

The Impact of Placement Exams on Refugee Children's School Enrollment

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Abstract

Between 2010 and 2024, the number of displaced children worldwide nearly tripled, reaching almost 50 million. When enrolling displaced children, schools can face different challenges: absence of school documents, language differences, and prolonged gaps in education. While placement exams can help to assess students' pre-enrollment knowledge and inform grade assignment, they may also work as an extra barrier to accessing education. This paper studies the effects of introducing mandatory placement exams on school enrollment of Venezuelan refugee children in Northern Brazil. We explore a triple difference framework using the policy's geographic implementation and its targeted age range (8 to 14). Using national administrative enrollment data, we find that the policy has reduced school enrollment of around 1,000 targeted refugee children between 2020 and 2024. Importantly, using unique exam registry administrative data, we find that the main obstacle was not families failing to register their children for the exam, but high absenteeism caused by long waiting times and difficulties reaching families to inform exam's date and time.

Keywords: Refugee Children; Access to Education; School Enrollment; Placement Exams; Venezuelan Migration

JEL Codes: I25, I28, J15, O15, F22

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1 Introduction

Between 2010 and 2024, the number of displaced children worldwide almost tripled, rising from 17 million to almost 50 million - [UNICEF](#). This group includes migrants, displaced persons, asylum seekers, and refugees. For these children, access to education in the host country is not only a pathway to future opportunities and integration but also a source of stability, psychosocial support, and protection - Galloway and Gjefsen ([2020](#)), Bridges and Walls ([2018](#)), and Felfe and Huber ([2015](#)).

When enrolling displaced children, schools can face multiple challenges in assessing their skills and how to best integrate and assign them to grades. First, displaced children can remain out of school for years after migration. Second, language differences often pose an immediate barrier. For instance, in Hungary, 60 percent of Ukrainian refugee children report not speaking Hungarian ([UNESCO](#)). In developing countries, children are disproportionately at risk of child labor and even trafficking, with families seeking to supplement income and children migrating alone or taking irregular routes with their families - [UNICEF](#). Finally, displaced families may flee without or lose birth certificates, academic transcripts, or school enrollment records.

These challenges, inherent to the displacement experience, highlight the importance of creating a well-developed system of reception of migrant students that properly assesses their educational background and enhances enrollment and attendance - see Luciak ([2012](#)) and OECD. ([2019](#)). In this context, placement exams can help assess students' pre-enrollment knowledge and guide integration into schools. However, depending on their design and implementation, they may also function as an unintended barrier, reducing school enrollment.

This paper examines how the introduction of a mandatory placement exam affects refugee children's school enrollment. We study the sudden and geographically concentrated displacement of Venezuelan migrants into Brazil triggered by Venezuela's economic and political upheaval. In 2018 alone, more than 150,000 Venezuelans crossed into Brazil through the border state of Roraima. The state capital, Boa Vista, saw public education enrollment of Venezuelans jump from virtually 0% in 2016 to almost 20% in 2024. At the end of 2019, the local government implemented a mandatory placement exam to assess prior knowledge and determine appropriate grade placement

for all Venezuelan children aged 8 to 14 who did not possess proper school documents. We employ a triple-difference framework that exploits both the policy's geographic implementation (exclusively in Boa Vista) and its targeted age range (exclusively 8 to 14).

Using national administrative enrollment data, we find that the policy has reduced school enrollment of around 1,000 refugee children between 2020 and 2024. Boys and girls were equally affected, and the effects were concentrated among ages 8 to 12, given that 13 and 14-year-olds could enroll in state-managed public schools without the exam. Exploring unique administrative data on the exams' registration list, we also found that the main barrier was not that refugee families failed to register their children for the exam, but rather in the after-registration logistics. More specifically, the waiting time (on average, 30 days) and difficulty in contacting families (some of them with only NGO phone numbers in their registry) increased the chances of exam absenteeism. Finally, Venezuelan children living in shelters, a specially vulnerable subgroup of the refugee population, were also more likely to miss the exam (by more than 20 percentage points).

Therefore, together the results reveal that local government should consider changes on the placement exam policy logistics. Importantly, improving exam capacity (i.e., reducing waiting times) and communication (such as using alternative strategies, such as publicly available exam schedule lists, and administering placement exams directly in refugee shelters) can reduce absenteeism and increase enrollment. Our results speak with other papers showing that removing barriers to exam access can substantially increase take-up, even when exams are high-stakes - Bulman (2015) (opening nearby SAT centers), Pallais (2015) (giving ACT takers more free score reports), and Muralidharan and Prakash (2017) (facilitating transportation to schools in India).

This paper also directly contributes to the limited literature on immigrants' integration into host-country schools.¹ Conger (2013) finds that English language learners in Miami-Dade County who were assigned to lower grades—based on birthdate—experienced improved outcomes in mathematics but showed no gains in reading or retention. In contrast, Höckel and Schilling (2022) studies immigrant children in Hamburg, Germany, and finds that enrollment in preparatory language-learning classes led to worse

¹See De Paola and Brunello (2016) for a review of the literature.

test scores compared to direct placement in regular classrooms. Another set of papers studies how school tracking (vocational and academic tracks) and its timing affect second-generation immigrants' performance and attainment - see Lüdemann and Schwerdt (2013), Jang and Brutt-Griffler (2023), and Cobb-Clark, Sining, and Stillman (2012). These studies focus on evaluating policies' effect on migrants' education outcomes after enrollment. This paper examines a different, not studied policy (placement exams) and its impact on enrollment, a particularly interesting outcome in developing settings. Finally, we were able to evaluate the barriers that prevent these students from attending school.

The rest of the paper is organized as follows. First, I describe the Venezuelan refugee inflow into Brazil, the public education system, and the policy change. The third section describes the data. Section 4 presents the empirical strategy and results. Finally, Section 5 concludes.

2 Background

Venezuelan Refugee Inflow in Brazil

Venezuela's deep political and economic crisis led to a 65% decrease in its GDP between 2014 and 2019 and yearly inflation rates above 1000%.² Human Rights Watch reported constant violations of human rights, including the persecution of journalists and civil society organizations and the capture of the judiciary by the government. UNHCR estimates that 7.7 million citizens emigrated, more than 84% to other countries in Latin America and the Caribbean.³

Between January 2017 and April 2024, more than 1 million Venezuelans entered Brazil, and around half left to go to other South American countries.⁴ After 2017, with the worsening of the economic crisis in Venezuela, poorer immigrants began arriving at the border of Venezuela and Brazil in the state of Roraima. After crossing the border at the city of Pacaraima, immigrants usually go to Boa Vista, Roraima's capital and biggest city with a population of more than 400,000 people in 2020 - see Figure 1.

²IMF statistics.

³See [R4V Platform](#) for statistics by hosting country.

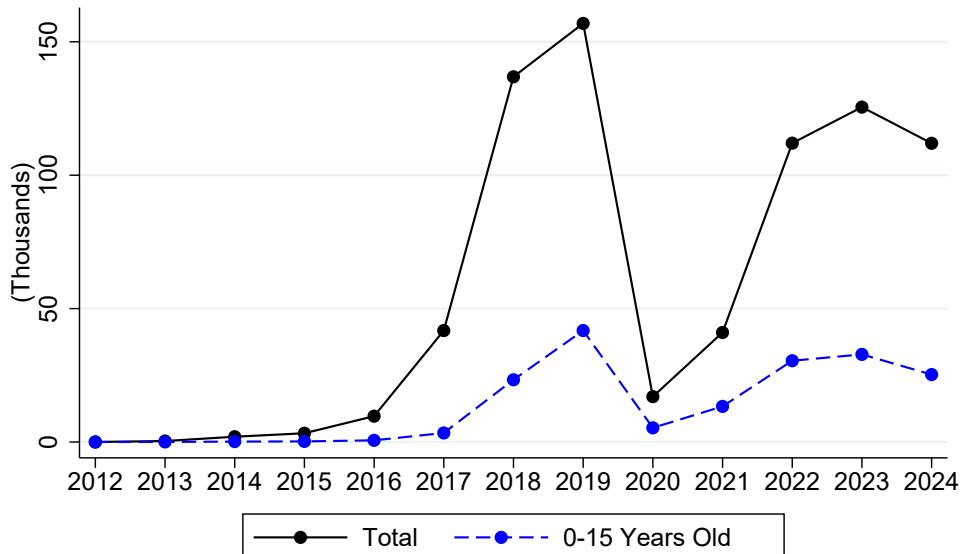
⁴Source: [Ministry of Justice and Public Security report on Venezuelan Migration for April 2024](#).

Figure 1: Brazil-Venezuela Border and Roraima's Municipalities



Between 2018 and 2019, almost 400,000 Venezuelan border crossings were registered in Roraima, representing more than 80% of the national inflow - see Figure 2. After a sharp drop in 2020 and 2021, when the border was closed due to the COVID-19 pandemic, entries surged again after 2023, demonstrating that the situation continues to evolve in the region.

Figure 2: Venezuelan Net Entrance Inflow in Roraima



Source: STI.

The Brazilian Federal Government launched the "Operação Acolhida" (Reception Operation) in February 2018 to deal with the increasing number of refugees crossing Roraima's border. The operation consists of a humanitarian task force coordinated

by the federal, state, and local governments with UN agencies, international and civil society organizations, and private entities. Different reception, accommodation, regularization, sanitary inspection, and immunization structures were set up at the border and in Boa Vista. Shelters provided food and protection for documented refugees. Teams of NGOs, UN, and government workers offered health services, portuguese classes, and informal education activities for children. Refugees, disregarding their legal status, can access public schools.

Brazilian Public Education System

The Brazilian public educational system is regulated by the Federal Constitution of 1988 and by the law nº9394 of 1996. The basic education cycle consists of 12 mandatory years of schooling (starting at age 6 up to 18). The school year in Brazil starts in February and ends in December. Municipality, State, and Federal Governments participate in the funding and management of public schools. Municipalities are responsible for early childhood education (children from 0 to 3 years old) and elementary education (6 to 14 years old). States also manage elementary schools, but are exclusively responsible for high schools (15 to 18 years old). Federal schools' enrollment represents a very small share of total enrollment.

Figure 3: Schools and Refugee Shelters - Boa Vista (2019)

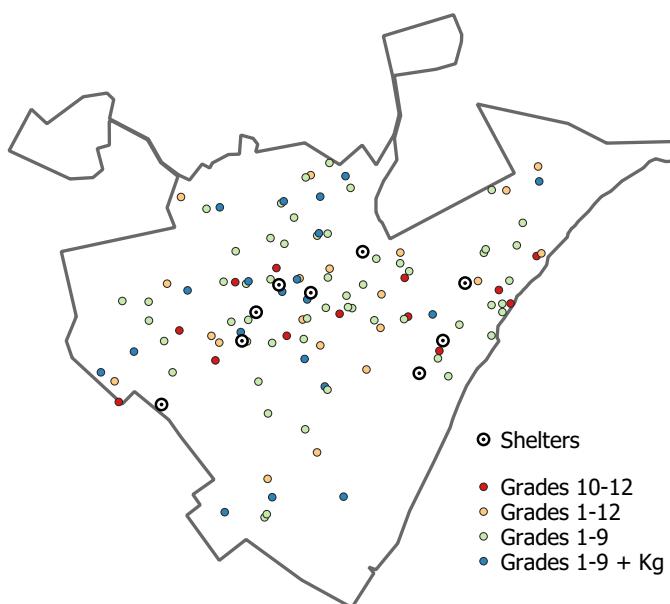


Figure 3 shows the geographic distribution of the different types of schools in the urban area of Boa Vista. In 2019, Boa Vista had 109 public schools (3 federal, 57 state, 49 municipal), 13 schools with only grades 10 to 12 (high schools), 20 with first to 12th grade, and 76 with students up to 9th grade.

To enroll a student, parents or responsible adults should go to any school or a special government office, bringing their ID, proof of residence with zip code, the child's ID, and a telephone number for contact. The period of enrollment usually happens in January (it is still possible to enroll kids during the school year), and children who were already attending school are automatically enrolled for the following year. The enrollment process takes into account the number of spots available and where the child lives. The priority is to assign the student to the school with an available spot that is the closest to where she lives.

To enroll foreign students, the child's original school documents must be translated into Portuguese (after 2018, translation was no longer necessary for Venezuelans in Roraima). Children without the document go to the 1st grade to adapt their speaking and writing, and at the end of the two-month school cycle, they take a placement test. Venezuelans over 18 years of age, who can already complete high school, take a specific completion assessment to receive the high school certification.

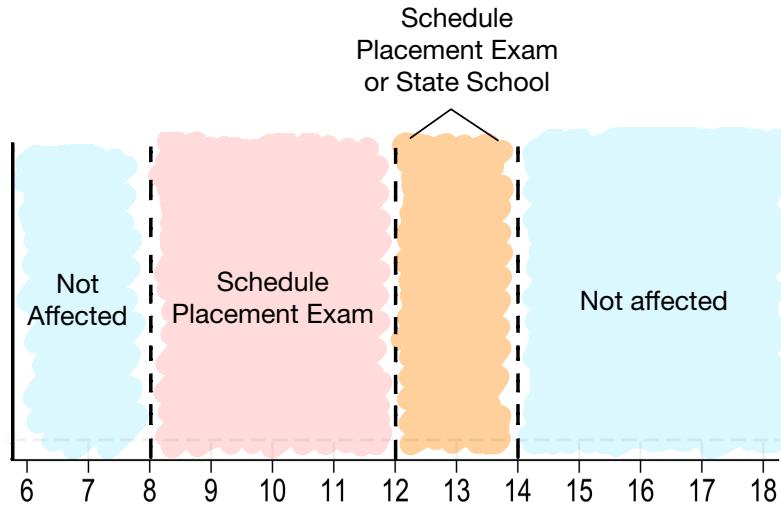
The Enrollment Policy Change

Before September 2019, decisions regarding the grade placement of refugee children in Boa Vista's municipal schools were decentralized. Each school had discretion over whether and how to administer a placement exam, and these tests were often conducted in Portuguese.

In September 2019, the municipal education council enacted Resolution No. 01/2019, which standardized and centralized both enrollment and grade assignment procedures across all municipal schools. Under this new policy, placement exams became uniform, were offered in Spanish, and were administered by the municipal education secretariat staff in a designated office. The exams followed a stepwise procedure: children were first tested on the grade level corresponding to their age—for instance, a 10-year-old took the fourth-grade exam. Those scoring below 50 percent in either language or

mathematics would have to take the test corresponding to the grade below. The process was repeated until they passed or reached the first grade assignment. According to the resolution, all necessary exams were administered on the same day, and the entire procedure could last up to four hours.

Figure 4: Placement Exam Policy Guideline by Age Group



The policy applied exclusively to Venezuelan children aged 8 to 14, as of March 31 of the enrollment year, who lacked school records or transcripts verifying their previous grade level. Importantly, it covered only municipal schools, which in this context serve grades 1 through 5. State-run schools, which offer grades six and above, were not subject to the new placement exam policy, and their enrollment procedures remained decentralized and determined by each school.

Consequently, the policy design generated three distinct subgroups of Venezuelan children who were differentially affected by the reform (see Figure 4). First, children younger than eight or older than fourteen on the reference date were not required to take a placement exam. Second, Venezuelan children aged 8 to 12 were fully subject to the policy. Finally, those aged 12 to 14 were only partially affected, as they were already eligible, based on age, for enrollment in the 6th grade and could, therefore, bypass the municipal placement exam by enrolling directly in a state school.

Using the administrative data on the placement exam registration list from 2020 to 2025 (2021 not available), 99.45% of registered Venezuelan children are within the targeted ages (8 to 14 years old as of March 31st) - see Table 1. Moreover, the exam

assignment based on age was also consistently implemented. Among the 8 years old more than 98% took the 2nd grade exam, more than 97% of the 9 year old took the third grade, more than 99.5% of 10 year old took the 4th grade exams, and more than 99.9% of 11, 12, 13, and 14-year-olds took the fourth grade exam. Finally, no student was assigned to a grade not permitted according to the policy guideline.

Table 1: Number of Venezuelans in the Placement Exam Registry - per age

Age	Number of Venezuelans	%	Cum. %
6	2	0.04	0.04
7	14	0.25	0.28
8	1,223	21.54	21.82
9	1,287	22.66	44.48
10	1,394	24.55	69.03
11	1,010	17.78	86.81
12	450	7.92	94.73
13	188	3.31	98.05
14	101	1.78	99.82
15	9	0.16	99.98
16	1	0.02	100.00

Notes: data includes the years: 2020, 2022, 2023, 2024, 2025.

Source: administrative data from SMEC Boa Vista (RR).

3 Data

Administrative Public Schools' Enrollment

The School Census provides yearly school-level information about infrastructure, size, students, teachers, and staff for all schools in the country (the reference date is the end of May). Importantly, for the students, we observe race, gender, date of birth, and nationality. We measure the first year of enrollment, which is especially important for migrants, as the first year students show up in the data.

Administrative Placement Exam Registration Data

Boa Vista's secretary of education keeps the list of all Venezuelan children who have scheduled a placement exam from 2020 to the beginning of 2025. It contains the date

the parent or legal responsible adult called, the name of the parent and children, the date of birth, and the date, time, and place the exam was taken. For a subset of years, we also observe children's housing status, more specifically, whether they lived in a refugee shelter and the shelter's name.

Shelters

UNHCR produced summary reports of "Operação Acolhida" efforts and published shelter-specific monthly reports during 2018. It includes the location, total capacity, and the monthly number sheltered.

4 Empirical Strategy and Results

Effect on Enrollment

To evaluate whether the policy changed enrollment, we first compare the age distribution of enrolled students in Boa Vista before and after the policy implementation (September 2019). We grouped all enrollments from 2017 (when the inflow of school-age Venezuelans started) to 2019, and 2020 to 2024 (the last year available). According to Figure 5a, between 2017 and 2019, the enrollment share continuously decreased along with Venezuelans' age. After 2019, however, the curve presented a significant "mass" gap around the ages of 8 to 12, which translated into higher shares for the other age groups.

Figure 5: Age PDF of Newly Enrolled Venezuelans - Boa Vista (RR)



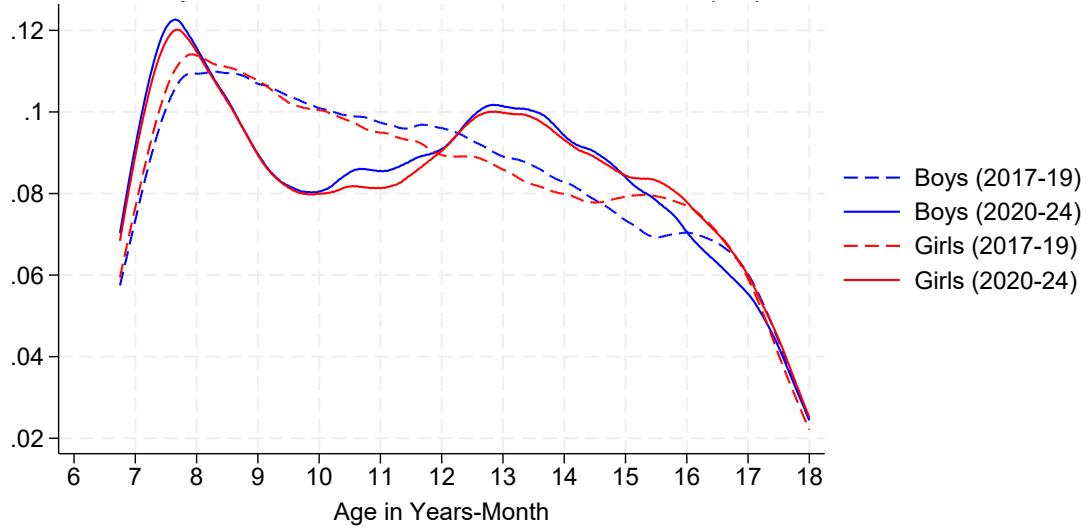
Notes: enrollment across all public schools. PDF estimated using an univariate kernel density estimation. *Source:* School Census (2017-2024).

Figure 5b shows that the change in the PDF shape started after the policy implementation at the end of 2019, and it is not driven by one specific year. Given that our data is a "photo" of enrollment on March 31st of each year, the 2020 data is a mixture of enrollment before and after the policy, and in fact, the 2020 PDF works as a transition between the 2019 and 2021. Therefore, it doesn't look like the change in the age PDF is due to some demographic change in the migration inflow that had already taken place before 2020. Moreover, it doesn't look like the pandemic years 2020 and 2021 are driving this difference, given that the 2022, 2023, and 2024 curves also present similar patterns.

When separating enrollment based on gender, we also observe that the change in

PDF shape also happened similarly for boys and girls - see Figure 6.

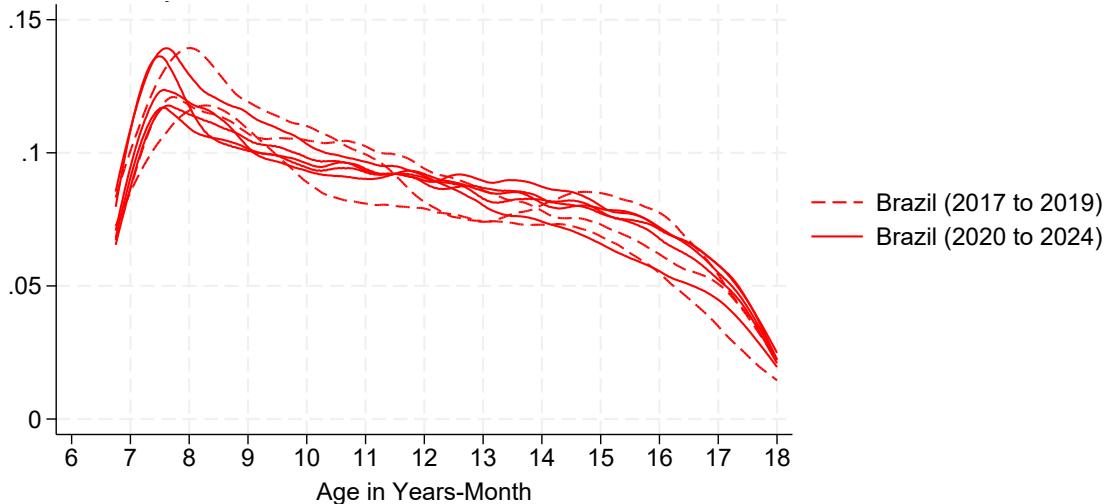
Figure 6: Age PDF of Newly Enrolled Venezuelans (Gender) - Boa Vista (RR)



Notes: enrollment across all public schools. PDF estimated using an univariate kernel density estimation. *Source:* School Census (2017-2024).

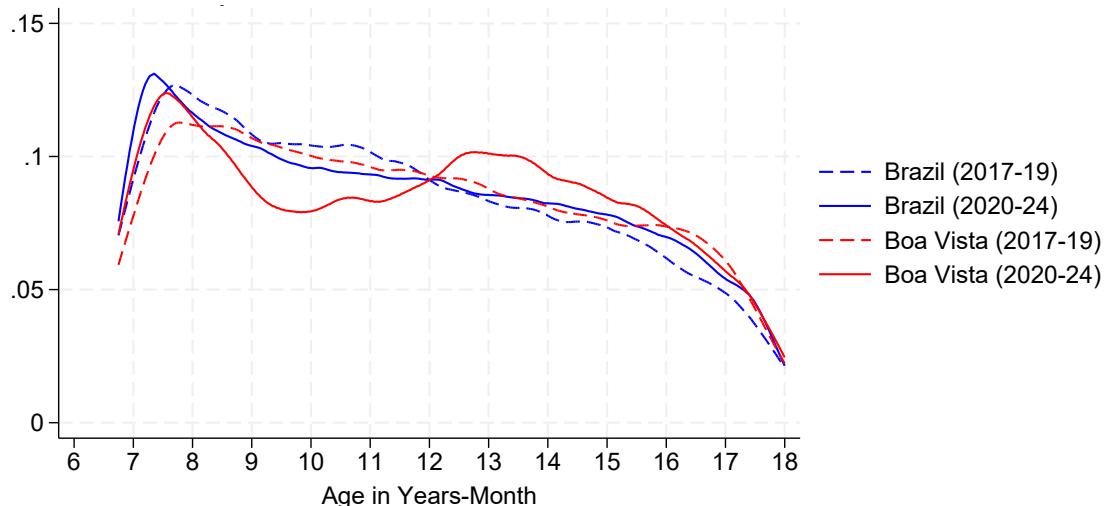
Another way to confirm the causal interpretation of the age density change is to compare it with the PDF of Venezuelan enrollment in the rest of the country, where no such placement exam requirement was introduced. According to Figure 7 and 8, the age distribution of Venezuelans enrolled in public schools in the rest of the country had a similar shape to the one observed for Boa Vista before the policy. However, after 2019, only Boa Vista experienced such a change in enrollment age distribution.

Figure 7: Age PDF of Newly Enrolled Venezuelans (Yearly) - Brazil (excluding RR)



Notes: enrollment across all public schools in Brazil excluding Roraima. PDF estimated using an univariate kernel density estimation. *Source:* School Census (2017-2024).

Figure 8: Age PDF of Newly Enrolled Venezuelans (Yearly) - Boa Vista Vs Brazil



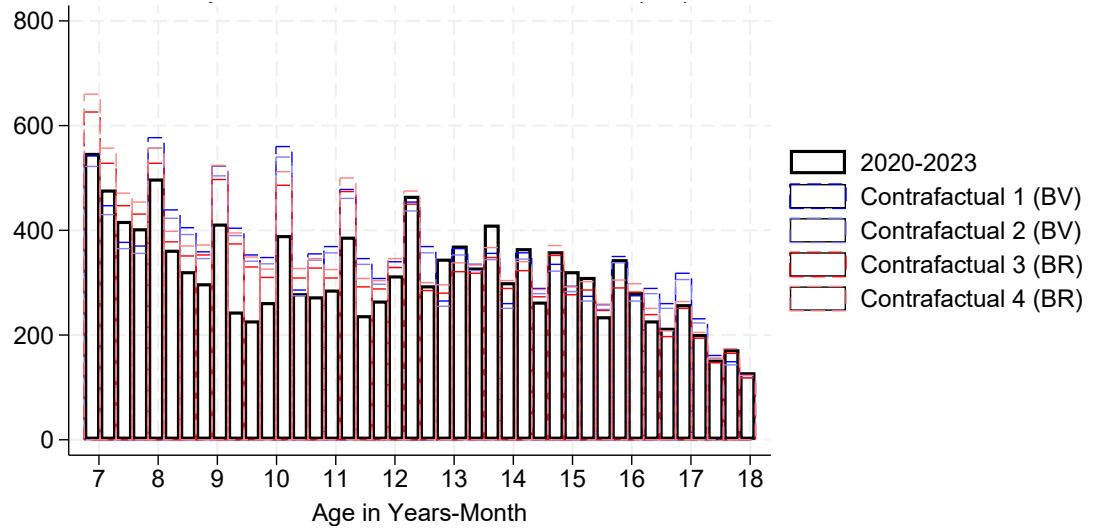
Notes: enrollment across all public schools. "Brazil" category excludes Roraima state. PDF estimated using an univariate kernel density estimation. *Source:* School Census (2017-2024).

Size of the Effect on Enrollment

To estimate the number of students missing, we need to construct a counterfactual scenario for the age distribution of Venezuelan enrollment in Boa Vista for the 2020-2024 period in the absence of the policy. To do so, first, we need to assume what the shape of the PDF would have been for the 2020-2024 period. We can use the Boa Vista PDF for the period 2017 to 2020, assuming no change over time in the migration inflow age composition. We can also use the PDF shape for 2020-2024 for enrollment in other municipalities in Brazil, under the assumption that eventual changes in the Venezuelan inflow age would be captured by the enrollment in the rest of the country, which seems to be a reasonable assumption given that Boa Vista is the main entrance of migrants in the country.

Second, we need to determine the total enrollment in the absence of the policy. We can assume total enrollment would have increased the same as the non-affected ages did after 2019. For that, we can use all the non-affected ages (7 and above 15 years old) or just above 15 years old, given that 7-year-olds were potentially indirectly affected by the policy. Therefore, we can construct four possible counterfactual scenarios.

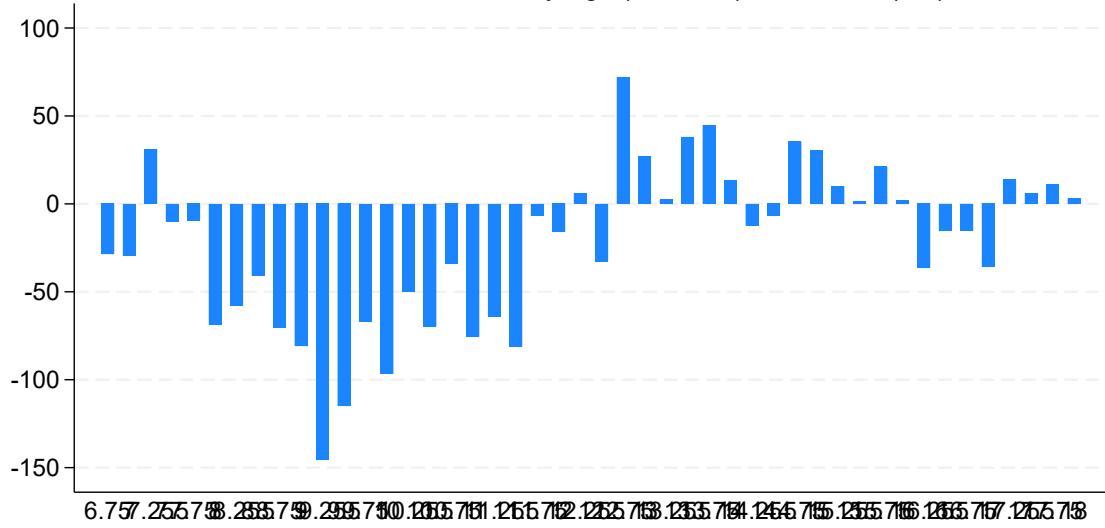
Figure 9: Real Vs Counterfactual Age Histogram of Newly Enrolled Venezuelans - Boa Vista (RR)



Notes: enrollment across all public schools. "*Contrafactual 1 (BV)*" = pre-policy Boa Vista PDF for the counterfactual PDF's shape and ages 7 and 15+ as counterfactual group to estimate total enrollment. "*Contrafactual 2 (BV)*" = pre-policy Boa Vista PDF for the counterfactual PDF's shape and ages 15+ as counterfactual group to estimate total enrollment. "*Contrafactual 3 (BR)*" = pre-policy Brazil PDF for the counterfactual PDF's shape and ages 7 and 15+ as counterfactual group to estimate total enrollment. "*Contrafactual 4 (BR)*" = pre-policy Brazil PDF for the counterfactual PDF's shape and ages 15+ as counterfactual group to estimate total enrollment. *Source:* School Census (2017-2024).

Figure 9 plots the age histogram distributions for all four possible counterfactual scenarios. Figure 10 plots the average differences between the observed distribution and each counterfactual. According to the results, the policy introduction decreased by 1000 the number of enrollment of Venezuelans between 8 and 12 years old between 2020 and 2024.

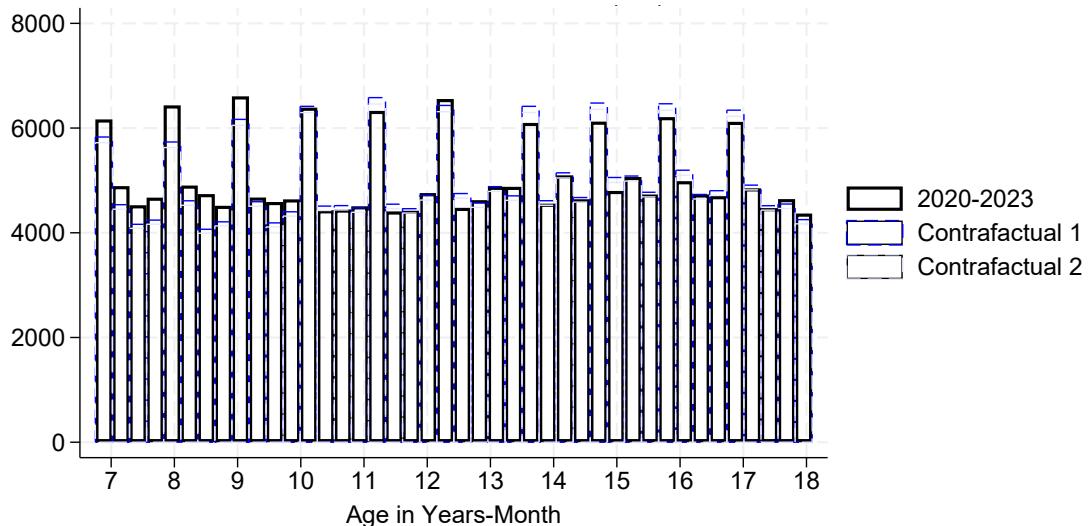
Figure 10: Average Difference Real and Counterfactual Age Histogram of Newly Enrolled Venezuelans - Boa Vista (RR)



Notes: Average difference between actual histogram and the four possible counterfactual histograms used. *Source:* School Census (2017-2024).

As a placebo, we can use the same strategy to obtain the counterfactual for the Venezuelan age distribution in all the other municipalities in the country. As expected, we estimate an effect on enrollment close to zero for all ages - see Figure 11.

Figure 11: Placebo: Difference Real and Contractual Age Histogram of Newly Enrolled Venezuelans - Brazil



Notes: enrollment across all public schools. "Contrafactual 1" = pre-policy Brazil PDF for the counterfactual PDF's shape and ages 7 and 15+ as counterfactual group to estimate total enrollment. "Contrafactual 2" = pre-policy Brazil PDF for the counterfactual PDF's shape and ages 15+ as counterfactual group to estimate total enrollment. *Source:* School Census (2017-2024).

A formal Difference-in-difference-in-difference (DDD)

We also plan to estimate the following Diff-in-Diff-in-Diff specification to formalize the analysis:

$$\begin{aligned} Y_{ict} = & \alpha + \beta_1 \text{Post}_t + \beta_2 \text{Treated}_c + \beta_3 \text{Group}_i \\ & + \beta_4 (\text{Post}_t \times \text{Treated}_c) + \beta_5 (\text{Post}_t \times \text{Group}_i) + \beta_6 (\text{Treated}_c \times \text{Group}_i) \quad (1) \\ & + \delta (\text{Post}_t \times \text{Treated}_c \times \text{Group}_i) + \varepsilon_{ict}. \end{aligned}$$

Y_{ict} is the number of Venezuelans enrolled in public schools with age i (age in 2-week intervals) in region c (either Boa Vista or the rest of the country) in year t . Post_t is a dummy for t after 2020. Treated_c is a dummy for Boa Vista and Group_i is a dummy for ages 8 to 14. The parameter of interest is δ .

What is the main barrier?

The placement exam consists of two parts: registering the children on the wait list and attending the exam. Therefore, the negative effect on enrollment can be due to families not registering children on the wait list or children failing to attend the exam. In this section, we discuss the main mechanisms/barriers behind the decrease in enrollment.

Between 2023 and 2024, around 3,300 children were registered on the placement exam wait list, and 30% (1,100) did not attend the exam. If we consider that all children would have been enrolled if they had attended, the negative effect of the policy would be erased for the entire period from 2020 to 2024.⁵ It is likely, consequently, that the registry includes families that would not enroll their children even in the absence of the policy, for example, transit families that planned to move to other parts of the country. Therefore, most of the challenges in refugee child enrollment are not related to families not registering kids (i.e., the registry not reaching enough families), but rather to the process after registration that is driving the high absenteeism.

Next, we use the 2023 and 2024 administrative exams registry data to verify what explains the limited exam take-up by estimating equation 2. Our main explanatory

⁵We only have data on exam attendance for 2023 and 2024

variables measure the extent and quality of communication with the families to inform the dates of exams and how long the family is expected to wait for their children to take the exam.

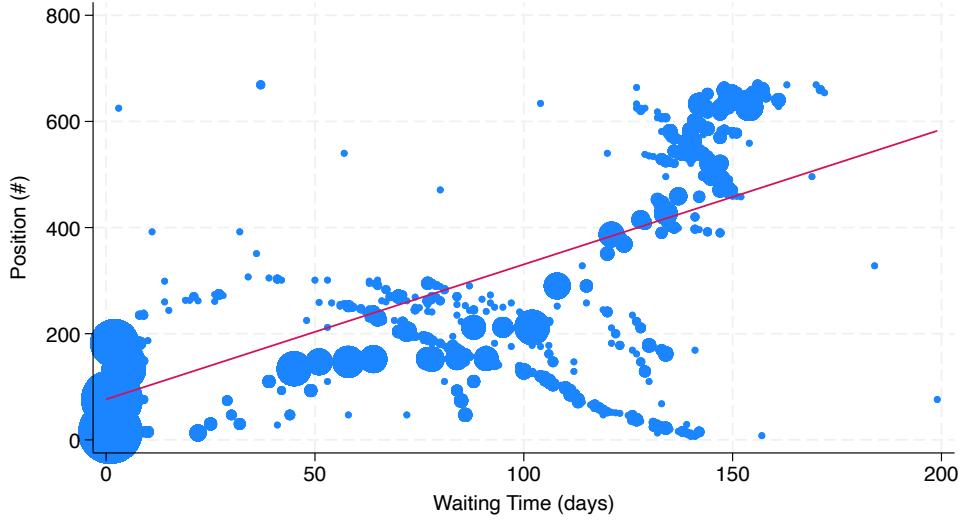
$$\begin{aligned}
 Missed Exam_i = & \alpha + \beta_1 \text{Wait List Position}_i \\
 & + \beta_2 \text{Phone}_i + \beta_3 \text{Multiple Phones}_i + \beta_4 \text{NGO Phone}_i \quad (2) \\
 & + FE + \varepsilon_i.
 \end{aligned}$$

The dependent variable is $Missed Exam_i$, a dummy for student "i" not taking the exam. Phone_i is a dummy equal to one if the individual provided at least one valid phone number at registration, and Multiple Phones_i indicates whether more than one phone number was annotated. NGO Phone_i is a dummy equal to one if one of the contact numbers belongs to a humanitarian organization. Around 8% of registered families rely on NGO phone numbers that can operate as an intermediary agent in the communication.

The time waited between registering the children and taking the exam is correlated with how easy it is to contact the family (exams can be postponed until communication is complete). Therefore, to measure how the capacity/speed of the exam scheduling process affects absenteeism, we instead use the variable $\text{Wait List Position}_i$, which measures how far down the queue the individual was when registered for the exam. Higher positions reflect longer waiting times - see Figure 12. This proxy for waiting time is less likely to be correlated with other family and children characteristics. Finally, we explore different sets of fixed effects (FE), including year, age, and month-year of registry. Our preferred specification compares students with the same age and registered in the same month and year.

According to the results in Table 2, the higher the position in the waiting list, the higher the chances of absenteeism. In addition, as expected, the existence of a phone number in the registry and the registry of multiple phone numbers can facilitate communication and are associated with smaller absenteeism. However, having an NGO phone number is associated with higher chances of absenteeism, likely because this variable captures other socio-economic variables of student "i" and their family. This becomes clear once we add a dummy for whether children "i" live in a shelter (only

Figure 12: Position in the Wait List Vs Waiting Time



Note: red curve represents the fit/regression line between the two variables and a constant. *Source:* Placement Exam Registry for 2023 and 2024.

available for a subsample), and the coefficient associated with NGO phone number decreases and loses significance - see column (4) of Table 2.⁶

Absenteeism is considerably higher (around 20 percentage points) for refugee children living in shelters. The addition of this variable, however, does not change the effects of wait list position and having multiple contact phone numbers, reinforcing the importance of those two logistical components in mediating exam attendance. Finally, the interaction of phone communication variables and position in the wait list (results not reported in this draft) is not significant, and therefore, indicates that both sets of variables matter by themselves.

⁶The results are similar when estimating equation 2 using logit - see Table 3 in the Apppendix.

Table 2: What Explains Exam Absenteeism

Dependent Variable:	Missed Exam (Dummy)			
	(1)	(2)	(3)	(4)
Wait List Position	0.0006*** [0.13***] (0.0000)	0.0006*** [0.13***] (0.0000)	0.0006*** [0.13***] (0.0001)	0.0009*** [0.29***] (0.0002)
Have Phone Number	-0.1245*** (0.0464)	-0.1268*** (0.0462)	-0.1059** (0.0450)	-0.2017 (0.1352)
Have 2+ Phone Numbers	-0.0958*** (0.0194)	-0.0913*** (0.0194)	-0.0609*** (0.0189)	-0.0702** (0.0318)
Have NGO Phone Number	0.1680*** (0.0246)	0.1717*** (0.0245)	0.1746*** (0.0238)	0.0549 (0.0375)
Live in a Shelter				0.2055*** (0.0300)
Observations	3,298	3,298	3,296	1,472
R-squared	0.3407	0.3479	0.4006	0.3078
<i>Fixed Effects:</i>				
Year FE	Y	Y	N	N
Age FE	N	Y	Y	Y
Month-Year Registered FE	N	N	Y	Y
Avg. Missed Exam	0.299	0.299	0.299	0.496
Avg. Wait List Position	222.2	222.2	222.3	325.3
Avg. Have Phone Number	0.980	0.980	0.980	0.993
Avg. Have 2+ Phones Numbers	0.130	0.130	0.130	0.147
Avg. Have NGO Phone Number	0.0797	0.0797	0.0798	0.147
Avg. Live in shelter				0.357

Notes: β multiplied by the average *Wait List Position* in brackets. Standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Grade Assignment

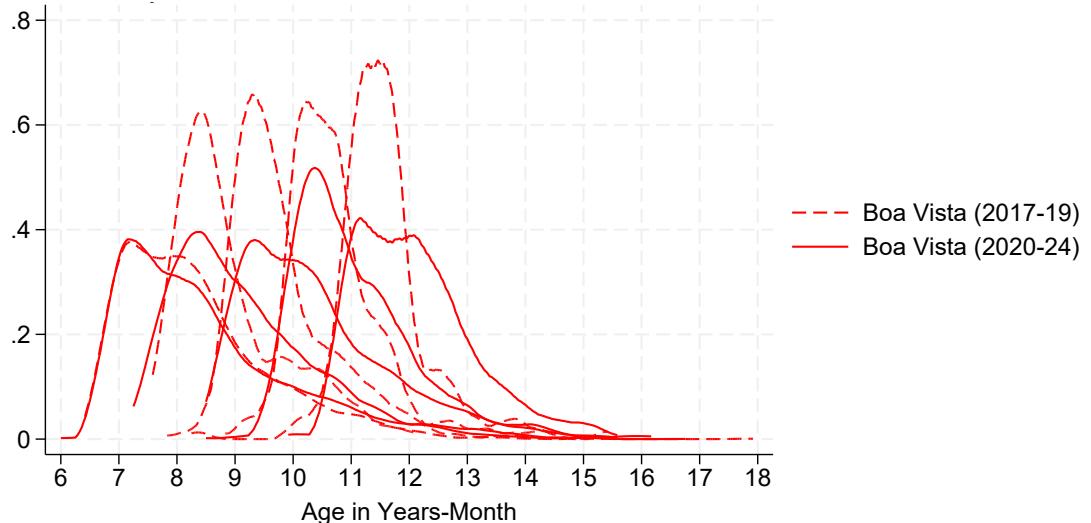
Finally, we compare how grade assignment changed before and after the policy. The creation of a centralized placement exam in Spanish could also have changed the grades that Venezuelans are assigned to, potentially affecting age distortions (students at least two years older than expected for that grade).

Looking at the age distribution of Venezuelans enrolled in each grade, we can also observe that age distortion rates increased after the policy implementation, especially for grades 2 to 5. In other words, the pull of students being enrolled at each grade from 2nd to 5th got on average older, due to the expansion in the left tail of the age distribution. As expected, given that the policy had a limited effect on 12-year-olds or older migrants, we don't observe relevant changes for grades 6th to 9th. Different things can explain this effect, either exams are now stricter,/or the pull of children

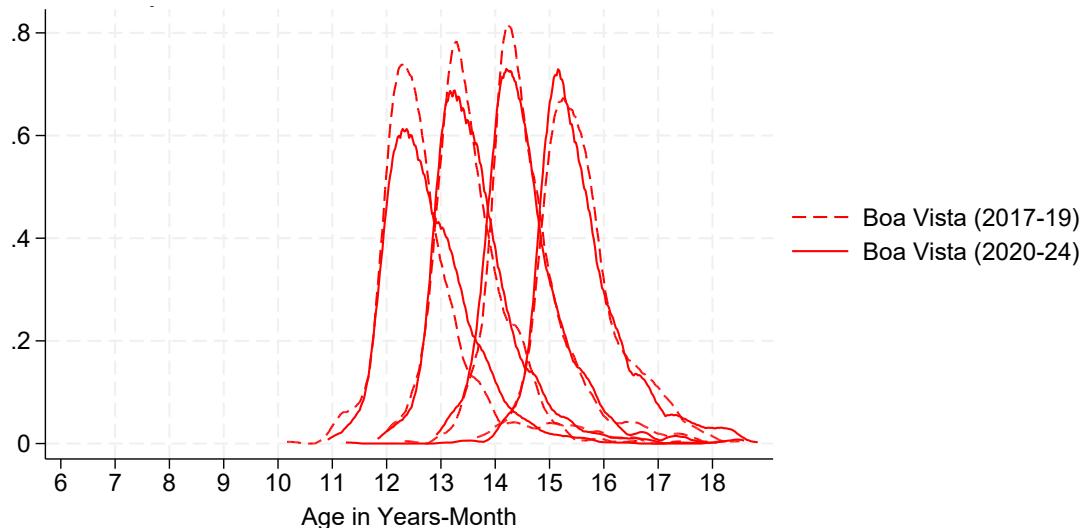
being enrolled has changed. However, it is still relevant that the policy likely affected age-distortion.

Figure 13: Age Density Per Grade - Boa Vista (RR)

(a) 1st to 5th Grades



(b) 6th to 9th Grades



Notes: enrollment across all public schools. PDF estimated using an univariate kernel density estimation. *Source:* School Census (2017-2024).

5 Conclusion

Between 2010 and 2024, the number of displaced children worldwide rose from 17 to nearly 50 million. Access to education offers these children stability, protection, and a path to integration, yet schools face challenges such as interrupted schooling, language barriers, and missing documents. Placement exams can assist schools in assessing migrants' pre-enrollment skills and guide grade assignment. However, depending on their design and implementation, they may also function as an unintended barrier, reducing school enrollment.

This paper studies how a mandatory placement exam affected refugee children's school enrollment in Boa Vista, Brazil, following the large inflow of Venezuelan migrants after 2017. The local government introduced a mandatory placement exam at the end of 2019 for all Venezuelan children aged 8–14 without school. Using a triple-difference framework, we exploit both the policy's geographic restriction to Boa Vista and its targeted age group to estimate its impact on school enrollment using national administrative data.

We find that the introduction of the exam in Boa Vista reduced school enrollment among refugee children in the targeted age group. We estimate that the policy affected the enrollment of around 1,000 Venezuelan children between 2020 and 2024. Exploring unique administrative data on the exams' registration list, we also found that the main barrier was not that refugee families failed to register their children for the exam, but rather the waiting time (on average, 30 days) and difficulty in contacting families, which increased the exam absenteeism. Finally, Venezuelan children living in shelters, a specially vulnerable subgroup of the refugee population, were also more likely to miss the exam (by more than 20 percentage points).

This project is among the first economic papers studying the integration of refugee children into the host country's public education. Together, the results reveal that local government should consider changes in the way placement exams are applied. Importantly, improving exam capacity (i.e., reducing waiting times) and communication (such as using alternative strategies, such as publicly available exam schedule lists) can reduce absenteeism and increase enrollment. Conducting placement exams in shelters to reach out-of-school children could also improve enrollment, especially

among this vulnerable subgroup of refugees most adversely affected by the policy.

Finally, this paper did not evaluated the effect of grade assignment. More specifically, whether downgrading/age distortion, is beneficial for refugees education outcomes (such as test scores, attendance and retention). Future work in understanding refugee students integration after enrollment is needed.

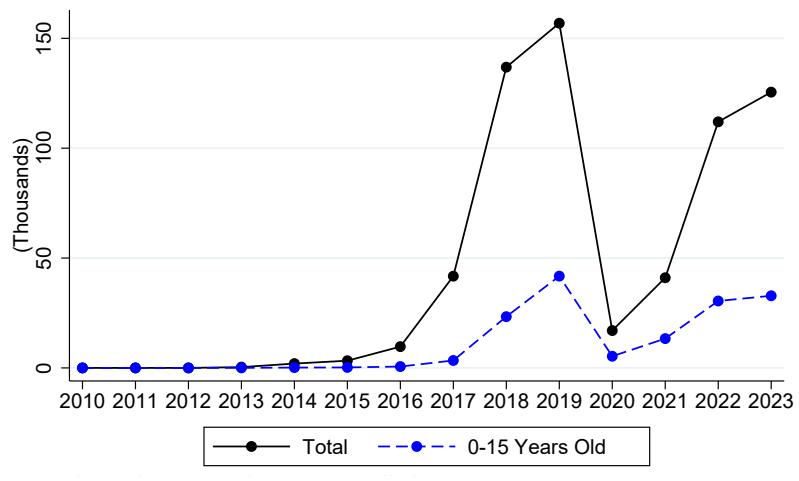
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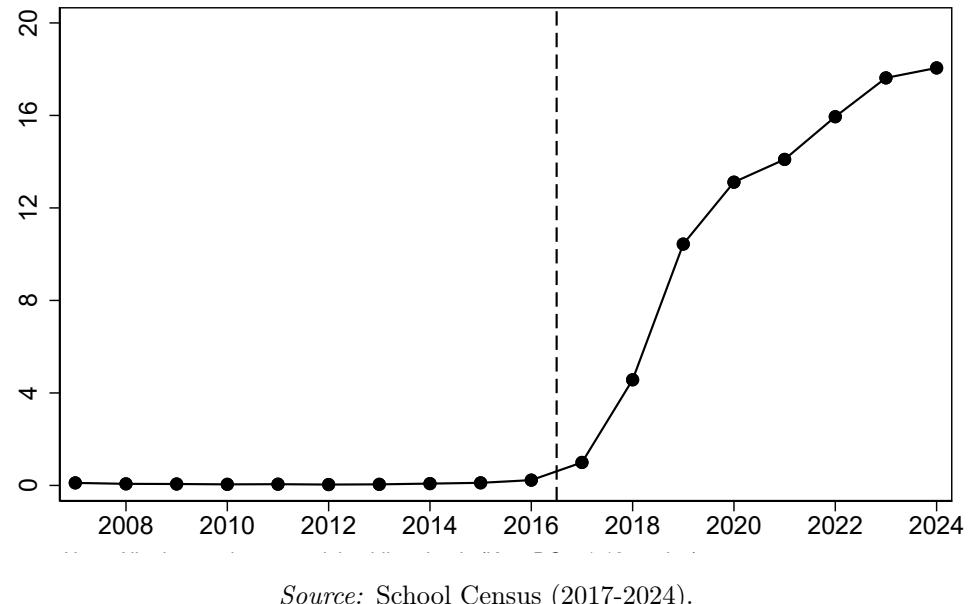
Appendix

Figure 14: Venezuelan Net Entrance Flow - Roraima's Border



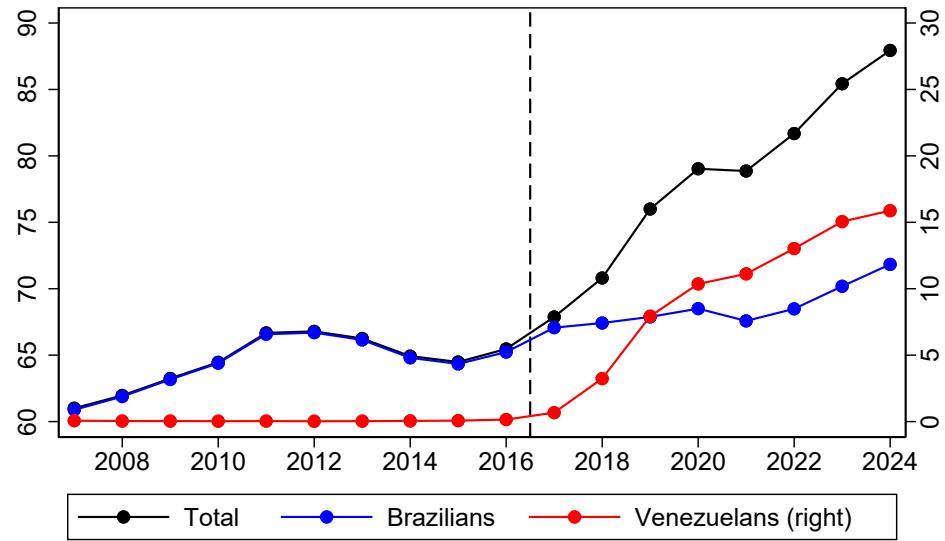
Source: STI.

Figure 15: % Venezuelan Students in Public Schools - Boa Vista (RR)



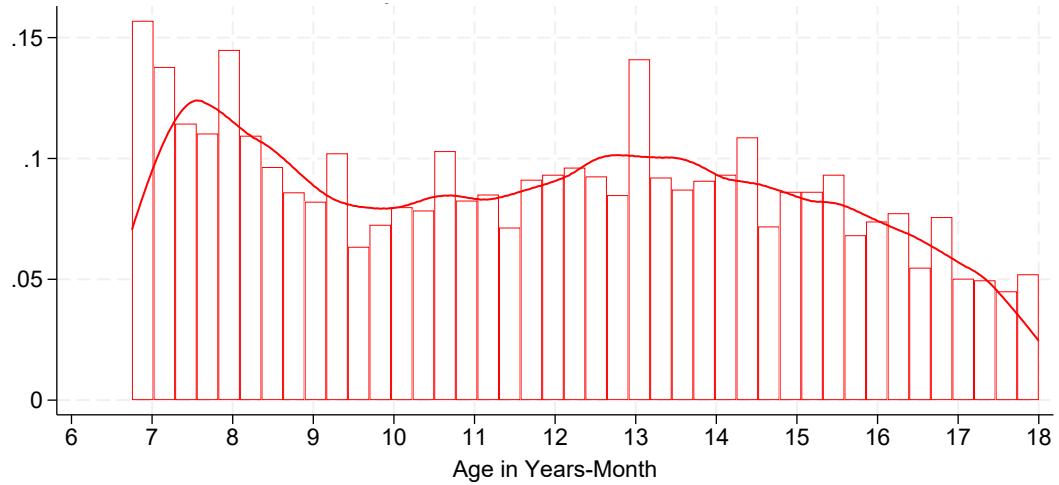
Source: School Census (2017-2024).

Figure 16: Number (1,000) of Venezuelan Students in Public Schools - Boa Vista (RR)



Note: Includes all public schools from grades 1 to 12, kindergarten to Nursery schools. Source: School Census (2017-2024).

Figure 17: Age Histogram of Newly Enrolled Venezuelans - Boa Vista (RR)



Notes: enrollment across all public schools. PDF estimated using an univariate kernel density estimation. Source: School Census (2017-2024).

Table 3: What Explains Exam Absenteeism - Logit

Dependent Variable:	Missed Exam (Dummy)			
	(1)	(2)	(3)	(4)
Wait List Position	0.0031*** (0.0003)	0.0031*** (0.0003)	0.0038*** (0.0007)	0.0044*** (0.0009)
Have Phone Number	-0.8201** (0.3440)	-0.8453** (0.3505)	-0.8061** (0.3432)	-1.3074 (0.9028)
Have 2+ Phone Numbers	-0.5880*** (0.1393)	-0.5723*** (0.1409)	-0.5194*** (0.1535)	-0.4213** (0.1841)
Have NGO Phone Number	0.9775*** (0.1630)	1.0179*** (0.1619)	1.1774*** (0.1762)	0.2808 (0.2364)
Live in a Shelter				1.1905*** (0.1852)
Observations	3,298	3,298	2,785	1,375
<i>Fixed Effects:</i>				
Year FE	Y	Y	N	N
Age FE	N	Y	Y	Y
Month-Year Registered FE	N	N	Y	Y
Avg. Missed Exam	0.299	0.299	0.299	0.496
Avg. Wait List Position	222.2	222.2	222.3	325.3
Avg. Have Phone Number	0.980	0.980	0.980	0.993
Avg. Have 2+ Phones Numbers	0.130	0.130	0.130	0.147
Avg. Have NGO Phone Number	0.0797	0.0797	0.0798	0.147
Avg. Live in shelter				0.357

Notes: β multiplied by the average *Wait List Position* in brackets. Standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1