The Tone of Solidarity: Race, Colorism, and Attitudes Toward Redistribution in Colombia in Times of Migration[1]

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Abstract:

This Paper explores how race and colorism shape public attitudes toward redistribution in Colombia, a country that has received over 2.5 million Venezuelan migrants in less than a decade. While cultural proximity between migrants and host communities is often expected to buffer negative reactions, this research shows that ethno-racial boundaries—particularly those rooted in skin tone—remain crucial in conditioning support for redistributive policies. Drawing on repeated cross-sectional data from the LAPOP surveys (2013–2023), enriched with migration records and municipal indicators, I estimate fixed effects and instrumental variable models to assess the impact of Venezuelan migration on redistributive preferences. The analysis reveals no significant average effect of migration on redistribution support. However, disaggregated results show striking heterogeneity: individuals racialized as White or Mestizo tend to reduce support for redistribution in response to increased migrant presence, while Afro-descendant, Indigenous, and darker-skinned individuals exhibit more solidaristic reactions. Specifically, for each unit increase in skin darkness (on an 11-point scale), the negative effect of the migration shock is reduced by 0.011 standard deviations. For individuals at the darkest point of the scale, the estimated net effect becomes positive (approximately +0.073 standard deviations). These findings suggest that perceived group boundaries—whether cultural or phenotypical—mediate the political consequences of migration. By distinguishing between race and skin tone, the study highlights how colorism and historical hierarchies influence who is imagined to belong and who is considered deserving of support.

Keywords: Migration, redistribution, race, colorism, Colombia.
JEL Classification: D31, J15, O15, F22

Paris, May 2025

[1]I am grateful to Professor Hillel Rapoport and Clément Gorin, for their guidance and insights throughout each stage of this project. I thank them for their availability and generosity in sharing their expertise, and for allowing me to explore ideas without ever stifling my curiosity. I would also like to thank Léa Marchal, Julieta Peveri, Rémi Bazillier, Alejandro Arciniegas, and Jesús Ortega for their valuable comments, suggestions, and feedback. Finally, I am thankful to all those colleagues, friends, and others who offered their time, ideas, and support throughout this process. All remaining errors are my own.

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1 Introduction

The relationship between migration and attitudes towards redistribution has been widely debated in economic and political literature. In contexts such as Europe and North America, studies have demonstrated that cultural differences between migrants and natives are a key determinant of support for redistributive policies (Alesina & Glaeser, 2004; Alesina et al., 2021; Luttmer, 2001). However, these investigations have primarily focused on regions with significant cultural and racial disparities.

Latin America presents a unique context; it is a region characterized by high levels of economic inequality, persistent intraregional mobility, and greater cultural proximity between natives and migrants. While the cultural proximity might mitigate the negative effects of migration on redistributive preferences in the region (Martínez-Correa et al., 2022), there is a lack of empirical evidence that directly evaluates this channel. Colombia has received more than 2.5 million Venezuelan migrants since 2015, making it the main host country in the region, This phenomena place pressure on the local labor market, public services, and social cohesion, especially in border regions between Colombia and venezuela such as Norte de Santander and Arauca, as well as in major urban centers such as Bogotá and Medellin.

Although Colombians and Venezuelans share cultural similarities in terms of language, religion, traditions, and political history (e.g., Gran Colombia), these do not always translate into positive attitudes toward migrants (Martínez-Correa et al., 2022). In some cases, migrants are perceived as economic competitors or a burden on public services, which could reduce support for redistributive policies (Rossiasco & de Narváez, 2023). In this context, the massive influx of Venezuelan migrants provides a crucial opportunity to explore how perceptions of cultural proximity influence attitudes towards redistribution.

In this Paper, I analyze the relationship between immigration and preferences for redistribution in Colombia through a rarely explored channel: the loyalty channel, mediated by cultural dimensions and physical phenotype. The Latin American region is one of the most racially and ethnically diverse in the world. This diversity matters not only for understanding patterns of inequality but also for explaining how individuals perceive and support redistributive policies. In contexts marked by an extractive elite, race and ethnicity often serve as social boundaries that shape notions of deservingness and solidarity, which are key drivers of preferences for redistribution (Sánchez-Ancochea, 2021).

One of the key challenges in analyzing preferences for redistribution in racially and ethnically diverse societies—such as Colombia—is disentangling the effects of cultural identity and physical phenotype. While this distinction is often overlooked by economists, sociological research emphasizes that race (or racialization) refers primarily to visible physical features (e.g., skin color, facial

traits), whereas ethnicity is typically based on cultural markers such as language, ancestry, or traditions (E. Telles & Martínez Casas, 2019b). This distinction is crucial because individuals may perceive and evaluate redistributive policies differently depending on whether they view recipients as members of their racial or ethnic ingroup. Yet most studies tend to collapse these categories into broad labels such as "Black," "Indigenous," or "Latino," which often conflate phenotype and culture. This analytical imprecision can obscure how racialized physical features—either independently or in interaction with cultural identity—shape notions of deservingness and solidarity, both of which are fundamental drivers of support for redistribution.

To overcome this challenge, I compiled a dataset of repeated cross-sections that includes nationally representative information on skin tone, self-reported broad ethnic categories, and preferences for redistribution. I merge this survey data with official migration statistics and municipal-level socioeconomic indicators for Colombia. The core data source is the Americas Barometer Survey from the Latin American Public Opinion Project (LAPOP), which incorporates the PERLA skin tone palette developed by the Project on Ethnicity and Race in Latin America. I complement this with official migration data at the municipality level from Migración Colombia (the national migration authority), and municipal-level data from Colombia's National Administrative Department of Statistics (DANE).

I exploit this data using multiple empirical strategies. First, I estimate a two-way fixed effects model that captures within-municipality variation in support for redistribution over time. Second, I apply an instrumental variables approach using an enclave instrument based on the geographic distance between Venezuelan and Colombian municipalities. This instrument, widely used in the literature on forced migration—including in the Venezuelan context—relies on the historical settlement patterns of migrants and exogenous geographic factors (Caruso et al., 2021; Del Carpio & Wagner, 2015). Third, I implement a shift-share Bartik-type instrument, also constructed from the enclave strategy, to predict migrant flows by interacting pre-shock migrant distributions with national-level inflows. This alternative identification strategy serves as a robustness check and helps mitigate concerns about potential endogeneity. Together, these three approaches allow for a comprehensive estimation of the impact of Venezuelan migration on redistributive preferences while accounting for both observed and unobserved heterogeneity across municipalities.

This Paper contributes **to three strands of the economics literature**. First, it engages with the body of work on ethno-racial disparities. A substantial portion of this research has focused on the United States, where the historical legacy of slavery, segregation, and systemic discrimination has led to persistent black-white gaps in income, wealth, education, segregation, health, and access to economic opportunities (Chetty et al., 2020; Cook et al., 2016; Derenoncourt & Montialoux, 2020; Logan & Parman, 2017). The prominence of race-related economic research in the US is largely due to these deep-rooted historical factors (Cook & Logan, 2020). However, racial and

ethnic inequalities are also present in other contexts, including countries with histories of slavery and segregation beyond the US.

Over the past two decades, researchers have increasingly documented the role of ethno-racial characteristics in shaping economic outcomes across Latin America. This body of work includes studies on labor market discrimination and wage gaps (Arceo-Gómez & Campos-Vázquez, 2014, 2019; Campos-Vázquez, 2020; Card et al., 2018; Garavito et al., 2013; Ñopo, 2012; Ñopo et al., 2007), disparities in educational attainment (Botelho et al., 2015; E. Telles & Martínez Casas, 2019a, 2019b; E. Telles & Steele, 2012), differences in social mobility (Campos-Vázquez & Medina-Cortina, 2019; Monroy-Gómez-Franco & Vélez-Grajales, 2020; Solís et al., 2019), and unequal access to financial services (Hernández-Trillo & Martínez-Gutiérrez, 2021).

Second, this Paper contributes to the literature on public preferences for redistribution. A long-standing question in political economy is why support for redistribution varies across individuals and contexts. Recent research has emphasized the role of identity, social distance, and perceived deservingness in shaping these preferences (Alesina & Giuliano, 2011; Alesina et al., 2001; Luttmer, 2001; Shayo, 2009). By combining individual-level survey data with exogenous variation in migrant exposure, this study examines how the intersection of race and migration shocks alters political attitudes related to redistribution.

Third, the Paper engages with the growing literature on the social and political consequences of migration. While many studies have analyzed how migration affects labor markets or public finances, a newer strand of work investigates how migration shocks influence native populations' attitudes and behavior (Alesina et al., 2021; Fouka & Tabellini, 2022; Hopkins, 2010). This Paper contributes to that agenda by focusing on the Global South, where forced migration flows—such as the Venezuelan exodus—provide a natural experiment to study the interplay between identity, solidarity, and redistribution. Despite this growing literature, much of the existing evidence is country-specific—most often focused on Brazil, Mexico, or Peru—and relies on disparate definitions and measures of race and ethnicity that vary widely across national contexts. Moreover, there is a lack of standardized methodological approaches: while some studies apply descriptive statistics, regression techniques, or structural models, others rely on decompositions, with limited use of experimental or quasi-experimental designs. Importantly, many fail to adequately address issues of endogeneity in their estimates. In light of these limitations, this Paper contributes by examining how ethno-racial hierarchies—measured through skin tone—shape preferences for redistribution in Colombia in response to the recent inflow of Venezuelan migrants.

To address these questions, the Paper is structured as follows. **Section 2** presents the related literature, with a focus on migration, redistribution, and the role of ethno-racial identity in shaping political preferences. **Section 3** describes the data sources and key variables, including the

LAPOP survey, migration statistics, and municipal indicators. **Section 4** outlines the empirical strategy, detailing three complementary identification approaches: a two-way fixed effects model, an instrumental variable model, and a predicted migration shock framework. **Section 5** reports the main results, highlighting both average effects and evidence of heterogeneity. **Section 6** investigates the mechanisms of racial and color-based heterogeneity in responses to migration, exploring how skin tone and group identity shape redistributive preferences. Finally, **Section 7** concludes by discussing the implications of the findings for migration policy and social cohesion in ethnically stratified societies.

2 Related literature

Preferences for redistribution reflect the extent to which individuals support the reallocation of resources within a society, influenced by factors such as inequality, social mobility, meritocracy, and culture. While greater inequality might be expected to increase support for redistribution, empirical evidence suggests that this relationship is mediated by perceptions of distributive justice (Alesina & Giuliano, 2011; Fehr & Vollmann, 2022). In high-inequality economies such as the United States and the United Kingdom, support for redistribution is lower compared to Scandinavian countries, where fiscal solidarity is stronger (Almas et al., 2020; Buser et al., 2020; Grimalda et al., 2018). Social mobility also shapes these attitudes: individuals who attribute success to effort tend to oppose redistribution, whereas those who perceive inequality as structurally determined are more likely to support it (Alesina & Angeletos, 2005; Cruces et al., 2013). Furthermore, direct exposure to poverty may reduce support for redistributive policies in certain contexts (Roth & Wohlfart, 2018; Sands, 2017).

Despite extensive literature on redistribution, the role of social and cultural identity in shaping redistribution preferences remains underexplored. **Group identity significantly influences redistribution attitudes, with greater support when beneficiaries are perceived as part of one's own group (ingroup), and lower support when they belong to an external group (outgroup)** (Dahlberg et al., 2012). In Sweden, the arrival of refugees reduced public support for redistribution, while in the United States, cities with greater religious diversity lowered tax rates and public spending compared to more homogeneous communities (Tabellini, 2020). **These findings suggest that cultural proximity, group boundaries, and shared identity may be crucial determinants of redistribution attitudes, highlighting the need for further research to examine these channels across different socio-political contexts.**

The theory suggests that cultural proximity (language, values, traditions, and beliefs) should facilitate migrant acceptance and increase support for redistribution (Alesina et al., 2021; Tajfel & Turner, 1986), the reality is more complex. Empirical evidence shows that, in some cases, the perception of cultural proximity does not mitigate rejection of migrants and positive preference for

redistribution. Factors such as economic competition, implicit biases, and distrust in institutions may counteract the positive effects of cultural proximity.

For example, in Latin America,(Martínez-Correa et al., 2022) found that migrant density in certain regions was negatively correlated with support for redistribution, although they suggest that cultural proximity could mitigate these effects; they don't measure it. (Gasparini & Tornarolli, 2009) Explored inequality gaps in Latin America, suggesting that cultural cohesion can influence public policies. Cultural similarity can facilitate the economic and social integration of migrants (Fernández-Huertas Moraga & Rapoport, 2014). However, there are no studies that directly measure cultural proximity perception and its impact on redistributive attitudes.

The social identity theory (Tajfel & Turner, 1986), which posits that individuals categorize others as part of their *ingroup* or *outgroup* based on perceived similarities, will be relevant for this Paper. Recent studies, such as those by (Fouka & Tabellini, 2022), expand this framework by demonstrating how perceptions of cultural or economic threats shape these categorizations. **In the Colombian context, this is especially relevant for analyzing how the arrival of Venezuelan migrants redefines ingroup boundaries.**

Studies that have explored more broadly the impact of cultural proximity and attitudes towards redistribution (Alesina & Giuliano, 2011) highlight how cultural values and social norms influence redistributive preferences; some of them, such as religion and family, can profoundly shape attitudes toward redistributive policies. While (Luttmer & Singhal, 2011) analyzes how immigrants' cultural differences affect their attitudes towards redistribution in destination countries. On the other hand, (Dahlberg et al., 2012) address how ethnic diversity can reduce support for redistributive policies, which underlines the importance of cultural cohesion. In the Latin American context, "The Inequality Crisis: Latin America and the Caribbean at the Crossroads" (Busso & Messina, 2020) provides a critical framework for understanding the dynamics of inequality and its interaction with cultural factors in the region, specifying how cultural and social factors can influence redistributive policies.

While traditional approaches to cultural proximity focus on linguistic, religious, and historical traits, recent studies have leveraged digital platforms and historical collaboration data to capture its more dynamic aspects. These advancements highlight the need for a more integrative approach that bridges static and dynamic perspectives in the study of migration and redistribution. However, few studies in Latin America have directly examined the impact of migration on redistributive attitudes—particularly through the lens of cultural proximity as a mediating channel. Although there is substantial theoretical and empirical research on migration and redistribution in Europe and North America, important gaps remain in regions like Latin America. These include the assumption of cultural homogeneity, the lack of empirical evidence

linking cultural proximity to redistributive preferences in highly unequal contexts, and the absence of reliable measures of cultural proximity itself.

2.1 The Venezuelan forced migration in Colombia

2.1.1 Context

The Venezuelan political crisis began with the election of Hugo Chávez on December 6, 1998. Chávez's socialist policies introduced significant changes, including constitutional reforms, land expropriations, populist social programs, nationalizations, and stricter regulations on private businesses (Crasto & Alvarez, 2017). After Chávez's death, Nicolás Maduro took office in 2013 and continued many of these policies. However, under Maduro's leadership, the situation worsened due to falling oil prices and growing international sanctions. This led to severe shortages of food and basic goods, while looting became a common occurrence across the country. In addition, insecurity became widespread, political opposition faced increasing repression, and human rights violations by the government were frequently reported by international media outlets (BBC, 2016; BBC News, 2017). As a result, many Venezuelans began migrating, with most moving to neighboring Colombia.

Figure 1 illustrates the annual growth in the number of Venezuelan migrants entering Colombia between 1994 and 2024, based on data collected at various migration points established by the Colombian government (Migración Colombia). Official statistics show that Venezuelan migration to Colombia increased five-fold during this period, up until 2018. However, this growth was followed by a decrease due to the effects of the COVID-19 pandemic. After the initial restrictions, the numbers began to rise again following a greater relaxation of these measures, continuing to increase steadily through 2024.

Initially, Venezuelan migrants were mostly wealthy individuals and entrepreneurs who sought refuge in Colombia to protect their capital from expropriation and hyperinflation (Crasto & Alvarez, 2017). However, as the crisis deepened, the profile of the typical migrant shifted. The majority of Venezuelan migrants increasingly came from the lower-income, less educated population, many of whom reported fleeing to Colombia to escape political repression, violent crime, and to secure basic necessities for survival (NPR, 2018). (See Figure 14 and Figure 15 annex).

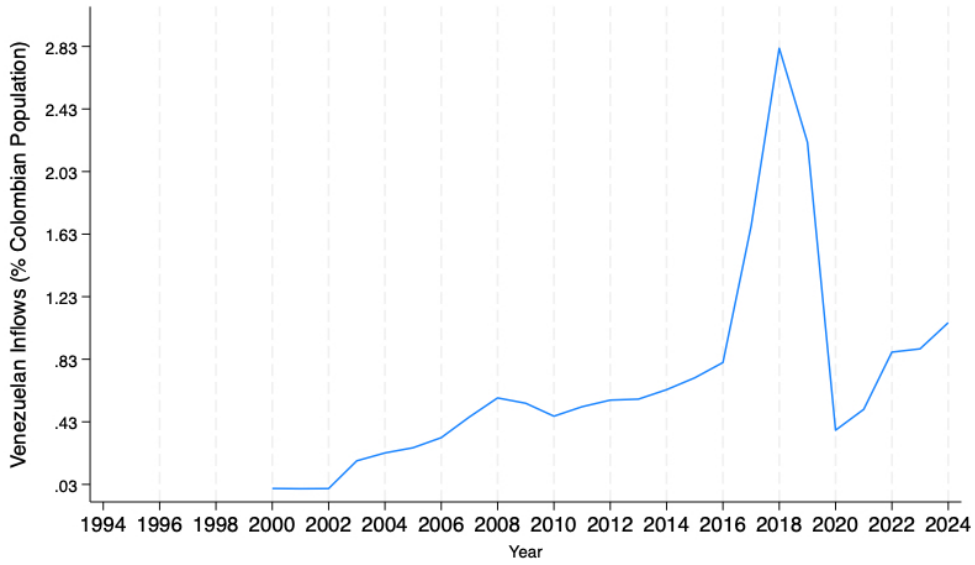

Figure 1: Venezuelan Inflows as % of Colombian Population.

Note: Own elaboration, Venezuelan Migration between 1994 and 2002 was estimated with information available from the Population censuses of 1993 and 2005. The data available from 2003 to 2024 comes from the official statistics of migration produced by the Colombian statistics department and Migración Colombia.

Now Figure 2 and Figure 3 illustrate the spatial heterogeneity in the distribution and concentration of Venezuelan migrants across Colombia as of 2024. Figure 2, which shows the proportion of Venezuelan migrants by municipality as a percentage of Colombia's total population, reveals that migration flows are not uniformly spread. Municipalities in border regions and large urban centers, such as Bogotá and Medellín, exhibit a higher proportion of Venezuelan migrants, indicating that these areas are key destinations for migrants. The heterogeneity in migration patterns can be attributed to a combination of factors such as proximity to Venezuela, economic opportunities, and access to services.

Figure 3, which presents the stock of Venezuelan migrants by municipality, further highlights the absolute number of migrants, with larger circles indicating municipalities with the highest number of migrants. This map complements the first by showing that the most significant concentrations are found in economically developed regions and those with better infrastructure, such as transportation networks, healthcare, and employment opportunities. The higher number of migrants in urban areas can be explained by the pull factors of job availability, social networks, and access to essential services that attract migrants looking for stability and improved living conditions.

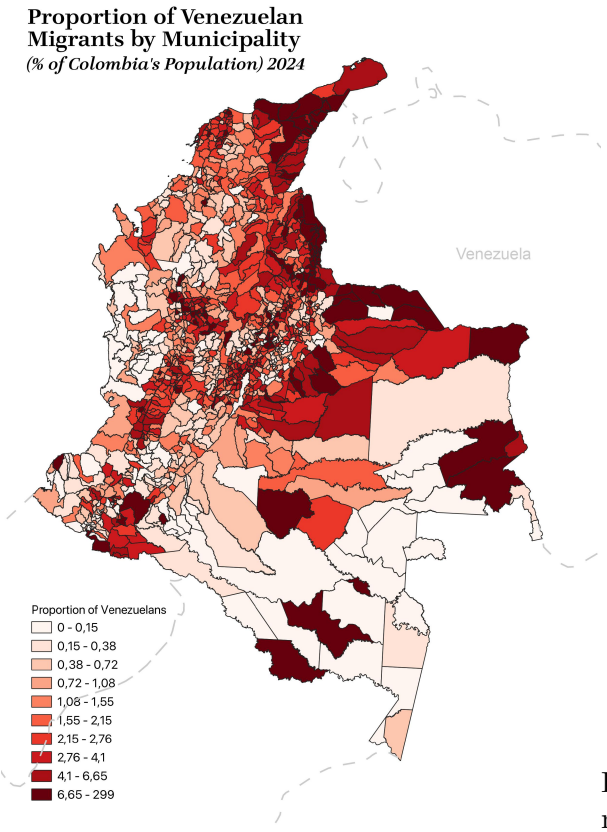

Figure 2: Proportion of Venezuelan Migrants by Municipality (% of Colombia's Population) 2024

Note: Own elaboration based on the official statistics of migration produced by the Colombian statistics department and Migración Colombia.

Figure 3: Stock of Venezuelan Migrants by Municipality

Note: Own elaboration based on the official statistics of migration produced by Migración Colombia.

3 Data

For model specifications 1 & 2 to examine support for redistributive policies, I rely on data from the Latin American Public Opinion Project (LAPOP) [3] Surveys covering the period from 2013 to 2023. Conducted biennially, the survey is nationally representative and includes a wide range of socioeconomic and attitudinal information at the individual level for most countries in the region, including Colombia. My analysis focuses on individuals aged 18 to 65. To assess preferences for redistribution, I use a question designed to measure the respondent's level of agreement with government intervention to reduce income inequality. Specifically, participants are asked to rate

[3] One limitation of this paper is that I can not differentiate between immigrants and natives among LAPOP respondents. However, in a similar survey, Latinobarometer, which includes information on country of birth, immigrants make up a very small proportion of the respondents (averaging 1.27% in 2018). Therefore, it is unlikely that their presence significantly impacts the results regarding attitudes toward redistribution.

their agreement on a scale from 1 to 7, where 1 indicates "Strongly disagree" and 7 means "Strongly agree," with the following statement: "The government of Colombia should implement strong policies to reduce income inequality between the rich and the poor. To what extent do you agree or disagree with this statement?". See Figure 4 and Figure 5, which provide some visualization of the preferences for redistribution across the cover years in LAPOP.

Regarding immigration data, I obtain it from the official migration points in the Migración Colombia database and the Colombian statistics department. I then merge this immigration data with the attitudinal data from LAPOP. Since LAPOP provides detailed information about each respondent's place of residence, I combine individual-level data with immigration shares at the municipality level. Specifically, I pool the LAPOP surveys from 2013 to 2023 and match them with the immigration data.

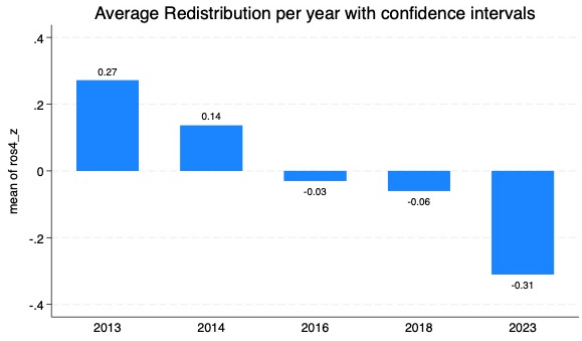

Figure 4: Average Redistribution per Year with Confidence Intervals

Note: Own elaboration based on LAPOP.

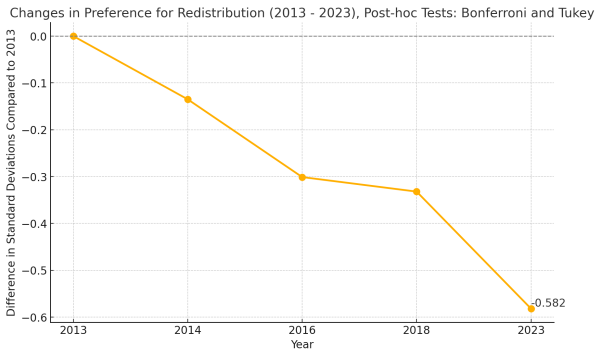

Figure 5: Average Redistribution per Year test

The Figure 6 illustrates the relative position of selected municipalities in the national distribution of migrant inflows from 2013 to 2023. Most of the municipalities in the sample are located in the upper percentiles of the distribution, indicating high exposure to Venezuelan migration compared to the national average. This pattern supports the internal validity of the analysis, as the selection of municipalities was not based on the outcome of interest—namely, preferences for redistribution. However, the external validity of the findings may be limited, particularly for low-migration municipalities that are underrepresented in the sample. As a result, the estimates should be interpreted as identifying a local average treatment effect (LATE), driven by municipalities with relatively high migration exposure. For more detail in the statistics of selected municipalities Table 8 (see annex)

For Model 3, my analysis of the effects of forced migration on redistribution outcomes covers the period from 1994 to 2023, consistent with the available data. The primary data used for this analysis can be categorized as outlined below. Data on the annual number of Venezuelans arriving in Colombia is available from the Colombian statistics agency for the period between 1994 and 2024. For the years 1994 to 2002, the data was constructed using the population censuses of 1993

and 2005, reflecting the number of Venezuelan nationals who arrived in Colombia each year, as reported by census respondents. The data from 2003 to 2024 is based on records from official migration points. Figure 1 illustrates the Venezuelan migration inflows observed in Colombia during the period of analysis. In my analysis, I acknowledge that municipalities with a higher share of migrants in 1993 may also have differed systematically in other dimensions. **These areas may have experienced lower levels of conflict or violence, stronger institutions, greater economic growth, higher public investment, less poverty or inequality, or lower levels of labor informality relative to other regions of the country. If such characteristics influenced attitudes toward redistribution—for instance, through their impact on economic performance—then my estimates could be biased**.

To address these concerns, I flexibly control for the interaction between a broad set of pre-shock municipal-level characteristics and election-year fixed effects. These pre-treatment controls capture variation in **conflict intensity, violent crime, government presence, institutional quality, economic development, poverty, inequality, and labor market outcomes**. A complete list of these time-invariant characteristics is presented in Table 9 and Table 13 (see Annex)

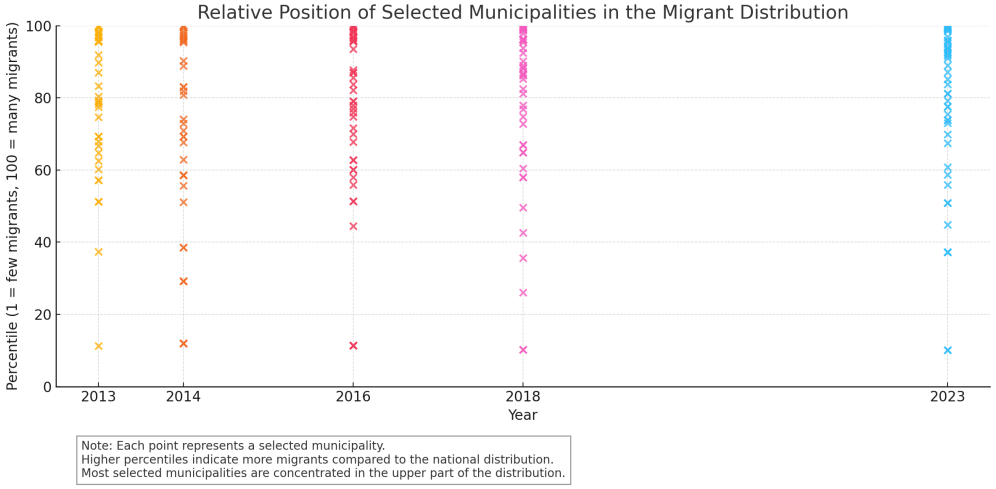

Figure 6: Relative Position of Selected Municipalities in the Migrant Distribution

Additionally, for the heterogeneity analysis, I am using data for race and skin color. Since 2010, LAPOP has incorporated the *Project on Ethnicity and Race in Latin America (PERLA)* [4] skin color palette, developed by (E. Telles & Martínez Casas, 2019b), as a standardized tool to capture interviewer-perceived skin tone. The PERLA scale ranges from **1 (lightest skin tone)** to **11 (darkest)** Figure 7 and provides a continuous measure of phenotypical variation based on skin pigmentation. During fieldwork, enumerators are trained to discreetly record the respondent's skin tone using the palette as a visual reference, without showing the guide to the interviewee. This procedure allows for the consistent measurement of perceived skin color across contexts and facilitates

[4] https://perla.soc.ucsb.edu/

the analysis of *colorism*—that is, discrimination or social stratification based on gradations of skin tone—within and across ethno-racial categories. This dimension will be central to my heterogeneity analysis in Section 6, where I explore how responses to migration may vary depending on skin tone and racial classification.

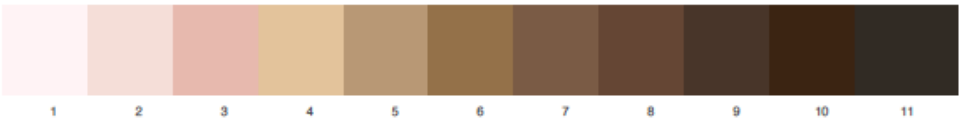

Figure 7: Perla Palette

4 Empirical strategy

4.1 Exploiting within-Municipality variation.

To analyse the relationship between Immigration and support for redistribution, I first exploit within-municipality variation in multiple cross-sectional analyses. I estimate 3 models.

4.2 Model 1: Baseline Specification + Municipal Controls ($\mathbf{X}'_{mt} \cdot \delta$) (Post-2012) + Individual Controls ($\mathbf{Z}'_i \cdot \lambda$)

$$\text{Redistribution}_{imt} = \beta_1 \cdot \text{ShareMigrants}_{mt} + \beta_2 \cdot (\text{ShareMigrants}_{mt})^2 + \mathbf{X}'_{mt} \cdot \delta + \mathbf{Z}'_i \cdot \lambda + \mu_m + \phi_{dt} + \varepsilon_{imt} \quad (1)$$

Where:

- $\text{Redistribution}_{imt}$: Standardized measure of redistribution preferences for individual i in municipality m and year t.
- $\text{ShareMigrants}_{mt}$: Observed share of Venezuelan migrants in municipality m at time t.
- μ_m: Municipality fixed effects.
- ϕ_{dt}: Department-by-year fixed effects.
- ε_{imt}: Error term.

Controls:

- $\mathbf{X}_{mt}$ is a vector of post-2012 municipal characteristics:
  - log(Population), GDP per capita, sectoral GDP shares, rural/urban population shares.
- $\mathbf{Z}_i$ is a vector of individual characteristics:
  - Age, sex, education, race, skin color dummies, marital status.
- Municipal-level variables (post-2012).
- Individual-level variables (post-2012).

4.3 Model 2: IV

4.3.1 Justification for Using an Instrumental Variable (IV) Strategy

One of the main empirical challenges in estimating the impact of migration on preferences for redistribution lies in the potential endogeneity of the key explanatory variable: **the share of migrants in a municipality**. Endogeneity may arise for several reasons. First, migrants may self-select into municipalities with certain economic, institutional, or social characteristics—such as better labor market opportunities, higher public service provision, or lower levels of discrimination—which could also independently influence attitudes toward redistribution. Second, there may be reverse causality, in the sense that communities with stronger redistributive preferences may adopt more inclusive policies that in turn attract migrants. Finally, omitted variable bias may occur if unobserved municipal-level characteristics (such as informal networks, local political culture, or institutional capacity) are correlated with both migrant inflows and redistributive attitudes.

Ignoring these concerns would result in biased and inconsistent estimates. To address this issue, I employ an *instrumental variable (IV)* strategy to isolate the causal impact of migration. Specifically, I construct a geographic *enclave-type shift-share instrument*, combining information on the historical distribution of Venezuelans across Venezuelan states (1990 census) with the driving distance between each Venezuelan state and Colombian municipality. This approach, widely used in the literature on **forced migration** e.g (Caruso et al., 2021; Del Carpio & Wagner, 2015), generates exogenous variation in migrant exposure across municipalities. By exploiting pre-crisis demographic and geographic patterns in the country of origin, this instrument addresses concerns related to selection, omitted variables, and reverse causality, thereby enhancing the credibility of the causal interpretation.

$$\text{Redistribution}_{imt} = \beta_1 \cdot \widehat{IV}_{mt} + \beta_2 \cdot (\widehat{IV}_{mt})^2 + \mathbf{X}'_{mt} \cdot \delta + \mathbf{Z}'_i \cdot \lambda + \mu_m + \phi_{dt} + \varepsilon_{imt} \tag{2}$$

Instrument construction: The instrumental variable is computed at the municipal level following a shift-share approach. Specifically, for each municipality m in year t, I construct:

$$\widehat{IV}_{mt} = V_t \cdot \sum_s \left(\frac{\alpha_{s,1990}}{K_{ms}} \right)$$

where:

- V_t is the total number of Venezuelan migrants in Colombia in year t.
- $\alpha_{s,1990}$: Share of Venezuelan (or Colombian, for robustness [5]) population in Venezuelan states

[5] This instrument is based on the idea that Colombian departments located closer to Venezuelan states with historically larger shares of Colombian residents are more likely to receive higher inflows of Venezuelan migrants. The underlying mechanism is the existence of migrant networks: individuals born in Venezuela who have personal ties to Colombians—especially in states with a significant Colombian-origin population—are more likely to migrate to Colombia, as these connections can facilitate their relocation and settlement.

s in 1990 relative to the national total:

$$\alpha_{s,1990} = \frac{Pop_{s,1990}}{\sum_{s'=1}^{S} Pop_{s',1990}}$$

  - **Option 1:** Venezuelans in Venezuela – captures historical population density.
  - **Option 2:** Colombians in Venezuela – captures migration network potential [6].

- K_{ms} is the driving distance in kilometers between Colombian municipality m and Venezuelan state s.
- S: Total number of Venezuelan states.

Expanded formulation:

$$\widehat{IV}_{mt} = V_t \cdot \sum_{s=1}^{S} \left(\frac{Pop_{s,1990}}{\sum_{s'=1}^{S} Pop_{s',1990}} \cdot \frac{1}{K_{ms}} \right) \tag{3}$$

While classical shift-share instruments rely on the historical distribution of migrants across destination areas, assuming that new migrants follow established networks, this approach may be problematic in the context of forced migration, where settlement patterns are shaped less by voluntary choices and more by spatial proximity and urgency.

Instead, I implement an enclave instrument used in recent studies of refugee inflows (Caruso et al., 2021; Del Carpio & Wagner, 2015; Martínez-Correa et al., 2022), which leverages *pre-crisis population distributions in Venezuela (1990)* and the *driving distance between Colombian municipalities and Venezuelan states*. The key identifying assumption is that, given the sudden and involuntary nature of the Venezuelan exodus, migrants were disproportionately likely to settle in Colombian municipalities located *closer to historically more populated Venezuelan regions*, especially along the border.

This construction differs from traditional shift-share designs in that it does not rely on historical migrant networks in Colombia, but instead on *exogenous geographic and demographic variation* in the country of origin prior to the migration shock. As a robustness check, I alternatively use the historical distribution of Colombians in Venezuela rather than Venezuelans, while preserving the structure of the instrument. Although option 2 theoretically valid, this alternative yields less precise estimates. Overall, by combining pre-treatment origin characteristics with time-varying national

[6] This instrument is based on the idea that Colombian departments located closer to Venezuelan states with historically larger shares of Colombian residents are more likely to receive higher inflows of Venezuelan migrants. The underlying mechanism is the existence of migrant networks: individuals born in Venezuela who have personal ties to Colombians—especially in states with a significant Colombian-origin population—are more likely to migrate to Colombia, as these connections can facilitate their relocation and settlement.

inflows, the instrument offers a credible strategy for capturing plausibly exogenous exposure to migration, while mitigating concerns of reverse causality and endogenous sorting.

4.4 Model 3: Predicted Migration Shock.

4.4.1 Model Justification Predicted Migration Shock Model (Model 3)

Model 3 is specifically designed to address the limitations of standard observational and instrumental variable approaches when estimating the impact of migration on attitudes toward redistribution. In contrast to Model 1, which relies on observed migrant shares that are likely endogenous to local economic or institutional conditions, and Model 2, which uses a classical shift-share instrument potentially biased by migrant networks correlated with unobserved local factors, Model 3 implements a *predicted migration shock* strategy[7]. This approach interacts pre-crisis migrant settlement patterns (1993 census) with cumulative national inflows of Venezuelan migrants after the onset of the humanitarian crisis, thus constructing a plausibly exogenous measure of migrant exposure.

Importantly, this model also flexibly controls for a wide range of pre-determined municipal characteristics—such as violence, tax capacity, economic development, and inequality—interacted with year fixed effects. This helps absorb time-varying confounders and persistent differences across municipalities. Moreover, since forced migrants do not choose their arrival municipalities randomly but are more likely to move to places where they have family or networks, this strategy aligns with the literature on predicted inflows based on historical settlement patterns. While following standard practice in the migration literature (Altonji & Card, 1991; Card, 2001; Lewis & Peri, 2015), In particular, I estimate the following specification.

$$\text{Redistribution}_{imt} = \theta_1 \cdot \text{PredictedShock}_{mt} + \mathbf{H}'_m \cdot \gamma + \mathbf{Z}'_i \cdot \lambda + (\mathbf{H}_m \times \text{Year}_t)' \cdot \eta + \mu_m + \phi_{dt} + \varepsilon_{imt} \quad (4)$$

Where:

$$\text{PredictedShock}_{mt} = \frac{\text{VenezuelanShare}_{m,1993} \times \text{CumulativeInflow}_t}{\text{Population}_{m,1993}} \quad (5)$$

- $\text{VenezuelanShare}_{m,1993}$: share of Venezuelan nationals among all foreigners in municipality m, based on the 1993 Colombian census.
- $\text{CumulativeInflow}_t$: total number of Venezuelan migrants who entered Colombia between 1993 and year t (official migration statistics). This variable accumulates the number of Venezuelan migrants arriving in Colombia starting from 2012.

[7]This measures of predicted cumulative inflows of forced migrants follow the standard practice in the literature (see (Altonji & Card, 1991; Card, 2001) for the pioneer approaches and (Lewis & Peri, 2015) for a review of the literature on applications). However, these estimates are not subject to recent critiques to Bartik-type specifications e.g (Borusyak et al., 2018; Goldsmith-Pinkham et al., 2020), as I control for a large set of pre-established municipal characteristics -that may be correlated with the early migrant networks-interacted with year indicators, and Venezuelan migration was sudden and negligible in Colombia before the beginning of the humanitarian crisis.

- $\text{Population}_{m,1993}$: total population of municipality m in 1993.

  The predicted shock is standardized to ease interpretation across municipalities.

- $\text{Redistribution}_{imt}$: standardized measure of individual preferences for redistribution for individual i, in municipality m, at time t.

- $\mathbf{H}_m$: Vector of historical municipal characteristics from 1993 (e.g., coca cultivation, violence, tax capacity, infrastructure, GDP, Gini, etc.).

- $(\mathbf{H}_m \times \text{Year}_t)$: Interaction terms between 1993 characteristics and year fixed effects to allow for time-varying impacts.

- μ_m: municipality fixed effects.

- ϕ_{dt}: department-by-year fixed effects.

- ε_{imt}: error term.

Controls: Historical municipal controls + individual controls + interactions with year.

In practice, Model 3 allows for identification of the impact of the migration shock while minimizing bias due to reverse causality or omitted variable concerns. It is particularly well suited for analyzing long-term effects because it ties migrant inflows to pre-existing local characteristics that predate the Venezuelan humanitarian crisis. Compared to Models 1 and 2, which provide useful descriptive and instrumental estimates of contemporaneous effects, Model 3 offers a more robust framework to assess causal impacts and long-term heterogeneous responses by race or other social cleavages. Thus, while not inherently "better" in all respects, Model 3 strengthens the credibility of the findings by addressing endogenous sorting of migrants and allowing for time-varying municipal-level confounders.

To capture the exogenous impact of the Venezuelan migration shock on Preference for redistribution in Colombia, I use the year 1993 as the baseline for constructing their migration instrument. This year corresponds to the last available population census conducted before the intensification of the Venezuelan humanitarian crisis, ensuring that the observed networks of Venezuelan migrants at that time were not influenced by the large inflows that would follow. Consequently, the share of Venezuelans in Colombian municipalities in 1993 reflects pre-crisis settlement patterns and serves as a stable source of variation. This allows for an identification strategy based on the interaction between these pre-existing networks and the annual cumulative inflows of migrants after the crisis began. This instrumental variable design addresses concerns raised in recent literature about biases from endogenous or temporally stable migration patterns.

Beyond technical considerations, the choice of 1993 also aligns with a historical turning point that separates two distinct phases of Venezuelan migration to Colombia. Before the election of Hugo

Chávez in 1998, migration flows from Venezuela were limited and composed mostly of individuals with significant economic resources, such as business owners and investors fleeing early signs of interventionist policies. However, as Chávez's regime consolidated and deteriorated further under Nicolás Maduro, Venezuela plunged into a severe political, economic, and social crisis. This shift triggered a massive wave of forced migration dominated by vulnerable populations seeking basic survival. Thus, the year 1993 is not only a convenient census reference but also a meaningful historical benchmark that clearly delineates voluntary migration from humanitarian displacement.

5 Results

5.1 Main results

5.1.1 Model 1 & 2

Table 1 shows the main results of the models for preferences for redistribution in Colombia. I present both the two-way fixed effect model (OLS) and the IV estimates with controls added sequentially. I find that there is a stable positive relationship between Venezuelan immigration and support for redistribution (OLS), with coefficients consistently positive but not statistically significant after controlling for municipal and individual characteristics. Considering, the specification with the full set of controls (3) OLS, I find that a one percentage point (p.p.) increase in the proportion of Venezuelan migrants in a Colombian municipality is associated with a 0.15 standard deviation increase in preferences for redistribution (coefficient 1.50; standard error: 3.88).

As a robustness check, I applied a non-parametric bootstrap procedure with 2000 replications to the full OLS specification (model 3) to assess the stability of the estimated effects under weaker distributional assumptions. The bootstrap results confirm the initial findings: the coefficient for the share of Venezuelan migrants remains positive (1.51), but not statistically significant (bootstrap standard error: 4.17; 95% CI: –6.66 to 9.68). Similarly, the quadratic term remains insignificant. These results reinforce the conclusion that, although the association between migration and support for redistribution is consistently positive across specifications, it is not statistically distinguishable from zero in this model. See annex Table 13 .

In the specification in column (6) IV of Table 1, I find that the estimated effect of Venezuelan immigration on preferences for redistribution is negative and statistically insignificant; this result follows the expected sign from the literature. This IV help to correct the bias presented (upper bias) in the 2FE stimator. Specifically, a one percentage point (1 p.p.) increase in the share of Venezuelan immigrants in a Colombian municipality is associated with a **0.287** standard deviation decrease in redistributive preferences (coefficient: –2.867; standard error: 4.341), with an average share of 2.23% [8] in the sample. However, due to the lack of statistical significance, no strong

[8]The average share of Venezuelan immigrants across Colombian municipalities in the sample is 2.23%. This figure provides a benchmark for interpreting the magnitude of the estimated effect. For instance, a one percentage point increase—from 2.23% to 3.23%—represents a substantial relative change in local migrant presence, particularly in

conclusions can be drawn about the causal relationship in this specification. Those results are in line in the negative sign in most of the literature on preferences for the redistribution. The turning point of the quadratic effect would occur at approximately 5.67%, but the estimates are imprecise and do not provide robust evidence of a non-linear relationship.

As a robustness exercise, I used the historical share of Colombians in each Venezuelan state ($\theta_{s;1990}$) instead of the share of Venezuelans ($\alpha_{s;1990}$) as an instrument. While this alternative instrument leads to less precise estimates, the results remain qualitatively consistent. In column (9) of Table 12, the linear effect is still negative and the squared term becomes *marginally significant at the 10% level*, suggesting a potential non-linear relationship. However, the overall weaker precision and lower explanatory power of this instrument imply that the original instrument based on Venezuelan shares provides more robust and reliable estimates (see annex Table 12).

The results in Table 2 indicate that certain control variables play a relevant role in shaping preferences for redistribution. In particular, **Education** shows a positive and statistically significant effect, suggesting that individuals with higher levels of education are more likely to support redistributive policies. This may reflect greater awareness of social inequalities as well as the internalization of egalitarian norms among populations with more academic exposure. Similarly, the **Race** variable also exhibits a positive and significant coefficient, indicating systematic differences in attitudes toward redistribution associated with racial or ethnic identity. This pattern may be linked to the perception of structural inequality or historical exclusion, which leads these groups to express greater demand for protection or redistributive justice.

At the municipal level, the **share of rural population** emerges as an important determinant, with a positive and highly significant effect on redistributive preferences. This finding aligns with the hypoPaper that rural areas, due to higher levels of economic vulnerability and dependence on public services, tend to show greater support for state intervention policies. **Taken together, these results suggest that the effect of migration on redistributive preferences is not homogeneous, but rather varies with the socioeconomic context and individual characteristics**. This heterogeneity is consistent with theories of ***ingroup-outgroup dynamics***, in which more educated individuals or those in more vulnerable contexts may exhibit a greater willingness to integrate migrants through redistributive mechanisms.

5.1.2 Model 3

In order to address potential endogeneity in the construction of the instrumental variable (IV), Table 3 presents the results of Model 3 **reaffirming the sign of the variable**. The estimations evaluate the impact of predicted migration exposure—constructed using historical Venezuelan settlement patterns and total inflows—on individual preferences for redistribution in Colombia. Across all specifications, the coefficient on the standardized migration shock remains negative but

municipalities with initially low exposure.

statistically insignificant, even after sequentially adding municipal-level controls from 1993 and individual-level characteristics. The magnitude of the effect remains small throughout, with the most comprehensive model (column 3) indicating a non-significant 0.013 standard deviation decrease in redistributive preferences for a one standard deviation increase in predicted exposure.

These results suggest no robust linear relationship between historical migration exposure and support for redistribution when the predicted shock is constructed. This stands in contrast with models using observed migrant shares or instrumental variable approaches, where effects are both larger and statistically significant. In this case, modeling the migration shock purely as a linear function of historical exposure does not appear to meaningfully influence attitudes toward redistribution.

Table 4 presents the statistically significant covariates from the full OLS model using the standardized migration shock as the main explanatory variable. Consistent with prior specifications, the effect of the migration shock remains negative but statistically insignificant, with a small coefficient of –0.015. Among the municipal-level controls, higher municipal tax income is associated with greater support for redistribution, while public expenditure shows a negative relationship. Night light density, a proxy for economic activity, also displays a positive and marginally significant association. At the individual level, education emerges as a strong and positive predictor of redistributive preferences. Moreover, **racial identity** and self-perceived **skin color** are both positively and significantly associated with support for redistribution, underscoring the relevance of ethno-racial dimensions in shaping redistributive attitudes.

5.2 Model 1 & 2

Table 1: OLS and IV Estimates with Quadratic Migration Term

	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) IV
Share of migrants	2.422	1.951	1.508	-0.524	-1.917	**-2.867**
	(3.871)	(3.864)	(3.883)	(5.159)	(4.947)	(4.341)
Share of migrants squared	-0.666	-0.533	-0.418	0.237	0.615	0.862
	(1.048)	(1.049)	(1.053)	(1.398)	(1.337)	(1.180)
Municipal controls (optimized)	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year					
Observations	7,615	7,615	7,215	7,615	7,615	7,215
R^2	0.072	0.072	0.077	0.069	0.070	0.075

Notes: Dependent variable: standardized redistributive preference (`ros4_z`). OLS models in columns (1)–(3). IV models in columns (4)–(6), instrumenting `share_migrant` and `share_migrant2` with `IV_ven` and `IV_ven`^{2}. Optimized municipal controls include log population, per capita GDP (total and consumption), and rural population share. Individual controls include age, sex, education, race, and marital status. All models include municipality and department-year fixed effects. Standard errors clustered at the municipal level. * p<0.10, ** p<0.05, *** p<0.01.

Table 2: OLS and IV Estimates with IV_ven and IV_ven² – Significant Controls Only (Annex Table)

	(1) OLS	(2) IV
Main variables		
Share of migrants	1.508	**-2.867**
	(3.883)	(4.341)
Share of migrants squared	-0.418	0.862
	(1.053)	(1.180)
Municipal controls		
Per capita GDP (consumption)	-0.0308	-0.0396**
	(0.0196)	(0.0196)
Rural population share	0.00000342*	0.00000542***
	(0.00000173)	(0.00000209)
Individual controls		
Education	0.0170***	0.0172***
	(0.00374)	(0.00372)
Race	**0.0196****	**0.0198****
	(0.00792)	(0.00777)
Fixed effects	Municipality and Department × Year	
Observations	7,215	7,215
R^2	0.077	0.075

Notes: Table displays only variables statistically significant at the 10% level or better from model (3) in the IV estimation using `IV_ven` and `IV_ven²`. The dependent variable is the standardized redistributive preference (`ros4_z`). All models include municipality and department-year fixed effects. Standard errors are clustered at the municipal level. * p<0.10, ** p<0.05, *** p<0.01.

5.3 Model 3

Table 3: OLS Results – Linear Migration Shock

	(1)	(2)	(3)
Predicted migration shock (standardized)	-0.0166	-0.0166	**-0.0133**
	(0.0186)	(0.0186)	(0.0148)
Municipal controls (1993)	No	Yes	Yes
Individual controls	No	No	Yes
Fixed effects	Municipality, Dept. × Year	Same	Same
Observations	6,861	6,755	6,404

Notes: Predicted shock is constructed as: `(Venezuelan share in 1993 × cumulative inflow)` divided by 1993 population. The variable is standardized to ease interpretation. Standard errors are clustered at the municipal level. The coefficients are not statistically significant at conventional thresholds. This suggests no robust linear association between predicted migration exposure and preferences for redistribution in the specification, even after controlling for pre-existing individual and municipal characteristics. A one standard deviation increase in the predicted migration shock is associated with a non-significant 0.013 standard deviation decrease in individual support for redistribution. This result suggests that historical exposure to Venezuelan migration has not shaped Colombians' redistributive attitudes,

Table 4: OLS Estimates – Significant Controls Only (from full model 3)

	(1) OLS
Main variable	
Standardized migration shock	-0.0149
	(0.0160)
Municipal controls	
Municipal Tax Income (Millions)	0.0000514***
	(0.0000178)
Municipal Public Expenditure (Thousands)	-0.0000298***
	(0.0000107)
Night Light Density	0.0114*
	(0.00630)
Individual controls	
Education	0.0162***
	(0.00379)
Race	**0.0153***
	(0.00847)
Skin color (self-perception)	0.0144*
	(0.00851)
Fixed effects	Department × Year
Observations	6,404
R^2	0.073

Notes: This table includes only variables statistically significant at the 10% level or better from the full OLS model using the standardized migration shock (`shock_rozo_z`) as the main explanatory variable. The dependent variable is redistributive preference (`ros4_z`). Standard errors clustered at the municipal level. * p<0.10, ** p<0.05, *** p<0.01.

Taken together, the results suggest that while there is no robust average effect of Venezuelan migration on redistributive preferences, this aggregate neutrality may mask important underlying differences across social groups. In particular, the consistent significance of race and skin color as individual-level predictors of redistributive support highlights the potential role of ethno-racial identity in shaping responses to demographic change. More educated individuals and those from racialized groups—particularly those with darker skin tones—tend to express stronger support for redistribution, even in the presence of rising migrant populations. These patterns are consistent with the broader literature on stratification and symbolic boundaries, which suggests that the perceived impact of migration may vary depending on individuals' social position, lived experience,

and perceived group membership.

Building on these insights, the next section examines whether the effect of the Venezuelan migration shock is conditioned by racial identity and skin tone in Colombia. This analysis draws on theories of group-based threat, status preservation, and colorism to investigate **whether certain groups react more defensively or more solidaristically** to migrant inflows. In particular, it explores whether individuals racialized as White—often associated with higher social status—respond differently than those identified as Afro-descendant, Indigenous, or with darker skin tones. In doing so, the analysis seeks to uncover how race and phenotype operate as lenses through which migration is interpreted, and whether redistributive preferences reflect not only economic interests but also deeply rooted hierarchies of belonging. Understanding this heterogeneity is crucial to interpreting the political implications of migration in a stratified society like Colombia.

6 Heterogeneous effects(loyalty effect)Mechanism Race/ethnicity/Colorism

The analysis of race and ethnicity in Latin America presents particular challenges due to the hybrid nature of the categories used to classify individuals. Terms such as **white, mestizo, black, mulatto, or indigenous** often combine phenotypical and cultural dimensions, leading to conceptual ambiguity. Although these labels are typically presented in surveys as broad ethnic categories, the literature has pointed out that, in the Latin American context, these classifications function predominantly as racialized social constructions—that is, as forms of categorization based on visible physical traits such as skin color, facial features, or hair texture (Loveman, 2014; E. Telles & Martínez Casas, 2019a, 2019b). In line with this approach, and following (Woo Mora, 2021), this Paper adopts a perspective that interprets these categories as forms of socialized race, rather than as expressions of cultural ethnicity. This distinction allows for the identification of mechanisms of social stratification, such as colorism and appearance-based hierarchies, while not excluding the possibility that, in some cases, these labels may overlap with cultural or linguistic identities.

In contrast, in the U.S. context—and more broadly in the Anglo-American literature—the distinction between race and ethnicity is clearly defined, both in institutional records and academic discourse. According to the U.S. Census, race refers to phenotypic or socially perceived characteristics (such as "Black," "White," "Asian," or "American Indian"), while ethnicity relates to cultural or national origin, particularly Hispanic or Latino origin. This separation makes it possible to recognize multiple identities, such as being racialized as Afro-descendant while simultaneously being ethnically identified as Latino (Omi & Winant, 1994). In Latin America, by contrast, surveys typically use a single question to capture both aspects, resulting in hybrid ethno-racial categories such as "mestizo" or "indigenous," which simultaneously reflect physical traits and cultural belonging. This difference is rooted in the ideology of *mestizaje*, which has promoted an image of racial homogeneity while contributing to the invisibilization of social hierarchies based on skin color (Loveman, 2014; E. E. Telles & Paschel, 2014).

6.1 Historical review: The racial question in LatinAmerica

To better understand the roots of racial classification in Latin America, it is crucial to consider the colonial period, during which the encounter between Indigenous peoples, European colonizers, and African slaves generated an early process of racial mixture. This miscegenation, however, did not occur in a social vacuum. Colonial authorities actively institutionalized social hierarchies by formalizing racial categories through legal and administrative means (Loveman, 2014). One of the clearest visual representations of this system can be found in the so-called *casta paintings*, which depicted various racial combinations and the perceived social status of each group Figure 8. **These paintings, particularly prominent in New Spain (modern-day Mexico and Central America), served both as artistic and political tools, reinforcing the notion of an ordered racial taxonomy that linked physical appearance with moral and cultural traits.** While the caste system was not entirely rigid—mobility between categories could occur, often for economic or legal incentives—it did reflect and reinforce a broader logic in which proximity to whiteness conferred higher social status (Graham, 2013). As (Woo Mora, 2021) notes, this legacy laid the foundation for later ideologies of *mestizaje*, which ostensibly celebrated racial mixing but, in practice, served to obscure enduring hierarchies rooted in colonial race-thinking.

Figure 8: Casta Painting

To deepen the analysis of heterogeneity, this subsection builds a bridge between the historical construction of racial categories and their contemporary statistical distribution in the sample. Specifically, I distinguish between two dimensions: (1) the ethnic self-identification reported by survey respondents using standard labels (e.g., mestizo, white, black, indigenous), and (2) the interviewer-perceived skin tone, measured using the PERLA palette on a scale from 1 (lightest) to

11 (darkest). This distinction is crucial for operationalizing what I term a "loyalty effect" [9]: the idea that individuals' support for redistribution may depend on whether migrants are perceived as part of an in-group—based either on shared phenotypical traits or on broader ethnic labels. By treating race and skin tone separately, I aim to uncover whether redistributive attitudes are more sensitive to symbolic boundaries drawn around cultural identity or to visible markers of social stratification.

6.2 Descriptive Overview: Sample Distribution of Race and Skin Tone

Before testing this hypoPaper, Figure 9 and Figure 9 provide a descriptive overview of the ethnoracial landscape of the sample. Figure 9 illustrates the distribution of skin tone (PERLA) as perceived by the interviewer. The distribution is right-skewed, with most individuals concentrated between tones 3 and 7, and relatively few identified at the extremes (1–2 or 10–11). This pattern reflects Colombia's historical legacy of mestizaje, while also preserving enough variation for meaningful analysis of colorism. Figure 10 presents the self-identified ethnic categories in the sample, showing that "mestizo" is by far the dominant label, followed by smaller shares identifying as black, white, mulatto, or indigenous. Together, these figures highlight the coexistence of phenotype-based and cultural classifications in the Colombian context and motivate the dual approach that follows in Sections 6.2 and 6.3.

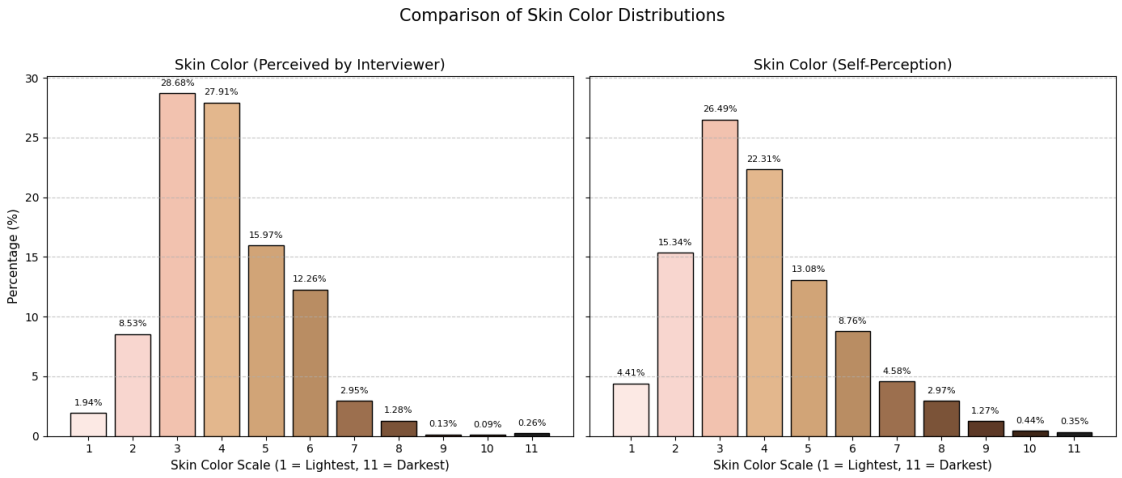

Figure 9: Skin Color Distribution Perceived Vs Self perception in Colombia (PERLA Project)

[9]It remains challenging to fully dismiss the influence of loyalty-based mechanisms in accounting for the adverse impact of immigration on support for redistributive policies in Latin America. Although immigrants and natives often share cultural and linguistic traits, multiple studies and survey evidence indicate that hostility toward immigrants has grown among native populations in recent years. For example, data from Latinobarómetro (2018) show that 74% of respondents across the region believe that immigration negatively affects them and their families. Additionally, nearly 60% perceive that there are strong or very strong tensions between immigrants and native-born individuals throughout Latin America.see annex Figure 16

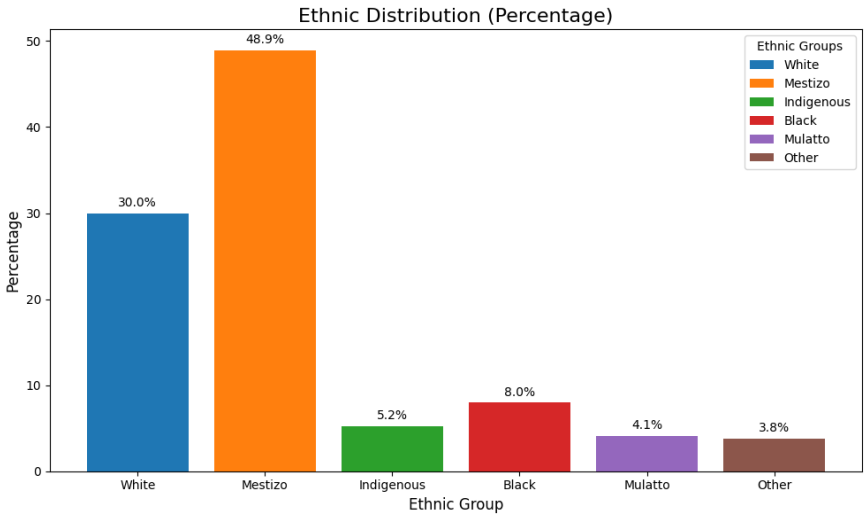

Figure 10: Ethnicity distribution in Colombia (PERLA)

6.3 Heterogeneous Effects of Migration by Racial Group

While the aggregate models suggest that migration may have a neutral or slightly negative effect on redistribution preferences, a closer look at racial heterogeneity reveals that these average effects are largely driven by specific racial groups Table 2 and Table 4. In particular, the significant negative reaction among White respondents and the positive, though less robust, responses from Black and Mulatto individuals suggest diverging political responses to migrant inflows Table 5. Whites appear to reduce their support for redistribution as migrant presence increases, possibly as a defensive reaction to perceived threats to socioeconomic status. Meanwhile, Blacks and Mulattos tend to support redistribution more, at least in the OLS models, potentially viewing it as a mechanism for social protection. Mestizos—the reference group and the dominant racialized identity in national discourse—also exhibit a negative response, though less pronounced than that of Whites. **These findings underscore that the overall effect of migration hides important variation, and that the political impact of demographic change is shaped by the stratified racial order in which different groups experience and interpret migration differently**.

The results of the OLS and IV estimations interaction with migration × race interactions Table 5 confirm that the impact of the Venezuelan migration shock on preferences for redistribution is not homogeneous across racial groups. Using individuals who identify as *mestizo*—the dominant category in the national ideology of racial mixing—as the reference group, we observe a differential pattern suggesting the existence of racialized hierarchies in political responses to migration. In particular, individuals who identify as White show a significantly negative differential effect: in the IV models, the interaction between migration and the White racial category is negative and statistically significant (column 6) Table 5, indicating that, compared to mestizos, this group tends to decrease their support for redistribution in response to an increase in the share of migrants. In

quantitative terms, the estimated coefficient for the interaction between migration and White is –4.898 ($p < 0.05$). A 10 percentage-point increase in the migrant share leads White individuals to reduce their support for redistribution by approximately 0.49 standard deviations more than mestizos.

This finding is consistent with the so-called "loyalty effect" (Alesina et al., 2001; Hopkins, 2010; Shayo, 2009), according to which groups perceived as dominant may react defensively to the arrival of migrant populations perceived as culturally or economically threatening, even if these migrants do not belong to an explicitly opposing racial category. This mechanism reflects not only the positioning of Whites toward redistribution, but also their potential symbolic identification with the resources being redistributed or with a status quo perceived to be under threat from migration.

By contrast, Black and Mulatto individuals exhibit a positive and statistically significant response in the OLS models, although this effect loses significance in the IV specifications Table 5. This suggests that these groups may view redistribution as a protective mechanism against possible social tensions associated with migration, although the evidence is not robust when accounting for the endogeneity of migrant settlement patterns. These results must be interpreted in the historical context of the region, where racial categories are social constructions shaped by the legacy of colonial rule and the logic of *mestizaje*. As (Loveman, 2014; E. E. Telles & Paschel, 2014) have noted, differences in skin color and phenotype continue to operate as axes of social stratification. Therefore, the finding of a more regressive response among Whites may reflect a reaction to perceived threats to their social privilege, while the greater receptiveness observed among other racialized groups may be linked to shared experiences of exclusion.

As shown in Annex Table 13 and Table 14, this specification isolates the heterogeneity that may be obscured when using broader ethnic categories. By reclassifying race into a binary indicator—grouping White and Mestizo individuals as "non-racialized," and Black, Indigenous, Mulatto, and Other as "racialized"—this model captures the potential loyalty effect rooted in racialized boundaries. The OLS results reveal that individuals in the racialized group exhibit significantly higher support for redistribution in response to increased migrant presence, as indicated by the positive and statistically significant interaction term (0.147 to 0.173 across models 1–3). These estimates suggest that the racialized population may be more likely to perceive Venezuelan migrants as part of an **ingroup**, or at least not as an economic or cultural threat. In contrast, IV estimates show a similar direction of effect **but lack statistical significance,** which could reflect weaker instrument relevance or reduced first-stage precision when aggregating racial identities. This binary approach provides an intuitive summary of racial dynamics and complements the more detailed triadic racial and color-based analyses presented earlier in the section.

In contrast, Table 14 presents OLS estimates using the predicted migration shock as the main

explanatory variable, interacted with the binary racialization variable. This specification helps address potential endogeneity concerns and isolates the exogenous component of migrant inflows. However, the interaction term between the shock and the racialized group is consistently positive but not statistically significant across all models. Moreover, the main effect of the shock itself remains small and negative. These results suggest that when the source of migration exposure is modeled more exogenously, the heterogeneous response by racial classification becomes weaker or more difficult to detect. Still, the direction of the coefficients remains consistent with the loyalty hypoPaper: racialized individuals appear slightly more supportive of redistribution in response to migration, although the effects are too imprecise to confirm statistically.

6.4 Heterogeneous Effects of Migration by Skin Color Group.

The Table 6 of Model (3) is selected as the preferred specification for interpreting the relationship between migration and redistribution across skin tones. This model includes both municipal-level controls (capturing long-run structural differences across municipalities) and individual-level characteristics (such as age, education, sex, and marital status), which are essential to reduce omitted variable bias. Compared to the simpler specifications in columns (1) and (2), Model (3) provides a more robust and credible estimate of the interaction between the migration shock and perceived skin tone. By holding constant relevant covariates, the model allows for a more accurate assessment of whether and how colorism shapes individual attitudes toward redistribution in the context of migration.

While the previous sections explored heterogeneity in response to migration through broad racial categories, including a binary racialization approach, the results showed limited or inconsistent evidence of differential effects. **This motivates a shift toward a more finely grained and visually salient axis of stratification: skin tone**. Skin tone, unlike self-reported or official racial classifications, captures the phenotypical dimension of racial hierarchy as perceived by others. It is a powerful proxy for everyday social treatment and structural discrimination in Latin America, where colorism persists as a core mechanism of inequality. By focusing on skin tone, the analysis seeks to uncover subtler but possibly more meaningful heterogeneity in how individuals respond to migration shocks.

This perspective is operationalized through the PERLA skin tone scale, as recorded by interviewers in the LAPOP survey. Table 6 reports the results of OLS regressions using a continuous measure of skin tone, interacted with a standardized migration shock. The specification in column (3), which includes both municipal and individual-level controls, is taken as the preferred model for interpretation. In this model, the migration shock has a baseline negative effect on redistribution preferences (–0.0367 standard deviations), but this effect is moderated significantly by skin tone: each unit increase in the PERLA scale attenuates the shock's effect by 0.011 standard deviations.

These results reveal a clear and statistically significant pattern consistent with a color-based loyalty effect. Individuals with darker skin tones are less negatively affected—or even positively influenced—by exposure to Venezuelan migrants The skin color is both positive (0.0110) and statistically significant at the 1% level, suggesting that each increase in a darker skin tone correlates with a negative impact of the migration shock by 0.011 standard deviations. For instance, among those with the darkest skin tone (PERLA = 11), the net effect of the shock becomes +0.0733, indicating increased support for redistribution in the presence of migration. This finding underscores the importance of colorism not only as a social stratification mechanism but also as a lens through which individuals evaluate redistribution in the context of demographic change. It marks a turning point in the analysis, justifying a deeper focus on skin tone for understanding heterogeneity in redistributive attitudes.

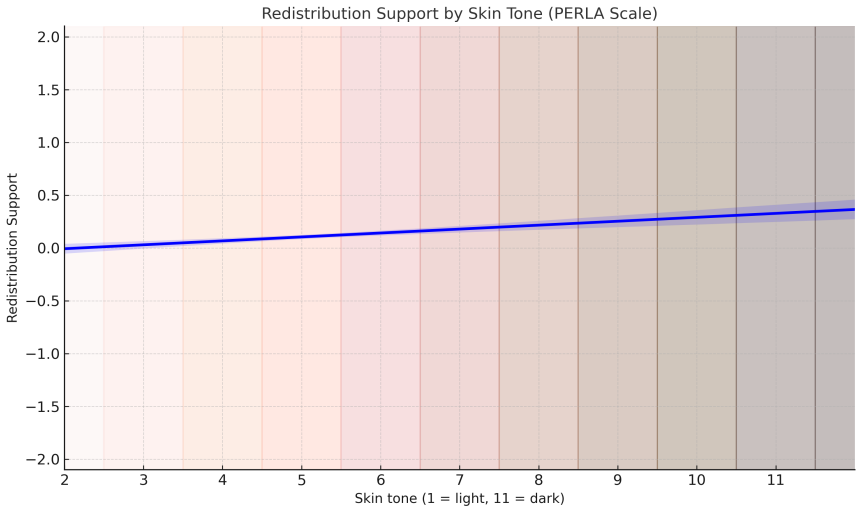

Figure 11: Skin Color Distribution Self-perception in Colombia (PERLA Project)

To complement the main analysis presented in Table 6, which uses a flexible interaction model between migration shocks and skin tone, Annex Table 16 reports estimates using a purely linear specification. In this alternative model, the continuous PERLA scale interacts with both the observed migrant share and its squared term (in IV models), but excludes a squared term for skin tone or any quadratic interaction. This allows for a more straightforward interpretation of how redistribution preferences vary linearly across the color gradient, from lightest to darkest skin tones. However, the interaction coefficients across all specifications are small and statistically insignificant, suggesting that a strictly linear formulation may fail to capture relevant heterogeneity.

In contrast, Table 12 incorporates a quadratic interaction between migration shocks and skin tone, allowing the effect to vary non-linearly along the PERLA scale. While none of the coefficients in this more flexible model reach conventional levels of significance, the point estimates suggest a convex relationship—where the migration shock has a weaker (or even positive) effect among

individuals with darker skin tones. This specification mirrors the intuition captured in Model (3) of Table 6, which finds a statistically significant and positive linear interaction. Taken together, these results highlight the importance of allowing sufficient flexibility in modeling the skin tone gradient: when constrained to a linear form, the attenuation of migration's negative impact by skin tone becomes statistically elusive; when quadratic or flexibly specified, it becomes more apparent. These findings reinforce the salience of colorism as a mechanism shaping redistributive preferences in the context of migration.

The Figure 11 illustrates a positive association between skin tone and support for redistribution. Individuals with darker skin tones, as measured by the PERLA scale, tend to express slightly higher preferences for redistribution. This pattern is consistent with the idea that those who occupy lower positions in the social hierarchy may favor more redistributive policies.

Table 5: OLS and IV Estimates with Migration × Race Interactions (Base: Mestizo)

	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) IV
Share of migrants	1.937	1.446	0.017	1.210	0.005	**-1.510**
	(3.706)	(3.699)	(3.531)	(4.126)	(3.906)	(3.307)
Share of migrants squared	-0.538	-0.399	-0.007	-0.034	0.285	0.662
	(1.004)	(1.005)	(0.959)	(1.088)	(1.034)	(0.876)
Share × White	-0.263***	-0.263***	-0.269***	-5.094**	-5.069**	**-4.898****
	(0.087)	(0.086)	(0.077)	(2.439)	(2.436)	(2.330)
Share × Indigenous	0.094***	0.094***	0.088***	-0.865	-0.773	-0.441
	(0.011)	(0.011)	(0.009)	(0.730)	(0.651)	(0.519)
Share × Black	4.951***	4.924***	3.683**	8.235	7.317	6.773
	(1.335)	(1.344)	(1.832)	(5.202)	(5.082)	(5.571)
Share × Mulatto	0.315***	0.315***	0.300***	2.689	2.649	3.302
	(0.036)	(0.036)	(0.036)	(2.732)	(2.712)	(2.912)
Share × Other	0.094***	0.094***	-0.080	-0.767	-0.706	-0.304
	(0.033)	(0.033)	(0.051)	(1.404)	(1.381)	(2.061)
Municipal controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year					
R^2	0.073	0.074	0.078	0.059	0.056	0.075
Observations	7,560	7,560	7,404	7,560	7,560	7,404

Notes: All models include fixed effects for municipality and for department × year. Standard errors clustered at the municipal level. Dependent variable: standardized preferences for redistribution ($ros4\_z$).

Interpretation: The interaction terms reflect how the effect of migration on redistribution preferences differs by racial group, relative to the Mestizo base category. In both OLS and IV models, individuals identified as White show a significantly more negative response to migration. This pattern is robust and statistically significant in the IV specifications. The interaction effects for Black and Mulatto groups are positive in OLS but lose significance in IV models.

6.5 Heterogeneous effects in Migration shock model 3

Table 6: OLS Estimates: Migration Shock and Colorism (PERLA Scale 1–11)

	(1) OLS	(2) OLS	(3) OLS
Standardized migration shock	-0.0343*	-0.0343*	-0.0367*
	(0.0195)	(0.0195)	(0.0216)
Skin tone (PERLA)	0.00759	0.00734	0.00548
	(0.0110)	(0.0112)	(0.0109)
Shock × Skin tone	**0.00960***	**0.00963***	**0.0110*****
	(0.00511)	(0.00513)	(0.00408)
Municipal controls	No	Yes	Yes
Individual controls	No	No	Yes
Fixed effects	Municipality and Department × Year		
Observations	6,760	6,654	6,404

Notes: Standard errors in parentheses. Skin tone is measured using the PERLA scale, from 1 (lightest) to 11 (darkest), as perceived by the interviewer. The interaction term captures whether the effect of the migration shock varies with skin tone. All models include municipality and department-by-year fixed effects. Standard errors clustered at the municipality level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: OLS Estimates – Migration Shock × Race Triad . Reference group: White/Mestizo

	(1) No controls	(2) Municipal controls 1993	(3) + Individual controls
Shock (standardized)	-0.0156	-0.0114	-0.0195
	(0.0192)	(0.0168)	(0.0162)
Shock × Afrodescendant (Triad 2)	0.00877	0.00821	0.00497
	(0.0271)	(0.0269)	(0.0229)
Shock × Indigenous (Triad 3)	-0.0491	-0.0470	-0.0446
	(0.0360)	(0.0341)	(0.0324)
Municipal controls	No	Yes	Yes
Individual controls	No	No	Yes
Fixed effects		Municipality and Department × Year	
Observations	6,861	6,755	6,609

Notes: Standard errors in parentheses. All models include fixed effects for municipality and department × year. The dependent variable is the standardized redistribution preference index ($ros4\_z$). The reference group is *White/Mestizo*.

Interpretation: None of the interaction terms with race reach statistical significance. The effect of the migration shock is small and not significant for the White/Mestizo group and remains non-significant for Afrodescendant and Indigenous groups. These results suggest that in this specification, racial group does not significantly moderate the relationship between migration shock and redistributive preferences.

Controls: Model (2) includes municipal-level controls measured in 1993: logarithm of population, per capita GDP (total and consumption), rural population share, coca cultivation (1999), homicide rate (1993), tax revenue (1995), total government spending (1995), intergovernmental transfers (1995), number of bank offices, total enrolled students, nighttime lights (1995), Gini index, multidimensional poverty (NBI), share of subsidized health coverage (1998), informality rate, and municipal-level racial shares. Model (3) additionally includes individual-level controls: age, sex, years of education, skin tone (two variables), and marital status.

7 Conclusion

This Paper set out to investigate how migration shocks shape public attitudes toward redistribution in a developing country context, using Colombia as a case study during a period of large-scale Venezuelan inflows. Going beyond average effects, it aimed to uncover how these responses vary across racial and color hierarchies, reflecting deeper structures of social stratification. By combining repeated cross-sections from LAPOP with administrative migration and municipal data, the analysis leverages both observational variation and an instrumental variable strategy to account for endogeneity in migrant settlement patterns.

The results show that, on average, migration shocks do not systematically reduce support for redistribution across the population. However, the estimated coefficients are predominantly negative—mirroring the pattern documented in much of the existing literature on migration and welfare preferences, particularly in Global North settings. This suggests that, while the aggregate effects may not be statistically significant, the underlying mechanisms of perceived competition or threat may still be present in the Colombian case.

More importantly, the Paper reveals a meaningful heterogeneity in how individuals respond to migration depending on their racial classification and skin tone. Racially marginalized groups (Afro-descendants, Indigenous, and others) and individuals with darker skin tones—measured using the PERLA color scale—exhibit weaker negative reactions, or even positive responses, to migrant inflows. These findings point to the relevance of **colorism** and **racial boundaries** as central organizing principles of redistributive attitudes. Specifically, the positive interaction between the migration shock and darker skin tone supports the idea of a **"loyalty effect,"** where individuals who share social or perceived similarities with migrants respond with greater solidarity rather than exclusion.

In doing so, this research contributes to an emerging literature that centers the Global South and its unique social cleavages. It shows that the political consequences of migration cannot be fully understood without accounting for the local hierarchies—such as racialization and colorism—that mediate group-based interests. In short, the way people respond to migration is not just about cultural proximity or economic calculus, but also about who is imagined to belong—and who is expected to share.

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9 Annex

Table 8: Summary Statistics of Selected Municipalities' Percentiles in Migrant Distribution

Year	Count	Mean	Std. Dev.	Min	P10	P25	Median	P75	P90	Max
2013	35	77.74	20.81	11.23	53.64	65.73	79.32	96.35	99.04	100.00
2014	38	69.76	27.89	11.92	29.18	56.43	73.44	96.00	98.84	100.00
2016	42	75.98	24.25	11.32	51.35	62.75	80.62	96.45	98.78	100.00
2018	43	77.68	24.10	10.19	43.97	65.93	86.42	96.17	99.22	100.00
2023	46	77.31	23.75	10.06	41.06	68.07	84.50	95.64	99.37	100.00

Note: Percentiles refer to each municipality's position within the national distribution of migrants. Higher values indicate municipalities with larger migrant populations relative to others.

Table 9: Descriptive Statistics – Individual-Level Control Variables

Variable	**Observations**	**Mean**	**SD**	**Min**	**Max**
Age	7,734	39.09	15.58	18	90
Sex (1 = Female)	7,729	0.499	0.500	0	1
Education (years)	7,704	8.62	4.52	0	20
Race (0–6 scale)	7,477	1.22	1.33	0	6
Marital status (0–8 scale)	7,729	1.23	1.31	0	8

Notes: Summary statistics for individual-level variables used as controls in the regression models. Variables are drawn from the LAPOP survey waves merged across years. The sex variable is coded as a binary indicator (1 = female, 0 = male).

Table 10: Descriptive Statistics – Control Variables

Variable	**Year**	**Obs.**	**Mean**	**Std. Dev.**
Violence and Illicit Activities				
Hectares of Coca Crops	1999	1124	142.46	960.24
Number of Terrorist Attacks	1993	1124	0.66	2.63
Homicide Rate (per 100,000)	1995	1048	52.92	66.89
Fiscal Capacity and Public Spending				
Municipal Tax Income (Millions)	1995	1098	1032.75	16066.25
Municipal Public Expenditure (Thousands)	1995	1098	2909.42	28866.32
Central Government Transfers (Millions)	1995	1098	1167.79	5348.37
Institutional and Financial Access				
Number of Financial Institutions	1995	1046	1.75	8.92
Number of Tax Collection Offices	1995	1046	36.05	182.37
Infrastructure and Economic Activity				
Per Capita GDP (Millions)	2005	1097	6.38	6.63
Night Light Density	1995	1048	3.97	7.47
Inequality and Deprivation				
GINI Index	1993	1043	0.46	0.04
Unsatisfied Basic Needs (UBN, %)	1993	1035	52.98	19.21
Social Services and Informality				
Subsidized Health Coverage (% with UBN)	1998	1136	0.72	0.41
Informal Labor (% Households)	2005	1114	0.95	0.06

Note: *Informal labor is a dummy equal to 1 if less than 100% of the economically active population in the household contributes to the pension system. In my analysis, I acknowledge that municipalities with a higher share of migrants in 1993 may also have differed systematically in other dimensions. These areas may have experienced lower levels of conflict or violence, stronger institutions, greater economic growth, higher public investment, less poverty or inequality, or lower levels of labor informality relative to other regions of the country. If such characteristics influenced attitudes toward redistribution—for instance, through their impact on economic performance—then my estimates could be biased. To address these concerns, I flexibly control for the interaction between a broad set of pre-shock municipal-level characteristics and election-year fixed effects. These pre-treatment controls capture variation in conflict intensity, violent crime, government presence, institutional quality, economic development, poverty, inequality, and labor market outcomes. A complete list of these time-invariant characteristics is presented in

Table 11: Bootstrap Estimates for Model (3) OLS

	Coefficient	Bootstrap SE	95% CI	p-value
Share of migrants	1.508	4.145	[-6.616, 9.633]	0.716
Share of migrants squared	-0.418	1.131	[-2.634, 1.798]	0.712

Notes: Results from 2,000 bootstrap replications applied to the OLS model with municipal and individual controls (Model 3 in Table 1). The table reports the coefficient estimates, bootstrap standard errors, normal-based 95% confidence intervals, and p-values. Standard errors clustered at the municipal level.

Table 12: OLS and IV Estimates with Quadratic Migration Term (This table will be placed in Annex)

	OLS			IV (IV_ven)			IV (IV_col)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Share of migrants	2.422	1.951	1.508	-0.524	-1.917	**-2.867**	-3.705	-4.370	**-4.911**
	(3.871)	(3.864)	(3.883)	(5.159)	(4.947)	(4.341)	(3.923)	(3.641)	(3.106)
Share of migrants^2	-0.666	-0.533	-0.418	0.237	0.615	0.862	1.125	1.322	**1.449***
	(1.048)	(1.049)	(1.053)	(1.398)	(1.337)	(1.180)	(1.056)	(0.974)	(0.838)
Municipal controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year								
Observations	7,615	7,615	7,215	7,615	7,615	7,215	7,615	7,615	7,215
R^2	0.072	0.072	0.077	0.069	0.070	0.075	0.067	0.067	0.073

Notes: Dependent variable is standardized redistributive preference (`ros4_z`). OLS models in columns (1)-(3). IV models in columns (4)-(6) instrument `share_migrant` and `share_migrant2` with `IV_ven` and `IV_ven`^{2}. IV models in columns (7)-(9) use `IV_col` and `IV_col`^{2}. Optimized municipal controls include log population, per capita GDP (total and consumption), and rural population share. Individual controls include age, sex, education, race, and marital status. All models include municipality and department-year fixed effects. Standard errors clustered at the municipal level. * p<0.10, ** p<0.05, *** p<0.01.

Instrument construction: The instrumental variable is computed at the municipal level following a shift-share approach. Specifically, for each municipality m in year t, we construct:

$$\widehat{IV}_{mt} = V_t \cdot \sum_s \left(\frac{\alpha_{s,1990}}{K_{ms}} \right)$$

where V_t is the total number of Venezuelan migrants in Colombia in year t, $\alpha_{s,1990}$ is the share of Venezuelans residing in Venezuelan state s according to the 1990 Venezuelan Census, and K_{ms} is the driving distance in kilometers between Colombian municipality m and Venezuelan state s. The intuition is that municipalities located closer to historically more populated Venezuelan states are expected to receive larger inflows of migrants. As a robustness check, I alternatively use the share of Colombians in each Venezuelan state ($\theta_{s,1990}$) instead of Venezuelans, preserving the structure of the instrument. The robust instrument based on historical networks of Colombians offers theoretical validity, but the effects are less precise and not significant.

- $\alpha_{s,1990}$: Share of Venezuelan (or Colombian, for robustness) population in Venezuelan states s in 1990 relative to the national total:

$$\alpha_{s,1990} = \frac{Pop_{s,1990}}{\sum_{s'=1}^{S} Pop_{s',1990}}$$

Table 13: OLS and IV Estimates with Race Interactions – **Binary Racialization** (Reference group: Non-racialized White/Mestizo)

	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) IV
Share of migrants	3.643	2.475	0.888	-0.167	-1.465	**-3.177**
	(4.232)	(4.076)	(3.863)	(5.313)	(4.424)	(3.719)
Share of migrants squared	-1.021	-0.703	-0.268	-0.116	0.259	0.747
	(1.147)	(1.105)	(1.047)	(1.499)	(1.266)	(1.063)
Shock × Racialized	0.173***	0.173***	0.147***	2.095	1.885	1.941
	(0.0149)	(0.0148)	(0.0140)	(1.716)	(1.599)	(1.612)
Municipal controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year					
Observations	7311	7311	7160	7311	7311	7160
R^2	0.072	0.073	0.077	0.027	0.037	0.041

Notes: Standard errors in parentheses. All models include fixed effects for municipality and department × year. The dependent variable is the standardized redistribution preference index (*ros4_z*). The reference group is *Non-racialized* (White/Mestizo).

Controls: Municipal controls include log population, GDP per capita (total and consumption), rural population share, and the municipal-level shares of racialized and non-racialized populations. Individual controls include age, sex, education, skin color (two variables), and marital status.

Interpretation: In OLS models, individuals classified as racialized show a significantly more positive response to migrant presence than the non-racialized group. However, in IV models, the interaction term is large but statistically insignificant, suggesting possible attenuation due to instrument weakness or limited first-stage variation.

Table 14: OLS Estimates – Migration Shock × **Binary Racialization** (Reference group: Non-racialized White/Mestizo)

	(1) No controls	(2) Municipal controls 1993	(3) Municipal + Individual controls
Migration shock (standardized)	-0.0112	-0.00558	**-0.0103**
	(0.0181)	(0.0151)	(0.0138)
Shock × Racialized	0.00648	0.00674	0.00143
	(0.0197)	(0.0195)	(0.0144)
Municipal controls	No	Yes	Yes
Individual controls	No	No	Yes
Fixed effects		Municipality and Department × Year	
Observations	6,598	6,502	6,361

Notes: Standard errors in parentheses. All models include fixed effects for municipality and department × year. The dependent variable is the standardized redistribution preference index ($ros4\_z$). The reference group is *Non-racialized* (White/Mestizo).

Interpretation: Across all specifications, the effect of the migration shock is small and statistically insignificant for both racial groups. Interaction terms with the racialized group are also not significant, suggesting limited heterogeneity in response to migration shocks by racial classification in this binary framework.

Controls: Col (2) adds municipal-level controls from 1993, including demographic, economic, and fiscal indicators, as well as the racial shares of the population. Col (3) adds individual-level characteristics: age, sex, education, skin tone (two variables), and marital status.

Table 15: OLS and IV Estimates with Migration × Skin Tone Interaction (PERLA Scale)

	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) IV
Share of migrants	-0.426	-0.912	0.746	-3.294	-4.678	-3.402
	(3.955)	(3.961)	(4.142)	(4.778)	(4.438)	(4.568)
Share of migrants squared	0.108	0.247	-0.208	0.789	1.128	0.812
	(1.072)	(1.077)	(1.125)	(1.390)	(1.311)	(1.323)
Migration × Skin tone	0.582	0.571	**0.387**	0.538	0.516	**0.419**
	(0.627)	(0.622)	(0.574)	(0.896)	(0.896)	(0.783)
Migration × Skin tone^2	-0.160	-0.157	-0.106	-0.0886	-0.0717	-0.0577
	(0.172)	(0.170)	(0.157)	(0.300)	(0.303)	(0.268)
Municipal controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year					
R^2	0.073	0.074	0.077	0.063	0.062	0.068
Observations	7,508	7,508	7,215	7,508	7,508	7,215

Notes: All models include fixed effects for municipality and for department × year. Standard errors clustered at the municipal level. Dependent variable: standardized preferences for redistribution ($ros4\_z$).

Interpretation: The interaction terms indicate how the effect of migration on redistribution preferences varies by skin tone as perceived by interviewers using the PERLA scale (1 = lightest, 11 = darkest). The quadratic interaction allows the relationship to be non-linear, capturing differential responses among darker-skinned individuals. Coefficients are not statistically significant, but point estimates suggest a convex relationship.

Table 16: OLS and IV Estimates with Migration × Skin Tone Interaction (PERLA Scale, Linear Only)

	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) IV
Share of migrants	-0.0380	-0.0149	-0.0223	-0.820	-0.937	-0.725
	(0.0432)	(0.0314)	(0.0382)	(1.096)	(1.132)	(0.944)
Migration × Skin tone	0.000567	0.000234	-0.000924	**0.285**	**0.282**	**0.234**
	(0.00407)	(0.00403)	(0.00356)	(0.336)	(0.340)	(0.283)
Municipal controls	No	Yes	Yes	No	Yes	Yes
Individual controls	No	No	Yes	No	No	Yes
Fixed effects	Municipality and Department × Year					
R^2	0.073	0.073	0.077	0.060	0.062	0.069
Observations	7,508	7,508	7,215	7,508	7,508	7,215

Notes: All models include fixed effects for municipality and for department × year. Standard errors clustered at the municipal level. Dependent variable: standardized preferences for redistribution ($ros4\_z$).

Interpretation: This specification considers only the linear interaction between migration and skin tone. Coefficients are small and statistically insignificant, suggesting no strong gradient in the migration effect along the skin tone scale when excluding quadratic terms.

Column (6): The migration shock has a negative but statistically insignificant effect on redistribution preferences for individuals with lighter skin tones. The positive coefficient on the interaction term suggests that this negative effect weakens slightly as skin tone darkens. However, none of the coefficients are significant, so we cannot draw strong conclusions about heterogeneity in this linear specification.

Table 17: OLS Estimates – Subsample: Mestizo only (Rozo Shock)

	(1) OLS	(2) OLS	(3) OLS
Rozo migration shock (standardized)	0.144**	0.144**	0.117
	(0.0707)	(0.0707)	(0.0836)
Municipal controls	No	Yes	Yes
Individual controls	No	No	Yes
Fixed effects	Municipality and Department × Year		
Observations	3,267	3,221	3,160
R^2	0.092	0.091	0.094

Notes: Standard errors in parentheses. All models are estimated using the subsample of individuals identified as *mestizo* (race==1). All regressions include fixed effects for municipality and for department × year. Standard errors are clustered at the municipal level.

Interpretation: The coefficient on the standardized Rozo shock is positive and statistically significant in the first two specifications, indicating that increased exposure to migration is associated with greater support for redistribution among mestizos. However, the effect becomes smaller and statistically insignificant once individual-level controls are added.

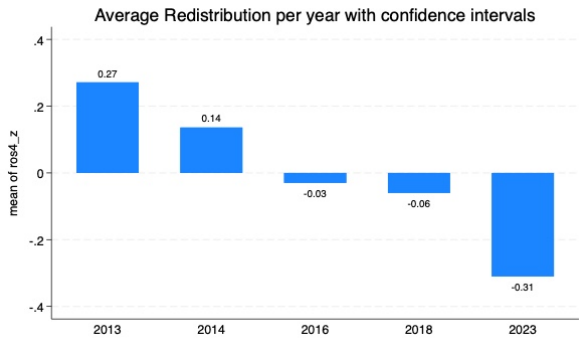

Figure 12: Average Redistribution per Year with Confidence Intervals

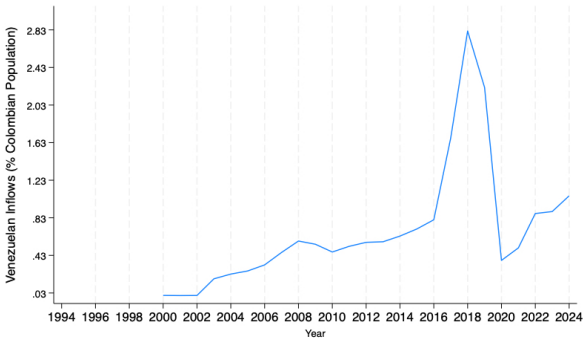

Figure 13: Venezuelan Inflows as % of Colombian Population

Figure 14: "hair is purchased" *John Otis for NPR*

Figure 15: handicrafts with banknotes on the Cucuta border

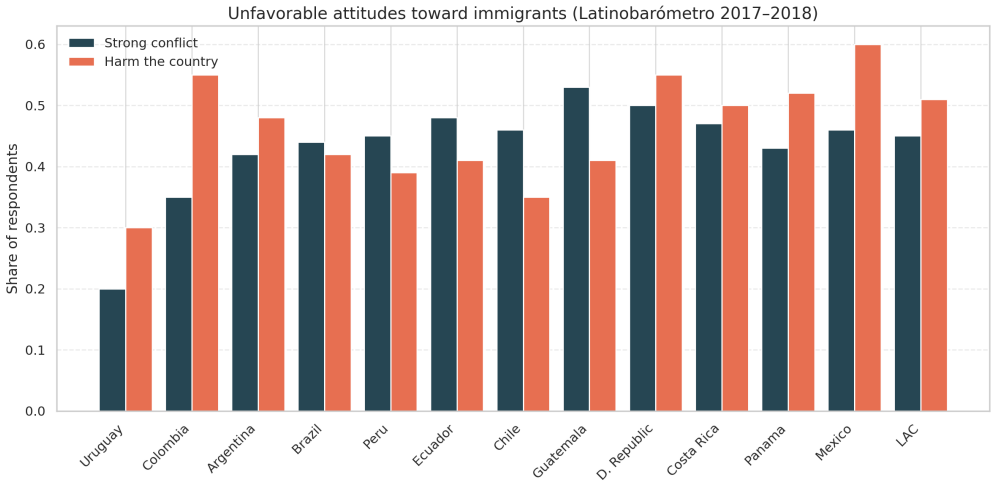

Figure 16: Unfavorable attitudes toward immigrants in Latin America. Bar graph based on Latinobarómetro 2017–2018 data showing the share of respondents who (i) perceive strong or very strong conflict between natives and immigrants (blue), and (ii) believe that immigrants harm them or their country (red). The figure reveals high levels of perceived threat across multiple countries in the region, with particularly strong negative attitudes in Mexico, Colombia, and the Dominican Republic. These unfavorable perceptions may hinder social cohesion and reduce support for redistributive policies.

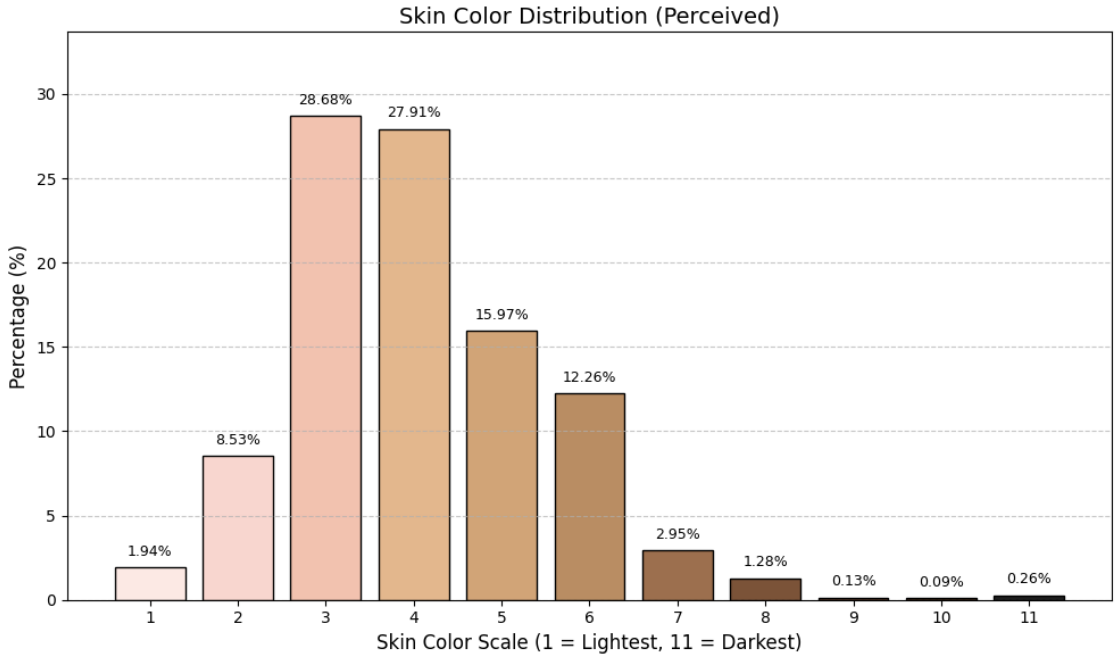

Figure 17: Skin Color Distribution (Perceived) in Colombia (PERLA Project)

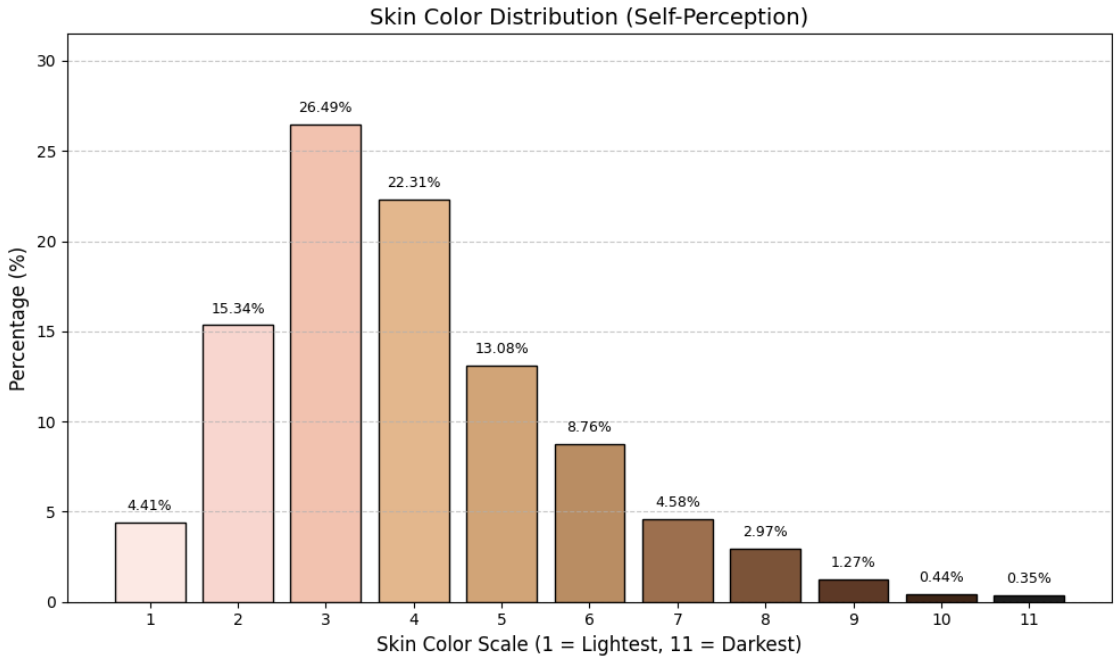

Figure 18: Skin Color Distribution Self-perception in Colombia (PERLA Project)

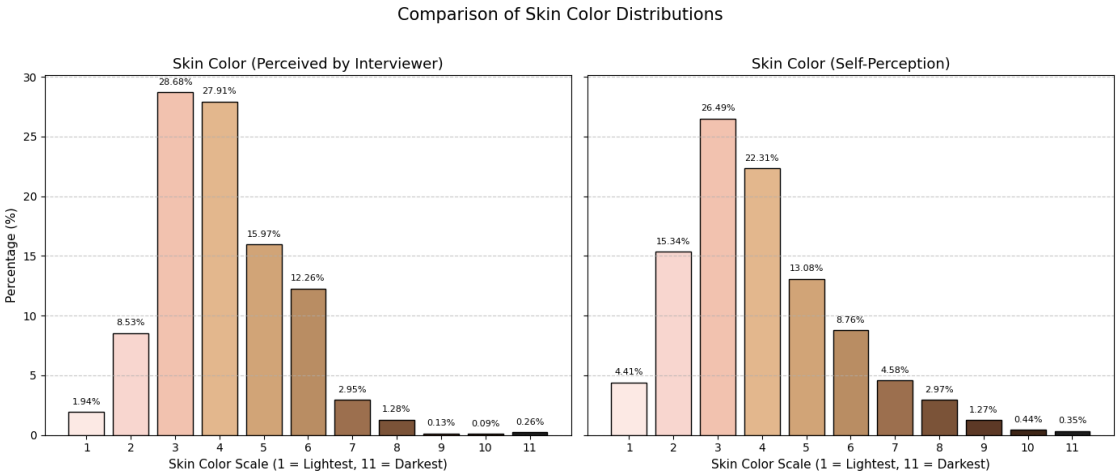

Figure 19: Skin Color Distribution Perceived Vs Self perception in Colombia (PERLA Project)

Interpretation of Key Variables

A. `share_migrant` (Observed)

- **Positive coefficient:** An increase in the actual share of migrants is associated with increased support for redistribution.
- **Negative coefficient:** The presence of migrants generates backlash or perceived competition over resources.

- **Interpretation:** This can be understood as the marginal effect of a percentage point increase in the real share of migrants on redistributive preferences.

B. `shock_rozo_z` (Predicted and Standardized)

- This variable does not reflect observed migration, but the expected intensity of the migration shock in a municipality, based on its historical linkage to Venezuela in 1993.
- It acts as a proxy for pre-determined exposure to migration shocks.
- **Interpretation:** A one standard deviation increase in the predicted migration shock (based on the 1993 Venezuelan distribution) is associated with a change of X units in redistribution preferences.
- Following Rozo (2021), I construct a measure of migrant exposure at the municipal level by interacting the share of Venezuelans residing in each municipality in 1993 with the total inflow of Venezuelan migrants into Colombia in year t. This approach captures the predicted exposure to migration shocks based on historical settlement patterns.
- This construction is justified as adequate to identify migratory shocks that do not depend on political decisions or current local conditions, but on pre-existing network conditions and an exogenous shock (the Venezuelan crisis).

C. $\widehat{IV}_{mt}$ (Instrumental Variable – Enclave Type)

- **Nature:** This instrument does not capture observed migration but rather the *predicted exposure* to Venezuelan migration shocks, based on a Colombian municipality's geographic proximity to Venezuelan states with a historically high density of Venezuelan (or Colombian, for robustness) populations.
- **Logic:** The premise is that municipalities closer to historically dense Venezuelan states are more likely to receive a larger share of migrants during the crisis-induced exodus.
- **Interpretation:** An increase in the instrument's value (i.e., higher predicted exposure based on historical density and proximity) is associated with an expected change in redistributive preferences, capturing exogenous variation in migration pressure.
- **Construction:** Following the approach of Del Carpio and Wagner (2015) and Caruso et al. (2019), this variable is constructed by interacting the share of Venezuelans (or Colombians) in each Venezuelan state in 1990 with the inverse of the distance from each Colombian municipality to each state. This weighted sum is then scaled by the total migrant inflow in year t.

- **Justification:** This construction isolates a quasi-exogenous source of variation not driven by contemporary political or economic conditions in Colombian municipalities but by historical spatial ties and geographic constraints.

Just Information: Construction of the Instrumental Variable (Municipality-Level Enclave IV)

The instrument is based on the idea that Colombian municipalities located closer to Venezuelan states with a historically higher concentration of Venezuelan residents (or Colombians, in a robustness version) are more likely to receive a larger number of migrants during the Venezuelan exodus.

Mathematical Formula

$$\widehat{IV}_{mt} = V_t \cdot \sum_{s=1}^{S} \frac{\alpha_{s,1990}}{K_{ms}} \tag{6}$$

Where:

- $\widehat{IV}_{mt}$: Predicted exposure to Venezuelan migration in municipality m and year t.
- V_t: Total number of Venezuelan migrants entering Colombia in year t.
- $\alpha_{s,1990}$: Share of Venezuelan (or Colombian, for robustness) population in Venezuelan states s in 1990 relative to the national total:

$$\alpha_{s,1990} = \frac{Pop_{s,1990}}{\sum_{s'=1}^{S} Pop_{s',1990}}$$

  - **Option 1:** Venezuelans in Venezuela – captures historical population density.
  - **Option 2:** Colombians in Venezuela – captures migration network potential.

- K_{ms}: Distance (in kilometers) between Colombian municipality m and the administrative center of Venezuelan state s.
- S: Total number of Venezuelan states.

Expanded formulation:

$$\widehat{IV}_{mt} = V_t \cdot \sum_{s=1}^{S} \left(\frac{Pop_{s,1990}}{\sum_{s'=1}^{S} Pop_{s',1990}} \cdot \frac{1}{K_{ms}} \right) \tag{7}$$