# Immigration Shocks and Unfounded Concerns About Crime: Evidence from Haitian Migration to Chile

**Fernando Severino**, Illinois State University
**Giancarlo Visconti**, University of Maryland

A large rise in migration in certain areas of the world since 2010 has triggered frequent unsubstantiated claims in politics, the media, and everyday life of a causal connection between migration and crime. We examine whether rapid and large demographic changes (i.e., immigration shocks) affect people's level of concern about crime. We use administrative and survey data from Chile, which has recently experienced a historic influx of migrants. Using a dynamic difference-in-differences design, we provide evidence suggesting that a rapid shift in Haitian migration at the local level led to an increase in concerns about crime. However, we find no evidence that immigration shocks have affected actual crime rates. Given that prior research has documented racial discrimination against Haitians in Chile, our findings suggest that prejudice and stereotypes toward nonwhite newcomers may trigger misconceptions about crime.

Recent migration patterns have triggered important demographic transformations around the globe. Economic, political, and humanitarian crises in Syria, Venezuela, and Haiti, for instance, have generated massive flows of people moving to safer or more prosperous places, which has led politicians in many countries to portray immigrants as a threat. For example, they often make (unsupported) claims about a causal connection between immigration and crime (explored in more detail in app. A). It is therefore important to study whether ordinary citizens associate immigration with crime—and, if so, whether actual crime data support these perceptions—because wrongfully criminalizing immigration can prevent foreigners from integrating and normalize xenophobia and racism.

We use rich administrative data that includes all visas requested in Chile between 2014 and 2017, when the country experienced a historic influx of migrants, as well as public opinion surveys and local crime rates. This South American nation had relatively few immigrants until a large wave of Latin American and Caribbean migrants—mainly from Venezuela and Haiti—arrived in the 2010s drawn by Chile's relative economic and political stability (see app. B for more details about immigration to Chile).[1]

Using a dynamic difference-in-differences (DiD) design, we provide evidence suggesting that an immigration shock—a sudden increase in the number of visas requested—increased citizens' concerns about crime. However, this effect is only linked to the arrival of Haitian migrants, not those from other countries of origin. Additionally, we demonstrate that this recent immigration shock has not affected actual crime rates. These findings suggest that misconceptions may be triggered by discrimination due to racial differences between new arrivals and the receiving population.

## IMMIGRATION AND CRIME IN CHILE

Chile is an excellent setting in which to explore how an immigration shock affects concerns about crime because it has

1. Understanding the political consequences of migration has become a key issue in Latin America given the large migratory waves experienced in this region since 2010 (Holland, Peters, and Zhou 2024; Vega-Mendez and Visconti 2021).

experienced the most drastic immigration-driven demographic change in Latin America in recent years (Doña-Reveco 2018). More than 90% of the new migrants arriving in Chile come from other Latin American and Caribbean countries (Bellolio and Valdés 2020), and people from elsewhere in the region could visit Chile without a tourist visa until 2018. After arriving as visitors, they could easily request a (nontourist) visa by presenting an employment contract or proving a personal link to a Chilean, a pregnancy, or a medical treatment. The most common route to acquiring a (nontourist) visa was to obtain an employment contract (Stefoni 2011) by securing any type of job, such as working in a large agricultural company or as a gardener, contractor, or nanny for an individual taxpayer (Fernandez 2017). Therefore, regular migration to Chile from other Latin American countries was a feasible path until the 2018 immigration reform, which makes the number of visa applications a good proxy for actual migration (see app. C).

## DATA

We use detailed administrative data to measure immigration shocks. We use records from 2014 to 2017 documenting all the (nontourist) visas requested, which include each applicant's municipality of residence and nationality. This allows us to compute immigration shocks at the local (municipality) level for different countries of origin. Using this data, we identify municipalities that experienced a drastic demographic change. Our two outcomes of interest are concerns about crime and actual crime rates.

To measure the first outcome (concerns about crime), we use data from 10 nationally representative surveys conducted by the Centro de Estudios Públicos between July 2014 and September 2017. On average, these surveys were implemented every four months. We construct this outcome based on answers to the following question: "Which are the three problems the government should dedicate the greatest effort to solving?" Respondents chose from a list of issues that was the same in each survey. We generate a binary indicator for concerns about crime (1 when mentioned crime as one of the top three issues and 0 otherwise).

To measure the second outcome (crime rates), we rely on key property crimes such as thefts and robberies, as these are Chile's most common and politically relevant offenses (Alberti, Diaz-Rioseco, and Visconti 2023). Both outcomes are expressed in standard deviation units for ease of interpretation. Appendix D describes the construction of both outcomes.

## DESIGN

To draw causal inferences about the political impact of immigration shocks, we use a dynamic (or event-study) DiD design (Callaway and Sant'anna 2021). In a dynamic DiD,

the results are aggregated by the length of exposure rather than the time of exposure, which is particularly useful when there are multiple periods and when there is variation in the occurrence of the treatment. In our robustness checks, we use a generalized DiD (i.e., two-way fixed effect), matching methods for causal inference with time-series cross-sectional data, and a generalized synthetic method control. These analyses are reported in appendices E, F, and G; they confirm the study's main conclusions.

Since the dynamic DiD approach requires using the same unit of analysis over time, we structured the data at the municipality level by computing the average concern about crime for each municipality-survey wave. As a robustness check, in appendix H, we use advances in multilevel regression with poststratification to construct the outcome. In appendix I, we generate a new binary indicator for concerns about crime, where 1 corresponds to respondents who mentioned crime as the top one issue (rather than one of the top three issues). In appendix E, we use survey respondents as the unit of analysis rather than municipality-survey waves. Importantly, the study's main findings are not conditional on the unit of analysis or the methods used to measure concerns about crime at the municipality level.

An essential challenge when studying immigration within a region or country is that people living in historically migrant-receiving areas grow accustomed to demographic changes and no longer react to the arrival of newcomers. Previous research has documented the problems associated with using immigration rates to capture perceived migration (Newman and Velez 2014). To address this concern, we identify municipalities that experienced a rapid increase in the number of (nontourist) visa requests, which we refer to as an immigration shock. By focusing on communities that experienced a substantive demographic change in a short period, we mitigate concerns that people in certain areas became habituated to immigration. Since administrative data includes the date on which the visa was requested, we can calculate the total number of visa applications before the survey implementation to compute the first outcome: concerns about crime. We use the number of visas requested in the two years prior to the surveys to calculate the percentage-point change between each year (i.e., changes in the number of visa applications from one year to the next). We define exposed municipalities as those in which the change in the number of visa requests is equal to or greater than one standard deviation above the mean.[2] In control municipalities, the demographic changes were less than one standard deviation above the mean. Using

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2. The treatment follows a staggered structure (i.e., exposed municipality cannot leave this group).

standard deviations is a common strategy when studying the impact of different types of shocks (e.g., Carreras and Visconti 2022). As a robustness check, in appendix E, we use a continuous rather than binary version of exposure to migration, and the conclusions remain the same. In appendix J, we provide more details about the treatment data. Appendix K includes maps and descriptive statistics about exposure to immigration in Chile.

We focus on two immigration shocks: (1) a sharp increase in the number of applications for all visas (regardless of the country of origin) and (2) a sharp increase in requests for visas from people from Haiti. Between 2016 and 2017, around 160,000 Haitians entered Chile in one of the largest increases in migration in the country's history (Bellolio and Valdés 2020)—close to 1% of the population, according to the 2017 Census. While 95% of Haitians are Black, Chilean residents of African descent represented a very small share of the population before 2015. As a result, Haitians experienced a different dynamic of assimilation than that of historic influxes of European or South American migrants in Chile (Rojas Pedemonte, Amode, and Vásquez 2015). In appendix L, we used immigration shocks from other relevant countries besides Haiti and found no evidence of an effect.

In summary, the main design for this study has the following structure: the units of analysis are municipality-survey waves, and exposed municipalities are those in which immigration increased by more than one standard deviation in the 12 months before the survey. Control units are municipalities never exposed to an immigration shock. We examine the effects of two immigration indicators: a sudden increase in visas from Haitians and a sudden increase in all visas. Finally, we study the impact of these two treatments on two outcomes: average concerns about crime and crime rates three months after the survey at the municipality-survey wave level.

## RESULTS

Figure 1 illustrates the results regarding how immigration shocks affect concerns about crime, disaggregated by the length of exposure: −1 refers to the period before the first exposure, which serves as evidence of the parallel-trends assumption needed for the DiD (never treated vs. eventually treated); 0 represents the average effect of the first exposure to an immigration shock or an instantaneous treatment effect (never treated vs. first treated); and 1 corresponds to the first period after the initial exposure to an immigration shock (never treated vs. second treated). We also include in figure 1 the overall treatment effect, which is the average of the posttreatment effects across all lengths of exposure to an immigration shock. Appendix M presents the full results. We correct the $p$ values of the overall treatment effects for multiple comparisons. We provide details in appendix N. The number of pre- and post-treatment periods is defined by the structure of the treatment variable, which is why they differ when comparing visas from Haiti and all the visas.

When using only visas from Haiti (fig. 1A), the average of the post-treatment coefficients indicates that an immigration shock has a positive and statistically significant effect on concerns about crime. A demographic change explained by the arrival of Haitians significantly boosts concerns about crime by 0.573 standard deviation units (corrected $p$-value $= .038$). When disaggregating the results by length of exposure, figure 1A displays an increase after the first
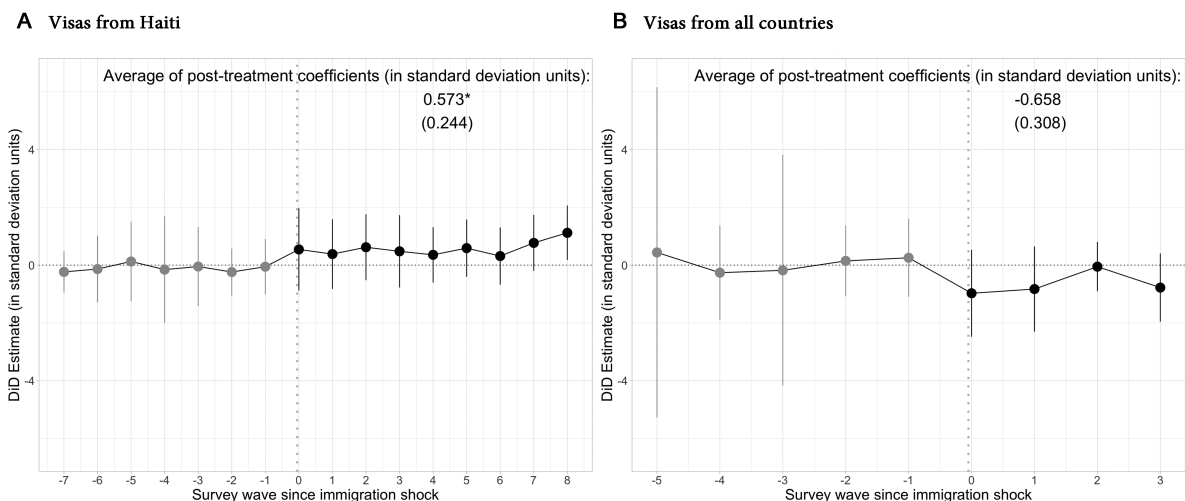


Figure 1. Average effect of immigration shock on concerns about crime by length of exposure. Results in gray are pre-exposure and those in black are postexposure. Lines denote 95% CIs. The overall treatment effect is reported using coefficients, standard errors in parentheses, and (*) for Bonferroni-adjusted $p$ values lower than .05. $N = 1,358$.

exposure, which becomes a statistically significant effect over time. There is a significant increase of 1.118 standard deviation units in concerns about crime in eight surveys after the first exposure to the Haitian immigration shock (95% CI: 0.173–2.061). In appendix E, we include covariates in the analysis, and the results become significant after seven surveys (95% CI: 0.265–2.154). Seven surveys from the first exposure represent two years from the first time people were exposed to the immigration shock.

One possible interpretation of the disaggregated results is the existence of a cumulative effect, in which prejudices emerge gradually over time. An alternative interpretation is that concerns appeared quickly, but when separating the analysis into multiple small pieces, more power is needed to find a statistically significant effect at the time of the first exposure.

Regarding substantive effects, even though the effect size for the average of post-treatment coefficients suggests a medium-sized impact (0.573 standard deviation units), we acknowledge that the confidence intervals are wide. Yet, when complementing these results with previous surveys and qualitative evidence about the mistreatment of Haitians in Chile (see app. P) and with consistent results across different designs (see app. O), we posit that there is evidence suggesting an increase in concerns about crime after an immigration shock of Haitians.

When using all the visas (fig. 1B), the average of the post-treatment coefficients suggests that immigration shocks decreased concerns about crime. However, these results do not provide enough evidence to reject the null hypothesis of no effect. When disaggregating the effects by length of expo-

sure, there is no evidence of an effect on concerns about crime. These null findings are confirmed across all the robustness checks reported in the appendices.

Additionally, the pre-exposure results for both visas from Haiti and all the visas provide evidence to support the parallel-trends assumption, as there is no change in trajectories between the control and the eventually exposed group.

Figure 2 reports the effects on crime rates three months after an immigration shock at the municipality-survey wave level. We use three months to avoid an overlap between surveys. The results provide evidence to hold the parallel-trends assumption but no evidence that migratory shocks increase crime.

## DISCUSSION AND CONCLUSION

Do immigration shocks increase perceptions of criminality? Our results illustrate that this only occurred with Haitians, although the actual crime rate remains unchanged. The large and sudden influx of Haitian migrants could have enhanced the salience of Chileans' sense of identity, which has been regarded as Eurocentric and conservative Catholic (Larraín 2001). Evidence from prior studies indicates that Haitians in Chile feel discriminated against, especially when looking for jobs, on public transportation, and in public spaces (CENEM-UTalca 2018; see app. P for more details about Haitians' experiences in Chile). They are also victims of racism and recognize skin color as a barrier to integration into Chilean society (Rojas Pedemonte et al. 2015; see more in app. Q).

Our main goal is to provide novel evidence regarding (unfounded) concerns about crime after immigration shocks. In the case of Chile, although immigration shocks caused by
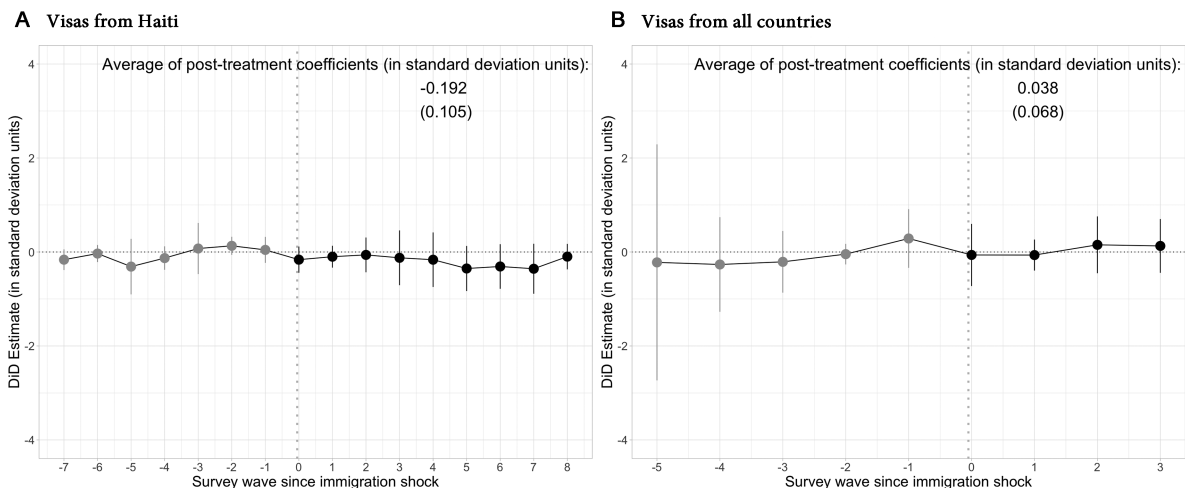


Figure 2. Average effect of immigration shock on crime rates by length of exposure. Results in gray are pre-exposure and those in black are postexposure. Lines denote 95% CIs. Overall treatment effect reported using coefficients, standard errors in parentheses, and (*) for Bonferroni-adjusted *p* value lower than .05. N = 1,358.

an influx of migrants from Haiti have been shown to increase Chileans' concerns about crime, demographic changes have not affected actual crime rates in the country. Based on this discrepancy, we suggest that discrimination based on racial differences could lead to the misperception of a link between crime and immigration. We discuss an argument to explain these findings in appendix R. However, further research is needed to test these proposed mechanisms.

Our findings challenge the common political use of immigrants as a scapegoat, particularly by populist regimes or far-right political parties. This rhetoric can be particularly harmful because it wrongly connects immigrants to crime, affecting their integration into their host communities and facilitating the adoption of *mano dura* (iron fist) policies that erode citizens' rights and exacerbate social injustices (Visconti 2020).

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