Bordering on Effectiveness: The Uneven Impact of Visa Policies *

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Abstract

We study how transit-country visa restrictions reshape international mobility, highlighting the trade-offs they create between reducing irregular migration and sustaining international travel. In 2021, Mexico reinstated a tourist visa requirement for Brazilians, a nationality that was simultaneously a relevant source of irregular migration to the United States and international tourists to Mexico. Using administrative data and a difference-in-differences design, we find that the policy reduced Brazilian encounters at the U.S.–Mexico border by more than 75 percent and that the remaining crossings became more concentrated in riskier border sections with higher mortality rates. At the same time, the policy decreased Brazilian tourist arrivals to Mexico by nearly 40 percent. Even under the assumption that all transit migrants previously entered Mexico as "tourists", the impact on legitimate tourism remains of a similar magnitude. These findings show that transit-country visa policies can substantially curb irregular migration to final destination countries. Still, their effectiveness is weaker (by around 30 p.p.) among less risk-averse (male and young) individuals. Crucially, they also reveal sizable unintended consequences for tourism, a sector that represents a major share of Mexico's GDP, underscoring the costs imposed by the visa.

Keywords: Visa policy, Irregular migration, Tourism flows, U.S.–Mexico border.
JEL Codes: F22, J61.

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1 Introduction

"Countries along migration routes must do their part to prevent and deter the movement of aliens seeking to enter the United States illegally."

US Secretary of State - Marco Rubio (March 2025)

The US–Mexico border is one of the busiest migration corridors in the world. Between October 2014 and September 2024, US Border Patrol reported over 9.2 million encounters of individuals from more than 30 nationalities attempting to cross. Non-Mexican citizens accounted for more than two-thirds of all encounters (Figure 4), with numbers rising sharply after 2018, reflecting the growing importance of transit migration through Mexico.

Mexico's openness to travelers from different countries thus shapes both tourism and migration flows. To enter Mexico's official ports of entry, transit migrants going to the US often attempt to enter as tourists (Cornelius, 2018). A tourism visa requirement, ranging from electronic authorizations to in-person consular interviews requiring proof of income, raises the costs of entry. These frictions can deter and redirect migration flows toward alternative routes, such as applying directly for a U.S. visa or crossing into Mexico without authorization, while simultaneously reducing legitimate tourist arrivals.

This paper examines how Mexico's introduction of tourism visa requirements affects irregular migration to the United States and legitimate international tourism flows to Mexico.[1] We study the case of Brazil, an important source of both international tourists to Mexico and irregular migration to the US, which lost its tourism visa exemption in late 2021. To identify causal effects, we exploit the timing of Mexico's policy change in a difference-in-differences framework, comparing Brazilian outcomes to those of unaffected nationalities.

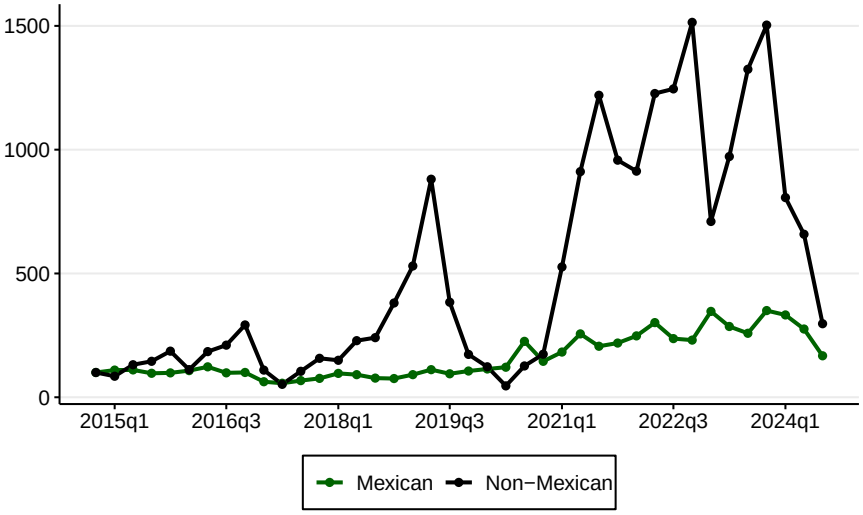
Our analysis highlights a stark trade-off. First, we find that the introduction of a visa reduced Brazilian encounters at the US–Mexico border by more than 75%, with sharper de-

[1] Our focus is on irregular land crossings at the U.S.–Mexico border. While higher costs of entering Mexico may indirectly shift migrants toward applying for U.S. tourist visas (B1/B2) and overstaying, those dynamics are not the object of our study. We focus on the direct effect of Mexico's visa requirement on land-border encounters.

clines among women and older individuals and concentrated crossings in riskier and deadlier border sectors. On the other hand, tourism flows from Brazil to Mexico fell by nearly 40% relative to control countries, equivalent to about 150,000 fewer annual visitors compared to pre–policy levels. Even under the extreme assumption that every undocumented Brazilian in the United States first entered Mexico as a tourist, the contraction in genuine tourism remains of similar magnitude (163,000 fewer tourists per year). The estimates are robust across specifications, estimation strategies, and alternative control groups.

These results point to the large economic costs in using tourism visas to control irregular migration borne by the tourism sector, which in 2019 accounted for 15% of Mexico's GDP and supported more than 7 million jobs.

Figure 1: Encounters along the USA–Mexico Border (Q4-2014=100)



Notes: This figure shows quarterly encounters by the U.S. Border Patrol along the U.S.–Mexico border between FY2015q1 and FY2024q1. Series are normalized to 100 in 2014q4. Encounters include apprehensions, expulsions, and inadmissibles under Title 8 and Title 42. The green line represents Mexican nationals; the black line represents non–Mexican nationals. Source: U.S. Customs and Border Protection (CBP).

This study contributes to the literature on how immigration policies (such as border enforcement and regularization) affect immigration flows. A large body of work models and measures undocumented flows using apprehensions as a proxy (Bean, Espenshade, White,

and Dymowski, 1990; Espenshade, 1995b). Classic studies show enforcement can alter flows and labor-market outcomes with nuanced effects (Hanson, Robertson, and Spilimbergo, 2002a; Hanson and Spilimbergo, 1999; Bohn and Pugatch, 2015; Buehn and Eichler, 2013), while regularization programs may have unintended consequences for subsequent inflows (Orrenius and Zavodny, 2003). More recent evidence indicates that restrictive processing at ports of entry (metering) redirected migrants to riskier crossings rather than eliminating movement (Amuedo-Dorantes and Bucheli, 2023a). We contribute by examining an upstream policy implemented in a transit country—Mexico's tourist visa —which indirectly determines who reaches the U.S.–Mexico border and through which sectors, broadening the lens beyond U.S. enforcement.

We also contribute to work on policy spillovers of immigration enforcement. Different studies highlight how U.S. immigration enforcement and adjudication contexts shape migrant strategies and outcomes (Amuedo-Dorantes and Puttitanun, 2018; Amuedo-Dorantes, Puttitanun, and Martinez-Donate, 2019; Amuedo-Dorantes and Lopez, 2022; Amuedo-Dorantes, Bucheli, and Lopez, 2023; Amuedo-Dorantes, Bucheli, and Lopez, 2024; Hanson, 2006; Espenshade, 1995a; Massey, 2016). Our results illustrate the externalities and trade-offs embedded in using visa policy as migration management. In short, while visa restrictions in transit countries can serve U.S. migration management goals, they do so by shifting risks to migrants and imposing sizable economic costs on the transit country.

The remainder of the paper is structured as follows. Section 2 provides institutional background on Mexico's visa policy change. Section 3 describes the data sources on border apprehensions and tourist entries. Section 4 presents the empirical strategy. Section 5 reports the main results on migration and tourism. Section 6 discusses robustness checks, and Section 7 concludes.

2 Institutional Background

Mexico is one of the world's largest tourism destinations. In 2019, the country received more than 45 million international visitors, making it the seventh most-visited country globally. According to the World Travel & Tourism Council, Mexico's tourism sector accounted for about 15% of GDP and supported over 7 million jobs in 2024. Brazil has historically been among the top five sources of international tourists, with more than 370,000 arrivals at Mexican airports in 2019.

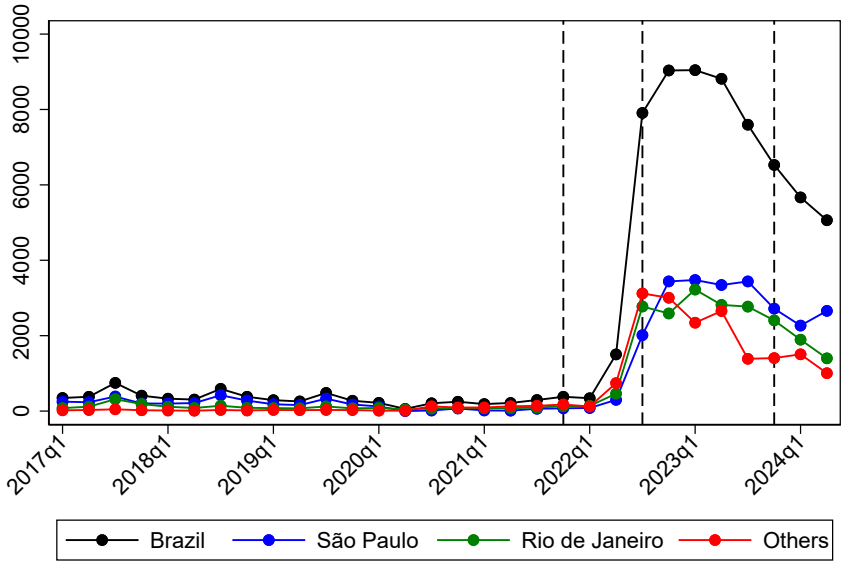
Mexico also plays a central role in regional migration dynamics as a transit country for non-Mexican nationals seeking to reach the United States. The share of non-Mexican encounters at the U.S.–Mexico border rose sharply after 2015, with Brazilians among the top 10 nationalities of border-crossing migrants.

In December 2021, the Mexican government introduced an electronic visa (E-visa) requirement for Brazilian nationals, justified as a response to a "substantial increase in irregular migration flows." The E-visa was followed by a full consular visa requirement in August 2022, marking a complete reversal of the exemption that had allowed Brazilians visa-free entry since 2004. The Mexican government kept the tourism visa exemption for Brazilians with valid diplomatic, official, or service passports for stays of up to 90 days. Furthermore, those with a valid visa or permanent residence in the US, Canada, Japan, the UK, or Schengen Area countries are also exempt.[2] Therefore, the policy directly affected a group of travelers who had relied on visa-free entry for short-term tourism or as a relatively low-cost pathway to the U.S. border. Figure 2 shows the increase in visas issued by Mexican consulates after the policy change. [3] By 2023, Brazil had also fallen from the fifth to the twelfth largest source of tourists to Mexico, with its share of arrivals cut by more than half (Table 1).

[2]Cruise ship tourists can disembark and stay for up to 7 days without a visa.

[3]See El País (2021); Reuters (2021), which reported U.S. requests for action; and official announcements from the Secretaría de Relaciones Exteriores suspending the 2004 visa waiver (SRE 2021). Similar measures were later applied to other nationalities.

Figure 2: Visas Issued by Mexican Consulates in Brazil



Notes: This figure shows quarterly visas issued by Mexican consulates in Brazil (São Paulo, Rio de Janeiro, and others) between 2017q1 and 2024q1. The sharp increase in 2022q1 reflects the introduction of new visa requirements. The black line shows total visas issued; colored lines show major consulates. Source: Secretaría de Relaciones Exteriores (SRE).

Table 1: Airport Entrance – Major Countries

	2019		2023	
Country	**Rank**	**Tourists (%)**	**Rank**	**Tourists (%)**
USA	1	10,186,027 (56.6)	1	13,135,213 (63.5)
Canada	2	2,259,185 (12.5)	2	2,384,971 (11.5)
UK	3	554,468 (3.1)	4	472,118 (2.3)
Colombia	4	547,441 (3.1)	3	657,293 (3.2)
Brazil	5	370,248 (2.1)	12	184,818 (0.9)

Notes: Table reports the top sending countries by air arrivals in 2019 and 2023. "Rank" indicates position among all countries by total arrivals. Percentages are shares of all tourist arrivals in that year. Source: Subsecretaría de Derechos Humanos, Población y Migración de la Secretaría de Gobernación (Segob), a través de la Unidad de Política Migratoria, Registro e Identidad de Personas (UPMRIP)

The policy is expected to affect two distinct populations. For migrants using Mexico as a transit country, the visa increases the costs of entry, which may deter some, redirect others toward alternative routes (such as irregular entry into Mexico or direct applications

for U.S. B1/B2 visas). For legitimate travelers, the visa introduces new costs, such as fees, trips to Mexican consulates, uncertainty of visa processing, and the possibility of rejection. Cross-country evidence suggests that visa restrictions cut tourism and business travel flows by 40–60% (Neumayer, 2010). Mexico's policy thus creates a trade-off: while reducing irregular migration to the United States, it might also impose sizable economic costs on its own tourism sector. In the next section, we describe the different data explored.

3 Data

To examine the relationship between the Mexican tourism visa requirement policy and its effects on local tourism and migration to the USA, we construct a panel of quarterly data for the period 2015 to 2024 using a variety of data sources.

Migration. Our analysis uses encounter data from U.S. Customs and Border Protection (CBP), which includes U.S. Border Patrol Title 8 apprehensions, Office of Field Operations Title 8 inadmissibles, and all Title 42 expulsions for fiscal years 2015 to 2024.[4] It provides individual-level information on encounters by nationality, border patrol sector, gender, age, and family status. We construct a panel at the sector–nationality–demographic–quarter level, where demographic groups are defined by the interaction of gender (female, male) with three age categories (under 18, 18–31, and above 31). We restrict our main sample to observations from the U.S.–Mexico border sectors: El Centro (ELC), El Paso (EPT), Del Rio (DRT), Laredo (LRT), Big Bend (BBT), Rio Grande Valley (RGV), Tucson (TCA), Yuma (YUM), and San Diego (SDC).

We first exclude Mexicans, Venezuelans, Peruvians, and Ecuadorians from the sample. Mexicans are excluded, by construction, as they do not use Mexico as a transit country to

[4]Title 8 apprehensions refer to migrants caught by Border Patrol agents after entering the U.S. between ports of entry; Title 8 inadmissibles are individuals deemed inadmissible at official ports of entry by CBP's Office of Field Operations; Title 42 expulsions are summary removals carried out under public health authority during the COVID-19 pandemic.

reach the United States. Venezuelans, Peruvians, and Ecuadorians are excluded because they were subject to similar visa restrictions around the same time as Brazil, which could confound identification. We also exclude migrants from the Northern Triangle (Guatemala, Honduras, and El Salvador), who are subject to a distinct and longstanding visa regime and whose migration dynamics differ substantially from other nationalities. Among the remaining nationalities, we restrict the sample to those in the top 5% of total encounters at the U.S.–Mexico border prior to the implementation of Mexico's visa policy. These nationalities account for 92% of total encounters during the study period and provide a consistent comparison group for Brazil.

While apprehensions do not capture the full volume of attempted unauthorized crossings, they are highly correlated with total irregular migration flows and have been widely used as a proxy in prior research (Bean et al., 1990; Espenshade, 1995b; Hanson, Robertson, and Spilimbergo, 2002b; Orrenius and Zavodny, 2003). As noted by Amuedo-Dorantes and Bucheli (2023a), they provide a consistent and empirically validated measure of migration pressure over time and across groups.

Tourism. To measure tourism flows, we use administrative records from the Mexican Migration Policy, Registration and Identity Unit of the Ministry of the Interior. The dataset covers all foreign entries at 60 land points of entry and 65 international airports and includes individual-level information on nationality, age, gender, month, point of entry, and migration category. Airport arrivals are available from January 2015 to December 2023, while land entries are available only from January 2020 to December 2023. Table 8 in the Appendix displays the main airports and land entry points for international visitors in 2023. Because no pre-policy non-pandemic years are available for land points of entry, we restrict the analysis to airport arrivals, which accounted for more than 98% of Brazilian entries prior to the visa requirement (see Figure 9, Appendix).

We classify as tourists all individuals recorded under the categories "Tourist Visitors,"

"Business Visitors," and "Other Visitors without a Paid Activity Permit." Table 2 reports the full set of migration categories and their shares in 2023. Other categories—such as students, diplomats, or temporary workers—require specific visas or documentation and are unlikely to be used by migrants to enter Mexico.

Analogously to the migration data, we construct a quarterly panel disaggregated by nationality, point of entry, and demographic group. Demographic groups are also defined by the interaction of gender (female, male) with three age categories (under 18, 18 to 31, and above 31). From Brazil, direct flights exist only to Cancún (CUN) and Mexico City (CDMX), which together account for more than 99% of arrivals; all other airports are grouped under a residual "Others" point of entry category.

Table 2: Foreigners' Entrance Classification, 2023

Classification Category	**Total**	**% of Entrances**
Tourist visitors	16,429,728	75.3
Business visitors	460,942	2.1
Other visitors (no paid activity permit)	3,776,328	17.3
Foreign crew	420,791	1.9
Visitors for humanitarian reasons	1,697	0.0
Visitors with a paid activity permit	48	0.0
Foreign diplomats	37,344	0.2
Temporary residents	300,135	1.4
Permanent residents	390,570	1.8
Visitors for adoption purposes	304	0.0

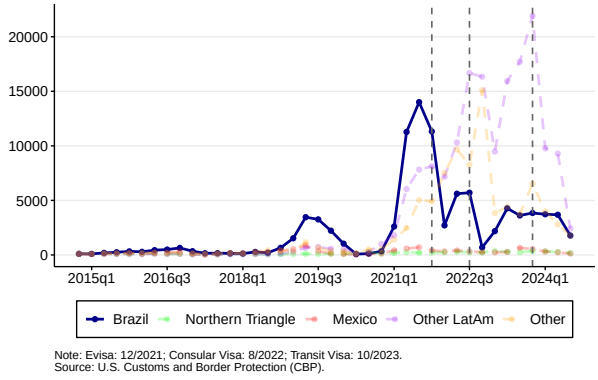
Notes: Table reports the classification of foreigner entrances to Mexico in 2023. "Total" indicates the absolute number of entries in each category, and "% of Entrances" shows their share of all foreigner entrances. Source: Secretaría de Gobernación, Unidad de Política Migratoria.

To focus on relevant sending countries and ensure comparability, we restrict the sample to nationalities in the top 75th percentile of arrivals to Mexico between 2015 and 2019. These countries represent 99.4% of all arrivals during that period and provide a consistent comparison group for Brazil. We also exclude Venezuelans, Peruvians, and Ecuadorians because they were also subject to new visa requirements after 2021.

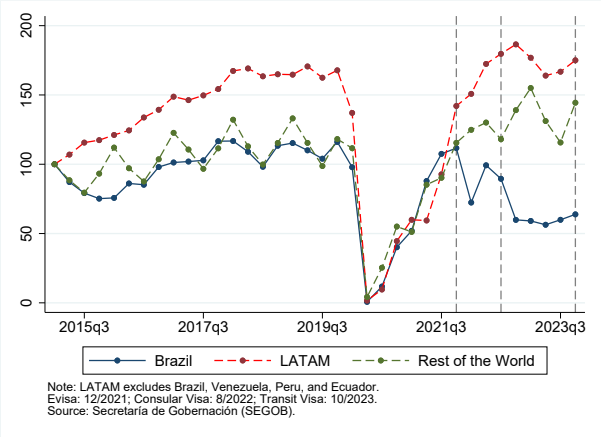
Descriptive patterns. Having defined the data and sample restrictions, we close this section by showing the unadjusted trajectories for our two outcomes. Figure 3 displays the raw trajectories of our two outcomes. For migration, Brazilian encounters decline sharply relative to controls after late 2021; for tourism, Brazilian arrivals diverge downward after the E-Visa and remain roughly 50% below pre-policy levels by 2023. We take these descriptive trends only as suggestive and turn to causal estimates in Section 5.

Figure 3: Descriptive trends for outcomes

(a) Encounters at the U.S.–Mexico border (Q4-2014=100)



(b) Airport arrivals in Mexico (Q1-2015=100)



Notes: Panel (a) plots quarterly encounters for Brazilians and control nationalities at the U.S.–Mexico border; Panel (b) plots quarterly airport arrivals for Brazilians and controls in Mexico. Series are normalized to facilitate comparison across groups; shaded periods mark the E-Visa (Dec-2021) and consular visa (Aug-2022) introductions where applicable.

4 Empirical Strategy

Migration. To estimate the causal effect of Mexico's visa requirements on irregular migration to the United States, we employ a difference-in-differences (DiD) framework. Specifically, we estimate the following equation:

$$\mathrm{Y}_{bcgt} = \alpha + \beta\ \mathrm{Visa}_c \times \mathrm{Post}_t + \mathrm{FE} + \epsilon_{bcgt} \tag{1}$$

where Y_{bcgt} represents the number of encounters for nationality c in border sector b, demo-

graphic group g (6 age-gender groups), and quarter-year t. The indicator $\text{Visa}_c \times \text{Post}_t$ captures the interaction between Brazil's treatment status and a post-policy indicator. We define treatment as the imposition of the first visa requirement for Brazilian nationals—specifically, the introduction of the E-Visa in December 2021.

Our specifications include five different sets of fixed effects, which consist of different combinations of: γ_c (nationality), γ_g (demographic), γ_b (border sector), γ_t (quarter-year), γ_{bcg} (border sector-nationality-demographic), γ_{bt} (border sector-quarter-year), γ_{gt} (demographic-quarter-year), γ_{cm} (nationality-quarter), and γ_{bcgm} (border sector-nationality-demographic-quarter).

We estimate equation 1 using both Poisson pseudo-maximum likelihood (PPML) and ordinary least squares (OLS). PPML is our preferred specification, as the dependent variable—the number of encounters—is a non-negative count that exhibits many zeros, particularly in the pre-policy period. PPML also delivers consistent estimates in the presence of heteroskedasticity and allows us to retain observations with zero outcomes without requiring arbitrary transformations. For comparison, we also report OLS estimates, which serve as a useful benchmark. For the Poisson models, we present coefficient estimates along with their approximate interpretation as semi-elasticities, i.e., percentage changes in the expected number of encounters.

Standard errors are clustered at the nationality level to account for heteroskedasticity and autocorrelation in treatment assignment. Our identification assumption is that, conditional on the fixed effects, the trends of Brazilian encounters would have followed similar trends to the control nationalities in the absence of the policy.

A potential concern is the "Remain in Mexico" (MPP) program, which briefly included Brazilians in early 2020 and again during MPP-2.0 (Dec-2021–Aug-2022). In practice, however, the number of Brazilians and other nationals placed into MPP was negligible relative to the total number of encounters.[5]. In addition, the policy affects post-encounter process-

[5]According to the CBP, returns under MPP were negligible relative to total flows: only 7,505 migrants were returned to Mexico during MPP 2.0, amounting to about 0.3% of the 2.38 million Southwest Border

ing rather than the probability of being apprehended at the border—the outcome we study. Finally, MPP-2.0 applied broadly to Western Hemisphere nationalities, implying that any residual effect constitutes a common shock absorbed by the fixed effects.

Tourism. Similar to the estimation for irregular migration, to estimate the effect of Mexico's tourism visa requirements on the arrival of tourists in Mexican airports, we also employ a DiD framework:

$$Y_{bcgt} = \alpha + \beta \text{ Visa}_c \times \text{Post}_t + FE + \epsilon_{bcgt} \tag{2}$$

Y_{bcgt} represents the total number of tourists reported from country c, demographic group g (6 age-gender groups) in airport b (*CDMX*, *CUN*, and *Others*) at quarter-year t. Post_t is a dummy for every quarter-year observation after the requirement of visas was imposed in December 2021. We use different combinations of the following fixed effects: γ_c (nationality), γ_g (demographic group), γ_b (airport), γ_t (quarter-year), γ_{bcg} (airport-nationality-demographic), γ_{bt} (airport-quarter-year), γ_{gt} (demographic-quarter-year), γ_{cm} (nationality-quarter), and γ_{bcgm} (airport-nationality-demographic-quarter). The last two are used to capture quarter-seasonality patterns. Errors are clustered at the nationality level.

Finally, we exclude the pandemic quarters (the entire 2020 and first and second quarters of 2021) to estimate equations 1 and 2. The pandemic was an unprecedented period with the closure of airports and borders, and other severe restrictions for international trips. It created a "floor" effect with basically all countries registering extremely low numbers of entries in both Mexican airports and the US-Mexico border. This pattern violates, by construction, the parallel trends assumption required for the DID estimations in the periods before policy implementation. We complement our analysis with a synthetic control estimation that allows the inclusion of pandemic quarters. Finally, we also estimate event study versions of equations 1 and 2 to verify pre-policy differential trends between treatment and control.

encounters in FY2022. For Brazilians, encounters numbered nearly 57,000 in FY2021, compared to just a few hundred MPP cases (e.g., 46 new cases in Sept 2020 and 584 pending by Jan 2021)

5 Results

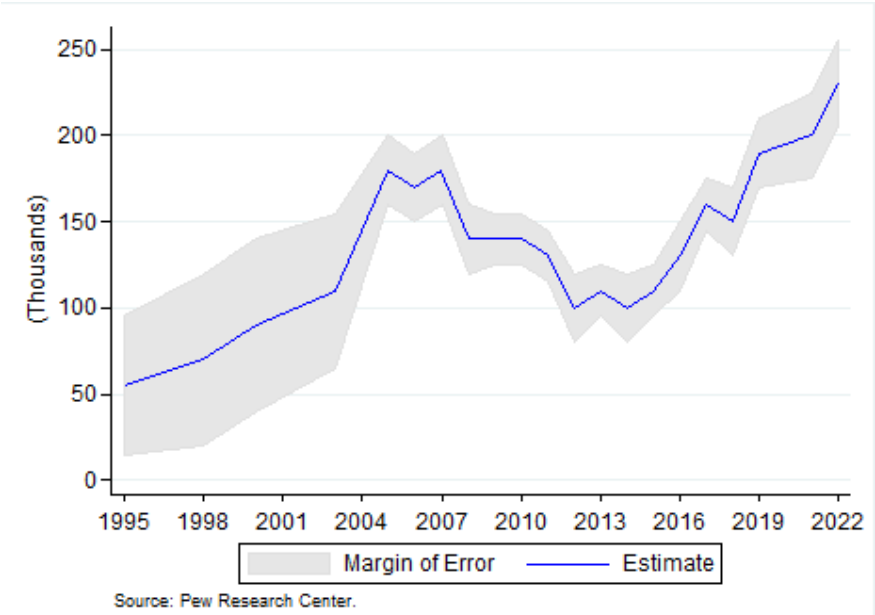
5.1 Main Results

Migration. Table 3 reports baseline DiD estimates. Across PPML specifications, estimated β ranges from -1.523 to -1.839, all significant at the 1% level. These magnitudes imply declines of roughly 78%–84% in expected encounters for Brazilians. Although OLS estimates are statistically insignificant, the sign and order of magnitude align with the PPML results.

Tourism. Table 4 shows that PPML estimates lie between -0.46 and -0.53, implying a 37%–41% contraction in expected arrivals; OLS levels estimates are also negative and statistically significant. Considering the number of visitors in 2019 ($\sim$ 370,000), our estimates indicate that the policy decreased the flow of visitors by the order of $\sim$ 150,000 per year. Estimates are stable across specifications with different sets of fixed effects capturing differential shocks across sending countries, changes in enforcement across border sectors, or common time shocks.

Reconciling tourism with undocumented migration counts. According to Pew Research Center estimates using a combination of household surveys, census, and official counts of immigrant admissions, the undocumented Brazilian stock in the U.S. rose by $\sim 120,000$ between 2015 and 2022. During the same period, $\sim$ 3.34 million Brazilian airport visitors' entries were reported in Mexican Airports. Therefore, even the extreme assumption that every irregular Brazilian migrant first entered Mexico as a "tourist" implies that our measure of legitimate tourism is overestimated by at most 3.6%. Therefore, if we adjust our estimated β by 0.96, the post-policy contraction in tourism remains essentially unchanged ($\sim$ 35.5%–40%), confirming that we are accurately measuring the costs of the policy for the tourism sector by using the entrance of visitors in Mexican airports.

Figure 4: Undocumented Brazilian Population in The US



Source: Pew Research Center estimates based on augmented U.S. Census Bureau data. See Methodology for details. "U.S. Unauthorized Immigrant Total Dips to Lowest Level in a Decade".

Table 3: Effect on Brazilian Encounters along the USA-Mexico Border

Dependent Variable:	Encounters				
Model:	(1)	(2)	(3)	(4)	(5)
Panel A: Poisson					
Treated × Post	-1.523***	-1.523***	-1.824***	-1.749***	-1.839***
	(0.3755)	(0.3754)	(0.4389)	(0.4692)	(0.4939)
	[-0.782]	[-0.782]	[-0.839]	[-0.826]	[-0.841]
Observations	19,440	18,920	18,920	18,920	17,900
Panel B: OLS					
Treated × Post	-124.6	-124.6	-124.6	-124.6	-124.6
	(85.68)	(85.65)	(86.91)	(86.91)	(86.91)
Observations	19,440	19,440	19,440	19,440	19,440
R^2	0.12235	0.20718	0.31737	0.32031	0.33324
Fixed-effects					
Apprehension Sector FE	Y	N	N	N	N
Country FE	Y	N	N	N	N
Demographic FE	Y	N	N	N	N
Time FE	Y	Y	N	N	N
App. Sector-Country-Dem. FE	N	Y	Y	Y	N
App. Sector-Time FE	N	N	Y	Y	Y
Demographic-Time FE	N	N	Y	Y	Y
Country-Quarter FE (seasonal)	N	N	N	Y	N
App. Sector-Country-Dem.-Quarter FE (seasonal)	N	N	N	N	Y

Notes: The dependent variable for both Panel A and B in columns (1) to (5) is the number of encounters along the U.S.-Mexico border. All models include a constant term. Robust standard errors clustered at the country level in parentheses. For the Poisson models in Panel A, values in brackets represent the approximate percentage change in expected encounters. *** p¡0.01, ** p¡0.05, * p¡0.1.

Table 4: Effect on Brazilian Tourism Flow to Mexico

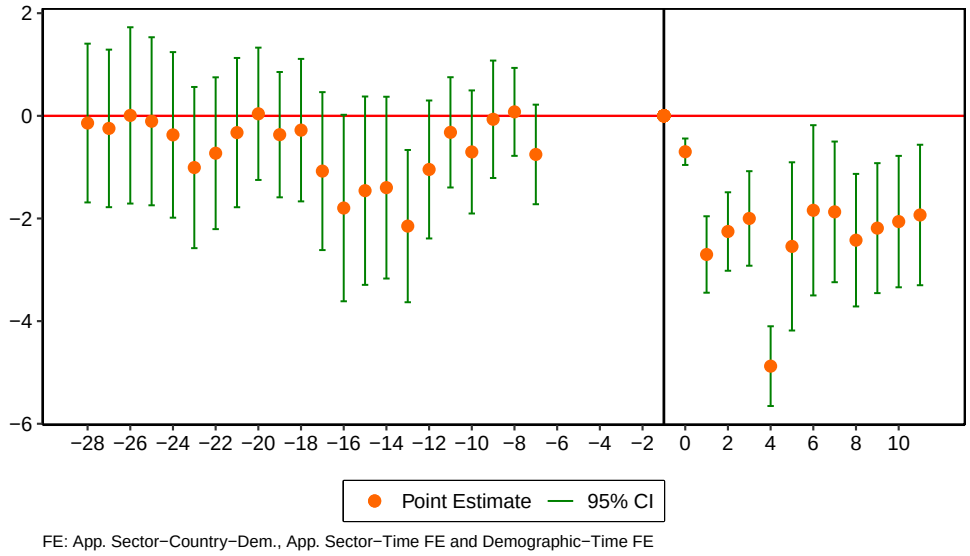
Dependent Variable:	Tourism Flow				
Model:	(1)	(2)	(3)	(4)	(5)
Panel A: Poisson					
Treated × Post	-0.528***	-0.528***	-0.455***	-0.461***	-0.462***
	(0.067)	(0.067)	(0.057)	(0.058)	(0.059)
	[41.02%]	[41.02%]	[36.56%]	[36.93%]	[40.00%]
Observations	28,710	28,710	28,710	28,710	28,710
Panel B: OLS					
Treated × Post	-2,175.155**	-2,175.155**	-2,175.155**	-2,193.760**	-2,193.760**
	(850.377)	(850.273)	(853.298)	(858.208)	(858.208)
Observations	28,710	28,710	28,710	28,710	28,710
R^2	0.571	0.945	0.945	0.952	0.970
Fixed-effects					
Airport FE	Y	N	N	N	N
Country FE	Y	N	N	N	N
Demographic FE	Y	N	N	N	N
Time FE	Y	Y	N	N	N
Airport-Country-Dem. FE	N	Y	Y	Y	N
Airport-Time FE	N	N	Y	Y	Y
Demographic-Time FE	N	N	Y	Y	Y
Country-Quarter FE	N	N	N	Y	N
Airport-Country-Dem.-Quarter FE	N	N	N	N	Y

Notes: The dependent variable for all columns is the number of Brazilian tourists or visitors entering Mexican airports, as classified by the Mexican government. All specifications include a constant term and fixed effects as indicated. For the Poisson models in Panel A, values in brackets represent the approximate percentage change in expected encounters. Robust standard errors, clustered at the country level, are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

5.2 Dynamics

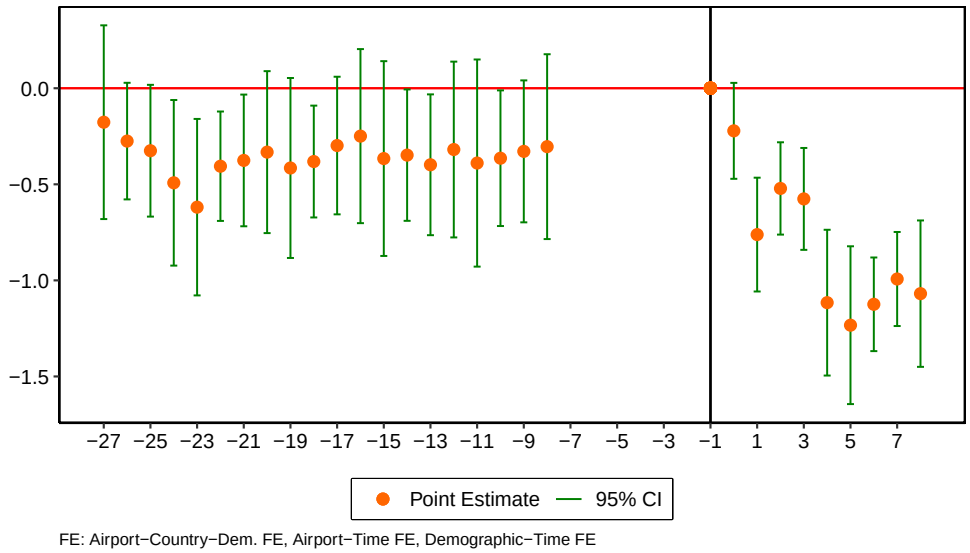
Migration. We estimate an event study version of equation 1 allowing coefficients to vary by quarter relative to 2021q4. Figure 5 shows that pre-treatment coefficients are small and statistically indistinguishable from zero, while post-policy coefficients turn significant and negative immediately after 2021q4 and remain so through 2023. The post-treatment path is persistent and tracks the tightening from E-Visa (2021q4) to consular visas (2022q3).

Figure 5: Effect on Brazilian Encounters along the USA-Mexico Border — Event Study



Tourism. Analogously, the Poisson event study for airport tourism arrivals in Figure 6 shows no detectable pre-trends and after 2022q1, coefficients become sharply negative and remain so through 2023, consistent with a sustained policy-induced contraction.

Figure 6: Effect on Brazilian Tourism Flow to Mexico — Event Study



5.3 Heterogeneity

Migration. Triple-difference PPML estimates (Table 4) confirm that the treatment effect is large and negative (75–86 percent) across all subgroups. However, women experience an additional decline of about 27–28 percent relative to men, while young adults (18–31 years old) are 38–47 percentage points less affected than older adults. For minors, we find no meaningful differential effect. Geographically, while encounters decreased, they became more concentrated at more dangerous (higher reported mortality) sectors such as LRT, TCA, BBT, and DRT. These results indicate that the visa policy not only reduced flows overall but also altered the composition of those who attempt to cross and where.

Tourism. Tourism contractions are broad-based, with estimated declines of 35–42 percent across all groups. Women are slightly more affected, with an additional 3–4 percent drop relative to men. The strongest heterogeneity is among young travelers (18–31), who show an extra 18–20 percent reduction compared to older tourists. Airport-level heterogeneity indicates that the Cancún airport experienced the largest drop in the arrival of Brazilians. This result goes in line with our interpretation that the estimates and data are indeed capturing the visa policy cost for the tourism sector, given that Cancun is primarily a tourism destination and less likely to be used by transit migrants to enter Mexico.

Table 5: Heterogeneous Effects: Gender, Age, and Risk

	Gender		**Age**		**Risk**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treated × Post	-1.402***	-1.688***	-1.636***	-1.949***	-1.564***	-1.895***
	(0.3480)	(0.4306)	(0.3560)	(0.3887)	(0.3929)	(0.4590)
	[-0.754]	[-0.815]	[-0.805]	[-0.858]	[-0.791]	[-0.850]
Female × Treated × Post	-0.3213**	-0.3287**				
	(0.1259)	(0.1462)				
	[-0.275]	[-0.280]				
Young × Treated × Post			0.3840***	0.3207**		
			(0.1302)	(0.1360)		
			[0.468]	[0.378]		
Minor × Treated × Post			-0.0305	0.0080		
			(0.3845)	(0.3927)		
			[-0.030]	[0.008]		
Treated × Post × High-Risk					0.5357	0.7968**
					(0.6045)	(0.3734)
					[0.709]	[1.218]
Observations	13,807	19,200	13,807	19,200	18,920	18,920
Fixed-effects						
Time FE	Y	N	Y	N	Y	N
App. Sector-Country-Dem. FE	Y	Y	Y	Y	Y	Y
App. Sector-Time FE	N	Y	N	Y	N	Y
Demographic-Time FE	N	Y	N	Y	N	Y

Notes: The dependent variable is the number of Brazilians encountered along the U.S.-Mexico border. Individuals classified as "young" are aged 18–31, while "minors" are under 18. High-risk ("dangerous") sectors are defined based on the historical share of deaths per encounter and include Laredo (LRT), Tucson (TCA), Big Bend (BBT), and Del Rio (DRT). All models include a constant term. For the Poisson models, values in brackets represent the approximate percentage change in expected encounters implied by the coefficients. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Heterogeneous Effect - Tourism Flow

	Gender		**Age**		**Airport**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treated × Post	-0.510***	-0.434***	-0.486***	-0.408***	-0.549***	-0.543***
	(0.064)	(0.054)	(0.073)	(0.059)	(0.068)	(0.070)
	´[39.95%]	[-35.21%]	[38.49%]	[33.50%]	´[-42.25%]	[-41.9%]
Female × Treated × Post	-0.034***	-0.043***				
	(0.009)	(0.010)				
	[-3.34%]	[-4.21%]				
Young × Treated × Post			-0.182***	-0.196***		
			(0.016)	(0.015)		
			[16.64%]	[-17.80%]		
Minor × Treated × Post			0.039	0.027		
			(0.048)	(0.037)		
			[3.46%]	[2.74%]		
Cancun × Treated × Post					0.051*	0.043
					(0.030)	(0.029)
					[5.23%]	[4.40%]
CDMX × Treated × Post					0.148***	0.142***
					(0.054)	(0.054)
					[15.95%]	[15.26%]
Observations	28,710	28,710	28,710	28,710	28,710	28,710
Fixed-effects						
Time FE	Y	N	Y	N	Y	N
Airport-Country-Dem. FE	Y	Y	Y	Y	Y	Y
Airport-Time FE	N	Y	N	Y	N	Y
Demographic-Time FE	N	Y	N	Y	N	Y

Notes: Individuals classified as "young" are those aged 18 to 31, while those classified as "minors" are individuals under the age of 18. All models include a constant term and are estimated using a Poisson. Values in brackets represent the approximate percentage change in expected encounters. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

6 Robustness

Migration. We first test whether our migration estimates could be an artifact of arbitrary policy timing. Appendix Figure 8 reports a placebo exercise in which we assign mock visa introduction dates to every quarter between 2014q4 and 2024q2 and re-estimate the baseline specification 1 using PPLM. The distribution of placebo estimates is centered around -1.3,

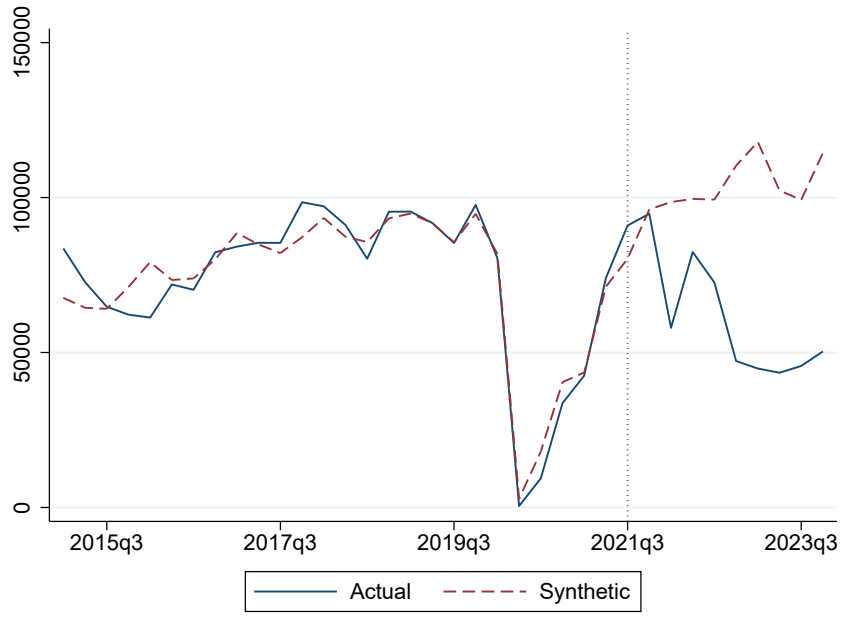
while our true post-2021 coefficient lies in the extreme left tail at -1.8 (around the 5th percentile). This confirms that the sharp post-policy decline in Brazilian encounters is not a spurious break that could have appeared at other points in the sample.

Next, we assess whether the results depend on excluding Mexicans, who account for a large and stable share of encounters at the U.S.–Mexico border. Appendix Table 7 shows that including Mexicans reduces the relative magnitude of the treatment effect because the comparison group now contains a very large population with different baseline levels and dynamics. However, the coefficient for Brazilians remains large and negative, and the direction of the effect is unchanged.

Tourism. For tourism, we conduct a similar set of robustness checks. First, Appendix Figure 14 presents the results of a placebo exercise in which we assign mock visa introduction months between 2015 and 2023 and re-estimate the baseline specification 90 times. The distribution of placebo estimates is centered close to -0.2, while our actual post-2021 coefficient lies in the extreme lower tail (1st percentile at -0.52).

Second, Figure 7 reports a synthetic control exercise using 60 other sending countries as donors. The gap between Brazil and its synthetic control after 2021 shows a decline of roughly 50 percent, closely matching the magnitude of our baseline DiD estimates. This exercise provides additional reassurance that the decline is not driven by the choice of control countries or functional form.

Figure 7: Brazil Vs Synthetic Control Brazil



Notes: The dependent variable is the number of Brazilians classified by the Mexican government as tourists or visitors entering Mexican airports.

Third, Appendix Table 10 shows that re-estimating the models after excluding major tourist-sending countries, such as the United States and Canada, or restricting the control pool to non-treated Latin American and Caribbean countries, produces similar results to the baseline.

As a falsification test, we also analyze Brazilians with Mexican residency cards, a category that has always required documentation and should not be affected by the visa. Appendix Table 11 and Appendix Figure 16 show that estimates for this group are consistently close to zero across DiD and synthetic control specifications.

Finally, given that tourism flow immediately reacts to visa introductions and that results survive once country-specific linear time trends are added (not reported), it is unlikely that the Brazilian-specific macroeconomic conditions are generating the results. Overall, the robustness exercises confirm that our main findings are not sensitive to placebo dates, control group definitions, or estimator choice.

7 Conclusion

This paper examines the effects of Mexico's reintroduction of tourist visa requirements for Brazilians on irregular migration to the United States and on tourism flows to Mexico. We explore administrative data on U.S. Border Patrol encounters and international arrivals at Mexican airports to estimate a difference-in-differences using unaffected nationalities as controls. We find that the visa policy reduced Brazilian encounters at the U.S.–Mexico border by roughly 80 percent. Importantly, the heterogeneity analysis reveals that the policy was less effective in deterring the crossings of male and young migrants, and it concentrated the flow in riskier and deadlier U.S. border sectors.

At the same time, the visa introduction reduced Brazilian tourist arrivals to Mexico by nearly 40 percent, equivalent to around 150,000 fewer visitors annually. Even under the extreme assumption that every irregular migrant first entered Mexico while recorded as a tourist, the contraction in "genuine" tourism remains of similar magnitude. The estimates are stable across different specifications, methods, and control group definitions.

The findings highlight the trade-offs embedded in restrictive visa policies when used as a control tool for immigration flows. On one hand, they can sharply reduce the presence of targeted nationalities at the U.S.–Mexico border. On the other hand, they impose steep costs on legal mobility, undermining a sector that represents a relevant source of foreign exchange and employment for Mexico. More broadly, our results illustrate how third-country policies can shape who reaches the U.S. border and through which pathways, extending the migration literature's focus beyond direct U.S. enforcement to the regional governance environment.

The Americas provide a particularly relevant setting: multi-country journeys are common, and visa policies often serve a dual purpose of signaling control to destination countries while affecting domestic industries such as tourism. Future work will expand the analysis to other nationalities subject to Mexican visa requirements, such as Venezuelans, Peruvians, and Ecuadorians, and develop a theoretical framework of transit migration to formally evaluate the policy's effectiveness in shaping economic versus humanitarian flows. Together, these

steps will further our understanding of the costs, effectiveness, and unintended consequences of using visa policy as a migration management tool.

References

Amuedo-Dorantes, C., J. Bucheli, and M. Lopez (2023): "Addressing the Surge in Unaccompanied Migrant Children," *AEA Papers and Proceedings*, 113, 357–360.

Amuedo-Dorantes, C. and J. R. Bucheli (2023a): "Implications of restrictive asylum policies: evidence from metering along the U.S.-Mexico Border," *Journal of Population Economics*, 36, 1941–1962.

——— (2023b): "Implications of restrictive asylum policies: evidence from metering along the U.S.-Mexico Border," *Journal of Population Economics*, 36, 1941–1962.

Amuedo-Dorantes, C. and S. Pozo (2019): "The Aftermath of Tougher Immigration Enforcement: E-Verify and Perceptions of Discrimination Among Hispanic Citizens," *American Behavioral Scientist*, 63, 1299–1330.

Amuedo-Dorantes, C. and T. Puttitanun (2018): "Undocumented youth in limbo: the impact of America's immigration enforcement policy on juvenile deportations," *Journal of Population Economics*, 31, 597–626.

Amuedo-Dorantes, C., T. Puttitanun, and A. P. Martinez-Donate (2019): "Deporting "Bad Hombres"? The Profile of Deportees under Widespread Versus Prioritized Enforcement," *International Migration Review*, 53, 518–547.

Amuedo-Dorantes, C., J. R. Bucheli, and M. J. Lopez (2024): "Managing migration crises: Evidence from surge facilities and unaccompanied minor children flows," *Economic Inquiry*, 62, 1405–1425.

Amuedo-Dorantes, C. and M. J. Lopez (2022): "Immigration policy, immigrant detention, and the U.S. jail system," *Criminology & Public Policy*, 21, 433–460.

Amuedo-Dorantes, C. and T. Puttitanun (2016): "DACA and the Surge in Unaccompanied Minors at the US -Mexico Border," *International Migration*, 54, 102–117.

Bean, F. D., T. J. Espenshade, M. J. White, and R. F. Dymowski (1990): *Post-IRCA changes in the volume and composition of undocumented migration to the United States*, RAND Corporation, 111–158.

Bohn, S. and T. Pugatch (2015): "U.S. Border Enforcement and Mexican Immigrant Location Choice," *Demography*, 52, 1543–1571, publisher: [Population Association of America, Springer].

Buehn, A. and S. Eichler (2013): "Determinants of Illegal Mexican Immigration into the US Southern Border States," *Eastern Economic Journal*, 39, 464–492, publisher: Palgrave Macmillan Journals.

Cornelius, W. (2018): "Mexico: From country of mass emigration to transit state," .

Espenshade, T. J. (1995a): "Unauthorized Immigration to the United States," *Annual Review of Sociology*, 21, 195–216, publisher: Annual Reviews.

——— (1995b): "Using INS border apprehension data to measure the flow of undocumented migrants crossing the U.S.-Mexico frontier," *International Migration Review*, 29, 545–565.

Hanson, G. H. (2006): "Illegal Migration from Mexico to the United States," *Journal of Economic Literature*, 44, 869–924, publisher: American Economic Association.

Hanson, G. H., R. Robertson, and A. Spilimbergo (2002a): "Does Border Enforcement Protect U.S. Workers from Illegal Immigration?" *The Review of Economics and Statistics*, 84, 73–92, publisher: The MIT Press.

——— (2002b): "Does border enforcement protect US workers from illegal immigration?" *The Review of Economics and Statistics*, 84, 73–92.

Hanson, G. H. and A. Spilimbergo (1999): "Illegal Immigration, Border Enforcement, and Relative Wages: Evidence from Apprehensions at the U.S.-Mexico Border," *The American Economic Review*, 89, 1337–1357, publisher: American Economic Association.

Massey, D. S. (2016): "The Mexico-U.S. Border in the American Imagination," *Proceedings of the American Philosophical Society*, 160, 160–177, publisher: [American Philosophical Society, American Philosophical Association].

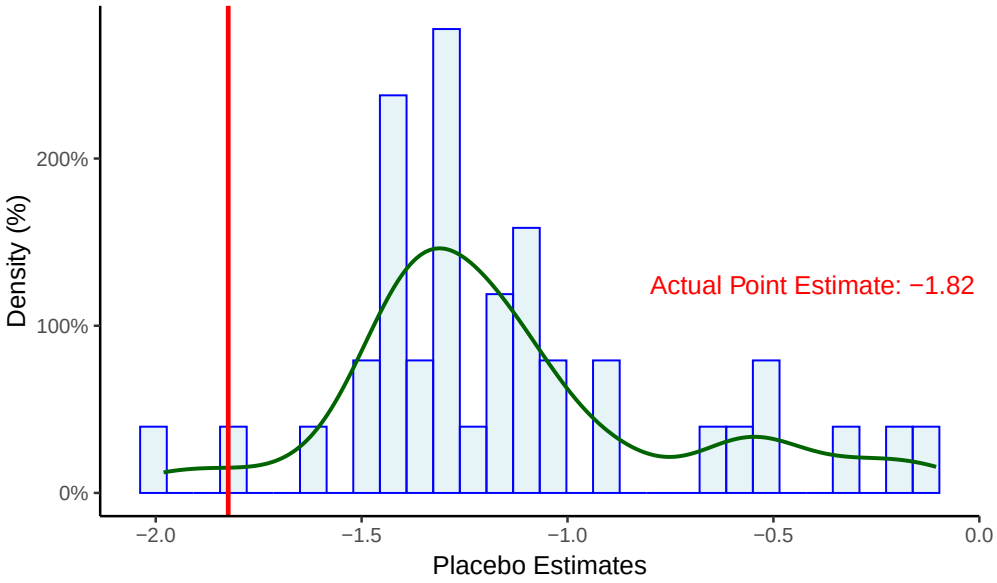
Neumayer, E. (2010): "Visa Restrictions and Bilateral Travel," *The Professional Geographer*, 62, 171–181, publisher: Routledge _eprint: https://doi.org/10.1080/00330121003600835.

Orrenius, P. M. and M. Zavodny (2003): "Do amnesty programs reduce undocumented immigration? Evidence from IRCA," *Demography*, 40, 437–450.

Appendix

A Migration

Figure 8: Placebo Check: Mock Tourism Visa Implementation Date



Notes: The estimates in the figure were obtained by generating placebo policy activation quarters for each quarter between October 2014 and July 2024. For each placebo activation quarter, we estimated Eq (X) with the FE structure corresponding to column (3) from Table 7. The true beta is at the 5th percentile of the placebo distribution.

Table 7: Effect on Brazilian Encounters along the USA-Mexico Border (Including Mexicans in the control group)

Dependent Variable:	Encounters				
Model:	(1)	(2)	(3)	(4)	(5)
Panel A: Poisson					
Treated × Post	-0.3817	-0.3817	-1.010***	-0.9399***	-0.9627***
	(0.3883)	(0.3882)	(0.3411)	(0.3366)	(0.3409)
	[-0.317]	[-0.317]	[-0.636]	[-0.609]	[-0.618]
Observations	19,440	19,040	19,040	19,040	18,350
Fixed-effects					
Apprehension Sector FE	Y	N	N	N	N
Country FE	Y	N	N	N	N
Demographic FE	Y	N	N	N	N
Time FE	Y	Y	N	N	N
App. Sector-Country-Dem. FE	N	Y	Y	Y	N
App. Sector-Time FE	N	N	Y	Y	Y
Demographic-Time FE	N	N	Y	Y	Y
Country-Quarter FE (seasonal)	N	N	N	Y	N
App. Sector-Country-Dem.-Quarter FE (seasonal)	N	N	N	N	Y

Notes: The dependent variable for both Panel A and B in columns (1) to (5) is the number of encounters along the U.S.-Mexico border. The sample is restricted to the top 5% of nationalities by pre-treatment encounters and excludes Mexico, Venezuela, Peru, Ecuador, El Salvador, Guatemala, and Honduras. Venezuela, Peru, and Ecuador are excluded because they were targeted with similar visa restrictions around the same time as Brazil. Mexico is excluded because, by construction, its nationals do not use Mexico as a transit route to the United States. While the Northern Triangle countries are excluded All models include a constant term. Robust standard errors clustered at the country level in parentheses. For the Poisson models in Panel A, values in brackets represent the approximate percentage change in expected encounters. For reference, the table also reports the unconditional mean number of Brazilian encounters in the pre-treatment period. *** p¡0.01, ** p¡0.05, * p¡0.1.

B Tourism

Table 8: Main Mexican Entry Points - International Tourists in 2023

	Number of International Tourists	**% Total International Tourism Entrance**
Airports:	**20,666,998**	**91.4%**
Cancun (CUN)	9.776.312	43.2%
Mexico City (MEX)	3..732.093	16.5%
Los Cabos (SJD)	2.250.541	10%
Puerto Vallarta (PVR)	1.773.961	7.8%
Guadalajara (GDL)	1.287.960	5.7%
Land Entry Points:	**1,950,554**	**8.6%**
Tijuana (Puerta México - CA)	876,922	3.9%
Anáhuac (TX)	173,956	0.8%
Mexicali (CA)	96,328	0.04%
Piedras Negras (TX)	71,817	0.03%
Tijuana (Tecate - CA)	63,404	0.03%

Figure 9: % Brazilian Entrances in Land Point of Entry

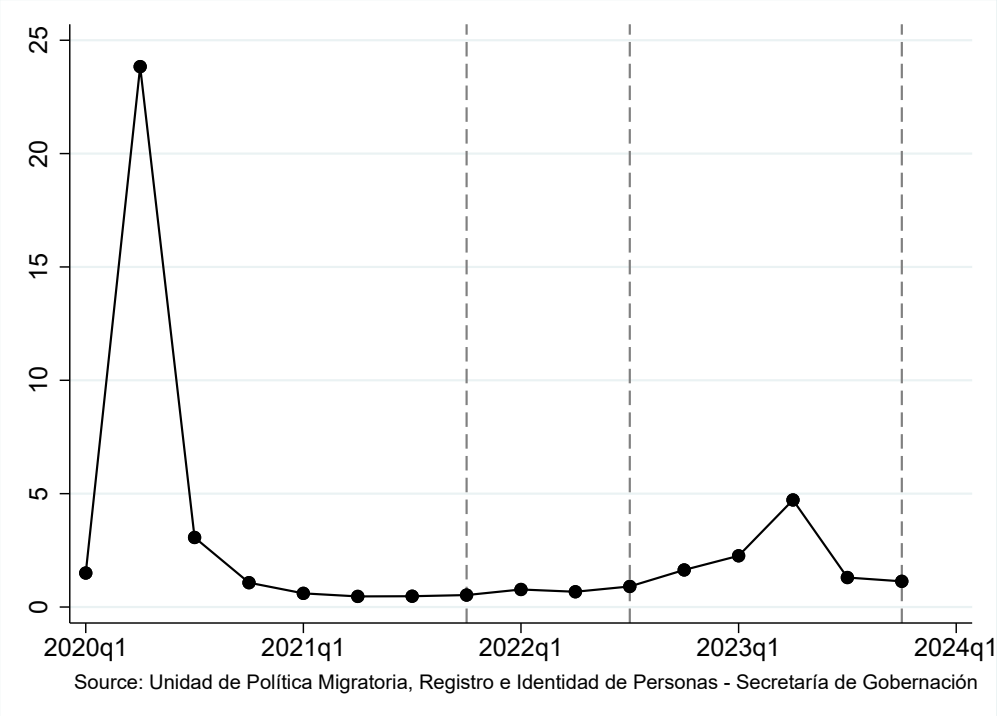


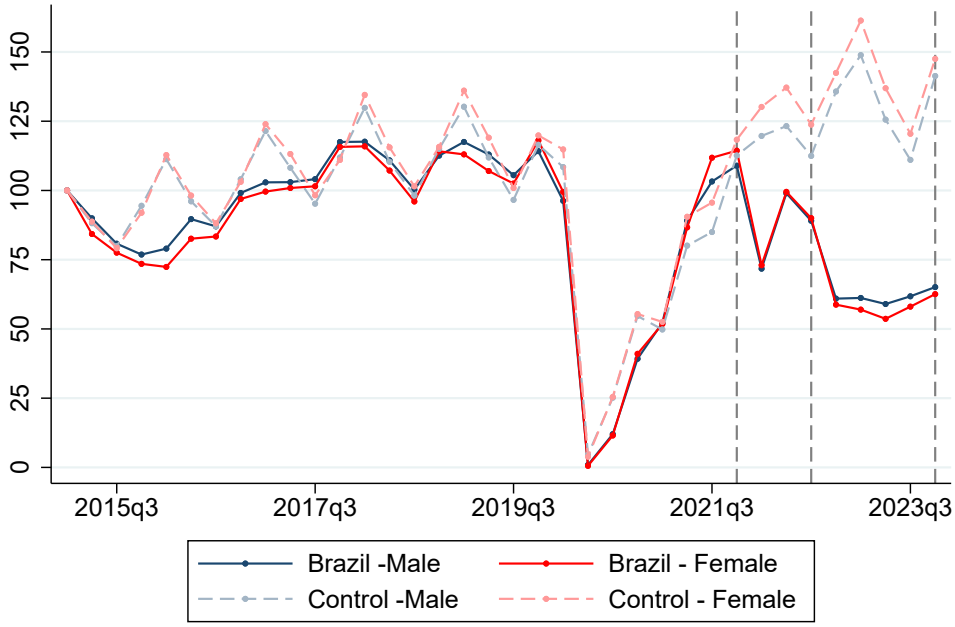
Table 9: Effect on Brazilian Tourism Flow to Mexico

Dependent Variable:	log(Tourism Flow)				
Model:	(1)	(2)	(3)	(4)	(5)
Treated × Post	-0.500***	-0.500***	-0.499***	-0.491***	-0.491***
	(0.047)	(0.047)	(0.047)	(0.047)	(0.047)
Observations	28,584	28,584	28,584	28,584	28,584
R^2	0.873	0.957	0.961	0.968	0.973
Fixed-effects					
Airport FE	Y	N	N	N	N
Country FE	Y	N	N	N	N
Demographic FE	Y	N	N	N	N
Time FE	Y	Y	N	N	N
Airport-Country-Dem. FE	N	Y	Y	Y	N
Airport-Time FE	N	N	Y	Y	Y
Demographic-Time FE	N	N	Y	Y	Y
Country-Quarter FE	N	N	N	Y	N
Airport-Country-Dem.-Quarter FE	N	N	N	N	Y

Notes: The dependent variable is the log of the number of Brazilians classified by the Mexican government as tourists or visitors entering Mexican airports. All models include a constant term. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

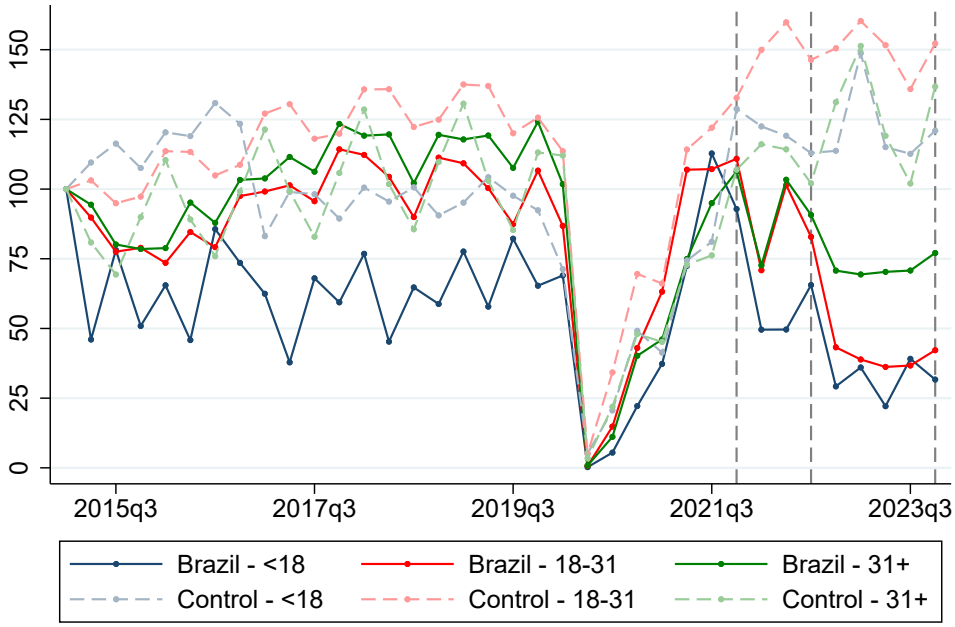
B.1 Tourism - Heterogeneous Effects

Figure 10: Brazilian Tourism to Mexico by Gender



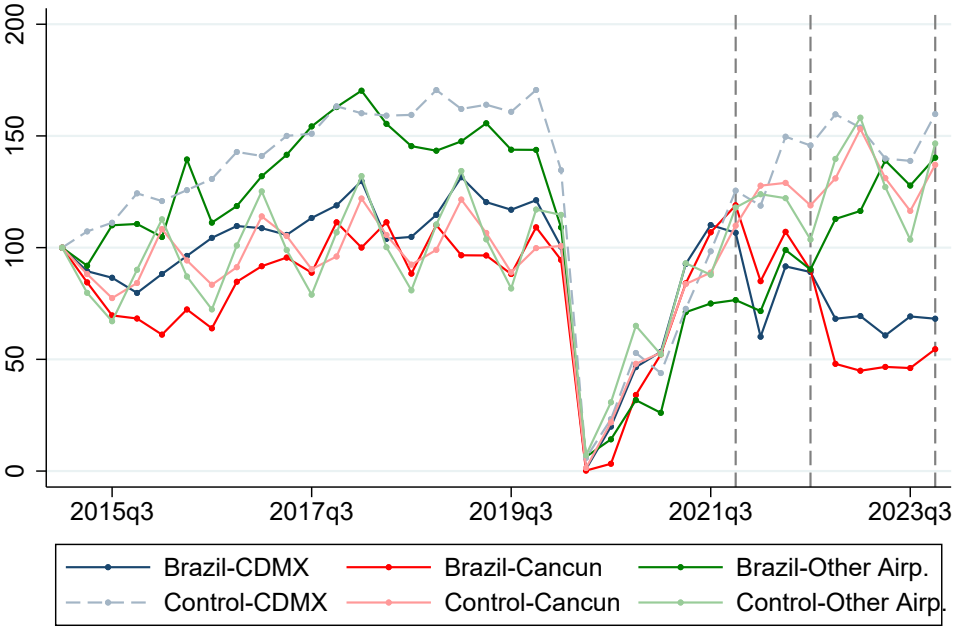
Note: Evisa: 12/2021; Consular Visa: 8/2022; Transit Visa: 10/2023.
Source: Secretaría de Gobernación (SEGOB).

Figure 11: Brazilian Tourism to Mexico by Age



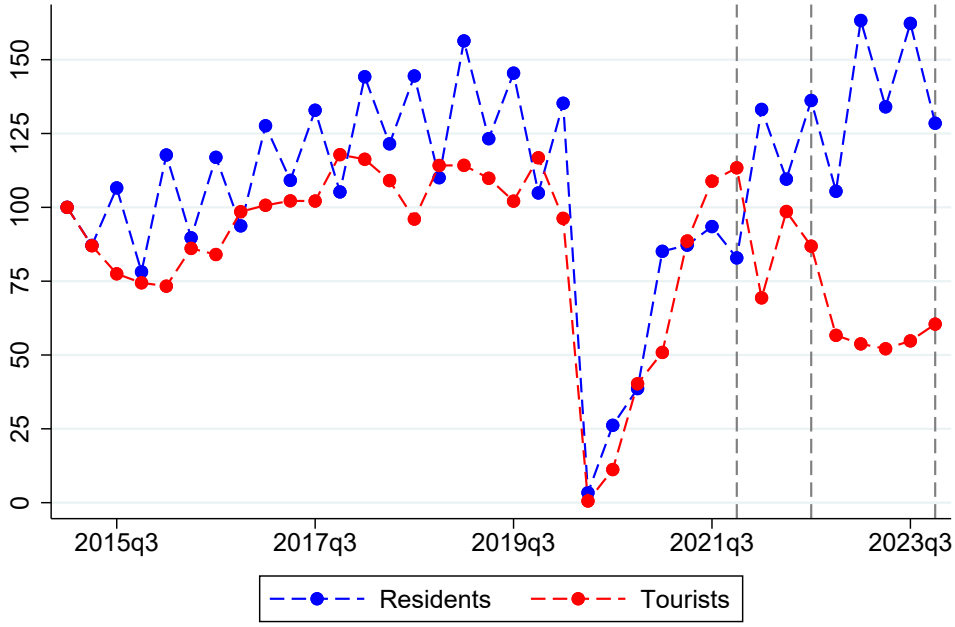
Note: Evisa: 12/2021; Consular Visa: 8/2022; Transit Visa: 10/2023.
Source: Secretaría de Gobernación (SEGOB).

Figure 12: Brazilian Tourism to Mexico by Airport



Note: Evisa: 12/2021; Consular Visa: 8/2022; Transit Visa: 10/2023.
Source: Secretaría de Gobernación (SEGOB).

Figure 13: Brazilian Flow in Mexican Airports (Q1-2015=100)



Notes: Evisa: 12/2021; Consular Visa: 8/2022; Transit Visa: 10/2023.
Source: Secretaría de Gobernación (SEGOB).

B.2 Tourism - Robustness Tests

Table 10: Robustness

	No US		**No US and Canada**		**Only LATAM**	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Poisson						
Treated × Post	-0.350***	-0.350***	-0.360***	-0.359***	-0.478***	-0.478***
	(0.061)	(0.061)	(0.079)	(0.079)	(0.159)	(0.158)
	[-29.53%]	[-29.53%]	[-30.23%]	[-30.16%]	[-38.00%]	[-38.00%]
Observations	28,188	28,188	27,666	27,666	8,874	8,874
Panel B: OLS						
Treated × Post	-1,342.887***	-1,342.887***	-1,345.141***	-1,345.141***	-1,508.668***	-1,508.668***
	(84.587)	(84.587)	(86.205)	(86.205)	(259.310)	(259.310)
Observations	28,188	28,188	27,666	27,666	8,874	8,874
R^2	0.841	0.960	0.929	0.953	0.926	0.935
Fixed-effects						
Airport FE	N	N	N	N	N	N
Country FE	N	N	N	N	N	N
Demographic FE	N	N	N	N	N	N
Time FE	N	N	N	N	N	N
Airport-Country-Dem. FE	Y	N	Y	N	Y	N
Airport-Time FE	Y	Y	Y	Y	Y	Y
Demographic-Time FE	Y	Y	Y	Y	Y	Y
Country-Quarter FE	Y	N	Y	N	Y	N
Airport-Country-Dem.-Quarter FE	N	Y	N	Y	N	Y

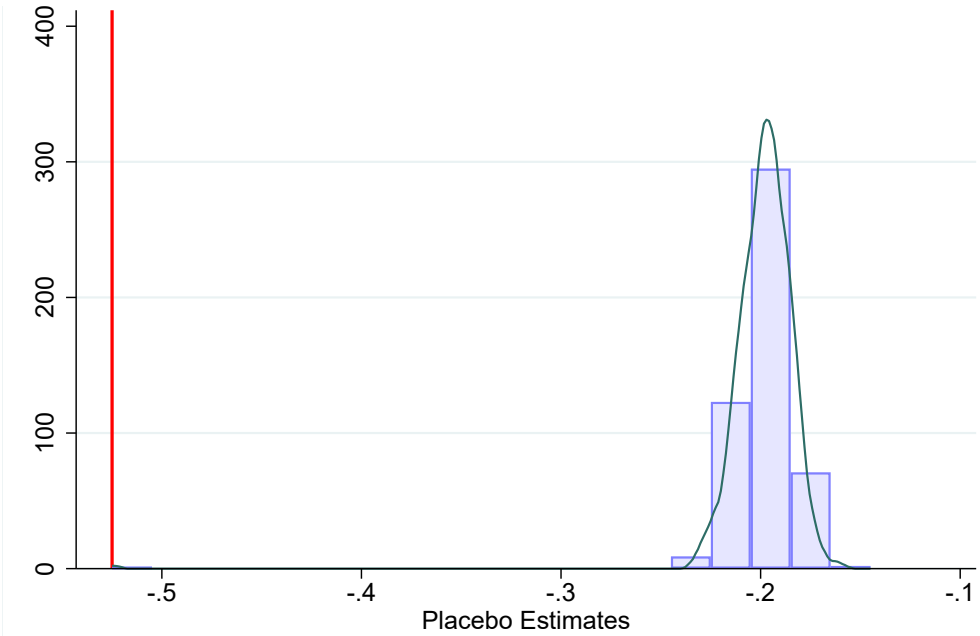
Notes: The dependent variable in columns (1) to (6) is the number of Brazilians classified by the Mexican government as tourists or visitors entering Mexican airports. All models include a constant term. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Placebo - Brazilians with Mexican Residency Card

	(1)	(2)	(3)	(4)	(5)
Panel A: Poisson					
Treated × Post	-0.031	-0.031	0.057	0.067	0.067
	(0.082)	(0.082)	(0.083)	(0.083)	(0.083)
	[-3.05%]	[-3.05%]	[5.86%]	[6.93%]	[6.93%]
Observations	25,056	25,027	25,027	25,027	24,519
Panel B: OLS					
Treated × Post	6.177	6.177	6.177	10.486	10.486
	(15.499)	(15.497)	(15.560)	(15.147)	(15.147)
Observations	25,056	25,056	25,056	25,056	25,056
R^2	0.314	0.933	0.935	0.938	0.952
Fixed-effects					
Airport FE	Y	N	N	N	N
Country FE	Y	N	N	N	N
Demographic FE	Y	N	N	N	N
Time FE	Y	Y	N	N	N
Airport-Country-Dem. FE	N	Y	Y	Y	N
Airport-Time FE	N	N	Y	Y	Y
Demographic-Time FE	N	N	Y	Y	Y
Country-Quarter FE	N	N	N	Y	N
Airport-Country-Dem.-Quarter FE	N	N	N	N	Y

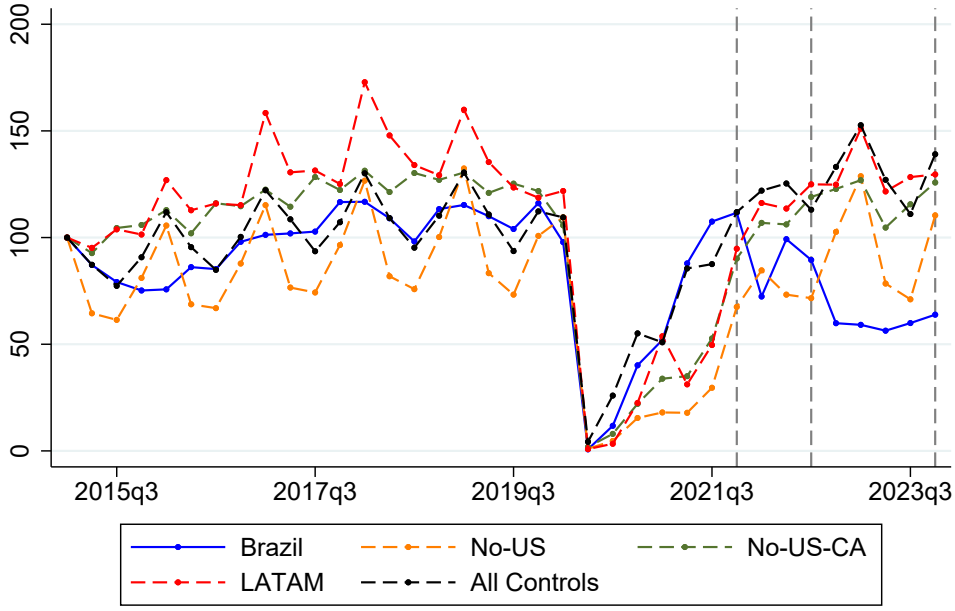
Notes: The dependent variable in columns (1) to (5) is the number of Brazilians with a Mexican temporary or permanent residency card entering Mexican airports. All models include a constant term. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Figure 14: Histogram of Placebo β (Mock Visa Introduction Date) Vs Estimated Causal β



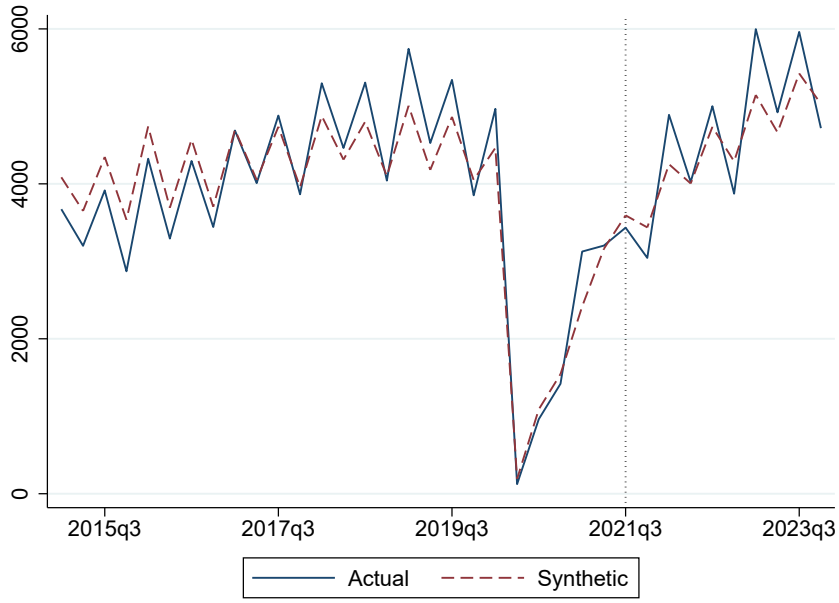
Notes: Red vertical line represent the estimated effect (-0.52). The estimates in the figure were obtained by randomly generating placebo policy activation months 500 times between January 2015 and December 2023. The placebo activation dates were used to estimate Eq. (2) using the same Fixed Effects set as column (3) specification from Table 4 using a PPML method and a sample at the month level.

Figure 15: Tourism to Mexico - Brazil and Selected Control Groups



Note: LATAM excludes Brazil, Venezuela, Peru, and Ecuador.
Evisa: 12/2021; Consular Visa: 8/2022; Transit Visa: 10/2023.
Source: Secretaría de Gobernación (SEGOB).

Figure 16: Brazil Vs Synthetic Control Brazil - Mexican Residents



Notes: The dependent variable is the number of Brazilians with a Mexican residency card entering Mexican airports.

Figure 17: Synthetic Control Effects

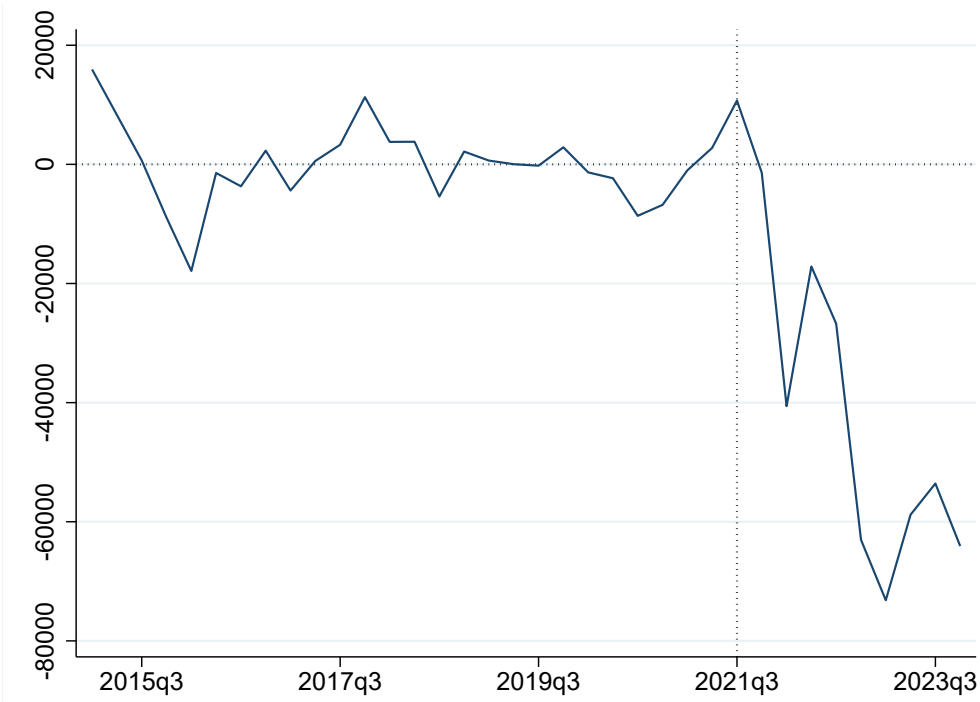


Figure 18: Synthetic Control - In-space Placebo Test

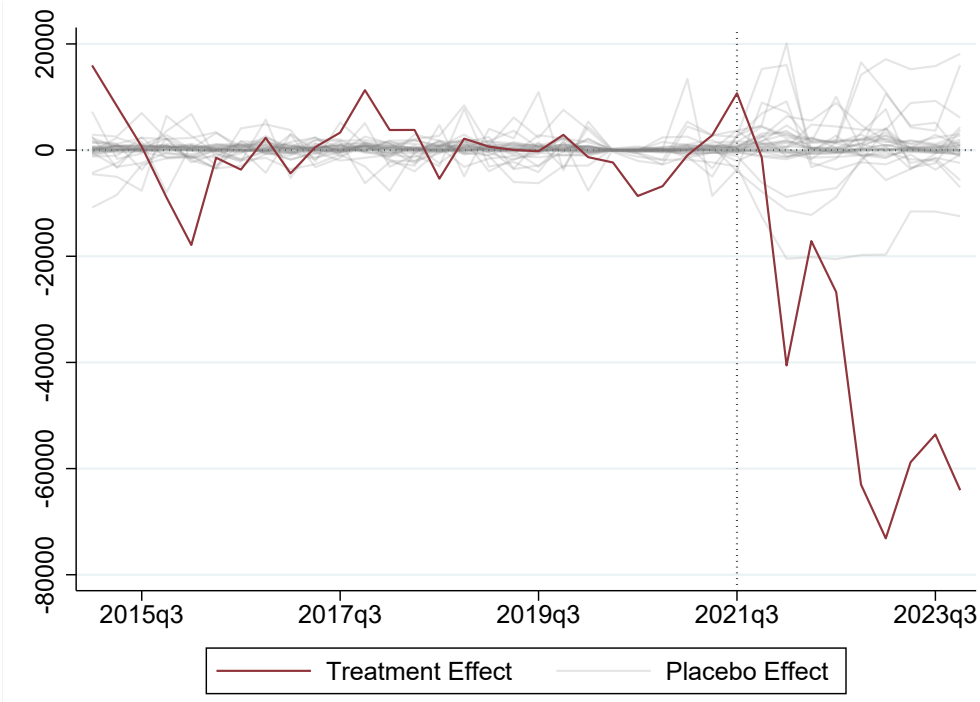


Figure 19: Synthetic Control - Leave-one-out Robustness Test