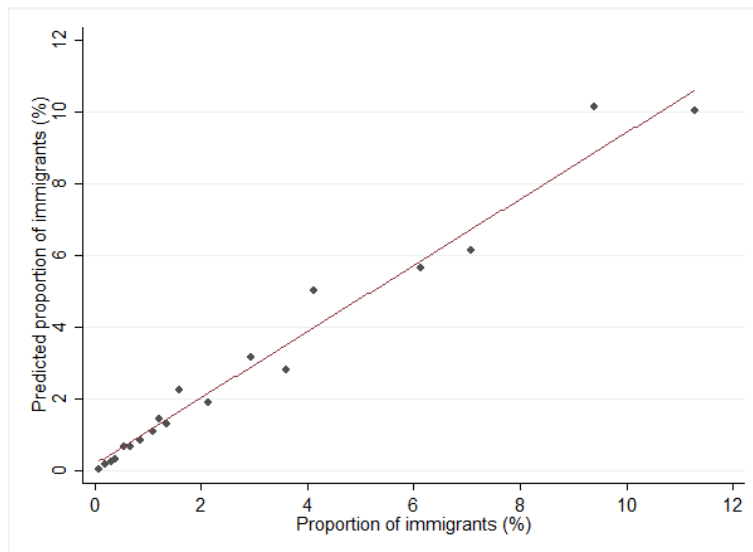
However, other unobservables may still bias our results. To alleviate the endogeneity problem, we instrument the share of immigrants M_{pc} with the standard shift-share instrument ([Card, 2001](#)). The main idea is to predict the share of immigrants in a specific province-country using the country's geographical distribution of immigrants from each nationality in the past and the total number of immigrants of the same nationality in the country in the present. The equation for the instrument is the following:

$$\hat{M}_{pc} = \frac{1}{\hat{P}_{pc}} \sum_o z_{opc} m_{oc} \quad (2)$$

where m_{oc} is the total number of immigrants from country origin o living in country c ; z_{opc} is the share of past immigrants from country of origin o living in province p . Finally, \hat{P}_{pc} is the predicted population of province p in country c considering the distribution of native individuals in the country in the past and the predicted number of immigrants in each province. Table B4 describes the years for present and past immigrants for each country. For the squared share of immigrants we use the squared instrument. Overall, the identifying assumption is that unobservables that determined the past location of immigrants are not correlated with current local preferences for redistribution besides the relation they have through present immigrants.

Figure 2 shows there is a strong relationship between the actual share of immigrants and the predicted share based on the equation 2, which supports the relevance condition of the proposed instrument.

Figure 2: First Stage Correlation



Notes: The figure shows the binscatter derived from a regression of the share of immigrants from census data to the predicted share of immigrants according to equation 2. The sample includes countries described in Table B4.

3.2 Main Results

Table 1 shows the estimates of equation (1) for support for redistribution by OLS and IV. Columns of each estimate add controls sequentially: country-year fixed effects, provincial controls and individual controls. Across all specifications, we find that, on average, there is a negative association between the province's share of immigrants and support for redistribution. More specifically, for the OLS estimation with the full set of controls we find that for an average province in our sample (a province with a share of immigrants close to 1.8%), a 1 percentage point (pp) increase in the immigrants' share reduces support for redistribution policies by more

than 0.03 standard deviations.

The implementation of the IV approach yields even stronger results. In column (VI) of Table 1 we find that a 1 pp increase in the percentage of immigrants, for an average province in terms of migration in our sample, reduces preferences for redistribution by more than 0.05 standard deviation. To put it differently, a one standard deviation increase in the share of immigrants (0.03) lowers support for redistribution policies by more than 17.7% of the standard deviations of preferences. This effect appears to be slightly greater than the one reported by [Alesina, Murard, and Rapoport \(2019\)](#) for Europe, where an increase in 1 standard deviation of the share immigrants reduces preferences for redistribution by about 12.3% standard deviations.

If we consider the non-linearity of the estimated effect, we can see that the share of immigrants in which the negative effect reaches its minimum and becomes positive is slightly higher than 0.06, which is close to the p90 of the distribution of immigration in our sample.⁷ On the other hand, the fact that IV estimates are larger than OLS ones may be suggesting that migrants sorting to welfare magnets may be the main endogeneity problem. This is not a novel result: [Edo, Giesing, Öztunc, and Poutvaara \(2019\)](#), for example, when studying immigration effect on political electoral votes also find higher estimates relative to OLS with a similar IV.

⁷In our sample only 8% of the provinces have an immigration share above 0.06: 3 from Argentina, 3 from Chile, 5 from Costa Rica, 4 from the Dominican Republic and 1 from Panama.

Table 1: Effect of immigration on Preferences for Redistribution

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-4.220*** (1.536)	-4.220** (1.791)	-4.153** (1.720)	-6.883*** (2.561)	-7.091** (3.283)	-7.803** (3.297)
Share immigrants, squared	30.64*** (11.08)	30.67** (12.60)	29.79** (12.16)	56.44** (23.12)	58.44** (28.82)	63.38** (29.02)
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Kleibergen-Paap Wald)				13.25	11.37	11.32
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Clustered standard errors at the the province-year level in parenthesis.

3.3 Heterogeneous Effects

For a better understanding of the mechanisms behind this negative relationship, we explore some heterogeneous effects regarding respondents’ characteristics and type of immigration.⁸

In the first place, respondent’s income level can be an important determinant of the immigration anti-redistribution effect. Indeed, in Table 2 we find that the effect of immigration on preferences for redistribution is stronger among individuals at the top of the income distribution. This result could be explained by the fact that rich individuals may perceive that immigrants would imply a bigger welfare spending that they, as taxpayers, should finance. As [Alesina and Stantcheva \(2020\)](#) remark, native individuals may perceive, correctly or incorrectly,

⁸ In this subsection, when analyzing heterogeneous effects we estimate equation (1) including an interaction between the immigrants’ share and the heterogeneity variable considered. We also include the heterogeneity variable as a control. For IV estimates, we instrument this interaction with the interaction of the predicted immigrants’ share and the variable capturing the heterogeneity. First stages of IV estimates are presented in Tables C5, C6, C7 and C8. In addition, when we analyze the heterogeneous effect by the type of immigration we include the immigrants share and its quadratic form for each of these types. In this case, for the IV estimates we construct an instrument for each group separately following equation (2).

that immigrants are net-recipients of public spending, even “free loaders”. These perceptions can affect the level of “acceptable” inequality for native individuals making them less prone to support reduction of income inequality when immigration is higher. This effect can be stronger among richer people.

Table 2: Heterogeneous Effects: Income level

	OLS				IV	
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-3.984** (1.584)	-3.392* (1.769)	-3.428* (1.762)	-6.757*** (2.558)	-6.565** (3.237)	-6.888** (3.240)
Share immigrants x High-Income	-0.653* (0.356)	-0.590* (0.356)	-0.661* (0.350)	-0.751** (0.379)	-0.705* (0.382)	-0.782** (0.374)
Share immigrants, squared	33.83*** (11.14)	29.33** (12.28)	30.06** (12.16)	61.78*** (23.52)	60.48** (29.01)	63.10** (28.94)
Effect on High-Income P-Value	-4.6369 [0.0027]***	-3.9817 [0.0218]**	-4.0892 [0.0176]**	-7.508 [0.00385]***	-7.270 [0.0271]**	-7.670 [0.0196]**
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Kleibergen-Paap Wald)				8.876	7.566	7.583
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. High-income individuals are defined as those with an income level in the 10th decile of the income distribution. Clustered standard errors at the province-year level in parenthesis.

In Table 3 we examine the heterogeneity regarding respondent’s skill level. We find evidence that relative to low-skilled individuals, more educated ones reduce more their support to redistribution in reaction to immigrants. This result goes against the one found by [Alesina, Murard, and Rapoport \(2019\)](#) in which tertiary-educated individuals show more educated preferences and suggests that in Latin America high-skilled may not be as tolerant towards minorities as they are in Europe. On the other hand, it could also be possible that higher-skilled individuals consider migrant labor as complementary to their labor. In this case, they may perceive that it is less likely for them to need government assistance and lower their support for redistribution.

Table 3: Heterogeneous Effects: Skill level

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-4.124*** (1.507)	-3.540** (1.706)	-3.853** (1.694)	-6.938*** (2.547)	-6.802** (3.263)	-7.426** (3.276)
Share immigrants x High-Skilled	-0.634** (0.289)	-0.623** (0.289)	-0.520* (0.281)	-0.704** (0.309)	-0.707** (0.310)	-0.577* (0.303)
Share immigrants, squared	32.37*** (11.08)	28.34** (12.24)	29.95** (12.16)	60.11*** (23.16)	59.63** (28.73)	63.11** (28.87)
Effect on High-Skilled P-Value	-4.7575 [0.0024]***	-4.1626 [0.0180]**	-4.3736 [0.0123]**	-7.642 [0.00312]***	-7.509 [0.0225]**	-8.003 [0.0153]**
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Kleibergen-Paap Wald)				8.931	7.606	7.617
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. High-skilled individuals are defined as those with more than completed secondary education. Clustered standard errors at the the province-year level in parenthesis.

We also analyze whether the anti-redistribution effect depends on the respondent’s ideological position. Table 4 shows that the effect of immigration on preferences for redistribution is slightly stronger for those individuals who declares themselves as Non-Leftist. However, differences are not statistically significant.

Table 4: Heterogeneous Effects: Ideology

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-4.153** (1.749)	-3.858* (1.975)	-4.141** (1.950)	-7.162** (2.840)	-7.543** (3.698)	-8.364** (3.707)
Share immigrants x Non-Leftist	-0.368 (0.558)	-0.355 (0.557)	-0.366 (0.543)	-0.129 (0.632)	-0.104 (0.632)	-0.0794 (0.619)
Share immigrants, squared	32.84*** (11.36)	30.31** (12.94)	32.16** (12.81)	60.02** (24.27)	62.87** (31.25)	68.43** (31.40)
Effect on Non-Leftist	-4.5212	-4.2121	-4.5062	-7.291	-7.647	-8.444
P-Value	[0.0052]***	[0.0241]**	[0.0147]**	[0.00720]***	[0.0329]**	[0.0189]**
Observations	73,748	73,748	73,748	73,748	73,748	73,748
F-stat (Kleibergen-Paap Wald)				9.026	7.445	7.453
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Non-Leftists are defined as those with self-declared values of 4-10 in a ten-point ideology scale. Clustered standard errors at the province-year level in parenthesis.

In Table 5 we further explore whether the effect varies according the immigrants’ origin. We find that the anti-redistribution effect is mainly driven by immigrants coming from other Latin American countries.⁹ This is an important result for various reasons. In the first place, immigration has come from Latin America in the past decades, reinforced by some crisis. It is expected that intra-regional migration would continue. Furthermore, the relevance of intra-regional migration in Latin America is different from the cases of Europe and the US that have been discussed in the literature. Because of the relatively similar backgrounds and cultural norms between countries in Latin America we could have expected that individuals do not change much their preferences for redistribution as a result of immigration. However, what we find is that in fact the anti-redistribution effect comes mainly from this type of immigration.

⁹ According to our sample, 70% of immigrants are from other Latin American countries, about 12.7% are from Europe, 12.3% from other non-Latin American countries in the Americas, 4.5% from Asia and the rest from Africa and Oceania.

Table 5: Heterogeneous Effects: Immigrants' origin

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants (LAC)	-4.492** (1.894)	-4.032** (1.915)	-4.327** (1.899)	-7.016** (2.832)	-6.784** (3.197)	-7.566** (3.230)
Share immigrants (no LAC)	-2.106 (4.193)	-2.540 (5.262)	-2.290 (5.183)	-0.684 (5.633)	-4.906 (7.468)	-4.524 (7.378)
Share immigrants (LAC), squared	38.01** (16.96)	34.33** (17.26)	36.20** (17.09)	66.03** (27.93)	65.32** (32.17)	71.22** (32.56)
Share immigrants (no LAC), squared	61.54 (145.3)	69.45 (157.7)	66.17 (154.8)	-28.26 (188.8)	99.91 (219.3)	92.71 (213.9)
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Kleibergen-Paap Wald)				6.192	5.529	5.538
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "The (Country) government should implement strong policies to reduce income inequality between the rich and the poor". It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Clustered standard errors at the the province-year level in parenthesis.

Finally, we study heterogeneous effects by destination countries. In particular, in Table 6 we find that the effect of immigration on the support for redistribution is stronger in those countries with a higher average per capita social public spending. This result can be explained by the fact that countries with a higher welfare state are countries where the tax burden on taxpayers is greater and therefore, migrants perceived as net-beneficiaries of this public aid lower native preferences for redistribution.

Table 6: Heterogeneous Effects: Destination countries

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-3.467*** (1.283)	-3.324** (1.480)	-3.508** (1.464)	-1.699 (1.989)	-1.856 (2.317)	-2.640 (2.323)
Share immigrants x High Social Spending	-1.318 (1.161)	-1.112 (1.205)	-1.282 (1.193)	-4.412*** (1.615)	-4.374** (1.775)	-4.306** (1.757)
Share immigrants, squared	34.04*** (12.74)	31.51** (14.37)	33.72** (14.23)	39.68** (18.71)	41.19* (22.92)	46.31** (22.78)
Effect on High Social Spending Country	-4.7850	-4.4354	-4.7897	-6.111	-6.230	-6.946
P-Value	[0.0100]**	[0.0366]**	[0.0226]**	[0.00801]***	[0.0315]**	[0.0158]**
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Kleibergen-Paap Wald)				14.80	14.34	14.63
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: *“The (Country) government should implement strong policies to reduce income inequality between the rich and the poor”*. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Clustered standard errors at the the provincial level in parenthesis. High-Social-Spending countries are the six countries with higher average public social spending per capita in ppp dollars based on data from CEPALSTAT for the period 2008-2018 (Argentina, Chile, Costa Rica, Mexico, Panama and Uruguay). Clustered standard errors at the the province-year level in parenthesis.

3.4 Robustness checks

To rule out the possibility that the results are driven by capital cities, we exclude them from the sample in Table C1. Results remain unchanged after this restriction. In addition, we include an ideology control in Table C3 and we find no differences on estimates of the effect of immigration on preferences for redistribution.

Finally, another concern of the analysis presented so far could be the distance between LAPOP years and census years. For that reason, in Table C2 we present estimates considering, for each country, LAPOP waves carried out no more than four years after the census year. The motivation for this robustness check is that, probably perception of individuals is mainly affected by past immigration and not by future migratory flows.¹⁰ Results of Table C2 confirm that estimates do not change when considering this restriction.

¹⁰ In the case of Colombia and Chile, the last census available and considered were conducted in 2018 and 2017, respectively, so for these countries we only considered the 2018/2019 LAPOP wave.

4 Short-term variations in immigrants and attitudes

In this section we move to a fixed effects design that controls for time-invariant unobservables at the province level. Since countries typically implement just one census every decade, we rely on information from national household surveys in order to compute the share of immigrants at the province level for a given year, and then match it to the LAPOP survey corresponding to that year (See Data Section and Table B5 for details.). Although using national household surveys allows us to have several observations over time, the data on immigration from this source is noisier due to the lower number of observations (compared to census) and differences in definitions across countries.

Given that we can assemble a panel, we run a fixed-effect model that allows us to take a different view of the relationship between immigration and social preferences than the one discussed in the previous section. Here, we focus the analysis on the relationship between changes in these variable in the short run (around two years).

4.1 Empirical Strategy

The regression model that we estimate in this section is the following:

$$R_{ipct} = \beta_1 M_{pct} + \beta_2 M_{pct}^2 + X'_{ipct}\theta + Z'_{pct}\phi + \alpha_p + \lambda_{ct} + \epsilon_{ipct} \quad (3)$$

where R_{ipct} is individual's i support for reduction in income differences and M_{pct} and M_{pct}^2 are the immigration share in province p and year t and its quadratic form, respectively. In contrast to equation (1) we also include province fixed effects, α_p , and standard errors are clustered at this level to account for potential serial correlation within provinces. Controls are the same as for equation (1).

4.2 Main Results

Table 7 shows estimates of the two-way fixed-effects model for support for reduction in income differences. Results show again a clear negative relationship between immigration and preferences for redistribution that is stable across specifications. Considering the specification with the full set of controls we find that a 1 percentage point increase in the share of immigrants for an average province in terms of immigration (a province with 1.25% of immigration in our sample) reduces support for redistribution by about 0.029 standard deviations. In addition, the level of immigration in which the relation between the share of immigrants and preferences for redistribution reaches its minimum is close to 5.7% which is greater than p90 of our sample.

This result is close to the OLS estimates presented in Table 1. However, coefficients are less statistically significant, which may be explained by the fact that immigration data coming from household surveys are noisier than census information.

Table 7: Main results: effect of immigration on support for reduction in income differences

	(I)	(II)	(III)
Share immigrants	-3.147 (1.918)	-3.641* (2.089)	-3.656* (2.052)
Share immigrants, squared	27.40 (17.63)	31.45 (19.19)	31.63* (18.98)
Observations	71,354	71,354	71,354
Province FE	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes
Provincial controls	No	Yes	Yes
Individual controls	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, mean of household per capita income and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Clustered standard errors at the the provincial level in parenthesis.

4.3 Heterogeneous Effects

We also explore heterogeneous effects and find results that are consistent with those discussed in the cross-country analysis with census data. In particular, the anti-redistribution effect is stronger for high income respondents (Table C12). On the other hand, although not statistically significant, differences in response to immigration between high- and low-skilled individuals go in the same direction as before (Table C11). Finally, estimates appears to be significantly driven by individuals self-selected ideologically as non-leftist (Table C10).

5 Not-so-brother countries: The case of Venezuelan forced migration in Colombia

In this section we study a recent and significant case of massive intra-regional immigration in Latin America: the Venezuelan exodus, and its impact on preferences for redistribution. The Venezuelan migratory exodus due to the current political instability and the strong economic crisis in the country is a well-known phenomenon. According to [UNHCR \(2019\)](#), massive out-flow of Venezuelan to different countries around the world is the second most important episode of forced displacement after Syria’s episode. At the end of 2019, about 3.6 million Venezuelans displaced abroad their country fleeing from the economic and social crisis. Due to its geographical proximity, Colombia was the first-destination country of Venezuelan refugees hosting about 1.8 million Venezuelans.

There are few papers that study the effect of this massive inflow of migrants from Venezuela in Colombia. The results so far suggest a significant impact on the labor market, crime, political attitudes and demographic composition in Colombia (See, for example, [Caruso, Canon, and Mueller, 2019](#); [Peñaloza Pacheco, 2019](#); [Rozo and Vargas, 2019](#); [Knight and Tribin, 2020](#)). In this section we study whether this flow of migration has also affected support for redistribution in Colombia.

5.1 Data

We use the immigration data at the departmental level of the Great Integrated Household Survey (GEIH for its acronym in Spanish) which is the Colombian national household survey carried out by the National Statistics Office (DANE). This information is available since 2013.¹¹ To measure preferences for redistribution we continue using LAPOP surveys. Given immigration data availability, we use four years: 2013, 2014, 2016 and 2018.¹² Finally, we also use 1990 Venezuelan census data from IPUMS International to build our instrument (developed below).

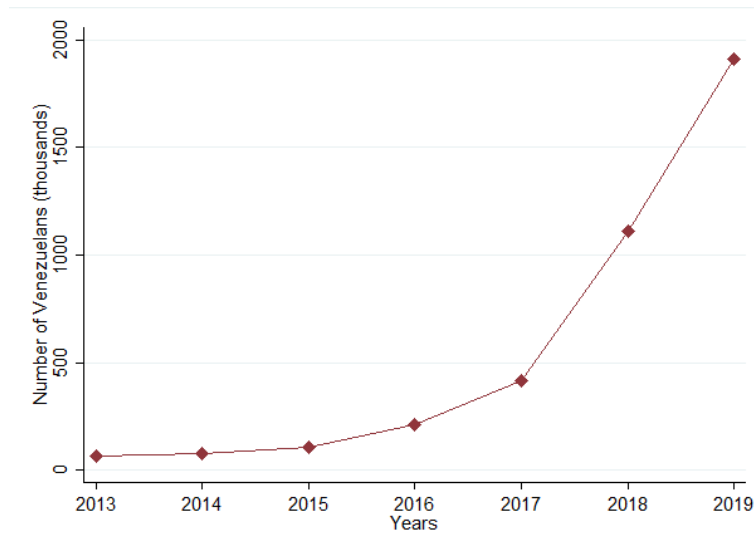
5.2 Descriptive Statistics of Venezuelan refugees in Colombia

As we can see in [Figure 3](#), the number of Venezuelans living in Colombia has increased continuously in the period 2013-2019.

¹¹Departments are the same unit we were calling provinces. Although the migration module of DANE household survey is available since 2012, the question about the country of origin of immigrants was included since April 2013.

¹²Three departments included in the GEIH are not surveyed by LAPOP: Chocó, La Guajira and Quindío.

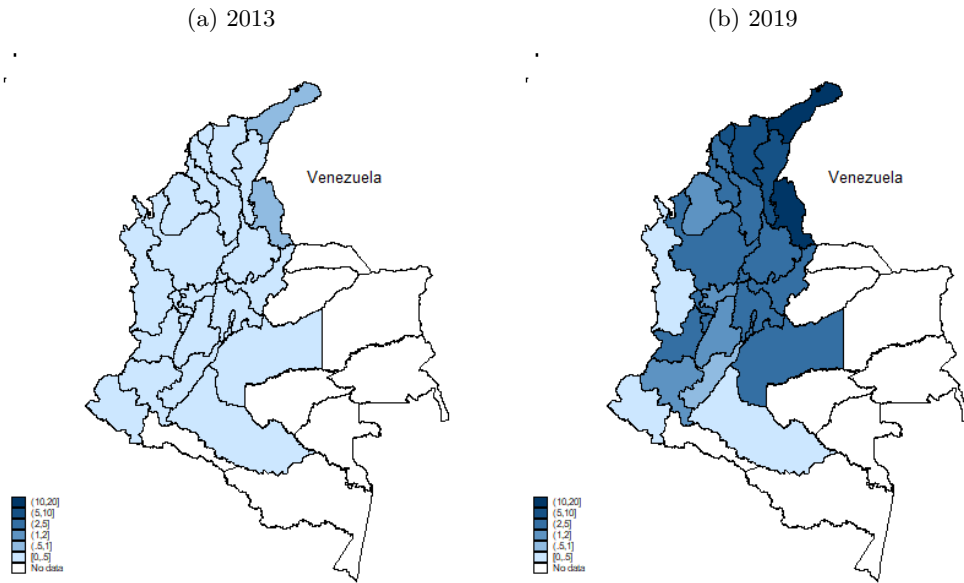
Figure 3: Venezuelans in Colombia. 2013-2019



Notes. Source: Own elaboration based on data from DANE.

However, this massive influx of Venezuelan immigrants into Colombia has not been homogeneous across departments. Figure 4 shows the percentage of Venezuelans in relation to native population in 2013 and in 2019. We find that the location of Venezuelans in Colombia has been concentrated in border departments possibly because their proximity to Venezuelans' states. In the most affected department the percentage is higher than 10% in 2019.

Figure 4: Venezuelan Immigration by Department (% Population)



Notes. Source: Own elaboration based on data from DANE. We consider as Venezuelan immigrants those individuals who were born in Venezuela. Departments with no data in the figures are mainly departments in the Amazon region with a low population density and small main cities in which data is not available. According to the last available census in Colombia (2018), population in these departments represents less than 3% of the total population in Colombia.

We exploit this heterogeneous distribution of Venezuelan across department and its evolution over time to analyze the effect of this episode of immigration on population preferences for redistribution.

Furthermore, characteristics of Venezuelan migrants can be relevant for understanding how they may affect residents' preferences. Although historically there has been a significant similarity between Colombian and Venezuelan population, we can expect certain selection in the Venezuelans who decided to leave their country and therefore, a significant difference between the average Venezuelan that arrives to Colombia and the average Colombian native.

Table 8 shows descriptive statistics on individual socio-demographic and labor market variables between Venezuelan migrants and natives. We find that, on average, individuals arriving from Venezuela are significantly younger than Colombian population, which may be explained by the fact that people who decides to migrate are especially individuals on working age. Moreover, Venezuelan migrants are clearly more vulnerable than the average Colombian: they have household per capita income 72% lower and a significantly higher poverty and unemployment rates. Altogether, this may be reflecting the difficulty of Venezuelan migrants to achieve acceptable living conditions in a new country and the incapacity of the Colombian economy to absorb all the increase in the labor supply.

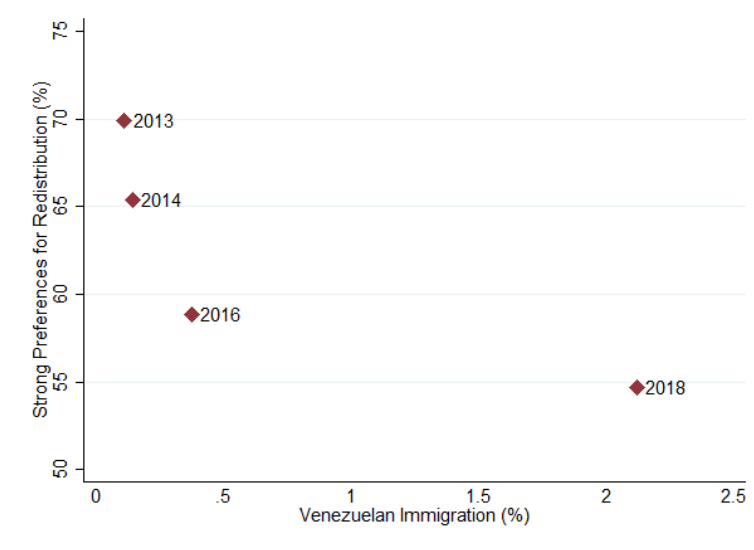
Table 8: Descriptive statistics of Venezuelan migrants in Colombia - 2019

	Venezuelan	Colombian	Difference	P-Value	Observations
Male	0.501	0.493	-0.008	0.212	754270
Age	22.33	32.55	10.22	0.000	754270
Years of education	7.778	7.714	-0.064	0.741	723811
Unemployment	0.149	0.103	-0.046	0.000	381613
Labor force participation	0.627	0.564	-0.063	0.000	623650
Household per capita income (logs)	12.40	12.94	0.540	0.000	754270
Poverty rate	0.424	0.215	-0.209	0.000	754270

Notes. Source: Own elaboration based on data from DANE. P-values are for difference between Venezuelan and Colombian averages with clustered standard errors at the departmental level.

Clearly, this massive immigration could have impacted on the support for redistribution policies in most affected departments. In fact, Figure 5 shows that from 2013 to 2018 the average departmental share of Venezuelan immigrants in Colombia has increased from 0.2% to about 2%, which represents an increase of almost ten times in only 5 years. On the other hand, support for redistribution among resident population seems to have decreased significantly in those years: whereas in 2013 approximately 70% of Colombians strongly agreed with the implementation of public policies to reduce inequality, five years later this fraction was reduced to around 55%.

Figure 5: Preferences for Redistribution in Colombia and Venezuelan Immigration. 2013-2018



Source: Own elaboration based on data from DANE and LAPOP. Notes. Strong preferences for redistribution defined as values of 6-7 on the seven-point scale on agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*” Each point is the average support for redistribution and Venezuelan immigration in the country.

It is worth mentioning that although Figure 5 shows a negative relationship between the share of Venezuelan immigrants and preferences for redistribution, it has a decreasing rate. This is consistent with the quadratic specification proposed by [Alesina, Murard, and Rapoport \(2019\)](#) and implemented in this paper.

In the following subsection we introduce the econometric specification and the empirical strategy to estimate the causal effect of this massive inflow of Venezuelans migrants on the support for redistribution.

5.3 Empirical Strategy

In order to analyze the effect on preferences for redistribution in Colombia of Venezuelan forced migration, we estimate the following equation:

$$R_{idrt} = \beta_1 M_{drt} + \beta_2 M_{drt}^2 + X'_{idrt} \theta + Z'_{drt} \phi + \alpha_d + \lambda_{rt} + \epsilon_{idrt}$$

where R_{idrt} is individual's i living in department d and region r support for reduction in income differences in year t ; M_{drt} and M_{drt}^2 are the Venezuelan immigration share in department d and its quadratic form; X_{idrt} is a vector of individual controls (years of education, age, sex, race, marital status, employment activity status, urban status, income scales, subjective income

mobility and self-reported insecurity episode suffering) and Z_{drt} a vector of departmental controls obtained from DANE (log of native population, unemployment rate, GDP, Gini coefficient, share of non-Venezuelan immigrants, poverty rate and share of rural population); α_d and λ_{rt} are department and region-year fixed effects, respectively. Standard errors are clustered at the department level to account for potential serial correlation within departments.

Considering that the allocation of Venezuelan immigrants was not random, we use an instrumental variable approach to instrument the share of Venezuelan immigrants in each Colombian department. We use a well-known enclave instrument used in several papers analyzing episodes of forced migration, including the Venezuelan (see, for instance, [Del Carpio and Wagner, 2015](#); [Morales, 2018](#); [Caruso, Canon, and Mueller, 2019](#)). It exploits the fact that given the forced nature of the migration, the location of Venezuelan migrants was specially concentrated on departments near to the Colombian border with Venezuela. Formally:

$$\hat{IV}_{drt} = V_t \sum_s \frac{\alpha_{s,1990}}{K_{drs}} \quad (4)$$

where V_t is the stock of Venezuelan immigrants living in department d region r in year t ; $\alpha_{s,1990}$ is the share of Venezuelan living in Venezuelan State s according to 1990 Venezuelan census and K_{drs} is the driving-distance in kilometers between Colombian department d and Venezuelan State s .¹³ The intuition of the instrument is that those Colombian departments located near to the border with Venezuela and, specifically, near to Venezuelan States with an historical high population density, are expected to face a higher immigration than those departments located far away from the borders.

As a robustness exercise we estimate the same IV regressions but slightly changing the instrument. Instead of considering the element $\alpha_{s,1990}$ that represents the share of Venezuelans in each Venezuelan state we consider the element $\theta_{s,1990}$ that represents the share of Colombians in each Venezuelan state s in relation to the total number of Colombians in Venezuela according to the 1990 census. This last instrument relies on the idea that Colombian departments that are close to Venezuelan states with a greater proportion of Colombian population in the past are more likely to receive a greater number of Venezuelans due to networks.¹⁴

5.4 Main Results of Venezuelan Immigration on Attitudes

Table 9 shows the main results for the case of Colombia. We present both the OLS and IV estimates with controls added sequentially. We find that there is a stable negative non-monotonic relationship across specifications between Venezuelan immigration and support for the reduction

¹³ Driving-distance is estimated by implementing Stata command `georoute` of [Weber and Martin \(2018\)](#) which also provides information about the travel-time between Colombian departments and Venezuelan States. Results are robust when travel time is considered instead of driving-distance in the instrument calculation.

¹⁴ In other words, if an individual native to Venezuela knows a Colombian person, it is more likely that this Venezuelan person has a network of contacts in Colombia that can help her in case she decides to leave the country and, at the same time, this is more likely to happen in those Venezuelan States with a higher share of Colombian population.

in income differences. Although coefficients are quite large, they are statistically significant at the 1% level once we account for individual and departmental differences in the IV estimator.¹⁵

In our preferred specification in column (VI) of Table 9, we estimate that a 1 pp increase in the share of Venezuelan immigrants in a Colombian department with an average share of Venezuelan immigrants (0.07% in our sample) reduces preferences for redistribution in 0.22 standard deviations. At the same time, if we consider a one standard deviation increase in the share of immigrants (0.01) we obtain a decrease by 20% of the standard deviations of preferences. This result is stronger compared to the one found for Latin America as a whole in the previous sections. It is worth noticing that the minimum of the relationship between preferences for redistribution and Venezuelan immigration is close to 4.6% which is certainly close to the p95 of Venezuelan share of immigrants distribution.

This result is larger than in the general Latin American case. This difference may be accounted for by the fact that the Venezuelan case was an unprecedented episode of massive inflow of immigrants in a very short period of time that could abruptly affect the preferences of individuals in the receiving country. On the other hand, given the proximity we can expect that a higher share of vulnerable people decided to migrate to Colombia rather to farther countries. As we saw in Table 8, these differences can determine a stronger reaction in attitudes.

¹⁵ First Stage of IV estimation for aggregate results are presented in Table D5 of Appendix D.

Table 9: Venezuelan Immigration and Preferences for Redistribution in Colombia

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	0.948 (10.86)	-4.480 (11.54)	-4.389 (11.33)	-13.82 (11.48)	-22.27** (10.47)	-22.88** (10.31)
Share immigrants, squared	1.052 (111.7)	56.78 (117.4)	52.26 (116.5)	143.3 (112.2)	242.3** (94.24)	247.2** (93.04)
Observations	4,717	4,717	4,717	4,717	4,717	4,717
F-stat (Kleibergen-Paap Wald)				19.11	122.7	126.1
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The Colombian government should implement strong policies to reduce income inequality between the rich and the poor*”. It is standardized (z-score). Departmental controls include log native population, unemployment rate, departmental GDP, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include years of education, age, sex, age×sex, years of education×sex, marital status, self-reported race, rural respondent, activity status (employee, unemployed, student, retired), a dummy whether the individual lived an insecurity episode in the last 12 months, income scale and a subjective income mobility scale respect to the last 12 months. Clustered standard errors at the the department level in parenthesis.

5.5 Heterogeneous Effects and Robustness Exercise

In Tables D1, D2 and D3 of Appendix D we analyze heterogeneous effects considering the characteristics of individuals such as income, education and ideology. In this case, we are not able to distinguish significant differences among the different group of individuals.¹⁶ This may be explained by the fact that massive inflow of Venezuelan in Colombia was an unexpected shock in the short-term that could probably have affected average individual’s preferences in the same magnitude.

Finally, Table D4 in Appendix D shows the aggregate results and heterogeneous effects presented in this section but using the instrument that considers the share of Colombians in each Venezuelan State in the past ($\theta_{s,1990}$) rather than the share of Venezuelans in each State ($\alpha_{s,1990}$). As can be seen, the results do not change when this instrument is considered.

¹⁶ First Stage of IV estimations for heterogeneous effects are presented in Tables D6, D8, D7 of Appendix D.

6 Concluding Remarks

Immigration seems to have affected natives' preferences and attitudes in Europe and the United States. In this paper we study whether this result also holds in a context of developing countries where migration is essentially intra-regional.

We use three different settings. First, we exploit within-country variation in twelve Latin American countries. We find a negative and significant relationship between the share of immigrants in a province and the support for redistributive policies in the resident population. The results are basically driven by intra-regional immigration, that is, immigration from other Latin American countries. Even when migration occurs among rather similar countries, we find that the size of the estimated effects are slightly larger than those found by (Alesina, Murard, and Rapoport, 2019) for the case of Europe, where immigration is more asymmetric. We also find that the anti-redistribution effect is larger among high-skilled and high-income individuals. We confirm these results in a different framework: a fixed-effect model that exploits panel data from a large database of national household surveys.

Finally, we study the case of mass migration of Venezuelans refugees to Colombia. We find that immigration from Venezuela significantly reduces support for strong redistribution policies in Colombia. Probably the fact that this wave of migration was massive and in a very short period of time (a “shock”) implied results that are significantly higher than the ones in the cross-country analysis for Latin America.

Given the relatively similar cultural backgrounds between immigrants and local population in the case of Latin America's immigration, a lower or null effect on attitudinal responses could have been expected. However, Latin American brotherhood seems to have limits in the extension of bonds of solidarity.

Our results are particularly relevant given that Latin America is one of the most unequal regions in the world where inequality has also stagnated in recent years (Gasparini, Cruces, and Tornarolli, 2016). In this context, the consequences of immigration on current and future welfare system can be worrying.

Future research is needed to explore in greater depth the mechanisms behind this anti-redistribution effect.

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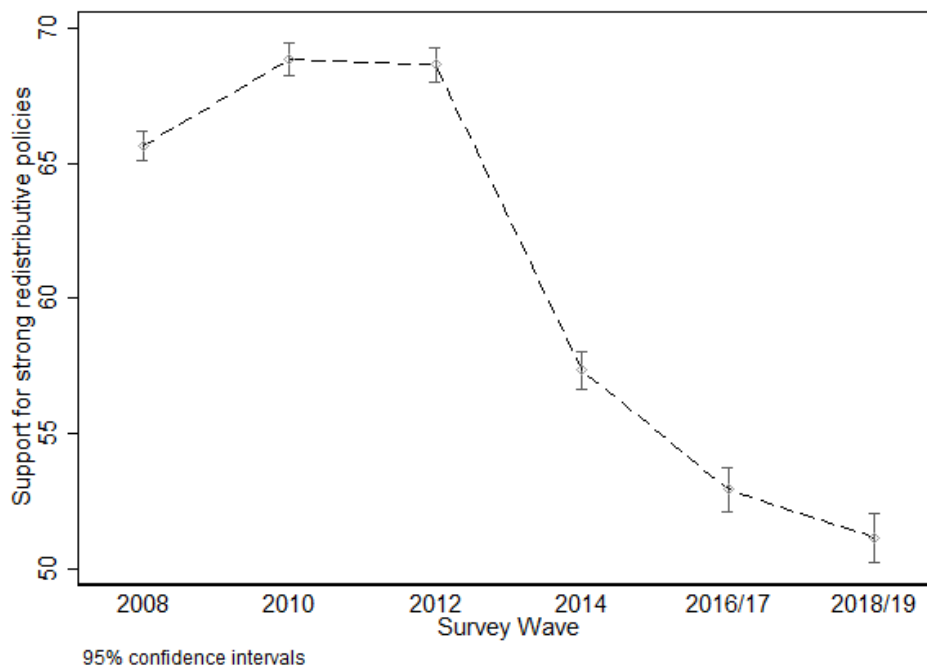
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Appendices

A Appendix

Figure A1: Preferences for Redistribution in Latin America



Notes: The figure shows the percentage of individuals that show significant support for policies to reduce income inequality (values of 6-7 on the seven-point scale on agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*”) by LAPOP wave. Countries included are LAPOP Latin American countries.

B Appendix: Data

Descriptive Statistics

Table B1 presents information concerning support for redistribution measure in Latin American countries. As previously mentioned, this variable is related to preferences regarding government intervention in the reduction of inequality according to the information provided by LAPOP for the period 2008-2018. As can be seen, given that the scale for all questions ranges from 1 to 7, there are high levels of support for redistribution in the analyzed countries. This support seems to be greater in the case of Argentina, Chile and Dominican Republic while, on the other hand, Peru, Guatemala and Ecuador show the lowest value of support for an active attitude on the part of governments to reduce income differences.

Table B1: Descriptive Statistics: Preferences for Redistribution in Latin America 2008-2018

Country	Mean	SD	p25	p50	p75
Argentina	5.84	1.56	5	7	7
Brazil	5.75	1.63	5	6	7
Chile	5.99	1.35	5	7	7
Colombia	5.76	1.54	5	6	7
Costa Rica	5.83	1.62	5	7	7
Dominican Republic	5.92	1.57	5	7	7
Ecuador	5.47	1.65	4	6	7
Guatemala	5.27	1.76	4	6	7
Mexico	5.66	1.62	5	6	7
Panama	5.51	1.73	4	6	7
Peru	5.42	1.56	4	6	7
Uruguay	5.81	1.60	5	7	7
Total	5.68	1.62	5	6	7

Notes. The dependent variable measures support for reduction in income differences and is based on the agreement to the statement: “*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*” where the answer is a scale from 1 to 7, such that 1 represents *Strongly Disagree* and 7 is *Strongly Agree*.

Table B2 presents some descriptive statistics of individuals in the sample. There are no large differences between countries regarding sex, age and years of education. Moreover, most respondents are employed and students are generally less than 10%. Finally, according to the last column of the table, on average, individuals from all countries are located to the right of the center of the ideological scale, with the exception of Uruguay, where respondents are located,

on average, slightly to the left of the center of the scale.

Table B2: Descriptive Statistics: Main variables LAPOP 2008-2018

Country	Male	Age	Years of Education	Employee	Student	Ideology
Argentina	0.50	40.2	10.7	0.58	0.08	5.43
Brasil	0.49	38.8	8.51	0.41	0.06	5.59
Chile	0.42	44.8	10.7	0.48	0.06	5.17
Colombia	0.51	37.6	9.72	0.54	0.07	5.91
Costa Rica	0.50	41.2	8.83	0.46	0.09	5.69
Dominican Republic	0.51	39.7	9.36	0.48	0.07	6.08
Ecuador	0.50	38.5	10.8	0.53	0.09	5.33
Guatemala	0.52	38.2	7.46	0.53	0.05	5.35
Mexico	0.52	39.8	9.31	0.52	0.06	5.52
Panama	0.50	38.6	10.8	0.41	0.08	5.53
Peru	0.52	38.8	11.3	0.54	0.08	5.48
Uruguay	0.48	45.7	9.62	0.54	0.04	4.96
Total	0.50	40.1	9.79	0.50	0.07	5.50

Notes. Own elaboration based on data from LAPOP 2008-2018. Ideological position is a variable in which the respondents had to place themselves in a scale from 1 to 10 where 1 is left and 10 is right ideology.

Table B3 shows that there is a great variation on the population share of immigrants across the analyzed countries. While in Argentina, Costa Rica, Chile, Dominican Republic and Panama there is a high share of immigrants, in Brazil, Guatemala, Mexico and Peru it is close to zero. Additionally, it is worth noticing that the variability of the shares of immigrants is not homogeneous across countries. The largest variability occurs in Argentina, and Chile (standard deviation greater than three). Since these countries have also a high immigration share, it is reasonable to think that it is concentrated in some country provinces.

Table B3: Descriptive Statistics: Immigration in Latin America

Country	Mean	SD	p25	p50	p75
Argentina	0.031	0.036	0.007	0.012	0.060
Brazil	0.002	0.002	0.001	0.002	0.003
Chile	0.040	0.041	0.013	0.021	0.071
Colombia	0.014	0.012	0.004	0.010	0.020
Costa Rica	0.083	0.025	0.054	0.088	0.106
Dominican Republic	0.040	0.024	0.025	0.031	0.047
Ecuador	0.012	0.009	0.005	0.011	0.016
Guatemala	0.004	0.003	0.002	0.004	0.006
Mexico	0.010	0.008	0.006	0.008	0.012
Panama	0.029	0.021	0.012	0.019	0.047
Peru	0.004	0.003	0.001	0.003	0.005
Uruguay	0.015	0.009	0.008	0.013	0.020
Total	0.018	0.025	0.003	0.008	0.020

Notes. Table shows summary statistics of immigration shares at the province level for the last available census for each country (See Table B4).

Immigration Data Sources

Table B4: Census Immigration Data

Country	Present immigrants	Past immigrants	LAPOP Year
Argentina	2010	1991	2008-2018
Brazil	2010	1991	2008-2018
Chile	2017	1992	2008-2018
Colombia	2018	1993	2008-2018
Costa Rica	2011	2000	2008-2018
Dominican Republic	2010	1981	2008-2018
Ecuador	2010	1962	2008-2018
Guatemala	2018	1994	2008-2018
Mexico	2010	2000	2008-2018
Panama	2010	2000	2008-2018
Peru	2017	1993	2008-2018
Uruguay	2011	1985	2008-2018

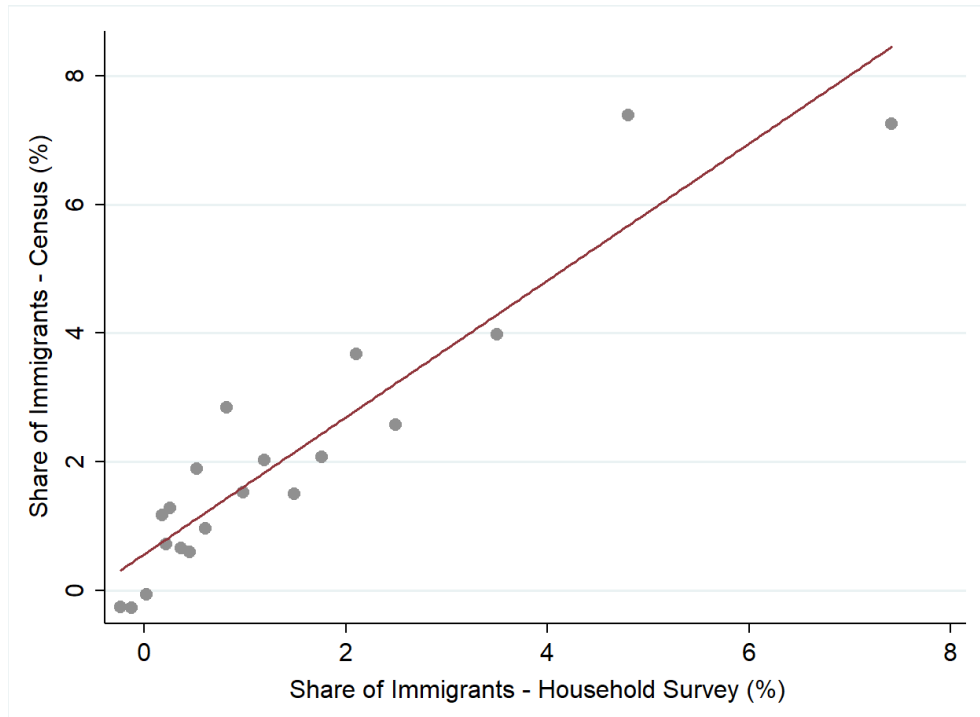
Notes. Source is IPUMS International for both present and past immigrants with the exception of Colombia, Guatemala and Peru which de last census retrieved from the official site.

Table B5: Household Survey Immigration data

Country	Year LAPOP	Year Household Survey	Country	Year LAPOP	Year Household Survey
Argentina	2008	2008	Ecuador	2008	2008
	2010	2010		2010	2010
	2012	2012		2012	2012
	2014	2014		2014	2014
	2016	2016		2016	2016
	2019	2018		2019	2018
Bolivia	2008	2008	Honduras	2008	2008
	2010	2011		2010	2010
	2012	2012		2012	2012
	2014	2014		2014	2014
	2017	2016		2016	2016
	2018	2018		2018	2018
Brazil	2008	2009	Panama	2008	2008
	2010	2011		2010	2010
	2012	2012		2012	2012
	2014	2014		2014	2014
	2017	2015		2017	2017
			2018	2018	2018
Chile	2008	2009	Peru	2008	2008
	2010	2011		2010	2010
	2012	2013		2012	2012
	2014	2015		2014	2014
	2017	2017		2016	2016
			2019	2017	2017
Colombia	2012	2012	Uruguay	2008	2008
	2014	2014		2010	2010
	2016	2016		2012	2012
	2018	2018		2014	2014
Dominican Republic	2008	2008		2017	2017
	2010	2010		2019	2018
	2012	2012			
	2014	2014			
	2016	2016			

Notes. Own elaboration based on data available from SEDLAC. The information of Bolivia for the years 2012, 2014, 2016 and 2018 was obtained from the official site of the Bolivian National Institute of Statistics (INE).

Figure B1: Correlation between Immigration Data Sources



Notes: The figure shows the binscatter derived from a regression of the share of immigrants from census data to the household surveys' shares (both at the province level) including country fixed effects. The sample includes countries for which there is an available household survey in the census year (Argentina, Brazil, Costa Rica and Dominican Republic).

C Tables Latin America analysis

Table C1: Robustness: Excluding capitals

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-1.236 (1.356)	-1.630 (1.419)	-1.791 (1.413)	-6.552** (2.734)	-6.984** (2.890)	-7.608*** (2.911)
Share immigrants, squared	8.501 (11.95)	10.99 (12.39)	11.36 (12.27)	61.48** (26.44)	64.85** (27.79)	68.34** (27.90)
Observations	57,802	57,802	57,802	57,802	57,802	57,802
F-stat (Kleibergen-Paap Wald)				12.21	12.51	12.57
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*". It is standardized (*z*-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the province-year level in parenthesis.

Table C2: Robustness: Closer Census

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-6.324*	-6.519*	-6.315*	-12.51*	-14.75*	-15.22*
	(3.511)	(3.903)	(3.705)	(6.417)	(8.142)	(8.094)
Share immigrants, squared	49.25**	51.09*	49.86**	114.9**	138.8*	141.7*
	(23.92)	(26.08)	(24.83)	(57.66)	(72.57)	(72.20)
Observations	33,289	33,289	33,289	33,289	33,289	33,289
F-stat (Kleibergen-Paap Wald)				5.289	4.646	4.689
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*". It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the province-year level in parenthesis.

Table C3: Robustness: Including ideology control

	Total	Income	Education	No Capital	High-Social Spending Country	Origin
Share immigrants	-8.454** (3.543)	-7.624** (3.484)	-8.200** (3.492)	-8.283*** (3.028)	-3.483 (2.506)	
Share immigrants x High-Income		-0.706* (0.364)				
Share immigrants x High-Skilled			-0.428 (0.386)			
Share immigrants x High Social Spending					-3.363* (1.751)	
Share immigrants, squared	68.75** (30.98)	68.53** (30.91)	68.51** (30.85)	73.58** (29.10)	47.18** (22.97)	
Share immigrants (LAC)						-8.475** (3.434)
Share immigrants (no LAC)						-2.924 (7.259)
Share immigrants (LAC), squared						78.97** (34.55)
Share immigrants (no LAC), squared						67.03 (207.2)
Observations	73,748	73,748	73,748	49,893	73,748	73,748
F-stat (Kleibergen-Paap Wald)	11.17	7.474	7.544	13.19	27.94	5.444
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Ideology controls	Yes	Yes	Yes	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "The (Country) government should implement strong policies to reduce income inequality between the rich and the poor". It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the province-year level in parenthesis.

Table C4: First Stage - Total

	Share	Share (squared)	Share	Share (squared)	Share	Share (squared)
IV	1.009*** (0.0853)	0.0791*** (0.0105)	0.906*** (0.0921)	0.0734*** (0.0113)	0.902*** (0.0935)	0.0733*** (0.0115)
IV (squared)	-3.361*** (0.459)	-0.175*** (0.0609)	-2.832*** (0.496)	-0.149** (0.0657)	-2.813*** (0.504)	-0.149** (0.0666)
Observations	85,088	85,088	85,088	85,088	85,088	85,088
F-stat (Sanderson-Windmeijer)	35.91	29.93	25.25	29.36	25.01	28.93
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	No	Yes	Yes	Yes	Yes
Individual controls	No	No	No	No	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C5: First Stage - Ideology

	Share	Share x Non-Leftist	Share (squared)
IV	0.888*** (0.0983)	0.162** (0.0773)	0.0732*** (0.0119)
IV x Non-Leftist	0.0211* (0.0109)	0.721*** (0.0468)	0.00249* (0.00141)
IV (squared)	-2.856*** (0.510)	-2.382*** (0.430)	-0.163** (0.0660)
Observations	73,748	73,748	73,748
F-stat (Sanderson-Windmeijer)	24.92	71.09	251.3
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C6: First Stage - Education

	Share	Share x High Skilled	Share (squared)
IV	0.874*** (0.0941)	0.0613 (0.0473)	0.0698*** (0.0115)
IV x High Skilled	0.0457*** (0.0115)	0.812*** (0.0374)	0.00580*** (0.00166)
IV (squared)	-2.789*** (0.501)	-1.349*** (0.297)	-0.146** (0.0660)
Observations	85,088	85,088	85,088
F-stat (Sanderson-Windmeijer)	467.5	25.30	33.58
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C7: First Stage - Income

	Share	Share x High Income	Share (squared)
IV	0.840*** (0.0953)	-0.0456 (0.0936)	0.0647*** (0.0115)
IV x High Income	0.0549*** (0.00916)	0.952*** (0.0334)	0.00767*** (0.00126)
IV (squared)	-2.803*** (0.502)	-3.070*** (0.541)	-0.147** (0.0663)
Observations	85,088	85,088	85,088
F-stat (Sanderson-Windmeijer)	813.6	123.4	26.21
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C8: First Stage - Destination countries

	Share	Share x Rich Country	Share (squared)
IV	0.464*** (0.0780)	0.184*** (0.0417)	0.0117* (0.00666)
IV x High Social Spending	0.604*** (0.0523)	0.838*** (0.0449)	0.0851*** (0.00660)
IV (squared)	-1.592*** (0.417)	-1.090*** (0.260)	0.0232 (0.0417)
Observations	85,088	85,088	85,088
F-stat (Sanderson-Windmeijer)	70.89	36.62	131.7
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C9: First Stage - Region of Origin

	Share - LAC	Share - no LAC	Share - LAC, (squared)	Share - no LAC, (squared)
IV - LAC	1.626*** (0.303)	0.820*** (0.0670)	0.151*** (0.0336)	0.00690*** (0.00232)
IV - no LAC	0.727*** (0.0844)	0.0312*** (0.00926)	0.0466*** (0.00786)	0.00113*** (0.000280)
IV - LAC, (squared)	-2.362*** (0.514)	-0.218*** (0.0814)	-0.0692 (0.0555)	-0.00764*** (0.00224)
IV - no LAC, (squared)	-31.69*** (5.858)	0.603 (1.318)	-2.988*** (0.612)	0.611*** (0.0458)
Observations	85,088	85,088	85,088	85,088
F-stat (Sanderson-Windmeijer)	59.10	1384	1230	82.29
Department FE	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from IPUMS, provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

Table C10: Short-term variations - Heterogeneous Effects: Ideology

	(I)	(II)	(III)
Share immigrants	-1.055 (2.289)	-1.511 (2.382)	-1.661 (2.338)
Share immigrants x Non-Leftist	-3.242** (1.620)	-3.247** (1.621)	-3.130** (1.571)
Share immigrants, squared	35.38* (18.26)	39.73** (19.78)	39.90** (19.53)
Observations	60,840	60,840	60,840
Effect on Non-Leftist	-4.2970	-4.7579	-4.7905
P-value	[0.0501]*	[0.0420]**	[0.0372]**
Province FE	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes
Provincial controls	No	Yes	Yes
Individual controls	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: *"The (Country) government should implement strong policies to reduce income inequality between the rich and the poor"*. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from and provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the provincial level in parenthesis.

Table C11: Short-term variations - Heterogeneous Effects: Skill level

	(I)	(II)	(III)
Share immigrants	-2.759 (1.907)	-3.250 (2.055)	-3.310 (2.020)
Share immigrants x High-Skilled	-0.814 (0.917)	-0.866 (0.921)	-0.735 (0.856)
Share immigrants, squared	29.31 (17.93)	33.53* (19.50)	33.26* (19.25)
Observations	71,354	71,354	71,354
Effect on High-Skilled	-3.5726	-4.1166	-4.0454
P-value	[0.0803]*	[0.0651]*	[0.0652]*
Province FE	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes
Provincial controls	No	Yes	Yes
Individual controls	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "*The (Country) government should implement strong policies to reduce income inequality between the rich and the poor*". It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from and provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the provincial level in parenthesis.

Table C12: Short-term variations - Heterogeneous Effects: Income level

	(I)	(II)	(III)
Share immigrants	-3.021 (1.922)	-3.523* (2.092)	-3.582* (2.055)
Share immigrants x High-Income	-2.047** (0.877)	-2.083** (0.885)	-1.885** (0.863)
Share immigrants, squared	29.25 (18.18)	33.16* (19.71)	33.45* (19.48)
Observations	71,354	71,354	71,354
Effect on High-Income	-5.0678	-5.6061	-5.4668
P-value	[0.0238]**	[0.0199]**	[0.0205]**
Province FE	Yes	Yes	Yes
Country-Year FE	Yes	Yes	Yes
Provincial controls	No	Yes	Yes
Individual controls	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: *"The (Country) government should implement strong policies to reduce income inequality between the rich and the poor"*. It is standardized (z-score). Provincial controls include log native population, whether the city is small, medium or large, unemployment rate, provincial mean of household per capita income and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person lived an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from and provincial controls come from SEDLAC-World Bank and attitudinal information comes from LAPOP. Clustered standard errors at the the provincial level in parenthesis.

D Tables Colombian case

Table D1: Colombia - Heterogeneous effects by income level

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	1.019 (10.86)	-4.409 (11.52)	-4.256 (11.32)	-13.83 (11.48)	-22.29** (10.45)	-22.83** (10.30)
Share immigrants x High-Income	-0.535 (2.741)	-0.562 (2.744)	-1.208 (2.294)	0.168 (3.546)	0.145 (3.557)	-0.563 (3.060)
Share immigrants, squared	0.515 (111.7)	56.23 (117.2)	51.43 (116.4)	143.3 (112.2)	242.4** (94.02)	246.9** (92.90)
Observations	4,717	4,717	4,717	4,717	4,717	4,717
F-stat (Kleibergen-Paap Wald)				12.76	82.19	85.51
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "The Colombian government should implement strong policies to reduce income inequality between the rich and the poor". It is standardized (z-score). Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D2: Colombia - Heterogeneous effects by ideology

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	2.679 (10.64)	-2.774 (11.36)	-2.061 (11.10)	-11.55 (12.49)	-19.57* (11.23)	-19.53* (11.06)
Share immigrants x Non-Leftist	-1.438 (3.791)	-1.153 (3.733)	-1.495 (3.372)	-4.002 (4.595)	-3.860 (4.537)	-4.263 (4.198)
Share immigrants, squared	-2.024 (112.7)	50.97 (122.0)	43.92 (120.2)	158.5 (113.3)	251.1** (95.25)	253.9** (92.70)
Observations	4,575	4,575	4,575	4,575	4,575	4,575
F-stat (Kleibergen-Paap Wald)				12.52	116.9	110.7
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: *"The Colombian government should implement strong policies to reduce income inequality between the rich and the poor"*. It is standardized (z-score). Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced a insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D3: Colombia - Heterogeneous effects by education

	OLS			IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Share immigrants	-2.274 (10.58)	-7.206 (11.16)	-4.721 (11.22)	-17.01 (10.92)	-25.43** (10.23)	-23.44** (10.38)
Share immigrants x High-Skilled	4.775* (2.558)	4.515 (2.618)	0.530 (2.041)	6.439* (3.494)	6.114* (3.518)	1.029 (2.741)
Share immigrants, squared	-5.365 (112.8)	47.18 (119.5)	51.20 (117.6)	127.2 (112.1)	227.0** (94.46)	244.9** (93.30)
Observations	4,717	4,717	4,717	4,717	4,717	4,717
F-stat (Kleibergen-Paap Wald)				12.94	83.97	92.93
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: "The Colombian government should implement strong policies to reduce income inequality between the rich and the poor". It is standardized (z-score). Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D4: Immigration and preferences for redistribution in Colombia - Robustness Exercise

	(I)	(II)	(III)	(IV)
Share immigrants	-25.67** (12.00)	-19.99 (12.66)	-25.56** (11.94)	-25.78** (11.92)
Share immigrants x Non-Leftist		-6.104 (4.578)		
Share immigrants x High-Income			-0.986 (2.763)	
Share immigrants x High-Skilled				0.232 (2.689)
Share immigrants, squared	264.0** (106.6)	242.8** (109.4)	263.2** (106.2)	263.3** (107.8)
Observations	4,717	4,301	4,717	4,717
F-stat (Kleibergen-Paap Wald)	74.47	49.88	49.78	49.74
Department FE	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Dependent variable measures support for reduction in income differences and is based on the agreement to the statement: *"The Colombian government should implement strong policies to reduce income inequality between the rich and the poor"*. It is standardized (z-score). Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced a insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D5: First Stage: Total

	Share	Share (squared)	Share	Share (squared)	Share	Share (squared)
IV	0.0247** (0.00973)	-0.000344 (0.000685)	0.0238*** (0.00563)	-0.000335 (0.000524)	0.0238*** (0.00565)	-0.000335 (0.000526)
IV (squared)	-0.000841 (0.000999)	0.000234*** (7.05e-05)	-0.000589 (0.000582)	0.000242*** (5.53e-05)	-0.000588 (0.000584)	0.000242*** (5.56e-05)
Observations	4,717	4,717	4,717	4,717	4,717	4,717
F-stat (Sanderson-Windmeijer)	81.85	218.6	525.8	403	413.3	534.6
Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Provincial controls	No	No	Yes	Yes	Yes	Yes
Individual controls	No	No	No	No	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced a insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D6: First Stage: Ideology

	Share	Share x Non-Leftist	Share (squared)
IV	0.0233*** (0.00566)	0.00843* (0.00440)	-0.000362 (0.000532)
IV x Non-Leftist	-0.000148 (0.000117)	0.0101*** (0.00124)	-1.89e-05* (1.08e-05)
IV (squared)	-0.000520 (0.000583)	-0.000121 (0.000470)	0.000247*** (5.59e-05)
Observations	4,575	4,575	4,575
F-stat (Sanderson-Windmeijer)	521.1	587.6	177.5
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced an insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D7: First Stage: Income

	Share	Share x High-Income	Share (squared)
IV	0.0238*** (0.00565)	0.000329 (0.000548)	-0.000335 (0.000526)
IV x High-Income	6.89e-05 (7.89e-05)	0.0104*** (0.00129)	1.11e-06 (6.52e-06)
IV (squared)	-0.000587 (0.000585)	-1.58e-05 (5.64e-05)	0.000242*** (5.56e-05)
Observations	4,717	4,717	4,717
F-stat (Sanderson-Windmeijer)	84.84	429.8	552.9
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced a insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.

Table D8: First Stage: Education

	Share	Share x High-Skilled	Share (squared)
IV	0.0238*** (0.00565)	0.00915* (0.00484)	-0.000340 (0.000526)
IV x High-Skilled	0.000203** (9.47e-05)	0.00945*** (0.000967)	1.32e-05 (9.08e-06)
IV (squared)	-0.000600 (0.000587)	-0.000316 (0.000521)	0.000242*** (5.59e-05)
Observations	4,717	4,717	4,717
F-stat (Sanderson-Windmeijer)	545	648.5	138.3
Department FE	Yes	Yes	Yes
Region x Year FE	Yes	Yes	Yes
Provincial controls	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes

*** Significance at 1% level; ** significance at 5% level; *significance at 10% level.

Notes: Departmental controls include log native population, unemployment rate, departmental GDP, share of rural population, share of skilled population, inactivity rate, share of migration different than Venezuelan, share of independent workers, poverty rate and Gini coefficient; individual controls include skill-level, age, sex, age×sex, years of education×sex, self-reported race, activity status (employee, unemployed, student, etc.), a question that captures whether the person experienced a insecurity episode in the last 12 months, marital status, income scale and a question that asked about how well a person is doing economically compared to twelve months ago. Immigration data comes from DANE and attitudinal information comes from LAPOP. Clustered standard errors at the the department level in parenthesis.