# The demography of crisis-driven outflows from Venezuela


## Abstract

The Venezuelan exodus represents the largest known displacement of people in recent Latin American history. Migrants are not a random sample of the population, and migration patterns by age and gender are dynamic, particularly amidst a wider crisis. This study examines the demographics of recent outflows from Venezuela, the chronology of associated changes, and the demographic implications for those remaining in the country. Official counts of Venezuelan-born populations compiled in seven main destinations are used to estimate annual outflows by age and gender from 2011 to 2020. Changes in the demographic composition of emigration are traced using parameters of the Rogers–Castro model, specifically the children-to-labor force dominance, and by decomposing the age contributions to the annual gross migraproduction rate. In the early phase of the crisis (2014–2017), emigration flows had high child dependency ratios. As the crisis entered its most acute phase (peaking in 2019), the mean age of migrants increased. Outward migration has resulted in the current Venezuelan population having 20% fewer women of reproductive age and 17.8% fewer individuals of working age. Consequently, the share of the population aged 60 or older has increased.



**Key words:** Migration, Latin America, population displacements, migrant stocks, migration flows, population crisis.

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## Introduction

International migration is often driven by structural, economic, and political factors such as international labor market disparities, income inequality, and conflicts in the countries of origin (De Haas et al. 2019). Throughout the twentieth century, Latin America has been marked by international migration, with periods of both immigration and emigration (Pellegrino 2000; Sanchez-Alonso 2019). However, between 2015 and 2020, approximately 76% of movements consisted of intra-regional migrants (UN DESA 2020), who fled poor labor markets only to find themselves in slightly less precarious conditions (Carrasco and Suárez, 2019).

No other nation epitomizes the region's history more than Venezuela. Once one of South America's most prosperous countries, Venezuela attracted large numbers of migrants from Europe, Latin America, and elsewhere throughout much of the twentieth century. According to the 1981 census, 7.4% of the Venezuelan population was born abroad, a proportion that had declined to 4.2% by 2011 (Rousset and Garcia 2020). However, due to socioeconomic instability and political turmoil over the past decade, immigration has decreased further while out-migration has increased (Freitez 2018). The recent Venezuelan exodus represents the largest displacement of people in Latin American history, comparable in magnitude to the 2015 crisis in war-torn Syria, when 23% of Syrian nationals fled to neighboring nations (UNHCR 2021; Carlotti 2021).

Venezuela is in the midst of a profound social and economic crisis, which intensified critically in 2015, one year after oil prices plummeted (Nowrasteh 2018). Between 2018 and 2019, hyperinflation peaked at 65,370%, and Venezuela's gross domestic product (GDP) plunged to a record low rate of −35% (International Monetary Fund 2021). During this period, the population living in extreme poverty rose to 75%, and 89.4% of household heads reported that their family income was insufficient to cover their household's food needs (LATAM Freedom and Development Foundation 2018; ENCOVI 2020).

As crime, hyperinflation, food scarcity, and human rights violations plagued the country (Nagel 2015), Venezuelans turned en masse to migration as a survival strategy. In April 2024, the Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela (R4V) reported that 6.1 million Venezuelans had fled the country (R4V 2024). At more than 20% of the estimated national population, such numbers are rarely seen outside of wartime. Approximately 80% of these outflows occurred between 2017 and 2018, making Venezuelans the world's largest population of asylum seekers as of late 2018 (UNHCR 2018a). The main destinations for Venezuelans are neighboring countries (Díaz-Sánchez et al. 2021), particularly Colombia, which received the largest influx, accounting for around 30% of the total (UN DESA 2019). Additionally, formerly displaced Colombians and other foreign-born populations also migrated back to their home countries, often with binational families (Masullo et al. 2021).

Studies on inflows of Venezuelan migrants are often found in country-based analyses (Koechlin and Eguren 2018; Caruso et al. 2021), frequently with a focus on specific sub-populations such as pregnant women (Tobon-Giraldo et al. 2019; Bahamondes et al. 2020; Pérez and Ugarte 2021), children (Garnica-Rosas, L. et al. 2021; Gallo Marin et al. 2021), HIV patients (Rodriguez-Morales et al. 2019; Huerta-Vera et al. 2021), and workers (Shamsuddin et al. 2021; Olivieri et al. 2021; Agudelo-Suárez et al. 2022; Ryu and Paudel 2022). However, little is known about either the overall demography of these crisis-driven outflows or the demographic implications for those who remain. Academic analyses have focused on changes in the general size of outflows during the crisis (Paez 2015; Heredia and Battistessa 2018), typically examining short time periods (Mazuera-Arias et al. 2019; Mazuera-Arias et al. 2020).

Migrants represent a non-random sample of the population in terms of demographic and socioeconomic characteristics. Consequently, certain individuals, characterized by specific age and gender profiles, are more likely to migrate than others, and the costs and benefits of migration vary for each individual as the crisis evolves. As Abel and Cohen point out (2022), migrant demographics play a role in the migratory experience by "shaping who will migrate and where they will go." Therefore, migration patterns by age and gender are dynamic, especially during widespread crises.

Accurate data on the demography of a crisis-induced migration are essential for developing effective mitigation strategies to reduce the vulnerability of the migrating population. Furthermore, emigration can have an immediate impact on remaining households and communities left behind, necessitating adjustments to their economic and care systems. Moreover, the loss of labor can have adverse effects on the local economy. Monitoring migration-induced changes for the demography of the remaining population allows for implementing evidence-based policies targeting specific subpopulations. In light of the above, the present study examines the demographic dynamics of the displaced Venezuelan population. It estimates annual outflows from Venezuela by age and gender from 2011 to 2021, and it summarizes the chronology of demographic changes in these outflows, along with their implications for those who remain in the country.

Venezuela maintains no emigration records, reflecting both its historical status as a country of immigration and the government's concomitant lack of interest in tracking emigration patterns. Thus, the primary challenge concerns the availability of data. This study relies on data from destination countries to compile estimates of annual outflows from Venezuela. However, data collection practices vary across these different countries. Some have conducted specialized surveys to estimate the number of Venezuelan immigrants within their borders, while others rely on continuous data sources such as administrative migration records or annual household surveys. This variability in data types and sources complicates direct comparisons, especially for annual estimates that require detailed granularity, such as gender, age, and year of arrival. Apart from Chile for the period 2018–2020 and Spain, no other destination countries compile official statistics on their Venezuelan-born populations by age and gender.

Carefully tracking the various potential sources of data in the main destinations of Venezuelans living abroad can help mitigate the challenges arising from the lack of continuous and equivalent datasets. The top destination countries are Colombia, Ecuador, Peru, Chile, Mexico, the United States, and Spain. Together, they accounted for around 90% of the total Venezuelan-born population living abroad as of April 2022 (R4V, 2022). The approach taken in this study assumes that by adding up inflows of Venezuelan migrants to these seven countries, overall Venezuelan outflow patterns during the period can be adequately summarized.

This sample of countries represents the demography of the outflows across three primary analytical dimensions identified in global migration trends (Czaika and de Haas 2014; de Haas et al. 2019). The first dimension is intensity, which varied over the period as outflows transitioned from low to high volumes and then back to low volumes. The second dimension is spread, indicating the number of destinations receiving relatively large numbers of migrants, a factor that also fluctuated during the crisis. The third and final dimension is distance, which is encompassed by the seven destinations, reflecting the experience of long- and short-distance displacements, such as those to the United States and Spain versus those to Colombia.

Here, the term *outflow* refers to individuals who were residing in Venezuela and changed their country of usual residence, regardless of their duration of stay and without distinguishing their legal status at destination. Although *refugee* and *migrant* are often considered separate categories, in practice, the distinction is blurred (Long 2013), especially in a context of crisis-based migration. Similarly, given a migrant's limited agency during an acute crisis, I draw no distinction between forced displacement and voluntary migration (Hugo, Abbasi-Shavaz and Percy 2018, de Hass et al 2019, Verwimp, Osti and Østby 2020) when tallying outflows. Thus, the counts encompass the entire Venezuelan-born population living abroad, regardless of their legal status or residency conditions. By counting Venezuelan-born migrants, this study also disentangles migration that may be concealed by second nationalities acquired through jus sanguinis, which is relevant in light of Venezuela's historical pattern of immigration. Notably, the estimates also include outflows of Colombian returnees, that is, Colombian immigrants to Venezuela who returned to Colombia from 2011 onwards; but it excludes those who migrated to a third country. Venezuela has witnessed two sizeable waves of Colombian-born migrants in the last half-century: one attracted by the oil boom in the 1970s (Pellegrino 2011; Freitez 2011), and the second fleeing the escalation of the Colombian conflict at the beginning of the twenty-first century (Ibáñez 2009; Urdinola 2001). According to the most recent population census, the stock of Colombian-born individuals living in Venezuela was 813,430 in 2011, constituting the largest foreign-born community in the country, representing 2.8% of the population (INE 2011).

In addition to shedding light on the changing demographic characteristics of the Venezuelan outflows over the past decade, this paper's results serve two main purposes. First, by quantifying the timing and intensity of the Venezuelan outflows by age and gender, they establish an evidence-based foundation for conducting further in-depth studies of the Venezuelan diaspora. Specific rates and probabilities derived from this analysis can be used to gauge vital events and any other phenomena linked to these outflows. Second, the evidence sheds light on crisis-induced changes in the size and composition of the population that has remained in the country.

**Recent migration in context**

In less than a century, Venezuela transitioned from being a net recipient of population to experiencing high and escalating net emigration. In the 1980s there were just over 45,000 Venezuelan emigrants, a figure that rose to 317,000 by 2000 and to around 560,000 by 2010 (UN DESA 2015). Since then, and for the first time in the history of the country, outflows have exceeded inflows each year.

Throughout the 2000s, Venezuela witness a period of economic expansion driven by sustained increases in tax revenues resulting from high oil prices. However, simultaneous political instability plunged the country into cycles of severe social conflict with severe economic repercussions. Events such as a national strike in private industry and a failed coup d'état in 2002, along with a strike by employees of the national oil company (PDVSA) in 2002–2003, led to food and fuel shortages that profoundly affected most of the population. Violent clashes between pro- and anti-government groups fostered an atmosphere of extreme political polarization. Venezuelan authorities used various lists of citizens considered opponents of the governing party (such as the "Tascón List"[1] and a list of strikers in PDVSA) to dismiss public officials from their positions and deny citizens access to public administrative services and procedures.

These events marked the onset of the first migratory wave of the twenty-first century, which consisted primarily of former oil industry employees and other highly qualified professionals. Their main

[1] List of individuals who signed a petition in 2003-4 calling for the recall of then-President Hugo Chávez

destinations were the United States, Spain, Italy, and Portugal (Freitez 2011). In the latter half of the 2000s, the country's economic growth coincided with escalating violence and criminality, prompting a second migratory wave beginning around 2007. This wave consisted mainly of members of Venezuela's middle and upper classes, businesspeople, and the first or second generation of descendants of immigrants to Venezuela (Requena and Caputo 2016)

After the death of President Chávez in office and the inauguration of President Maduro in 2013, new economic controls were implemented, such as intensified price controls through the Fair Prices Law and the devaluation of the national currency. These measures resulted in a pronounced contraction in economic activity, leading to the closure of nearly 78,000 companies, uncontrolled inflation, and shortages of essential goods such as food, hygiene products, and medicines (Castillo and Reguant 2017, Zambrano and Sosa 2018). Consequently, the proportion of households living in extreme poverty steadily rose from 10 percent in 2013 to 78 percent in 2018 (ENCOVI, 2020). Food and nutritional deficiencies increased the risks of morbidity and mortality, while the number and lethality of cases of previously controlled infectious diseases also surged (Garcia et al 2019).

The country's deepening political-legal crisis reached a peak in 2017 when the Supreme Court overruled the publicly elected National Assembly, sparking a new cycle of extrajudicial executions and state violence against anti-government demonstrators. In 2016 the third and largest wave of emigration in Venezuelan history began, predominantly consisting of members of the lower and lower-middle classes seeking work or income to survive (Koechlin et al., 2018).

Drawing on findings from previous episodes of crisis-induced migration, one might expect the demography of the outflows from Venezuela to reflect evolving reactions to the worsening conditions in the country of origin, leading to corresponding changes over time in the age and gender composition of the Venezuelan diaspora abroad. For instance, increased levels of migration prompted by structural factors in the origin country typically coincide with reductions in the modal ages of migration (Rogers and Rajbhandary, 1997). In this study, I analyze the demography of outward migration patterns from Venezuela across four distinct periods: pre-crisis (2011–2013), the incipient or early phase of the crisis (2014–2017), the most acute years of socioeconomic upheaval (2018–2020), and the COVID-19

pandemic (2021). Figure 1 shows the timeline of the crisis in Venezuela and the key events demarcating these phases.

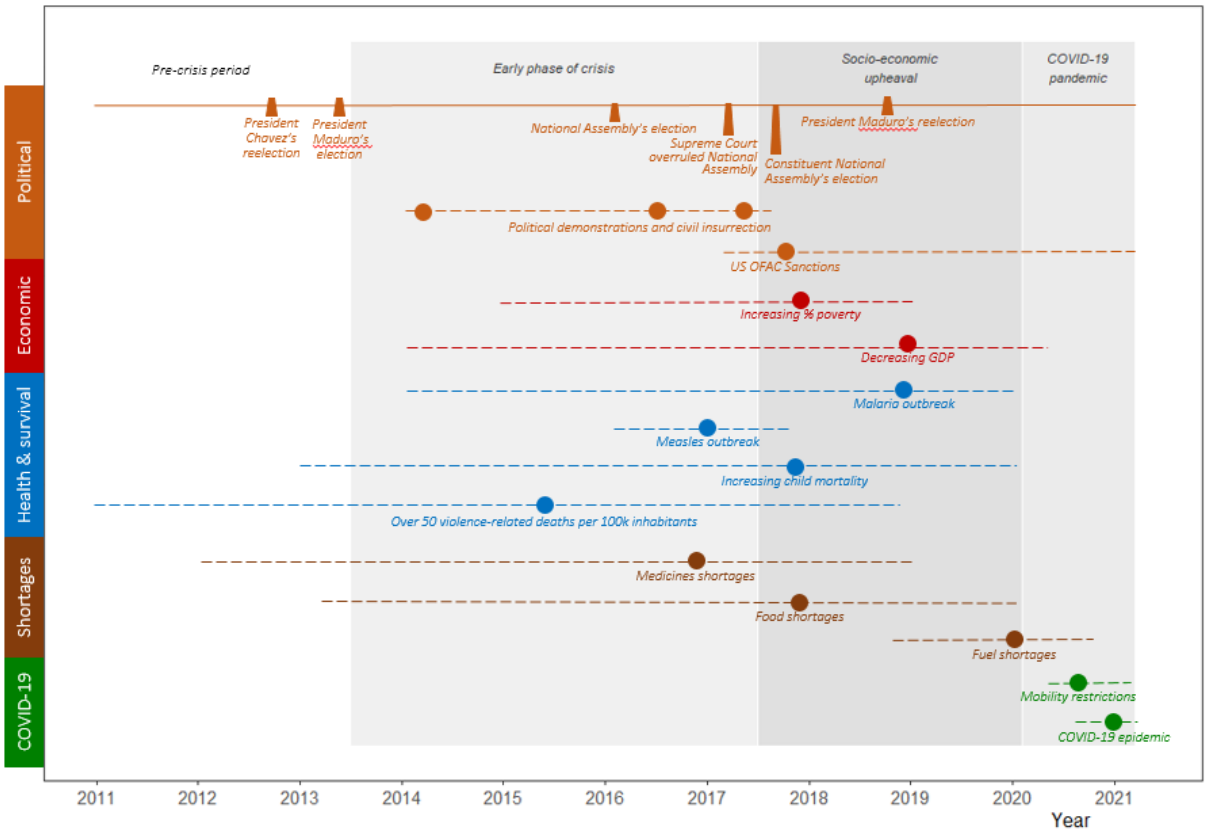


**Figure 1 Timeline of the crisis in Venezuela, 2011–2021.**

Note: Dashed lines mark the event period; dots indicate critical peak indicator levels.

Sources: Political event timeline: Cohen, L. "How Venezuela got here: a timeline of the political crisis" https://www.reuters.com/article/us-venezuela-politics-timeline-idUSKCN1PN05S; Demonstrations: Wikipedia, "Timeline of the Venezuelan protests" https://en.wikipedia.org/wiki/Timeline_of_the_2019_Venezuelan_protests; US OFAC sanctions: https://ofac.treasury.gov/sanctions-programs-and-country-information/venezuela-related-sanctions; Proportion of households living in poverty: data published by ENCOVI-UCAB 2015-2022, available at https://www.proyectoencovi.com/. GDP: World Bank 2022; Malaria: updates published by the Pan-American Health Organization at https://www.paho.org/en/topics/malaria. Measles: epidemiological alerts published by the Pan-American Health Organization https://www.paho.org/en/topics/measles. Child mortality: epidemiological alerts published by the Venezuelan Health observatory at https://www.ovsalud.org/ in Garcia et al (2019). Homicides: Garcia and Aburto (2019), figures published by the Yearbook of the Venezuelan Observatory on Violence, 2015-2022, at https://observatoriodeviolencia.org.ve/. COVID-19 cases and non-clinical measures applied by the country at https://covid19.patria.org.ve/estadisticas-venezuela/.

## Data

After reviewing all sources of data on the Venezuelan-born population living abroad, this study focuses on two categories: 1) country-based sources that consistently record the age and gender of the Venezuelan-born population, and 2) country-specific and international sources providing comprehensive data on the total flow or stock size for each year under study. For certain countries (such as Ecuador), both age and gender data, as well as total annual flow data, are sourced from the same

provider. Conversely, for other countries (such as Colombia), the sources may vary across the study period.

Table 1 summarizes all the available age and gender data by year of reference. This data may include information from previous years, as in the case of population censuses and migrant surveys, where stocks may be distinguished by year of arrival. In contrast, administrative reports on flows typically provide only information for the reference year.

Table 1 Available age and gender data on Venezuelan-born individuals living abroad, by destination country and data type

| | Reference year | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Destination country | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Colombia | | AR | AR | AR | AR | AR | AR | CC AR CS | AR CS | AR CS | AR CS | AR CS |
| Chile | | | | | | | CC | | ME | ME | ME | |
| Ecuador | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | |
| United States | CS | CS | CS | CS | CS | CS | CS | CS | CS | | CS | |
| Spain | PR | PR | PR | PR | PR | PR | PR | PR | PR | PR | PR | |
| Mexico | | | | | CC | | | | | CC | | |
| Peru | | | | | | | CC | SS | | | | SS |

| | |
|---|---|
| Flows | Stocks |
| CC Census | CS Continuous survey |
| SS Migrant survey | ME Migration estimates |
| AR Administrative reports | PR Population register |

Note: Appendix 1 details the data sources and their limitations.

Data sourced from distinct providers often exhibit heterogeneity stemming from the varying objectives underlying their collection efforts. Additionally, in different cases, counts may represent either annual flows or annual stocks. Table 2 shows the age and gender information potentially derived from the aforementioned data sources.

In addition to age and gender data, this study uses total emigrant counts from various sources, namely: the 2012, 2015, and 2019 Revisions of the World Population Prospects (WPP); migration figures for 2020 from the UN Department of Economic and Social Affairs (DESA); and the monthly figures reported by the interagency coordination platform R4V (2018–2022) for the total size of the diaspora. The information is drawn from census records and country-specific administrative reports on Venezuelan citizens living in the destination countries, regardless of their nationality or year of arrival.

Table 2 Available data on stocks and flows of Venezuelan-born individuals, by destination country

| | Reference year | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country/Source | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Colombia | a | a | a | a | a | a | a | a | x | x | x | x | |
| Chile | | | a | a | a | a | a | x | | x | x | x | |
| Ecuador | | | f | f | f | f | f | f | f | f | f | f | |
| United States | x | x | x | x | x | x | x | x | x | x | f | x | |
| Spain | x | x | x | x | x | x | x | x | x | x | x | x | |
| Mexico | x | | | | | x | | | | | x | | |
| Peru | | | a | a | a | a | a | x | x | a | a | a | x |
| UN DESA migration statistics | | | | | | | | | | | x | | |
| World Population Prospects | | | x | | x | | | | x | | | | |
| R4V | | | | | | | | | x | x | x | x | |

| | |
|---|---|
| x | Stock |
| a | Retrospective stocks |
| f | Flow |

Note: Appendix 2 shows the temporal scope and annual count on each data sources.

## Methods

The age and gender outflow estimations by year are derived from two independent calculations: first, a summary of the age and gender composition of Venezuelan-born individuals living in the seven selected countries (see Online Supplemental Material for a detailed data description); and second, the total count of Venezuelan-born individuals living abroad reported by international organizations. The final estimates are presented as annual age and gender-specific outflows at mid-year, assuming that, for each year, the reported stocks represent the cumulative count of previous stocks and the survivors of recent inflows.

### Age and gender structure of stocks in individual destination countries

The strategies employed in this study to estimate the annual age and gender composition of the migration stocks in each country varied depending on whether the available data referred to population flows or stocks, as detailed below. When referring to "stock," this document denotes the number of Venezuelan-born present in a country at a specific moment in time, whereas "flow" refers to the number of Venezuelan-born arriving in a country within a particular time period.

*a) Stocks reported in censuses and specialized surveys, categorized by declared year of arrival:* Data from censuses and surveys used in this study readily facilitate the calculation of total stock for a reference year, as well as its age and gender structure. Information on migrants' age, gender, and country of birth suffices if the enumeration exhibits either a low omission rate or a representative sample size, both of which are applicable to all the censuses and surveys considered in this study. Challenges arise, however, when estimating stocks in years prior to the enumeration, because the stocks of migrants in the enumeration represent only those who both survived and remained in the destination country until the time of enumeration (Dorrington 2014). To address the first challenge, this study estimated the survival of migrants. The second challenge proved difficult to overcome due to the lack of available records on individual entries and exits of migrants in the selected countries.

For each country with available enumeration categorized by declared year of arrival, the estimated flow $\hat{l}$ at age *x* in year *t* ( $\hat{l}_x^t$ ) is equal to the number of migrants of age *x* + *n* in the enumeration used as baseline *(b)*, where *n* is the lag between the reference year and the year of declared arrival, plus the estimated number of migrants who arrived in the reference year but did not survive until year *t* ($S_{x+n}^t$) (see the survival estimates in the Online Supplemental Material, Appendix 3).

$$\hat{l}_x^t = l_{x+n}^b + \left( l_{x+n}^b * \left( \frac{1}{S_{x+n}^t} - 1 \right) \right) \quad (1)$$

Subsequently, the estimated annual age and gender stocks ($\hat{c}_x^t$) for years preceding the enumeration are calculated as the cumulative sum of estimated annual flows, taking into account the ageing of the population. These consist of reported flows of individuals of age *x* – *n*, where *x* represents the age in year *t* and *n* denotes the lag between *t* and the year 2011, which is regarded as the initial year of this study.

$$\hat{c}_x^t = \sum_{n=0}^{t-2011} \hat{l}_{x-n}^{t-n} \quad (2)$$

*b) Flows reported in administrative records:* Certain countries compile annual data on the entries and exits of their national and foreign populations. These migration flows are disaggregated by legal status at entry (type of visa), the purpose of stay or departure, age, and gender. Estimations based on administrative records involve individuals reporting "residency" or "studying" as their purpose of entry and Venezuela as their country of origin.

For each country with available administrative records, the annual stock of individuals of age *x* in year *t* ( $\hat{c}_x^t$ ) is calculated independently as the sum of reported flows of age *x* – *n* in the previous years within the study period($l_{x-n}$ ), where *n* represents the difference between the reference year *t* and 2011, regarded as the initial year of this study. This calculation is then adjusted by subtracting the estimated number of migrants in each age group who did not survive until year *t* (see the survival estimates in the Online Supplemental Material).

$$\hat{c}_x^t = \sum_{2011}^{t-2011} l_{x-n} - \left( l_{x-n} * \left( \frac{S_x^t}{S_{x-n}^t} - 1 \right) \right) \quad (3)$$

*c) Stocks from population estimates, continuous surveys, and population registers:* In cases where the available data represent annual population stocks for each year in the study period, quality checks were performed. These checks aimed to identify and rectify reporting errors related to digit preference in age declaration. Counts displaying digit preference in age declaration were smoothed by applying moving averages. Similarly, cases of incomplete or unknown information were allocated proportionately across known data (see the Online Supplemental Material for detailed arrangements). I assumed that there is no negative difference between any two consecutive stocks (i.e., inflows from Venezuela were always higher than outflows in any given age and gender group in any country). Where calculations resulted in negative counts, the estimated number of individuals of age x who arrived at their destination from Venezuela was defined as zero. In this case, 1.87% negative values were forced to zero; most of these pertained to the population aged 60 and over during the pre-crisis period.

**Total annual outflow estimates**

The initial step in calculating total annual outflows involved determining annual stocks from 2010 to 2022, as most available reports from international organizations provide figures for 5-year periods on the numbers of Venezuelan-born individuals living abroad, regardless of their year of arrival in or exit from the reporting country. To achieve this, a single-year estimate was derived by aggregating the annual single-country estimates of Venezuelan migrant stocks for the seven primary destination countries, along with an estimated "rest" for all other destinations combined. The "rest" was defined as the complement when interpolating the proportional size of the seven countries relative to the total stocks of Venezuelan emigrants reported in the 2020 origin–destination matrix produced by UN DESA (United Nations 2020). Regarding the total stocks of Venezuelan-born individuals living abroad, the proportion residing in the seven main destination countries increased from 72.1% in 2010 to 94.5% in 2022.

The estimates of Venezuelan stocks living abroad are regarded as inputs in a semi-parametric regression model aimed at smoothing the estimates and deriving a likely trend. The smoothing parameter was calculated using the restricted maximum likelihood approach. The model is defined as:

$$\hat{C}^i = f\left(t^i\right) + \varepsilon^i, \qquad \varepsilon^i \sim N(0, \sigma_\varepsilon^2) \tag{4}$$

where, ($\hat{C}^i$) refers to the total stocks of Venezuelan living abroad and $t^i$ to the years, while $\varepsilon_i$ represents the error. The assumptions of this model are identical to those underlying the mixed linear models.

**Total age and gender outflow estimates**

The age- and gender-specific figures from the combined single-country estimates provide the demographic composition of the annual stocks. The total outflow $\left(\hat{L}_x^t\right)$ of Venezuelans of age *x* in year *t* is determined by subtracting two consecutive stocks, while considering their likelihood of survival by age and gender (see the survival estimates in Appendix 3). Thus, $\hat{L}_x^t$ equals the estimated total stock of individuals of age x in year *t* $\left(\hat{C}_x^t\right)$, plus those who do not survive the year *t* $(m_x^t)$, minus the estimated stock of individuals aged $x - 1$ in year $t - 1$ $\left(\hat{C}_{x-1}^{t-1}\right)$ and their share of non-survivors during year $t - 1$.

$$\hat{L}_x^t = \left(\hat{C}_x^t + \left(\hat{C}_x^t * m_x^t\right)\right) - \left(\hat{C}_{x-1}^{t-1} + \left(\hat{C}_{x-1}^{t-1} * m_{x-1}^{t-1}\right)\right) \quad (5)$$

The annual share of non-survivors ($m_x^t$) is calculated using the empirical survival rates by age of the population that remains in Venezuela in year *t*.

$$m_x^t = \frac{1}{S_x^t} - 1 \quad (6)$$

**The force of outmigration during the crisis**

Rogers and Castro developed a statistical model enabling the generalization of the age selectivity of migration based on empirical schedules of age-specific migration rates. The Rogers–Castro model migration schedule is a multiexponential model, which can be expressed with seven, nine, eleven, or thirteen parameters (Rogers and Castro 1981). The present study focuses on two parameters to monitor changes in the age composition of the population leaving Venezuela: the age of peak propensity toward outmigration in the population ($x_h$), and the subpopulation dominance in the outflows (a2/a1), which indicates if there is child dependence or dominance of the labor force. A value lower than one in the dominance indicates child dependence, whereas a value higher than one indicates the level of dominance of the labor force. The a2/a1 indicates the force of family migration among the outflows. The calculations were conducted using the R package *rcbayes* (Yeung, Alexander and Riffe 2021).

In addition, the gross migraproduction rate (GMR) is computed to highlight changes in the migration intensity of the Venezuelan population during the crisis. Migration intensities vary substantially with age, with certain age groups engaging in migration more frequently than others. The GMR standardizes the level of migration experienced by a population per lifetime, eliminating the effect of the demographic composition of the population. By tracking the GMR trend, one can isolate the feedback effect in the age composition of outward flows and the remaining population. This is particularly important because a significant wave of emigration also alters the demographic profile of the remaining population, which implies changes in the composition of future waves and that of the remaining population. The GMR is calculated by summing the age-specific outmigration rates for all ages, and its interpretation is similar to that of the gross reproduction rate for fertility (Rogers and Castro 1981), representing the number of

events per lifetime. The GMR was originally conceived as an event-based measure for estimating migration intensity from period data (Reeds et al 2000). Results manifest as the age decomposition of GMR (in percentage), facilitating the assessment of changes in the age contribution to migration intensity during the crisis. Similarly, male-to-female GMR ratios elucidate the evolution of age-standardized differentials between genders.

### Changes in the demography of those who remain

This study evaluated the impact of the massive outflows from Venezuela on the current in-country population by contrasting the "expected" population, based on pre-crisis demographic trends, with an estimate that incorporates the recent outflows. The counterfactual scenario is built on official outdated population estimates published by the Institute for National Statistics in Venezuela (INE) in 2017. These outdated estimates relied on observed trends in official vital statistics up to 2014, along with data from the 2011 Population and Household Census. In the scenario developed here, the 2011 population was subjected to annual age- and gender-specific outmigration rates, along with the outflow's share of potential population growth based on its fertility rate. The population changes induced by outmigration are summarized for the year 2021.

## Results

### The shifting size and composition of the Venezuelan exodus

Figure 2 summarizes reported and estimated outmigration from Venezuela during the period 2011–2021, showcasing stocks (left panel) and flows (right panel). The interpolated aggregate flow to the seven main destinations (in blue) is the longest and most detailed of the series. This is because figures from UN DESA (in green) and WPP (in reddish to yellowish scale) are updated only as five-year estimates, while the monthly counts of the R4V platform (in purple) cover only the most critical period of migration outflows, since 2018. The total outflow since 2011 is around 5.16 (95% CI: 5.13–5.19) million, equivalent to 18% of the estimated 2021 Venezuelan population. The vast majority, around 4.73 (95%

CI: 4.65–4.80) million, emigrated between 2015 and 2020. Socioeconomic upheavals led to the largest exodus of Venezuelans, particularly in 2018–2019, when nearly 1.70 (95% CI: 1.69–1.71) million people left the country. Despite the decrease in the intensity of migration resulting from severe mobility restrictions brought on by the COVID-19 pandemic, nearly 300,000 more people managed to cross the border between mid-2020 and mid-2021, mainly through improvised hubs.

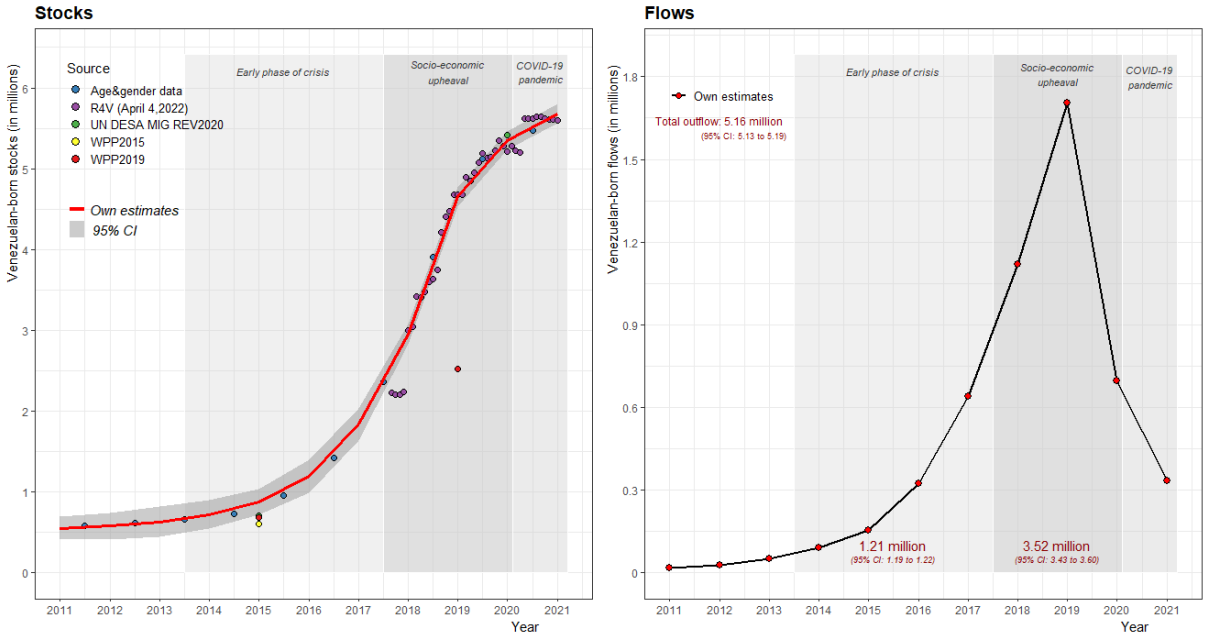


**Figure 2 Outmigration from Venezuela: Stock (left) and flows (right) at mid-year, 2011–2021.**

Source: R4V = estimates based on data from the Interagency Coordination Platform for Refugees and Migrants from Venezuela (retrieved on 4 April 2022); Age & gender data = author annual estimates based on data reported by the seven main destination countries (see Appendix Figure 1); UN DESA MIG REV2020 = UN DESA International Migrant Stock 2020; WPP2019 = UN DESA Population Division, International Migrant Stock 2019; WPP2015 = UN DESA Population Division, Trends in International Migrant Stock: Migrants by Destination and Origin.

The age structure of migrant stocks and flows changed in concert with total outflow, as shown in the right panel of Figure 3. During the pre-crisis and early phase of the crisis periods, the outflows included many children. This was particularly evident between 2012 and 2015, when the relatively small outflows (under 150,000 persons per year) were driven primarily by foreign-born individuals returning to their countries of origin, usually with binational families. For instance, the 2018 Colombian Census (DANE 2018) reports that, up to 2016, one-third of the outflows from Venezuela to Colombia comprised children aged under 15 years old.

As the crisis unfolded, outflows came to be dominated by working-age individuals, especially those aged 15 to 40 year-olds. However, during the most acute year of the crisis (2019), individuals aged 50

or older began to make up a significant proportion of outmigration, especially older women during the COVID-19 pandemic. Mean age at migration, which decreased in the early years of the crisis (2014–2017), increased again from 2019 onward. Throughout the period 2011–2021, the mean age of women remained consistently higher than that of men.

Changes in the age and gender structure of outflows can be tracked through the resulting age and gender distribution of the total stock (Figure 2, left panel). The stock in 2021 comprised a young population, with only 2.8% of men and 4.1% of women aged 65 or older. Males were generally younger than females, with average ages of 30.6 for men and 31.8 years for women. Moreover, the population of boys under age 15 was 1.4% larger than that of girls in the same age range (19% vs. 17.6%).

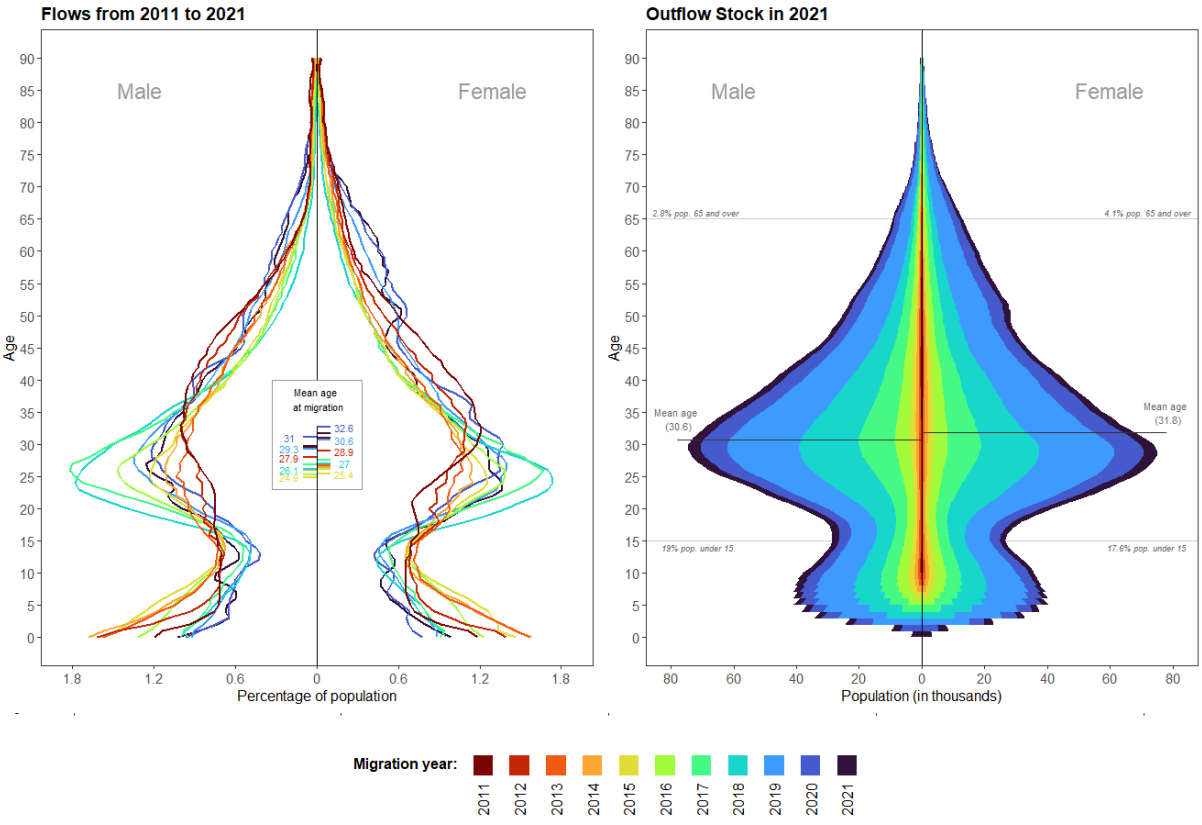


**Figure 3. Age and gender structure of stocks and flows of out-migrants from Venezuela, 2011–2021.**

*Note.* Left panel: The 2011 to 2021 flows show the proportional distribution by age and gender of annual outflows from Venezuela. Each year is color-coded, ranging from reds at the beginning of the study period to blues at the end. Mean migration ages for males (left) and females (right) for each year are presented in a central box and indicated with the same colors as the age curves. Right panel: The 2021 migrant stock illustrates the numerical distribution of Venezuelan-born migrants by age, gender, and year of migration, using the same color scheme.

Source: Author's estimates of Venezuelan annual outflows by age and gender.

**The dynamics of outmigration during the crisis**

Changes in the demography of outgoing flows reflect both structural factors determining the intensity of migration and the evolving composition of the origin country's population. To isolate this feedback effect between outward flows and the remaining population, Figure 4 focuses on the evolution of the gross migraproduction rate (GMR), which measures the migration intensity of a population without the effect of its demographic composition. The left panel shows the gender differential, while the right panel shows the contributions of different age groups to migration flows.

Until 2016, the GMR showed modest increases, reaching levels that involved less than one move in the average lifetime of any individual living in Venezuela. The GMR peaked in 2019, when it reached 4.22 (95% CI: −4.12 to 4.31) for men and 4.74 (95% CI: −4.60 to 4.89) for women. Women's GMR exceeded that of men's throughout the study period, with the differential ranging from 0.87 in 2011 to 0.98 male movements per female movement in 2018. The historical feminization of Venezuelan emigration rates, observed since 1990, has continued even in the context of a crisis. The large outflows of men observed between 2014 and 2018, when their share of the total increased, were partly a function of the composition of those still living in Venezuela.

The greater propensity of Venezuelan-born women to migrate has remained consistent. In 2017, the contributions of working-age women to annual GMR were only slightly lower than those of their male counterparts. However, at more advanced ages, women's contributions to the GMR have consistently exceeded those of men. Notably, the contribution of women aged 55 and over has been the major differentiator between male and female GMRs.

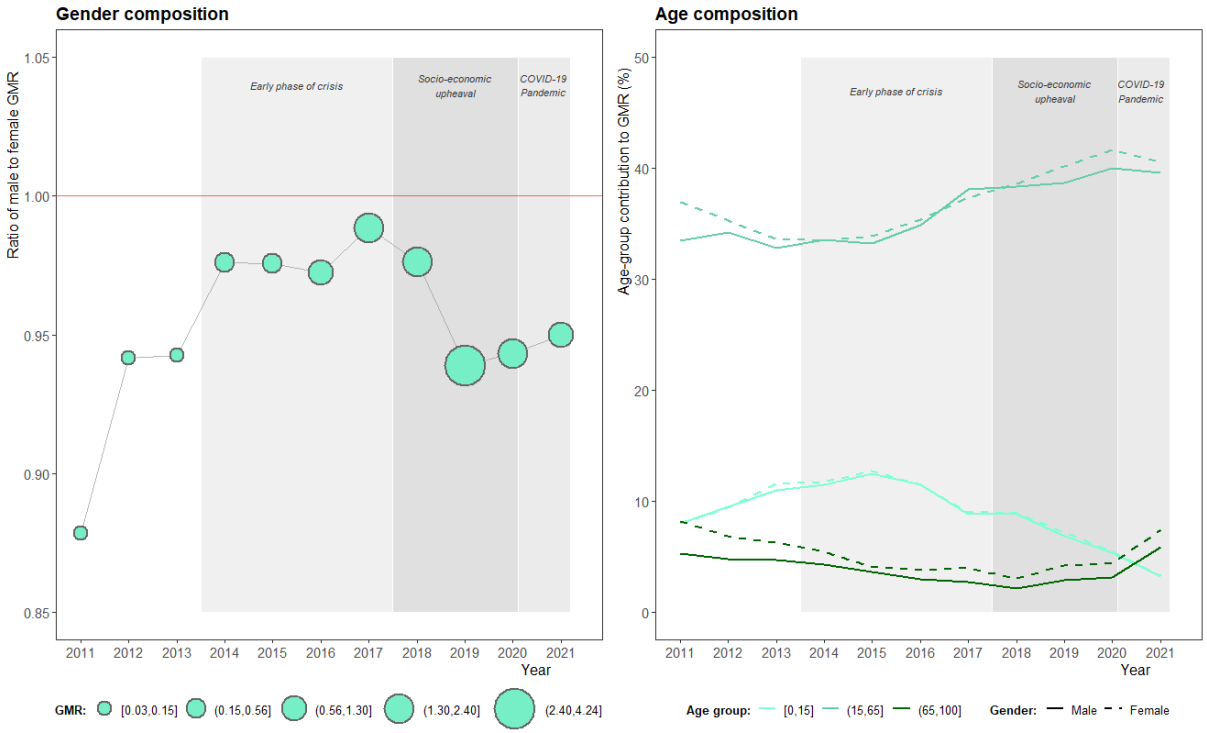


Figure 4. Gender differential in GMR and contributions to Venezuelan emigration by age group, 2011–2021.

*Note:* Left panel: The circles' positions indicate the ratio of male GMR to female GMR, with the red line denoting gender parity. Circle sizes represent the value of the annual GMR for the total population, reflecting the summary of age-specific rates (ranging from 0.03–0.15 to 2.40–4.24). Right panel: Curves illustrate the contributions of various age and gender groups to the GMR. Colors denote age; solid lines represent male outmigration; and dashed lines depict female outmigration.

Source: Author's estimates of annual outflows of Venezuelan-born individuals, by age and gender.

The age of peak propensity to emigrate ($x_h$) evolved throughout the crisis (see the Online Supplemental Material, Appendix 4 and 5). During the pre-crisis period and part of the early phase, young children constituted the age group with the greatest propensity to migrate, as binational families comprised a large part of the outflows. In general, families migrating with young children were particularly prominent between 2012 and 2016, with children and adolescents under the age of 15 contributing up to 24% of the GMR in 2015. However, as the crisis intensified, the contribution of children to the outmigration from Venezuela progressively decreased, and the peak propensity to migrate shifted to the working ages, specifically between the ages of 25 and 31. Accordingly, the data on migration flows show a shift over time from high child dependency to labor dominance.

During the pre-crisis and early crisis period dominated by family migration, the peak age at outmigration showed gender parity (between 2012 and 2017); however, during the most acute years of the crisis, men were likely to migrate at slightly higher labor-force ages than women.

**Outmigration-related changes in the size and composition of the current Venezuelan population**

Migration-induced change during the study period resulted in a 17.8% loss compared to the expected 2021 population assuming the observed fertility and continuity (no change due to the crisis) in mortality trends. The left panel of Figure 5 shows the estimated population pyramid for 2021, with Venezuelan outflows in blue and their share of expected offspring in orange. The right panel summarizes the changes (as a percentage) in different population groups by age and gender, based on composite indicators. The most impacted groups are women of reproductive age (WRA) and the working-age population as a whole. Specifically, outward migration has resulted in the current Venezuelan population having 20% fewer WRA, while the working age dropped by 17.8% fewer individuals aged 15 to 64. As a result, the share of the population aged 60 or older has increased by 8% (males) and 10% (females) respect to what it was expected without migration.

Consistently higher female GMRs have increased the male-to-female ratio from 101 to 102 per 100. Outflows in 2019 in particular contributed greatly to this increase. Given that men's propensity to migrate peaks at a later age than that of women, and women's higher survival rates, the gender gap in mean age also increased. Over the study period, the mean ages of both males and females in Venezuela rose by 2%, while the difference between men's and women's ages increased to 1.4 years, rather than the expected 1.2 years.

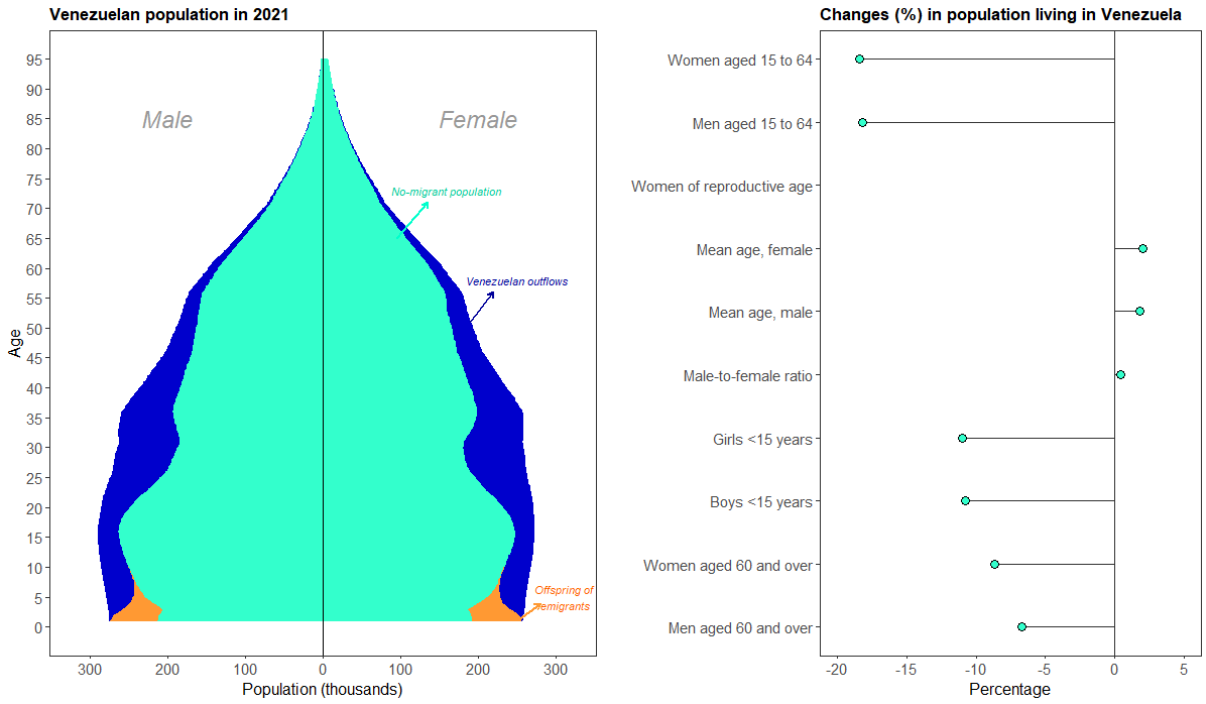


Figure 5. Changes in the age and gender composition of the estimated 2021 Venezuelan population due to 2011–2021 outflows.

*Note:* Left panel: The population pyramid shows the estimated 2021 Venezuelan population based on the demographic trends observed in the 2011 Population and Household Census. Emigrants (blue) and their offspring, calculated based on their expected fertility rates (orange), are subtracted. The resulting net population (in green) represents the non-migrant population still living in the country. Right panel: Differences (in percentage) between the author's estimates of the remaining population in Venezuela and predictions from the Institute for National Statistics in Venezuela for 2021.

Source: Author's estimates of annual outflows of Venezuelan-born individuals by age and gender. Expected 2021 Venezuelan population by age and gender published by the Institute for National Statistics in Venezuela (INE).

## Discussion

Until the late twentieth century, Venezuela stood out as a desirable destination country for many migrants. However, the country's recent period of socioeconomic upheavals reversed the direction of the flow. Venezuelans' outmigration began at low intensity, with those who left comprising mainly middle-class individuals, entrepreneurs, students, and second-generation immigrants who headed primarily to the United States and Europe (mainly Spain, Italy, and Portugal). Within less than a decade, the country experienced an explosion of outward displacement, as heterogeneous outflows of middle- and lower-income Venezuelans headed to nearby countries such as Colombia, Ecuador, and Peru (Rousset and Garcia 2020). The regional crisis caused by this mass Venezuelan migration drove the development of multiple inter-agency initiatives (such as the R4V platform), as well as academic attempts to keep track of outflow intensity. However, little is known about the age and gender

composition of the emigrants since most existing literature to date has focused primarily on total volume and country-specific shares of migration outflows.

In particular, the knowledge gap regarding the age and gender of Venezuelan emigrants stems from a lack of comparable, regularly compiled data, as most of the main destination countries lack population registers. Additionally, the COVID-19 pandemic caused delays in the 2020 Latin American census rounds, which constitute the primary source of migration data in Latin America. The present study has overcome these challenges by integrating various data sources from the seven main destinations for Venezuelans to determine the age and gender composition of emigrant outflows from Venezuela. The results shed light on three critical aspects of this composition: its evolution (in numbers and proportions) over the course of the crisis, the evolution of the age-specific schedule of outmigration from the country (in standardized rates), and the migration-induced demographic changes in the population that remained in the country.

Although it has been asserted that the gender selectivity of migration is much less pronounced than its age selectivity (Roger and Castro 1981), men are more likely to move as migrant workers, leading to a high ratio of women to men in displaced populations (Reed et al. 1998). Throughout the different stages of the crisis, the gender composition of the outflows shifted in both directions. In the pre-crisis period, the emigrant profile in Venezuela consisted largely of highly qualified women seeking opportunities in specialized job markets (Freitez 2018). However, as the interlocking crises began act as a push factor for the entire population, increasing numbers of men left the country in the early phase of the crisis (2014–2018). Once the crisis passed through its most critical years, women regained their dominant share among the outflows.

The gender-specific emigration rates reveal that the predominance of men in the outflows during the early phase of the crisis (2014–2018) was primarily due to the overall composition of the Venezuelan population. In fact, women travelling independently and sending back remittances emerged as a key survival strategy for many households during the crisis in Venezuela. The feminization of migration is a common phenomenon in Latin America, where women have consistently demonstrated a higher

propensity to migrate than men since the 1990s (United Nations 2020). Globally, the number of women seeking to generate remittances has also increased (Cabieses et al. 2013; de Haas et al. 2019).

The evidence presented here may offer valuable insights for further comprehensive research on Venezuelan outflows, particularly work that focuses on the gendered dimensions of human survival and mobility in crisis-driven migration processes. Understanding the factors driving women to migrate is crucial for comprehending the distinct characteristics and consequences of various migration patterns in both origin and destination countries (Birchall 2016). Gender analysis extends beyond adult men and women to include boys and girls as well. Notably, boys aged 15 years and below represented 19.1% of cumulative outflows from Venezuela between 2011 and 2021, slightly more than their female counterparts (17.6%).

Given that people with children are less inclined to migrate from stable environments compared to those without children (Toulemon 2006), the early phase of the crisis witnessed a rise in the share of children in the outflows from Venezuela and a decline in the mean age at migration compared to the pre-crisis period. During this phase, children and adolescents formed a large part of the outflows, as whole families migrated together. This family migration phenomenon coincided with the relaxation of transit and entry permit conditions in the South American trade bloc MERCOSUR. However, as the outflows intensified, most recipient countries began to impose entry barriers on Venezuelans (Freier and Parent 2019). Concurrently, the Venezuelan government closed borders and failed to issue valid passports to many citizens (Gandini 2022, Spiridigliozzi and Barbeito 2023). Collectively, these developments may have led to a decrease in family migration out of Venezuela and an increase in the proportion of young adults emigrating alone, prompted by the escalating risks associated with irregular routes and reliance on smugglers.

The findings of this study can be compared with the migration figures reported in the 2017 and 2020 waves of the Survey on Living Conditions in Venezuela (ENCOVI). According to the 2017 ENCOVI results, 16% of households remaining in the country had a solitary member emigrate to another country between 2012 and 2017, while 42% experienced the departure of more than one member (ENCOVI 2018). Sons or daughters of household heads were the most frequently cited migrants, representing

approximately 61% of all reported migrants in 2020 and 54% in 2022. Consequently, migration profoundly impacted the family structure of those remaining in Venezuela, potentially leading to disruptive dynamics between migrants and non-migrants within households. Since the onset of the crisis-driven migration outflows, the mean age of household heads has risen, coinciding with an increase in the proportion of women declared as household heads. Furthermore, households reporting migration by one or more members are more likely to be extended and multigenerational than those without migrants (Di Brienza 2022). This evidence suggests a substantial exodus of young parents, particularly women, who left their children under the care of elderly relatives.

COVID-19 travel restrictions in mid-2020 significantly decreased the intensity of outflow to much lower levels. This residual outflow comprised a larger portion of extended family members compared to previous years, particularly older adult women, who relocated to reunite with family members abroad. The emigration of older adults may largely stem from the formidable threat to their survival posed by the lack and subsequent scarcity of COVID-19 vaccines in Venezuela, compounded by limited access to the already strained public health system and its meager resources (Lampo et al. 2021; Loyo et al. 2021; Correa-Salazar and Amon, 2020, Standley et al. 2020).

The large-scale outward migration during the crisis has decreased Venezuela's labor force and increased the proportion of older adults within its population. The ongoing highly concentrated emigration of young adults poses a serious threat to the future functionality of Venezuela's labor market, due to its irreversible effects on the country's demography. Even if outmigration were to cease entirely in the near future, this threat would persist. Migration has now surpassed both fertility and mortality as the primary driver of demographic change, a trend commonly observed in countries experiencing large migration flows (Bell et al. 2015). Furthermore, the diminishing number of women of reproductive age will inevitably lead to a reduction in birth rates, further exacerbating the aging of the population in years to come.

The repercussions of outmigration extend beyond just a reduction in the population; they also have a profound impact on the overall education level of the remaining populace. Over the past decade, the outflow of working-age individuals has predominantly comprised those who have benefited the most

from Venezuela's expansion of educational opportunities. According to the American Community Survey 2022, individuals migrating from Venezuela are more educated on average than any other group of Latin American immigrants, with 53% of Venezuelans aged 25 and older holding at least a bachelor's degree. This is followed by Argentinians at 46% and Brazilians at 45%, in stark contrast to the 9% of Mexicans and Salvadorans. (MPI 2022). Similarly, data from 2019 reveals that 95.4% of the working-age Venezuelan-born population residing in Colombia held at least a bachelor's degree (Fundación ANDI 2020). In the coming years, Venezuela may experience outflows driven by family reunification and the persistent perception of migration as an economic remedy. However, these outflows are unlikely to read the same scale as in recent years, regardless of whether the country's living conditions improve or continue to deteriorate.

Following the economic downturns caused by the COVID-19 pandemic in neighboring Latin American countries, where many Venezuelan-born immigrants reside, low-intensity inflows of return migration were expected. However, to date, only negligible return migration has been reported (ENCOVI 2022). When return migration does occur, it often serves as a strategy to redirect migration towards another destination, particularly to the United States. Research on refugees around the world indicates that return migration is highly influenced by migrants' demographic characteristics, with younger people more inclined to remain in the host country than older adults, and women less likely to return than men (Mohammadi et al. 2018). Given that recent outflows from Venezuela consist primarily of young adults, particularly of women, substantial return migration in the coming years is improbable.

**Limitations**

This study has focused on estimating the age and gender composition of yearly outflows and the stock of emigrants from Venezuela, utilizing official data from seven main destination countries. However, the coverage and reliability of the empirical age and sex data vary across sources and countries, leading to differing levels of uncertainty in country-specific estimates. For instance, in countries like Colombia, where multiple data sources provide demographic information on Venezuelans, it was feasible to model yearly trends. Conversely, age and sex estimations in Ecuador rely exclusively on official administrative

records (see the Online Supplemental Material, Appendix 1 for country-specific data limitations). Despite the challenges posed by varying data sources, aggregating country-specific estimates helps mitigate potential reporting biases, thereby providing a more comprehensive understanding of the demographics of the overall outflows from Venezuela.

Given Venezuela's historical status as a major destination for migrants, a significant portion of the migration outflows over the past decade comprised second- and third-generation immigrants who were born in Venezuela. Many of these individuals likely hold citizenship in their destination countries, particularly in Spain and Colombia, especially during the initial stages of the crisis. By counting individuals with a migration background who were born in Venezuela rather than those recorded as Venezuelan citizens, the estimates included as many displaced Venezuelans as possible, thus achieving the main objectives of this analysis. Regrettably, the estimates account only for Colombian return migrants, while returnees to other nations are missing from the outflow estimates. This represents a primary limitation of this study, potentially leading to an underestimation of the outflows.

Another limitation of these estimates stems from the definition of "migrant" used in the data collected by destination countries, which likely results in an underestimation of the population in transit. The largest outflows from Venezuela occurred between 2018 and 2020, with many of these migrants traveling primarily on foot, often taking months to reach their final destination. Colombia, in particular, bore the brunt of this gradual displacement, as migrants traversed its territory en route to countries further south, such as Ecuador, Peru, and Chile. Except for Colombia, 90% of displaced Venezuelans remained in the first country they reached after leaving Venezuela (Chaves-Gonzalez and Echeverria 2020). Consequently, the outflow estimates in this research may underestimate the population of migrants who were in transit in 2021 and had not yet reached their final destination by the year's end.

A third limitation concerns the assumption of zero return migration over the ten-year period when estimating the impact of migration on the current Venezuelan population. Despite the lack of evidence of large-scale return migration, it is improbable that no movement occurred at all. In 2022, only 6% of households with declared migrants reported any instances of return migration (ENCOVI 2022). Furthermore, government officials declared that around 30,900 Venezuelans returned through the "Plan

Vuelta a la Patria," an initiative launched in September 2018 offering free return flights for outmigrants (MPPRE 2022). Despite this, conservative estimates point to a negligible number of returnees when compared to the population changes induced by recent Venezuelan outflows. To test the validity of the zero-return assumption, a simulation was conducted to assess the impact of crisis-driven migration on the remaining population in 2021, assuming that 6% of the total outflows had indeed returned to Venezuela. Due to a lack of information on the demographics of the returnees, their age and gender composition were assumed to match those estimated for the total emigrant stock in 2021. The results showed that the selected indicators illustrating the impact on the remaining population (as depicted in the right panel of Figure 5) differed by less than 0.02%.

Relative to the calculations in this study, the age and gender distribution of the estimated number of emigrants based on ENCOVI results (see the Online Supplemental Material, Appendix 6) provides a lower estimate of the proportion of children in outflows and, consequently, a higher estimate of its labor force component. Furthermore, ENCOVI results suggests that more working-age men than women have emigrated. These deviations from the findings presented above may be attributed to the fact that ENCOVI only accounts for migrants declared by remaining households, thereby underestimating family migration or cases where all members of a household have migrated. An analogous discrepancy is observed in the "up versus down perspectives" in fertility studies, where the family size distribution varies depending on whether one samples children or mothers. Supporting this claim, the officially reported number of Venezuelans living in all seven destination countries in 2021 indicates a higher proportion of women compared to men, whereas all ENCOVI waves (2014–2023) have consistently highlighted a higher proportion of men in the outflows (See the Online Supplemental Material, Appendix 7). When comparing the age and gender distribution of the population currently residing in the country with those of the 2022 Revisions of World Population Prospects (see the Online Supplemental Material, Appendix 8), the population aged 20 and below are higher than those presented above. This difference stems from a disparity in the estimated number of children who have left the country. The definition of the study population adopted here, consisting of individuals born in Venezuela regardless of their legal status in the destination country, may have played a role in these discrepancies.

This paper intentionally refrains from using terminologies that characterize degrees of agency in the decision-making process underlying outward migration from Venezuela. Instead, the population of interest is defined simply as those who left the country. Similarly, the term "outflow" encompasses voluntary and forced migrants, regular and irregular migrants, the skilled and unskilled, and economic and humanitarian migrants. The decision to include all types of migrants is motivated by both contextual and theoretical considerations. First, migration emerged as perhaps the only accessible survival strategy for many Venezuelan households during the most acute years of the crisis. Second, as often highlighted by the specialized literature, the motivations driving migration decisions are situated on a continuum rather than falling strictly into dichotomous categories of involuntary or voluntary (Betts 2009; Castles and Miller 1998). Ideally, distinctions regarding the agency and legal status of populations on the move could shed light on the changing age and gender profiles of outflows during a major socioeconomic crisis.

**Conclusion**

The total population at risk is a crucial factor in assessing levels and trends in any demographic phenomenon. When a humanitarian crisis strikes, demographic patterns can change abruptly, with outward migration and shifts in local population compositions becoming fluid. This presents considerable challenges when monitoring the demographic impacts of the crisis. Compounding these difficulties, tremendous effort is required to count large populations in motion over short periods like just a few weeks or months, often with little or no warning. To gain a deeper understanding of such displacements and to identify segments of the population in need of assistance, humanitarian agencies and authorities must gather data on broken down by demographic characteristics such as age and gender of these populations. Without this level of data granularity, very little will be known until the populations on the move arrive at their destinations.

Researchers and humanitarian aid practitioners must navigate not only the changing size of a displaced population during a crisis, but also its demographic heterogeneity. As ongoing developments alter the demographic profile of the displaced population, this in turn affects changes in the population of those

who remain, leading to alterations in the profile of the next wave, and so forth until the crisis is resolved. Although a person's gender and age greatly affect their migration experience, and certain groups such as women and children are inherently more vulnerable than others, these characteristics nevertheless impact the entire population on the move. Thus, any study of large population flows and migration rates should avoid relying solely on crude summary indices and instead establish age- and gender-specific data and if possible also other relevant demographic characteristics such as level of education and ethnicity. By understanding the composition of crisis-induced flows in terms of numbers and proportions, as well as the age-specific emigration rates, we can gain a clearer understanding of the required responses to the crisis. Moreover, this understanding can shed light on how changing structural factors over time affect the magnitude and pace of emigration in any population.

The protracted socio-economic upheaval in Venezuela has resulted in one of the world's largest migration crises. As this crisis has unfolded, the demographic composition of the outflows has rapidly responded to changes in the origin and potential destinations. Three key points in time delineate the most dramatic transitions in the composition of outflows: 1) the year 2014 when the historical profile of high-skilled labor flows shifted to family migration at the early stage of the crisis; 2) the year 2019, when the largest outflows occurred and young adults, especially women travelling independently, dominated the migrant demography; and 3) 2021, marked by the Covid-19 Pandemic, during which family reunification and older adults emerged as prominent constituents of the outflows. Any comprehensive understanding of the integration process and the challenges faced by the Venezuelan diaspora requires that one distinguish these three demographic profiles and the pace of their movements.

Despite efforts by South American countries to implement immigration policies to address the influx of migrants and asylum seekers, such as the Operação Acolhida (Operation Welcome) in Brazil or the Temporary Protected Status in Colombia, among others; Venezuelan migrants still struggle to obtain regular status, access to healthcare, housing, and job opportunities, and face increasing xenophobia and discrimination. Nowadays, many Venezuelans are leaving the South American countries where they had originally migrated, and embarking on the risky journey through the Darién Gap to reach the United

States border. Given the demography of these migrants, one can expect that these population flows contain a large proportion of children crossing one the most dangerous migration routes in the world.

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