Complementary Administrative Data for the Understanding of International Migration, Dual Nationality and Naturalization in Mexico.

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Theoretical focus

Although recent studies have increasingly analyzed the use of administrative and digital data to complement the use of census and surveys for estimating and nowcasting international migration (Cesare et al, 2018; Spyratos et al., 2019; Varona, Masferrer, Prieto & Pedemonte, 2024), the knowledge of the characteristics of migrant populations with alternative data is still limited. Specifically, understanding multiple nationalities in the context of high mobility where populations might access multiple citizenships over time, is important but open for empirical research. Dual nationality is not free of challenges in the collection of migration statistics (Schachter, 2015), and as more people have more than one citizenship (Harpaz, 2019), these challenges will increase. In this paper, we use administrative data to study naturalizations and dual nationality in Mexico and compare it to gold-standard census data.

Mexico has been a traditional emigration country to the United States, but as migration has become more complex and immigration increased and diversified, many foreign-born have become Mexican nationals, either through naturalization or by accessing Mexican nationality by right of birth. On the one hand, there are different pathways for naturalization in Mexico that have different residence requirements at the Ministry of Foreign Affairs (SRE, by its name in Spanish): being an adopted child of a Mexican parent; being a resident in Mexico from a country in Latin America or the Iberian Peninsula, marrying a Mexican, giving birth to a Mexican child, outstanding work, or after residing legally for more than 5 years. Thus, naturalizations reflect immigration patterns and migrant integration processes, cultural factors, as well as legal definitions and bureacracy, or historical exclusion and xenophobic processes in Mexico (Harpaz 2019; Pedroza 2019; Yankelevich 2015). On the other hand, there is dual nationality by Law and without a residence requirement following the *jus sanguinis* principle for those with a Mexican mother/father or grandmother/grandfather. The process of registering for dual nationality may happen abroad at a Mexican consulate or at a civil registry in Mexico. In fact, this process is strongly linked to emigration and return to and from the United States, since most U.S.-born immigrants are minors residing in Mexico with at least one Mexican parent (Masferrer, Hamilton & Denier, 2019), as well as a binational and transnational life (Harpaz 2019; Harpaz and Mateos, 2019). In 2015, civil society organizations and migrant groups mobilized against the lack of identity documents within the U.S.-born population in Mexico and the Mexican government implemented the binational strategy "Soy México" to facilitate access to dual nationality by registering and accessing Mexican nationality and a birth registry out of charge (García-Guerrero & Masferrer, 2022).

In this context, the research questions that guide this paper are the following: How many foreign-born are also Mexican nationals? How many Mexicans born abroad and naturalized live in Mexico, and what are their basic socio-demographic characteristics? How do naturalized foreign-born differ from Mexicans born abroad? What do different data sources tell us about these populations in Mexico? How could we overcome data limitations? Traditionally, these populations have been analyzed using census and survey data, and rarely, birth certificates. Administrative data from the SRE have also rarely been used because they are not publicly available. Here, we analyze, for the first time, data from the 2020 Mexican census and complement it with vital statistics of births, as well as data on naturalizations accessed due to a public request of information via the National

Institute for Transparency and Public Information Access (INAI, by its acronym in Spanish), and restricted-access data from the National Electoral Institute (INE, by its name in Spanish).

Data, measures, and methods
We use four main data sources: 2020 Mexican Census data from the National Institute of Statistics and Geography (INEGI, by its acronym in Spanish); Vital Statistics of Birth (1980-2020); administrative data from SRE on naturalization from 2016 to 2013, and the General Catalogue of Voters. We hope to access soon a fifth data source on the birth certificates provided abroad at Mexican consulates through a public request of information to SRE. First, the 2020 Mexican census includes three key questions for our analysis; country of birth, Mexican nationality, and having a birth certificate or being registered in the civil registry of Mexico, another country, or none. With this data it is impossible to know if those born in Mexico have another nationality, but it is possible to estimate how many foreign-born are also Mexican nationals. Importantly, not everyone stating a Mexican nationality report having a birth certificate or in civil registry, and viceversa. Second, vital statistics of birth provide information (age, sex, and state of registration) on those born abroad who registered as Mexican nationals and obtained a birth registration while being in Mexico, during the period 2000-2022, distinguishing those born in the United States, a Latin American country, or another country. Third, the data from the Foreign Affairs Ministry (SRE) provide information on the foreign-born who naturalized in Mexico from 2016 to 2023. Finally, the General Catalogue of Voters is provided by the National Electoral Institute (INE, by its acronym in Spanish) and therefore considers only adult population with a valid voting ID, aged 17 and older (since people are eligible to get an ID if they will be 18 at the time of the next election). An important characteristic of the General Catalogue of Voters is that it distinguishes between those 1) born in Mexico; 2) born abroad with dual nationality due to birth right (referred to as Mexicans born abroad); and 3) foreign-born naturalized. The characteristics available are summarized in the different data sources are summarized in Figure 1. For this paper, our analysis is descriptive and based on studying and comparing total estimates, age-structures, as well as country of birth.
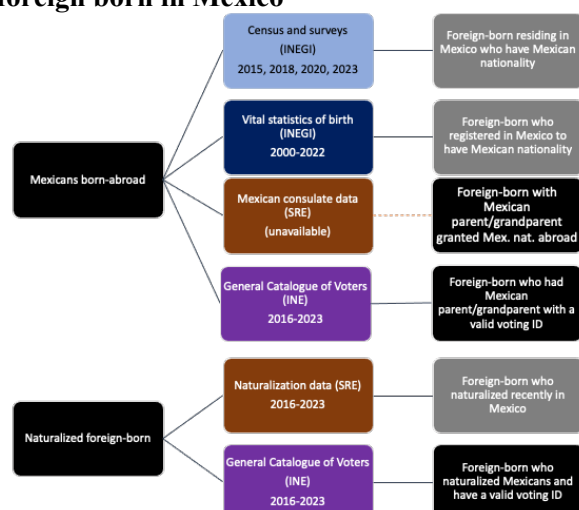
Preliminary results

According to the 2020 Mexican Census the foreign-born population totals 1.168 million people. A cross-tabulation of the two variables used to identify Mexican nationality and birth certificate or registration allow a first way for determining foreign-born populations that are dual nationals or naturalized. Four in five foreign-born that declared having the Mexican nationality, declared having a Mexican birth certificate or have been registered in the Civil Registry, while 18% declared having a birth certificate from another country, and the rest declared that they did not have a Mexican birth registry or the information is unknown. Among those who declared that they did not have Mexican nationality, 86% declared having a birth certificate from another country, and curiously, 8% declared having a birth certificate from Mexico or declared to be registered at the Civil Registry. Our hypothesis is that most of them could have been registered through marriage but that the question is unclear. Using these two questions, are proposal is to identify foreign-born with Mexican nationality as those who either declared Mexican nationality or declared having a birth certificate or inscribed in civil registry, and that a proxy for naturalized people could be those with Mexican nationality that declared having a birth certificate from another country. However, we cannot properly distinguish naturalized from Mexicans born abroad. Basic socio-demographic characteristics of these populations are shown in Table 1. As expected, those likely to be dual nationals are younger, more likely to be single, and in traditional emigration region than those likely to be naturalized.

Administrative data from SRE provides information on naturalization by pathway or type, but only for the years for which this information was provided. We can observe an increase over time with a drop of naturalization processes in 2021 and 2022 attributed to the COVID-19 pandemic closures of bureaucratic offices and processes. The main pathway is a 2-year residence requirement for those from a Latin American or Ibero American country, with an absolute and relative increase of naturalizations of immigrants from other countries that fulfill the 5-year residence requirement (see Figure 2). The naturalizations data from SRE also allows the analysis of the types of naturalization by age, which was provided in 5-year age-groups. We used the penalized composite link model for efficient estimation of smooth distributions from coarsely binned data (Rizzi et al., 2013, Pascariu et al., 2018), to ungroup it in single age years by type of naturalization and year. We can see that the most common pathways for naturalization are concentrated in young adults and, recently, in older adults aged 60 and older (See Figure 3).

The adult naturalized population is much older than the Mexican population born abroad. In 2023, Mexicans born abroad and inscribed in the electoral roll are very young (around 20 years old) in comparison to the naturalized population (around 50 years old). When we analyzed the age at registration in the electoral roll (results not shown here) we confirm that Mexicans born abroad register almost all as soon as they are eligible when turning 18 years old, whereas naturalized obtain their voting ID later, concentrated in working-ages around 35-44 years old, which is expected to be the age they naturalize. This age pattern is similar to the observed in the 2016-2023 period for which we analyzed naturalization data from SRE (see Figure 3). The naturalization data from SRE also allow us to analyze patterns by country of birth (see Figure 5 with top 10 countries for better visualization): Venezuela, Colombia, and Cuba are the main origin countries, and the increase of Venezuelans naturalizing in recent years reflects increasing arrivals during the last decade. The General Catalogue of Voters also allow us to analyze country of birth, both for naturalized and Mexican born abroad populations. For this analysis, we faced multiple challenges and had to apply the OpenRefine (https://openrefine.org/) program for data cleaning and validation, since country of birth was not selected from a catalogue of countries, but was typed or captured by hand by INE officers. As rich as this data is, preventing it from typing errors should be solved in the near future. We compared the number of Mexicans born abroad and naturalized population in the INE data with foreign-born who are potentially dual nationals in the Census data and found interesting similarities and complementarities. First, the United States is the leading country of Mexicans born abroad in Mexico, whereas Guatemala, Colombia, Venezuela, and Cuba are the main countries of birth of those who naturalized as Mexicans (see Figure 6).

Current data collection methods, such as censuses and surveys, are highly dependent on individuals who report the information, which can introduce inconsistencies. There is a lack of clarity on how people might understand and report question on birth certificates or registration at a civil registry, especially for individuals with multiple nationalities or those born abroad that do not respond themselves the census questionnaire. Also, census data does not include year of arrival, year of naturalization, or exact timing when dual nationality is obtained. This gap hampers the ability to accurately identify people with multiple nationalities and distinguish between naturalization and dual nationality statuses. Vital statistics from birth records offer limited information on Mexicans born abroad who register for birth certificates, and access to consular data can significantly enhance the comprehensiveness of this dataset. Similarly, naturalization records do not capture the year of arrival or the legal pathways that individuals have taken. While the Electoral Roll (INE) is a continuous and updated source verified with official documents, its restricted access limits its utility for studying integration processes. Implementing a standardized catalogue or coding system for countries could reduce errors and improve the accuracy of data across all platforms.

Figure 1. Summary of data sources and populations identified when studying Mexicans born abroad and naturalized foreign born in Mexico
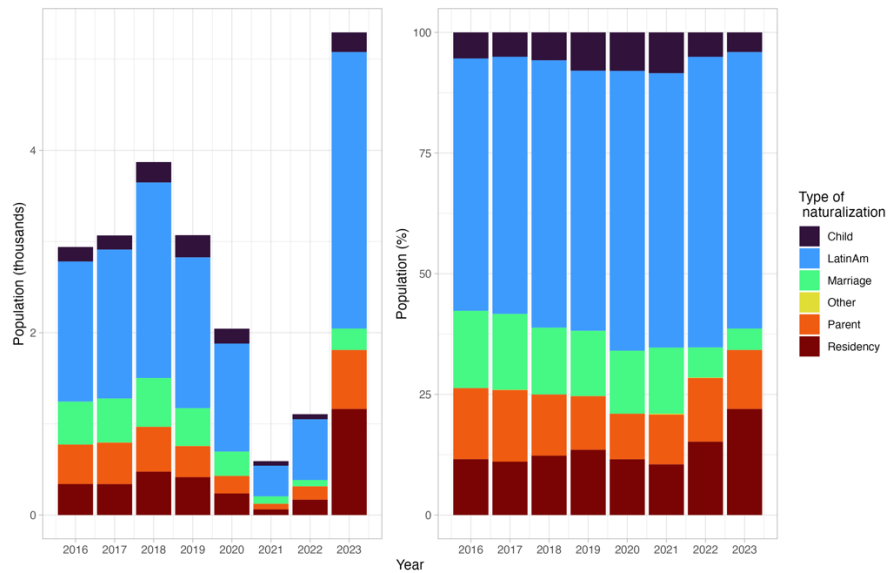

Source: Author's elaboration.

Table 1. Mexican nationality and birth certificate information for the foreign-born in Mexico

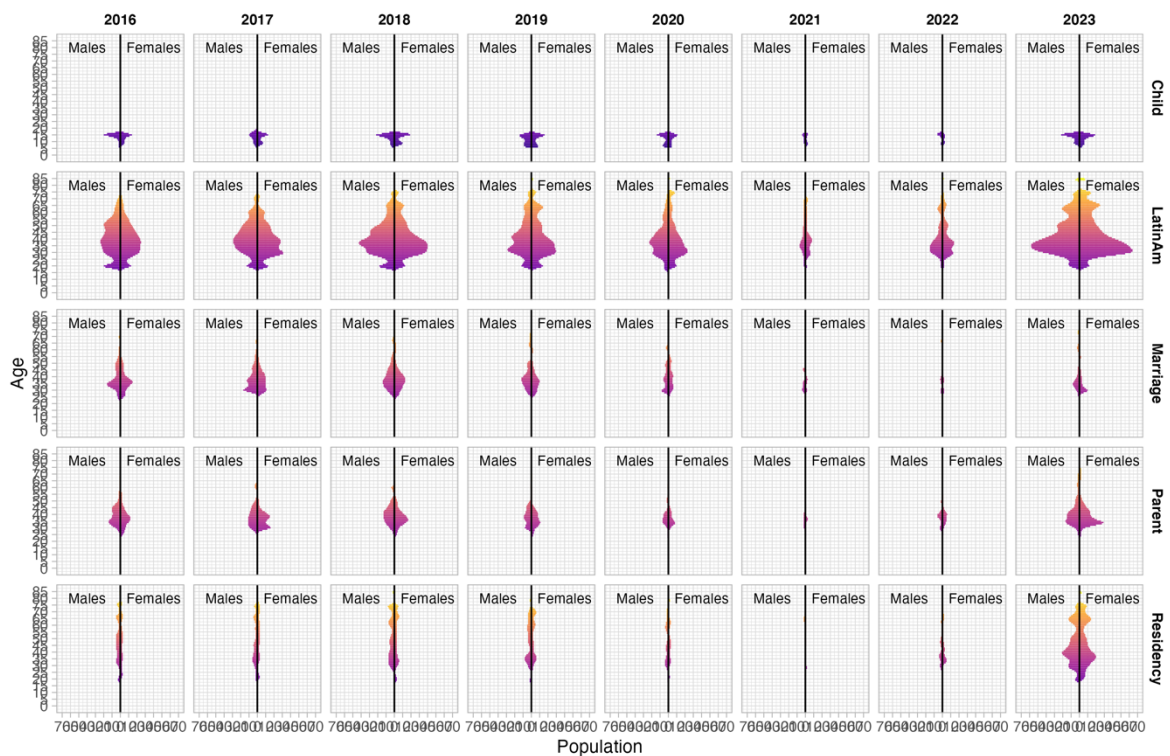|	Born abroad						Born in Mexico
	With Mexican nationality				Not dual	Unclear	
	Dual national	Dual, "not Mexican"	Dual, no certificate	"Naturalized"			
Total population (N)	459,797	45,136	4,240	105,487	480,790	72,928	124,149,906
Sex							
% women	50.5	47.9	48.7	49.7	48.5	50.0	51.3
Age							
Minor, 0-17	63.8	44.9	27.2	31.8	39.2	42.0	31.5
Young adult (18-24)	13.4	9.2	4.3	8.0	8.6	9.4	10.4
Adult, 25-49	15.8	34.5	39.8	35.1	35.9	35.0	35.6
Adult, 50-64	4.3	6.8	18.9	14.4	8.8	8.5	13.8
Elderly (65 and older)	2.8	4.6	9.8	10.8	7.5	5.1	8.6
Years of schooling (25-64)							
0 to 9	27.0	28.8	49.5	18.4	23.9	45.2	55.5
10 to 12	23.4	24.6	12.3	20.1	23.3	20.3	21.0
13 to 15	9.0	8.8	3.4	9.8	9.6	6.6	5.5
16 or more	40.6	37.9	34.9	51.7	43.3	27.9	18.0
Marital status (18+)							
In a union	48.0	62.3	72.0	66.3	64.9	64.2	61.4
Ex-union	8.1	8.8	12.8	13.6	9.8	10.2	14.4
Single	43.9	28.8	15.2	20.1	25.3	25.7	24.2
Recent migration							
Lived abroad in 2015	7.8	22.3	11.2	16.5	37.4	21.5	0.3
Size of locality							
Rural (<2500)	19.8	13.2	27.3	10.1	13.7	15.5	20.8
Semi-urban (2500 - 14999)	14.1	9.9	10.6	8.7	9.0	9.8	15.1
Small urban (15K - 99999)	15.0	11.9	8.1	11.4	10.9	12.9	15.8
Large urban (100K+)	51.1	65.1	54.0	69.8	66.4	61.9	48.3
Region of residence							
Traditional (US-MEX)	29.4	21.0	16.4	17.3	17.1	19.3	23.0
Northern	35.9	44.2	29.2	28.8	42.6	44.1	21.0
South/Southeastern	13.9	14.2	33.6	15.6	17.5	21.8	22.9
Central	20.9	20.6	20.7	38.3	22.8	14.9	33.1

Source: 2020 Mexican Census data (INEGI, 2021).

Figure 2. Number (thousands) and distribution (%) of naturalized foreign-born population in Mexico by type of naturalization, 2016-2023
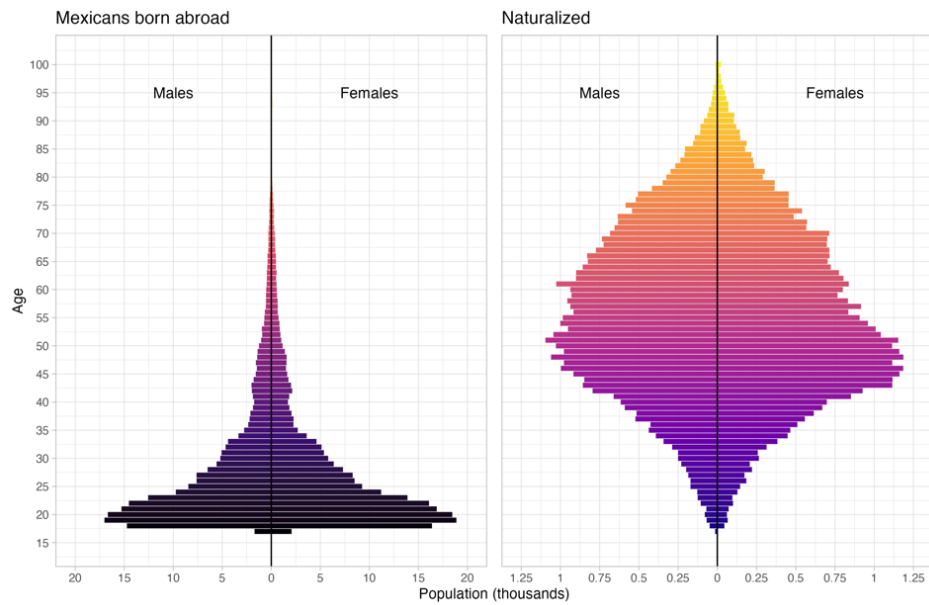

Source: Data from the Ministry of Foreign Affairs (SRE).

Figure 3. Age-sex distribution of naturalized foreign-born population in Mexico by type of naturalization, 2016-2023
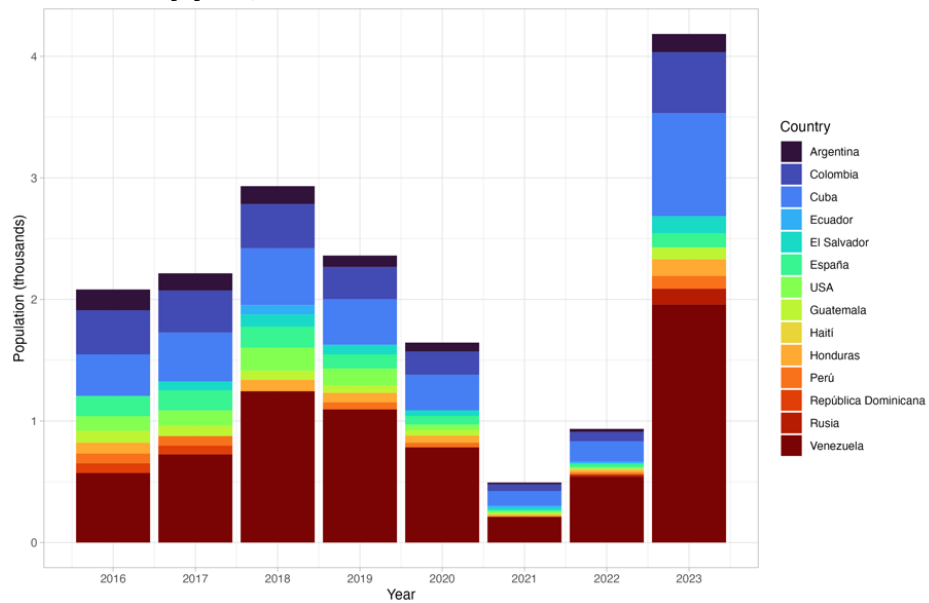

Source: Data from the Ministry of Foreign Affairs (SRE).

Figure 4. Age-sex distribution of the Mexican born abroad and naturalized populations in Mexico with a valid voting identification card in 2023
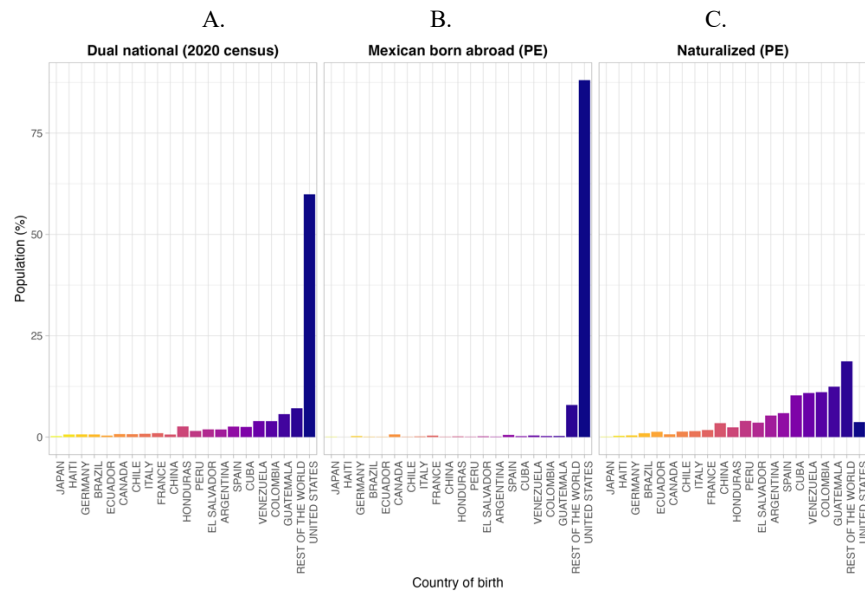

Source: General Catalogue of Voters in 2023, INE.

Figure 5. Number (thousands) of naturalized foreign-born population in Mexico for the top-ten countries of birth by year, 2016-2023

Source: Data from the Ministry of Foreign Affairs (SRE).

Figure 6. Foreign-born aged 17 and older with Mexican nationality according to the 2020 Census (A), Mexicans born abroad (B), and naturalized (C) populations with a valid voting identification, according to the General Catalogue of Voters.

Source: 2020 Mexican Census (INEGI, 2024) and 2023 General Catalogue of Voters (INE).

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