Is Recent Portuguese Emigration Tapping Into a Growing Pool of University Graduates or Draining it?

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Abstract

This report investigates whether recent Portuguese emigration is tapping into or draining the country's growing pool of university graduates. We begin by analyzing aggregate data from the *Observatório da Emigração* to identify major destination countries and investigate recent trends in their Portuguese emigrant populations. Next, we assemble a comprehensive dataset covering Portugal and several major destination countries, integrating multiple census sources with information on university education attainment and detailed age groups. We use this to examine population and university education trends in Portugal and abroad, studying how the dynamics in the stocks of university graduates and non-graduates determine graduate rates among different birth and age groups over time. We find that graduate rates among Portuguese emigrants broadly align with those observed in Portugal for the United States, Spain, and Germany. Whereas for France, Canada, and Switzerland, we find evidence of negative educational selection. The United Kingdom stands out, showing positive educational selection and a rising relative size of its Portuguese graduate emigrant population among younger cohorts, compared to the population of graduates resident in Portugal. Overall, we find no evidence of a widespread brain drain, though some degree of brain drain is evident in the UK. However, while the UK case may raise concerns, the educational attainment of Portuguese emigrants appears more reflective of the country's broader educational advancements than of a significant loss of talent.

Keywords: Portuguese emigration, educational attainment, graduate migration, brain drain, demographic trends.

1 Introduction

In recent years, Portugal has experienced substantial emigration, sparking concerns about a potentially severe loss of its most skilled workforce At the same time, it has seen a significant rise in education levels, with university education becoming increasingly prevalent. As a result, the most qualified generations ever raised in the country have recently entered the labor market. These developments raise the question of whether, and to what extent, the educational attainment of Portuguese emigrants is a byproduct of the country's educational advancements or reflects a greater propensity among highly educated individuals to seek opportunities abroad ("brain drain").

This report aims to shed light on this question by examining the emigration and educational attainment patterns of Portuguese individuals in recent decades, with a strong focus on younger generations. We begin by providing an assessment of recent Portuguese emigration to identify the major destination countries and investigate trends in their Portuguese emigrant populations. In this first part of the analysis, we examine aggregate annual data on stocks and inflows of Portuguese emigrants from the *Observatório da Emigração (OdE)* covering the period 2000-2022, focusing on the destination countries hosting the largest Portuguese communities.

We document that France hosts the largest population of Portuguese emigrants by a considerable margin. After a significant decline in the early 2000s, this population has remained relatively stable, receiving only modest inflows in recent years. The United States, Brazil, and Canada also have substantial Portuguese populations, though they have gradually declined over the last two decades. In contrast, other countries with similarly large stocks of Portuguese emigrants, such as the United Kingdom, Switzerland, and Spain, have experienced considerable growth, with Germany showing a similar trend, albeit at a slower pace. Meanwhile, the Benelux countries——Belgium, the Netherlands, and Luxembourg——while hosting much smaller Portuguese emigrant populations, have seen steady and substantial growth due to inflows of significant magnitude relative to their smaller initial stocks.

In the second part of the analysis, we delve into population and university education trends in Portugal and a set of major destination countries. For this purpose, we construct a comprehensive dataset, integrating various census-based sources (both microdata and aggregate data), which enables us to study these trends across 5-year birth and age groups over recent decades, spanning from the 2000s to the 2020s. We start by examining the overall evolution of the Portuguese domestic and emigrant populations aged 20-59, taking a country-specific approach. In Portugal, we observe substantial population aging as well as significant emigration, especially among younger generations. Moreover, we document a

marked increase in the share of the domestic population holding a university degree, rising on average from about 10 to 28% in the span of two decades.

We observe a similar aging pattern also among Portuguese emigrant populations in most destination countries. This trend is more pronounced in France, Brazil, the United States, and Canada, where emigrant populations are primarily composed of individuals born before the mid-1960s, while in Switzerland and Spain, aging is mitigated by substantial population growth also occurring among younger generations. Conversely, the opposite trend emerges in the United Kingdom, where the Portuguese emigrant population has been growing across all birth cohorts, particularly among the youngest ones.

For each destination country, we further examine the dynamics of population stocks divided between university graduates and non-graduates and analyze how these determine graduate rates among different birth and age groups over time. We find a general increase in the prevalence of tertiary education across most destination countries, especially among younger generations, reflecting concurrent advancements in education and demographic shifts. However, in countries with older Portuguese emigrant populations, this trend appears mostly driven by the sharp declines in the stocks of non-graduates across cohorts as they get younger, rather than by substantial expansions in the stocks of graduates.

Finally, we provide a systematic comparison of graduate rates between Portuguese residents and emigrants. Specifically, we decompose the share of university graduates among emigrants in a given destination country, 5-year birth cohort, and decade into the corresponding share among Portuguese residents (*production* component) and a deviation term (*selection* component). For the United States, Spain, and Germany, we find that university graduate rates among Portuguese emigrants are mostly aligned with those of Portuguese residents, reflecting relatively little selection. In contrast, for France, Canada, and Switzerland in particular, we find evidence of substantial negative educational selection. Lastly, we provide evidence of positive educational selection in Brazil and the United Kingdom. However, while for Brazil this appears to be mechanically driven by the more rapid fall of its stock of non-graduate emigrants compared to graduates, in the United Kingdom it results from an actual and substantial expansion of its stock of Portuguese graduate emigrants, especially among younger cohorts. The latter is also reflected in the increasing relative size of the Portuguese emigrant graduate population in United Kingdom, measured as the ratio of the stock of Portuguese emigrant graduates to the stock of graduates residing in Portugal, reaching as high as 0.06 among younger cohorts—while in all other countries this ratio is declining or flat around 0.01-0.03. Overall, while these results indicate no evidence of widespread brain drain, they point to some degree of brain drain from Portugal to the United Kingdom among younger cohorts in the last two decades.

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The remainder of the report is organized as follows. Section 2 provides a broad overview of recent trends in Portuguese emigration after describing the aggregate data used for this first part of the analysis. Section 3 moves on to the second part of the analysis, illustrating our integrated dataset and presenting the results of our descriptive analysis of the population and university education trends among Portuguese emigrants and residents by birth and age groups. Finally, Section 4 offers concluding remarks.

2   Broad overview of Portuguese emigration trends

This section aims to outline the key patterns and trends in recent Portuguese emigration. We seek to address two questions: (i) what countries host the largest populations of Portuguese emigrants? and (ii) which countries have been their primary destinations in recent years?

2.1   Data

We exploit country-level data made available by the *Observatório da Emigração (OdE)*, a research institute studying Portuguese emigration. *OdE* compiles comprehensive and timely aggregate data on Portuguese emigrants at their destinations by sourcing information from national statistics offices across a wide range of countries around the world. Due to its broad coverage, this dataset provides a substantive basis for identifying the major destination countries for Portuguese emigrants, both in the present and historically, as well as for assessing recent migration flows and their scale.

In this report, we focus on the top 12 countries by Portuguese emigrant population (France, Switzerland, United States, Brazil, United Kingdom, Canada, Germany, Spain, Luxembourg, Venezuela, Belgium, and the Netherlands) over the period 2000-2022. Specifically, we use data from the annual series on the total stocks of individuals born in Portugal by destination country, as well as on the total inflows of Portuguese emigrants.[1] The data lacks the detail needed to distinguish different education groups. Furthermore, breakdowns by age are not available for most of our selected countries. Therefore, to ensure cross-country comparability, we employ figures referring to individuals of all ages.

OdE defines Portuguese emigrants, following the United Nations' definition, as individuals living in a foreign country for a period of at least twelve months or expected to be. In the year of arrival, they are considered entrants, constituting an *inflow* into the destination

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[1]The data is available at the following links: stocks: annual series of *resident population born in Portugal*; inflows: annual series of *Portuguese inflows*. *OdE* also publishes aggregate annual series on the stocks of individuals with Portuguese citizenship resident abroad, which lead to similar results (not reported). In addition, it provides census-based aggregate data, but due to limited observations, these are not used here.

country. If they continue to reside in the host country after the year of arrival, they are considered residents, corresponding to the *stock* of the country's emigrant population. Appendix A illustrates the metadata published in *OdE*'s 2022 report on Portuguese emigration (Pena Pires et al., 2022). Table A.1 reports the data source and definition for the stock of Portuguese emigrants in each destination country. Table A.2 presents the same information for their inflows. Source types span from national population registers and census data to third-party institutional sources (e.g., OECD, Eurostat).[2]

2.2 Portuguese emigration in recent years (2000-2022)

The annual data series introduced in the previous section are presented in Figure 1a, showing the stocks of Portuguese emigrants across destination countries, and in Figure 1b, showing their inflows into such countries. Countries are ranked according to their population stock in 2022. The underlying datasets are also reported in Table 1 and Table 2, respectively.

Figure 1a indicates that France is by far the primary host country for Portuguese emigrants. In 2022, its population of Portuguese-born emigrants was about 570 thousand individuals, which amounts to approximately 6% of the Portuguese-born population residing in Portugal in 2021 (9.4 million).[3] The Portuguese population in France saw a sharp decline from about 832 thousand individuals in 2000 to about 567 thousand in 2005, possibly due to return migration and deceases of elderly people who had migrated there in previous decades. Thereafter, it has remained stable at around 600 thousand, with annual inflows in the order of 6 to 20 thousand units (shown in Figure 1b and declining since 2002), which are rather modest relative to the large existing population.

All other countries have Portuguese-born populations ranging, in the most recent year available, from about 10 to 200 thousand individuals (or 0.1% to 2% of the corresponding population residing in Portugal).[4] Among these countries, we can distinguish three major groups. The first group includes the United States, Brazil, and Canada. These three countries have substantial Portuguese emigrant populations, ranging from approximately 150 to 200 thousand people, primarily inherited from emigration waves before 2000. Since then, these populations have slightly declined, as annual inflows during the period under examination have been modest—both in absolute terms (around 1 to 3 thousand units per year)

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[2]Some discrepancies might arise between stocks and inflows data, as the information collected by *OdE* for a given country may come from different sources. Furthermore, we have no information on outflows or deaths, preventing a complete stock-flow accounting.

[3]The population of Portuguese-born individuals resident in Portugal is estimated based on the 2021 Census microdata (Instituto Nacional de Estatística (INE), 2023).

[4]Figure B.1 omits data for France and illustrates the same stocks shown in Figure 1a on a narrower scale.

and especially relative to the countries' large initial stocks.[5]

The second group comprises countries with similarly large Portuguese emigrant populations, having stocks ranging from 100 to 200 thousand individuals. However, these countries recently received much more substantial annual inflows, around 10 to 30 thousand units per year. Such inflows are 10 times the size of those seen for countries in the first group, and amount to about 0.1-0.3% of the Portuguese-born population resident in Portugal. In this group, two countries particularly stand out: the United Kingdom and Switzerland. Throughout the first decade of the new millennium, and at an even faster pace in its second decade, the United Kingdom experienced a staggering increase in its inflows of Portuguese emigrants, leading to a steady rise in its stock. This trend culminated in the years surrounding the Brexit referendum (held in 2016, when about 30 thousand Portuguese entered the country). Afterward, inflows began decreasing—arguably due to expectations of future restrictive immigration policies by the UK government—and the stock stabilized at around 156 thousand people in 2021, more than four times its level in 2000 (36 thousand). Switzerland also saw a significant increase in inflows, though to a somewhat lesser extent compared to the UK, peaking at 20 thousand units per year in 2013 and slowly decreasing thereafter. This trend resulted in a 50% increase in the country's stock of Portuguese emigrants over the last two decades, rising from about 135 to 203 thousand individuals.

Also part of the second group are Germany and Spain. After an initial period of decline and sluggishness in the 2000s, inflows of Portuguese emigrants to Germany gained positive momentum during the 2010s, averaging about 8 thousand units per year, before stabilizing towards the end of the decade at around 6 thousand units annually. This led to an overall growth in its Portuguese population stock of about 6% over the period under scrutiny, increasing from approximately 108 to 115 thousand people. The dynamics in Spain were more volatile. Inflows of Portuguese emigrants grew steeply throughout the 2000s, peaking in 2007 at 27 thousand units per year (up from 3 thousand in 2000), before falling sharply during the Great Recession, which brought high unemployment and economic hardship. Following the subsequent economic recovery, inflows resumed at a moderate pace, stabilizing around 10 thousand units per year in recent years. This pattern resulted in an inverse U-shaped trend for the Portuguese population stock in Spain, which overall grew by 60% over the last twenty years, rising from around 60 to 90 thousand individuals.

Lastly, the third group includes the Benelux countries—Luxembourg, Belgium, and the Netherlands—which have considerably smaller stocks of Portuguese emigrants, ranging from about 10 to 90 thousand individuals. These countries also receive annual inflows of moderate

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[5]While not neatly falling within this group due to its significantly smaller stock (51-54 thousand), Venezuela also shows a similar profile, although inflows are recorded only in 2011 (about 530 individuals).

scale compared to those in the previous group, with 1 to 5 thousand units per year. However, these inflows have grown remarkably over the last two decades. Between 2000 and 2022, Luxembourg saw a 63% increase (from 2.2 to 3.6 thousand units per year), while Belgium and the Netherlands experienced even larger increases—rising by 170% (from 1.3 to 3.5 thousand per year) and by 350% (from 1 to 4.5 thousand per year), respectively. Notably, inflows in Luxembourg and Belgium increased until the early 2010s but subsequently flattened following a slight decline, whereas they have been rising consistently in the Netherlands. The case of the Netherlands is particularly noteworthy, as the country saw its Portuguese emigrant inflows more than double from 2020 to 2022 alone, rising from 2 to 4.5 thousand per year. This trend may have been influenced by the tightening of entry conditions to the United Kingdom after 2020, following the full implementation of the UK's EU Settlement Scheme as a result of Brexit, which likely made the Netherlands a more attractive destination.

The rising inflows seen in these three countries have put their stocks of Portuguese emigrants on steadily increasing trajectories, although their levels remain substantially smaller than those observed in the countries of the other groups. Luxembourg's Portuguese emigrant population, starting from a relatively higher level in 2000 (about 50 thousand) compared to the other two Benelux countries, has seen a 45% increase over the last two decades, rising to 73 thousand people. Meanwhile, over the same period, the other two countries have seen their emigrant populations approximately double—growing by 85% (from 20.8 to 38.4 thousand) in Belgium and by 133% (from 9.5 to 22.1 thousand) in the Netherlands.

This section provided a comprehensive overview of recent Portuguese emigration trends by illustrating the evolution of emigrant population stocks and the dynamics of emigrant inflows across countries. While these figures offer valuable insights, they do not differentiate emigrants by fine age groups (or birth cohorts) and education levels, which is crucial to the main purpose of this report. The next section will address this gap by using more detailed data for a selection of countries, covering the first two groups presented here. In particular, we will focus on comparing patterns in university educational attainment between Portuguese individuals in Portugal and in destination countries.

3 Population and university education trends among domestic and emigrant Portuguese populations by birth and age groups

This section presents a descriptive analysis of recent trends in population and university educational attainment among Portuguese individuals, by birth cohort and age bracket,

both in Portugal and in key destination countries.

3.1   Data

We assembled a comprehensive dataset covering Portugal and several major destination countries. The dataset integrates census data from multiple sources with data points from the 2000s, 2010s, and 2020s. For each country, Table 3 illustrates the data type (microdata or aggregate), the underlying data source and statistical agency producing it, and the provider through which we obtained it. It also displays the set of available years, information on birth country and nationality availability, age range, and total counts.

We obtained microdata for France (2006, 2011), the United States (2000, 2010, 2020), Brazil (2000, 2010), Canada (2001, 2011), and Spain (2001, 2011) through IPUMS International (Minnesota Population Center, 2024, henceforth, IPUMS-I), and for Portugal (2001 and 2011 via IPUMS-I, and 2021 via INE). Additionally, we acquired aggregate data at the level of university education by age group for the United Kingdom (2001, 2011, 2021), Switzerland (2000, 2010, 2020), and Germany (2011) through their national statistics offices. For all country-year pairs, we are able to distinguish individuals (or groups of individuals if the information comes from aggregate data) whose completed level of schooling is either university education or at most secondary education. However, the data contains no information on whether such schooling was acquired in Portugal or abroad.

We combined microdata and aggregate data into cells defined by university education and age group, containing the total count (stock) of Portuguese individuals for each country-year pair. The resulting integrated dataset provides extensive coverage, as it includes Portugal and the primary destination countries classified under the first two groups in Section 2 (FR, US, BR, CA, UK, CH, ES, DE). Despite some countries lacking data for certain decades between the 2000s and 2020s, the dataset offers a comprehensive and recent overview of Portuguese populations in Portugal and abroad across different education and age groups.

Our analysis focuses on individuals aged 20 to 59. The information from aggregate datasets was obtained in 5-year age brackets, from 20-24 to 55-59, providing stocks of Portuguese emigrants divided by university education attainment.[6] To align with this structure, we collapsed individual-level microdata following the same level of aggregation, using sample weights to compute cell-level counts. Furthermore, we mapped the derived cells to their corresponding 5-year birth cohorts. In the microdata, we used reported birth years when

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[6]An exception is the United Kingdom, where for 2001, we received data in 5-year age brackets ranging from 21-25 to 51-55, which we harmonized to 20-24 to 50-54 for consistency; whereas for 2021, the UK age groups range from 20-24 to 50-54. Additionally, in Switzerland in 2010, the number of individuals with university education aged 55-59 is scrambled due to a low number of observations.

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available. Absent the information on birth year (in both microdata and aggregate data), we calculated birth cohort bounds as the census year minus the corresponding age bracket bound, subtracting an additional year for censuses held from January to June, as in Cardoso and Morin (2023).

To define the relevant Portuguese populations of interest in both Portugal and destination countries, we use the following criteria. When the country of birth is observed, we define as Portuguese all individuals born in Portugal, regardless of their nationality (and whether it is observed). This criterion applies to all country-year pairs in our integrated dataset except Germany in 2011, where we only observe Portuguese nationals, whom we include in the relevant population. If both birth country and nationality are observed, individuals who were *not* born in Portugal but have Portuguese nationality are excluded from our definition and sample.[7] In Portugal, these are immigrants who acquired Portuguese citizenship (e.g., by naturalization or marriage). Abroad—specifically in France, Switzerland, and Spain—they are most likely second or subsequent generation Portuguese nationals, typically born in the destination country (40-80% of the time for individuals aged 20 to 59).

3.2 Descriptive analysis

3.2.1 Population and university education trends in Portugal

We begin by examining the patterns observed in Portugal. Figure 2a illustrates trends in the stocks of Portuguese individuals aged 20-59 residing domestically, broken down by birth cohort for the years 2001, 2011, and 2021.[8] The first data point in each series indicates the number of individuals aged 55-59, while the last one indicates those aged 20-24. The 2001 line shows a growing population stock as birth cohorts get younger. In contrast, the 2011 and 2021 lines display an increasing trend for cohorts born until 1975, followed by a substantial drop for younger cohorts (up to 200 thousand units), reflecting the sharp decline in fertility rates over recent decades.

Vertical jumps between lines indicate population changes for each birth cohort across census years, which are largely driven by migration. For cohorts born between 1951 and 1975, there are relatively moderate declines over time, in the order of 10 thousand units per birth cohort. However, for cohorts born after 1976, the population drops are more substantial, ranging from 30 to 70 thousand units. This suggests significantly higher emigration rates among younger generations in recent decades.

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[7]For microdata obtained through IPUMS-I, we initially selected census sample observations on individuals either born in Portugal or with Portuguese nationality.

[8]The 20-59 age segment amounts to about 5 million individuals in each year (see Table 4), around half of the overall Portuguese population.

The combination of lower birth rates and higher emigration rates among younger cohorts has led to a progressive aging of the Portuguese domestic population, as shown in Figure 2b, which illustrates the data by age bracket. In 2001, the population is highest in the youngest age group (20-24), but this pattern is reversed by 2011 and 2021. In these later years, the population peaks in older age brackets (in particular, age 40 and beyond) as the earlier birth cohorts age, while the youngest age groups experience significant declines due to lower fertility and the amplifying effect of emigration.

Next, we examine the stocks of Portuguese individuals at home further broken down by university education. Figure 2c depicts a marked shift from no university to university education, occurring both across newer birth cohorts and over time. The percentage of university graduates among individuals aged 20-59 rises from 9.6% in 2001 to 18.1% in 2011 and 27.7% in 2021, as shown in Table 4. In particular, the composition of educational attainment begins to significantly shift toward university education for cohorts born in the 1960s onwards. The percentage of university graduates reaches double digits for individuals born in 1961-1965, and increases from 10.5% in 2001 to 14.7% in 2021. In 2011 and 2021, the number of university graduates in each 5-year birth cohort from 1971-1975 to 1991-1995 is stable at around 200 thousand units, while the stock of individuals with no university education is progressively declining.[9] This results in university graduate shares ranging from 22.8% for individuals born in 1971-1975 in 2011 to 39.9% for those born in 1991-1995 in 2021. These advancements in university education are mirrored by the age composition of educational attainment, shown in Figure 2d, which illustrates a progressive relative shift toward university education across all age brackets, most notably among individuals aged 40 or younger.

3.2.2 Population and university education trends in destination countries

In this section, we examine the patterns observed in the destination countries. Figures 3a and 3b display overall population trends for France in 2006 and 2011, broken down by birth cohort and age bracket, respectively. As noted in Section 2, France is the destination country with the highest population of Portuguese emigrants. Figure 3a illustrates a similar cohort structure to that of the domestic population in Portugal, with substantially lower stocks (in relative terms) of individuals born from the 1970s onwards (about 25 thousand individuals per 5-year cohort, compared to approximately 75 thousand for earlier cohorts). Addition-

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[9]Note that in Portugal, university students typically graduate with a bachelor's degree (*new Licenciatura* after the 2005 Bologna-process reform) by around age 21 or 22, and with a master's degree by around age 23 or 24 (*Mestrado* or *old Licenciatura*). This results in a downward (upward) spike in the last data point of each series in Figure 2c, corresponding to individuals aged 20-24 with *completed* university (no university) education.

ally, the figure shows moderate population growth between 2006 and 2011, predominantly concentrated among the younger birth cohorts. Overall, this results in a slight increase in the stock of emigrants aged 20-29, while the rest of the emigrant population progressively ages (see Figure 3b).

Moreover, further disaggregating the data by university education, as shown in Figures 3c and 3d, reveals that the stocks of university-educated Portuguese emigrants in France are strikingly smaller than those of non-university-educated emigrants. As a result, even for younger cohorts born between 1971 and 1990, the share of university graduates is relatively low (11-15%, shown in Table 5). These trends indicate that while Portuguese emigration to France persists at a moderate pace, it remains characterized by relatively low levels of university education, even in the younger generations.

We continue by examining the set of countries categorized under the first group in Section 2: the United States, Brazil, and Canada. These countries have sizeable Portuguese emigrant populations, predominantly composed of individuals born before the mid-1960s (see Figures 4a to 6a). Population growth among younger cohorts of emigrants has been minimal in Brazil and Canada, while the US has experienced some limited growth. Accordingly, the Portuguese emigrant populations aged 20-59 in all three countries show clear signs of aging and decline over time, as illustrated in Figures 4b to 6b.

As to the tertiary education composition in these countries, in Canada, the Portuguese emigrants with a university degree are disproportionately fewer than those without a degree, with the percentage of graduates ranging on average between 7 and 10% and moderately increasing among younger generations (see Figures 6c and 6d and Table 8). However, this is not the case for the other two countries, which exhibit rather high shares of university graduates (shown in Tables 6 and 7). In particular, in the United States, these shares increase as cohorts get younger, reaching up to 39%. In Brazil, the highest percentages of university graduates are observed among cohorts born between the mid-1960s and the mid-1970s, getting close to 50% in 2010. Yet, as illustrated in Figures 4c and 5c, in both countries these trends appear to be largely driven by the sharper declines in the stocks of non-graduates across younger cohorts, rather than by substantial expansions in the stocks of graduates.

Next, we focus on the countries previously classified under the second group: the United Kingdom, Switzerland, Spain, and Germany.[10] As previously discussed, over the last two decades, the United Kingdom has experienced a remarkable growth in its population of Portuguese emigrants, which can be observed across all birth cohorts (see Figure 7a). However,

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[10]We do not have data on Belgium, Luxembourg, and the Netherlands. However, as discussed in Section 2, while exhibiting rising inflows and growing stocks, the Portuguese emigrant populations in these countries remain considerably smaller than those observed in other countries.

unlike in the other countries examined so far, this growth has been particularly strong among younger cohorts, especially those born after the mid-1970s. This trend is further reflected in the age composition of emigrants, with the largest age groups consisting of individuals up to their mid-forties (as shown in Figure 7b).

The stocks of Portuguese emigrants in the UK, as well as their overall growth over the last two decades, are comparable in magnitude between university graduates and non-graduates (see Figures 7c and 7d). In particular, the number of non-graduates experienced the largest increase between 2001 and 2011, continuing to rise at a slower pace in the following decade. By contrast, the number of university graduates increased primarily between 2011 and 2021, with the largest gains observed among the youngest cohorts. Consequently, as illustrated in Table 9, the percentage of graduates has steadily increased both across cohorts and over time, nearing 50% in 2021 for emigrants born in the early 1980s and surpassing it for more recent cohorts.

For Switzerland, Figure 8a shows sizeable stocks undergoing significant growth for Portuguese emigrants born between the mid-1960s and 1990, while stocks are markedly lower for the oldest cohorts born earlier and only slightly lower for the youngest cohorts born afterward. This pattern results in moderate population aging, most pronounced at the right tail of the age distribution, with individuals aged 30 and above forming the largest age groups in 2020 (see Figure 8b). Between 2000 and 2010, the observed increase in the Portuguese emigrant population in Switzerland was almost entirely driven by individuals without a university degree, as shown in Figure 8c. As a result, the percentage of graduates remained well below 10%. In the following decade, the number of university graduates experienced some growth, with stocks rising in comparable magnitude to those of non-graduates among the youngest cohorts. This led to significantly higher percentages of university graduates, reaching up to 25% for the youngest cohorts in 2020 (see Table 10).

The patterns observed for Spain between 2001 and 2011 (see Figure 9 and Table 11) are similar to those seen in Switzerland, with population growth concentrated among cohorts born between the early 1960s and 1980s. Analogously, graduate rates are also in the single digits in 2001, increasing in 2011 due to a modest rise in the stock of university graduates among younger generations, where they approach similar percentages of around 20%, although a decade earlier. Lastly, for Germany, we only have data for 2011 (shown in Figure 10 and Table 12), where both the cohort composition and university education levels resemble those observed in Spain in the same year. However, in Germany, graduate rates are slightly higher among individuals born between the mid-1950s and 1970s, ranging from 8 to 12%.

To take stock of the changes in university education among the Portuguese populations

in Portugal and in the destination countries, we conclude this section with a comparative analysis of tertiary education rates. Figure 11 illustrates the percentages and total counts of university graduates across countries and years grouped by decade. These are shown separately for the overall populations aged 20-59, as well as for subgroups aged 20-29, 30-34, and 45-59. From these figures, three main patterns emerge. Firstly, university education among Portuguese individuals became increasingly prevalent between the 2000s and the 2020s across all the countries under consideration, rising on average from approximately 10 to 25%, reflecting significant educational advancement both domestically and abroad.[11] This trend is particularly evident for individuals in Portugal, as well as for emigrants in the United Kingdom, the United States, and Brazil. Secondly, perhaps unsurprisingly, higher and faster-growing tertiary education rates are found among age group 20-29 and also 30-34, compared to the 45-59 age group, consistent with educational advancement occurring alongside demographic changes.

Thirdly, and most importantly, Portugal is found to occupy a high rank when stacked against destination countries in terms of university education attainment. This reveals that, in most cases, the share of the Portuguese population with a university degree is at least as high or higher in Portugal than in the destination countries. However, some important exceptions emerge, primarily for the United Kingdom and Brazil. During the 2000s, the share of university graduates among Portuguese individuals aged 20-59 was about twice as high in the United Kingdom and Brazil (approximately 20%) compared to Portugal (around 10%). In the 2010s, Portugal made significant progress, with the share of university graduates rising to 18%, substantially narrowing the gap with the United Kingdom (21%) but still lagging considerably behind Brazil (32%). By 2021, the proportion of Portuguese university graduates in Portugal increased further to 28%, while the United Kingdom saw a notable rise to 41%; however, comparable data for Brazil is not available for this period.

These trends broadly hold also within age subgroups, although the observed gaps vary between them. Specifically, the gap between Portugal and the United Kingdom is more pronounced among individuals aged 20-29, while that between Portugal and Brazil in the 30-44 age group.

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[11]Note, however, that for the 2020s, we only have data on Portugal, the United Kingdom, the United States, and Switzerland (see Table 3).

3.3 Detailed comparison of university graduate rates between Portuguese residents and emigrants by birth cohort

In the previous section, we examined population and university education trends using a country-specific approach, detailing how dynamics in the stocks of university graduates and non-graduates determine graduate rates among different birth and age groups over time. Additionally, we provided a general comparative overview of graduate rates between Portuguese populations at home and abroad within broadly defined age groups. This section provides a more systematic and detailed comparison of graduate rates between Portuguese residents and emigrants, focusing on narrowly defined (i.e., 5-year) birth cohorts over time.

For this purpose, we perform the following simple decomposition:

$$S_{c,t}^D = \underbrace{S_{c,t}^P}_{\text{production component}} + \underbrace{\left(S_{c,t}^D - S_{c,t}^P\right)}_{\text{selection component}}$$

where the share of university graduates among emigrants in a given destination country D, birth cohort c, and decade t $(S_{c,t}^D)$ is written as the sum of the corresponding share among Portuguese residents $(S_{c,t}^P)$ and a deviation term $(S_{c,t}^D - S_{c,t}^P)$. The first term captures the domestic *production* of university graduates in Portugal. If emigrant populations were random draws from the domestic Portuguese population, the university graduate rates among destination countries and Portugal would be aligned (i.e., the deviation would be zero), implying that Portugal exports graduates in the same proportion as they are produced domestically. Else, a deviation arises, reflecting the compositional difference in terms of university education prevailing in destination countries. This second term captures the sign and extent of education *selection* relative to the domestic production of graduates. A positive (negative) value indicates that the emigrant population is more (less) educated relative to the population in Portugal.

The results from the decomposition are reported in Figure 12, showing the graduate share in each destination country (in blue), the graduate share in Portugal (in red), and their difference (in green), for each 5-year birth cohort over observed decades. Additionally, to gauge the weight of selection and thus help contextualize it, Figure 13 illustrates the ratio of each country's emigrant graduate population to its domestic counterpart, also by birth cohort and decade. This ratio captures the relative size of the stock of Portuguese graduates in a given destination country and birth cohort compared to the stock of graduates in Portugal in the corresponding birth cohort.[12]

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[12]For illustrative purposes, in Figures 12 and 13, birth cohorts for the United States and Spain are harmonized for consistency. Specifically, birth cohort bounds are increased by 1 year for the United States

The decomposition results highlight three main patterns of alignment and divergence in university graduate rates between Portuguese emigrants and the domestic population. First, for the United States, Spain, and Germany, the graduate rates of emigrants are mostly aligned with those of Portuguese residents, reflecting that the production component strongly dominates and the selection component is relatively small. In particular, in the United States, the graduate share of emigrants closely mirrors that of the domestic population, indicating very little selection, which can take either sign but remains negligible overall. Moreover, in the United States, the size of the Portuguese graduate population relative to the one in Portugal is found to be declining both within cohorts and across them as they get younger—with ratios falling from around 0.04 for emigrants born until 1970 to about 0.01-0.02 for those born later. The results for Spain and Germany also show a considerable alignment in graduate rates, although a mild pattern of negative selection is apparent (in the order of 5-7 percentage points), with little variation across cohorts. However, for these two countries, the relative size of the Portuguese graduate population is rather low, with ratios exhibiting a flat trend around 0.01.

Second, in France, Canada, and Switzerland, we observe considerably more pronounced patterns of negative educational selection. For France and Canada, the deviations in the graduate shares between emigrants and residents are small for older cohorts born up until 1970, indicating some alignment with the corresponding domestic cohorts prior to the rapid educational advancement experienced in Portugal. However, such gaps significantly intensify among younger cohorts, nearing 20 percentage points for cohorts born around the 1980s. This pattern is also reflected by the decreasing relative size of their graduate emigrant populations, occurring both within and between cohorts (with ratios falling from approximately 0.07 to 0.02-0.03 for France, and from around 0.02 to 0.01 for Canada). By contrast, in Switzerland the observed negative deviations are substantial also for older cohorts born up until 1970, reflecting a long-standing negative educational selection of Portuguese emigrants into the country. These deviations further expand among younger cohorts born between 1970 and 2000, although they experience a temporary reduction for emigrants born in the 1980s. This is driven by a larger increase in emigrant graduates than non-graduates for those cohorts, as seen earlier in Figure 8c, which also results in a temporary increase of the relative size of Switzerland's emigrant graduates stock (as shown by ratios temporarily rising from about 0.01 to 0.03).

Lastly, Brazil and the United Kingdom also exhibit significant divergence from Portugal, but in these cases we observe positive educational selection. In Brazil, these positive divergences are particularly large, increasing among emigrants born between the 1950s and

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and decreased by 1 year in Spain, so as to match the cohort structure in all other destination countries.

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the mid-1970s (reaching around 20–30 percentage points), before decreasing in later cohorts. However, as noted in the previous section, this pattern seems to be mechanically driven by the disproportionate decline in the stock of emigrant non-graduates as cohorts get younger, compared to the already significantly declining stock of graduates. This latter trend is also reflected by the sharp decline across cohorts in the relative size of the Portuguese graduate population in Brazil, with ratios to the corresponding domestic population falling from 0.10 among those born between 1946 and 1950 to less than 0.01 for those born from the 1970s onward. Thus, Brazil represents a special case where the observed positive selection appears to be largely the result of marked education-biased demographic shifts within its Portuguese emigrant population.

As to the United Kingdom, for Portuguese emigrants born up until 1980, in the 2000s, the observed positive differences in graduate rates are increasing across cohorts as they get younger (ranging from 6 to 17 percentage points) but decrease within cohorts over time, leading positive selection for these cohorts toward zero by 2011. This is due to a larger expansion of the stock of non-graduate emigrants compared to graduates for such cohorts during the 2000s, discussed earlier and illustrated in Figure 7c. However, for emigrant cohorts born from 1980 onwards, the difference in graduate rates starts increasing again, both across and within cohorts during the 2010s, reaching 10–17 percentage points. This is due to faster growing stocks of emigrant graduates, also driving an increase in the relative size of the UK's emigrant graduate population among these younger cohorts—rising from about 0.02-0.03 for individuals born around 1980 to around 0.05-0.06 for those born after. Overall, these trends suggest some degree of brain drain from Portugal to the UK among younger cohorts.

4   Conclusion

In conclusion, the evidence provided in this report suggests that recent Portuguese emigration has mostly been tapping into a growing pool of university graduates, rather than draining it. We document that, in major destination countries such as the United States, Spain, and Germany, the university graduate rates among Portuguese emigrants broadly align with those observed in Portugal. This indicates that the educational attainment of Portuguese emigrants in these countries is largely shaped by Portugal's domestic progress in higher education. If anything, the negative gaps in graduate rates observed in France, Canada, and Switzerland reflect that Portuguese emigration to these countries is not keeping pace with Portugal's educational advancements due to both moderate recent Portuguese migration flows and enduring negative educational selection of migrants. Moreover, the declining or

flat trends in the relative size of graduate emigrant populations observed in most destination countries (compared to the population of graduates residing in Portugal) further points to limited evidence of substantial and widespread brain drain.

The United Kingdom stands as the notable exception (excluding Brazil's special case), showing positive educational selection of its Portuguese emigrants and a rising relative size of its stock of graduate emigrants among younger cohorts. This result aligns with concerns about a possible brain drain, though post-Brexit immigration restrictions are likely to reduce this flow in the future.

While we find no strong evidence of a widespread brain drain, the UK case highlights the potential for future shifts in emigration patterns, especially if young Portuguese graduates seek opportunities elsewhere. It remains to be seen whether this would lead to a revival of emigration among the highly educated Portuguese to traditional destinations—such as Switzerland and France or Spain and Germany—or a shift toward destinations with smaller Portuguese communities—such as the Benelux countries, which have recently experienced notable growth in their Portuguese emigrant populations.

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Tables

Table 1: Stocks of Portuguese emigrants by destination country and year

	Destination Country											
Year	France	Switzerland	United States	Brazil	United Kingdom	Canada	Germany	Spain	Luxembourg	Venezuela	Belgium	Netherlands
2022	573,000	203,847	183,633	.	.	.	.	93,621	.	.	38,423	22,141
2021	595,200	207,251	162,121	.	156,295	133,695	115,165	93,902	72,948	.	37,798	19,816
2020	588,600	210,731	157,418	175,251	165,726	150,166	114,825	95,221	75,221	51,471	37,376	19,820
2019	605,300	214,087	161,936	185,489	165,463	148,513	114,705	94,319	83,666	53,473	36,828	18,713
2018	610,206	217,662	178,500	.	141,300	.	115,190	94,520	72,821	.	36,378	17,893
2017	618,214	220,904	182,219	169,069	137,857	161,055	123,155	96,266	72,477	55,441	36,074	17,384
2016	621,986	223,099	148,209	.	130,387	143,160	112,430	100,027	.	.	35,249	16,868
2015	621,777	222,277	163,767	161,250	140,318	138,589	110,384	107,226	94,732	54,591	34,303	16,456
2014	615,573	218,657	134,003	.	127,171	.	107,470	116,710	.	.	33,292	16,054
2013	606,897	211,451	158,002	.	109,978	.	104,084	134,248	.	.	31,504	15,486
2012	599,333	199,209	166,582	.	92,916	.	97,445	143,488	.	.	29,453	14,868
2011	592,281	187,409	177,561	.	85,625	140,310	92,343	146,298	60,897	37,326	28,310	14,430
2010	588,276	172,274	191,803	137,973	84,031	138,520	90,148	148,789	62,068	53,659	27,532	14,356
2009	584,714	206,019	171,506	.	87,976	.	90,203	148,154	.	.	26,541	13,553
2008	580,598	196,842	217,540	.	83,177	.	91,225	136,171	.	.	24,950	12,569
2007	576,100	183,028	266,612	.	71,270	.	91,253	111,575	.	.	24,005	11,940
2006	569,600	174,198	193,621	.	70,532	150,390	91,651	93,767	.	.	23,337	11,823
2005	567,000	167,857	179,463	176,510	66,400	141,057	92,136	80,846	55,878	53,646	22,795	11,833
2004	.	160,249	188,277	.	66,979	.	93,190	71,065	.	.	22,324	11,729
2003	.	150,448	188,874	.	68,385	.	105,135	71,843	.	.	21,657	11,300
2002	.	141,696	190,736	.	61,996	.	105,667	67,313	.	.	21,331	10,762
2001	.	136,135	210,269	.	52,473	153,530	107,057	62,610	41,690	53,477	21,189	10,030
2000	831,900	135,449	218,646	213,203	35,776	154,283	108,397	58,364	50,254	54,176	20,834	9,509

Source: Observatório da Emigração (OdE). Annual series of *Resident population born in Portugal* (*População residente nascida em Portugal*).

Table 2: Inflows of Portuguese emigrants by destination country and year

	Destination Country											
Year	France	Switzerland	United States	Brazil	United Kingdom	Canada	Germany	Spain	Luxembourg	Venezuela	Belgium	Netherlands
2022	.	9,948	746	562	7,941	875	5,935	11,001	3,633	.	.	4,533
2021	7,663	7,675	750	461	13,551	890	5,460	11,009	3,885	.	3,529	3,406
2020	5,998	7,542	679	439	6,664	550	5,365	6,471	3,286	.	2,907	1,933
2019	7,643	8,443	940	705	24,593	855	5,765	10,155	3,752	.	3,215	2,841
2018	8,047	8,733	889	631	18,871	865	6,035	10,636	3,501	.	2,816	2,400
2017	8,314	9,257	939	601	22,622	790	16,325	9,038	3,342	.	2,691	2,127
2016	12,377	10,123	1,006	722	30,543	855	7,380	7,646	3,355	.	2,863	1,961
2015	11,607	12,325	857	1,294	32,301	830	7,915	6,638	3,525	.	2,927	1,860
2014	14,732	15,221	892	1,921	30,546	637	8,735	5,923	3,832	.	2,993	1,887
2013	18,803	20,039	918	2,904	30,121	630	10,030	5,302	4,590	.	4,332	2,079
2012	19,658	18,892	811	2,161	20,443	560	7,930	6,201	5,193	.	4,228	2,051
2011	15,023	15,020	821	1,543	16,347	528	5,340	7,424	4,977	532	3,140	1,727
2010	9,801	12,720	755	798	12,064	629	4,220	7,678	3,845	.	2,717	1,530
2009	9,933	13,601	946	708	12,211	622	4,330	9,739	3,844	.	2,854	1,983
2008	13,044	17,657	772	679	12,983	664	4,140	16,857	4,531	.	3,200	2,002
2007	10,930	15,351	1,019	550	12,039	403	3,700	27,178	4,385	.	2,293	1,577
2006	11,742	12,441	1,409	477	9,696	423	3,371	20,658	3,796	.	2,030	1,211
2005	9,146	12,138	1,125	595	11,712	338	3,418	13,327	3,761	.	1,934	830
2004	9,807	13,539	1,069	482	13,867	336	5,570	9,851	3,542	.	1,907	984
2003	9,165	12,228	808	.	12,603	329	6,981	4,825	3,857	.	1,823	1,166
2002	.	9,005	1,313	.	7,915	362	7,955	3,538	2,767	.	1,567	1,189
2001	.	4,347	1,609	.	4,396	531	9,287	3,057	2,293	.	1,347	1,216
2000	.	4,311	1,343	.	1,811	468	.	2,955	2,193	.	1,324	1,009

Source: Observatório da Emigração (OdE). Annual series of *Portuguese inflows* (*Entrada de estrangeiros*).

Table 3: Census-based integrated dataset characteristics

Country	Decade	Year (month)	Type (sample fraction if microdata)	Source	Statistical Agency	Provider	Birth country observed	Nationality observed	Definition of Portuguese (born/national)	Age range	N. individuals (microdata are weighted)
Portugal	2000s	2001 (mar)	microdata (5.0%)	Census	INE	IPUMS-I	Yes	Yes	born	20-59	5,271,880
	2010s	2011 (mar)	microdata (5.0%)	Census	INE	IPUMS-I	Yes	Yes	born	20-59	5,106,340
	2020s	2021 (mar)	microdata (5.0%)	Census	INE	INE	Yes	Yes	born	20-59	4,683,800
France	2000s	2006 (feb)	microdata (33.0%)	Census	INSEE	IPUMS-I	Yes	Yes	born	20-59	438,972
	2010s	2011 (feb)	microdata (31.0%)	Census	INSEE	IPUMS-I	Yes	Yes	born	20-59	410,637
	2020s	*unavailable*									
United States	2000s	2000 (apr)	microdata (5.0%)	Census	U.S. Census Bureau	IPUMS-I	Yes	No	born	20-59	154,309
	2010s	2010 (varies)	microdata (1.0%)	American Community Survey	U.S. Census Bureau	IPUMS-I	Yes	No	born	20-59	126,351
	2020s	2020 (varies)	microdata (5.0%)	American Community Survey	U.S. Census Bureau	IPUMS-I	Yes	No	born	20-59	92,642
Brazil	2000s	2000 (aug)	microdata (10.0%)	Census	IBGE	IPUMS-I	Yes	No	born	20-59	85,102
	2010s	2010 (aug)	microdata (10.0%)	Census	IBGE	IPUMS-I	Yes	No	born	20-59	32,416
	2020s	*unavailable*									
Canada	2000s	2001 (may)	microdata (2.7%)	Census	Statistics Canada	IPUMS-I	Yes	Yes	born	20-59	111,118
	2010s	2011 (may)	microdata (2.7%)	Census	Statistics Canada	IPUMS-I	Yes	Yes	born	20-59	89,292
	2020s	*unavailable*									
United Kingdom	2000s	2001 (apr)	aggregate	Census	ONS	ONS	Yes	No	born	21-55	24,962
	2010s	2011 (mar)	aggregate	Census	ONS	ONS	Yes	No	born	20-59	63,774
	2020s	2021 (mar)	aggregate	Census	ONS	ONS	Yes	No	born	20-54	107,204
Switzerland	2000s	2000 (dec)	aggregate	Census	FSO	FSO	Yes	Yes	born	20-59	86,211
	2010s	2010 (dec)	aggregate	Register-based census	FSO	FSO	Yes	Yes	born	20-59	144,636
	2020s	2020 (dec)	aggregate	Register-based census	FSO	FSO	Yes	Yes	born	20-59	171,973
Spain	2000s	2001 (nov)	microdata (5.0%)	Census	INE	IPUMS-I	Yes	Yes	born	20-59	41,560
	2010s	2011 (nov)	microdata (10.0%)	Census	INE	IPUMS-I	Yes	Yes	born	20-59	71,767
	2020s	*unavailable*									
Germany	2000s	*unavailable*									
	2010s	2011 (may)	aggregate	Census	Destatis	Destatis	No	Yes	national	20-59	81,580
	2020s	*unavailable*									

Note: The table illustrates the characteristics of our census-based integrated dataset. Column 1 reports the census years available for each country in the 2000s, 2010s, and 2020s, along with the months the censuses were conducted. Column 2 indicates the data type (microdata or aggregate) and shows the sample fraction for microdata. Columns 3 to 5 report the underlying data source, the statistical agency producing it, and the provider through which we accessed the data. Columns 6 to 8 detail the availability of information on birth country and nationality, as well as our definition of the relevant Portuguese population. Column 9 reports the age range restriction applied to the data in each country-year pair and highlights discrepancies for countries with missing or different age brackets in certain years. Finally, Column 10 presents the total number (stock) of individuals for each country-year pair, with figures for microdata derived using provided sample weights.

Table 4: Stock of Portuguese residents aged 20-59 in **Portugal**

(a) by birth cohort and university education

Birth Cohort	2001				2011				2021			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
1941-1945	555,000	523,800	31,200	5.6	.	.	.	.	.	.	.	.
1946-1950	616,740	574,100	42,640	6.9	.	.	.	.	.	.	.	.
1951-1955	643,200	587,280	55,920	8.7	633,900	567,560	66,340	10.5	.	.	.	.
1956-1960	673,920	611,340	62,580	9.3	661,040	587,640	73,400	11.1	.	.	.	.
1961-1965	700,080	626,480	73,600	10.5	683,680	596,040	87,640	12.8	687,320	586,440	100,880	14.7
1966-1970	671,620	586,140	85,480	12.7	662,120	555,960	106,160	16.0	667,240	541,240	126,000	18.9
1971-1975	689,780	577,040	112,740	16.3	686,640	530,420	156,220	22.8	694,540	507,140	187,400	27.0
1976-1980	721,540	680,660	40,880	5.7	673,780	481,600	192,180	28.5	649,940	438,940	211,000	32.5
1981-1985	.	.	.	.	582,600	408,780	173,820	29.8	552,100	359,720	192,380	34.8
1986-1990	.	.	.	.	522,580	451,580	71,000	13.6	470,440	295,680	174,760	37.1
1991-1995	.	.	.	.	.	.	.	.	461,480	277,120	184,360	39.9
1996-2000	.	.	.	.	.	.	.	.	500,740	378,060	122,680	24.5
Total	5,271,880	4,766,840	505,040	9.6	5,106,340	4,179,580	926,760	18.1	4,683,800	3,384,340	1,299,460	27.7

(b) by age bracket and university education

Age Bracket	2001				2011				2021			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
20-24	721,540	680,660	40,880	5.7	522,580	451,580	71,000	13.6	500,740	378,060	122,680	24.5
25-29	689,780	577,040	112,740	16.3	582,600	408,780	173,820	29.8	461,480	277,120	184,360	39.9
30-34	671,620	586,140	85,480	12.7	673,780	481,600	192,180	28.5	470,440	295,680	174,760	37.1
35-39	700,080	626,480	73,600	10.5	686,640	530,420	156,220	22.8	552,100	359,720	192,380	34.8
40-44	673,920	611,340	62,580	9.3	662,120	555,960	106,160	16.0	649,940	438,940	211,000	32.5
45-49	643,200	587,280	55,920	8.7	683,680	596,040	87,640	12.8	694,540	507,140	187,400	27.0
50-54	616,740	574,100	42,640	6.9	661,040	587,640	73,400	11.1	667,240	541,240	126,000	18.9
55-59	555,000	523,800	31,200	5.6	633,900	567,560	66,340	10.5	687,320	586,440	100,880	14.7
Total	5,271,880	4,766,840	505,040	9.6	5,106,340	4,179,580	926,760	18.1	4,683,800	3,384,340	1,299,460	27.7

Note: Own elaborations on IPUMS-I and INE data.

Table 5: Stock of Portuguese emigrants aged 20-59 in **France**

(a) by birth cohort and university education

	2006				2011			
Birth Cohort	All	No University	University	% University	All	No University	University	% University
1946-1950	73,454	70,533	2,920	4.0	.	.	.	.
1951-1955	71,575	68,421	3,153	4.4	69,814	66,375	3,439	4.9
1956-1960	71,698	67,653	4,045	5.6	72,823	68,670	4,153	5.7
1961-1965	84,878	79,223	5,656	6.7	87,263	81,211	6,052	6.9
1966-1970	69,263	63,044	6,219	9.0	75,467	67,853	7,614	10.1
1971-1975	34,878	30,858	4,020	11.5	39,894	35,125	4,769	12.0
1976-1980	19,734	17,148	2,586	13.1	26,463	23,077	3,386	12.8
1981-1985	13,493	11,819	1,674	12.4	22,710	19,268	3,441	15.2
1986-1990	.	.	.	.	16,204	14,104	2,100	13.0
Total	438,972	408,699	30,273	6.9	410,637	375,683	34,953	8.5

(b) by age bracket and university education

	2006				2011			
Age Bracket	All	No University	University	% University	All	No University	University	% University
20-24	13,493	11,819	1,674	12.4	16,204	14,104	2,100	13.0
25-29	19,734	17,148	2,586	13.1	22,710	19,268	3,441	15.2
30-34	34,878	30,858	4,020	11.5	26,463	23,077	3,386	12.8
35-39	69,263	63,044	6,219	9.0	39,894	35,125	4,769	12.0
40-44	84,878	79,223	5,656	6.7	75,467	67,853	7,614	10.1
45-49	71,698	67,653	4,045	5.6	87,263	81,211	6,052	6.9
50-54	71,575	68,421	3,153	4.4	72,823	68,670	4,153	5.7
55-59	73,454	70,533	2,920	4.0	69,814	66,375	3,439	4.9
Total	438,972	408,699	30,273	6.9	410,637	375,683	34,953	8.5

Note: Own elaborations on IPUMS-I data.

Table 6: Stock of Portuguese emigrants aged 20-59 in the **United States**

(a) by birth cohort and university education

	2000				2010				2020			
Birth Cohort	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
1940-1944	17,072	16,297	775	4.5	.	.	.	.	.	.	.	.
1945-1949	20,872	19,807	1,065	5.1	.	.	.	.	.	.	.	.
1950-1954	23,944	22,213	1,731	7.2	23,348	22,292	1,056	4.5	.	.	.	.
1955-1959	26,055	23,734	2,321	8.9	26,594	25,000	1,594	6.0	.	.	.	.
1960-1964	25,979	23,192	2,787	10.7	25,878	23,148	2,730	10.5	26,315	23,301	3,014	11.5
1965-1969	19,704	16,667	3,037	15.4	18,876	16,555	2,321	12.3	20,688	17,471	3,217	15.6
1970-1974	12,534	10,288	2,246	17.9	13,872	10,487	3,385	24.4	15,427	12,361	3,066	19.9
1975-1979	8,149	7,217	932	11.4	9,850	7,173	2,677	27.2	11,470	8,282	3,188	27.8
1980-1984	.	.	.	.	5,237	3,166	2,071	39.5	7,510	4,954	2,556	34.0
1985-1989	.	.	.	.	2,696	2,288	408	15.1	5,568	3,383	2,185	39.2
1990-1994	.	.	.	.	.	.	.	.	3,480	2,356	1,124	32.3
1995-1999	.	.	.	.	.	.	.	.	2,184	1,841	343	15.7
Total	154,309	139,415	14,894	9.7	126,351	110,109	16,242	12.9	92,642	73,949	18,693	20.2

(b) by age bracket and university education

	2000				2010				2020			
Age Bracket	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
20-24	8,149	7,217	932	11.4	2,696	2,288	408	15.1	2,184	1,841	343	15.7
25-29	12,534	10,288	2,246	17.9	5,237	3,166	2,071	39.5	3,480	2,356	1,124	32.3
30-34	19,704	16,667	3,037	15.4	9,850	7,173	2,677	27.2	5,568	3,383	2,185	39.2
35-39	25,979	23,192	2,787	10.7	13,872	10,487	3,385	24.4	7,510	4,954	2,556	34.0
40-44	26,055	23,734	2,321	8.9	18,876	16,555	2,321	12.3	11,470	8,282	3,188	27.8
45-49	23,944	22,213	1,731	7.2	25,878	23,148	2,730	10.5	15,427	12,361	3,066	19.9
50-54	20,872	19,807	1,065	5.1	26,594	25,000	1,594	6.0	20,688	17,471	3,217	15.6
55-59	17,072	16,297	775	4.5	23,348	22,292	1,056	4.5	26,315	23,301	3,014	11.5
Total	154,309	139,415	14,894	9.7	126,351	110,109	16,242	12.9	92,642	73,949	18,693	20.2

Note: Own elaborations on IPUMS-I data.

Table 7: Stock of Portuguese emigrants aged 20-59 in **Brazil**

(a) by birth cohort and university education

Birth Cohort	2000				2010			
	All	No University	University	% University	All	No University	University	% University
1941-1945	23,453	21,540	1,913	8.2	.	.	.	.
1946-1950	25,183	20,662	4,521	18.0	.	.	.	.
1951-1955	19,016	14,298	4,719	24.8	14,765	11,001	3,763	25.5
1956-1960	8,644	6,474	2,170	25.1	7,098	4,863	2,234	31.5
1961-1965	3,964	3,022	942	23.8	3,372	2,139	1,233	36.6
1966-1970	2,138	1,468	670	31.3	2,470	1,270	1,200	48.6
1971-1975	1,663	1,304	359	21.6	2,045	1,069	976	47.7
1976-1980	1,042	910	132	12.6	1,198	735	462	38.6
1981-1985	.	.	.	.	947	587	360	38.0
1986-1990	.	.	.	.	522	388	134	25.7
Total	85,102	69,678	15,424	18.1	32,416	22,052	10,364	32.0

(b) by age bracket and university education

Age Bracket	2000				2010			
	All	No University	University	% University	All	No University	University	% University
20-24	1,042	910	132	12.6	522	388	134	25.7
25-29	1,663	1,304	359	21.6	947	587	360	38.0
30-34	2,138	1,468	670	31.3	1,198	735	462	38.6
35-39	3,964	3,022	942	23.8	2,045	1,069	976	47.7
40-44	8,644	6,474	2,170	25.1	2,470	1,270	1,200	48.6
45-49	19,016	14,298	4,719	24.8	3,372	2,139	1,233	36.6
50-54	25,183	20,662	4,521	18.0	7,098	4,863	2,234	31.5
55-59	23,453	21,540	1,913	8.2	14,765	11,001	3,763	25.5
Total	85,102	69,678	15,424	18.1	32,416	22,052	10,364	32.0

Note: Own elaborations on IPUMS-I data.

Table 8: Stock of Portuguese emigrants aged 20-59 in **Canada**

(a) by birth cohort and university education

Birth Cohort	2001				2011			
	All	No University	University	% University	All	No University	University	% University
1941-1945	14,466	14,356	111	0.8	.	.	.	.
1946-1950	16,686	16,169	517	3.1	.	.	.	.
1951-1955	16,912	15,805	1,107	6.5	17,907	16,682	1,225	6.8
1956-1960	19,774	18,184	1,590	8.0	19,636	18,206	1,430	7.3
1961-1965	18,960	17,444	1,515	8.0	19,313	17,480	1,833	9.5
1966-1970	13,081	11,861	1,219	9.3	14,249	12,551	1,698	11.9
1971-1975	6,678	5,899	779	11.7	7,009	6,163	846	12.1
1976-1980	4,562	4,153	408	8.9	4,966	4,448	518	10.4
1981-1985	.	.	.	.	4,190	3,394	796	19.0
1986-1990	.	.	.	.	2,022	1,862	160	7.9
Total	111,118	103,871	7,247	6.5	89,292	80,785	8,506	9.5

(b) by age bracket and university education

Age Bracket	2001				2011			
	All	No University	University	% University	All	No University	University	% University
20-24	4,562	4,153	408	8.9	2,022	1,862	160	7.9
25-29	6,678	5,899	779	11.7	4,190	3,394	796	19.0
30-34	13,081	11,861	1,219	9.3	4,966	4,448	518	10.4
35-39	18,960	17,444	1,515	8.0	7,009	6,163	846	12.1
40-44	19,774	18,184	1,590	8.0	14,249	12,551	1,698	11.9
45-49	16,912	15,805	1,107	6.5	19,313	17,480	1,833	9.5
50-54	16,686	16,169	517	3.1	19,636	18,206	1,430	7.3
55-59	14,466	14,356	111	0.8	17,907	16,682	1,225	6.8
Total	111,118	103,871	7,247	6.5	89,292	80,785	8,506	9.5

Note: Own elaborations on IPUMS-I data.

Table 9: Stock of Portuguese emigrants aged 20-59 in the **United Kingdom**

(a) by birth cohort and university education

Birth Cohort	2001				2011				2021			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
1946-1950	2,016	1,756	260	12.9	.	.	.	.	.	.	.	.
1951-1955	2,092	1,837	255	12.2	3,291	2,884	407	12.4	.	.	.	.
1956-1960	2,795	2,364	431	15.4	4,861	4,273	588	12.1	.	.	.	.
1961-1965	3,952	3,285	667	16.9	6,781	5,885	896	13.2	.	.	.	.
1966-1970	5,194	4,176	1,018	19.6	8,636	7,346	1,290	14.9	10,748	8,607	2,141	19.9
1971-1975	4,831	3,524	1,307	27.1	10,193	7,967	2,226	21.8	12,798	9,113	3,685	28.8
1976-1980	4,082	3,129	953	23.3	11,979	8,612	3,367	28.1	15,863	9,898	5,965	37.6
1981-1985	.	.	.	.	10,642	7,425	3,217	30.2	17,159	9,418	7,741	45.1
1986-1990	.	.	.	.	7,391	5,851	1,540	20.8	18,317	8,364	9,953	54.3
1991-1995	.	.	.	.	.	.	.	.	16,939	8,090	8,849	52.2
1996-2000	.	.	.	.	.	.	.	.	15,380	9,664	5,716	37.2
Total	24,962	20,071	4,891	19.6	63,774	50,243	13,531	21.2	107,204	63,154	44,050	41.1

(b) by age bracket and university education

Age Bracket	2001				2011				2021			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
20-24	4,082	3,129	953	23.3	7,391	5,851	1,540	20.8	15,380	9,664	5,716	37.2
25-29	4,831	3,524	1,307	27.1	10,642	7,425	3,217	30.2	16,939	8,090	8,849	52.2
30-34	5,194	4,176	1,018	19.6	11,979	8,612	3,367	28.1	18,317	8,364	9,953	54.3
35-39	3,952	3,285	667	16.9	10,193	7,967	2,226	21.8	17,159	9,418	7,741	45.1
40-44	2,795	2,364	431	15.4	8,636	7,346	1,290	14.9	15,863	9,898	5,965	37.6
45-49	2,092	1,837	255	12.2	6,781	5,885	896	13.2	12,798	9,113	3,685	28.8
50-54	2,016	1,756	260	12.9	4,861	4,273	588	12.1	10,748	8,607	2,141	19.9
55-59	.	.	.	.	3,291	2,884	407	12.4	.	.	.	.
Total	24,962	20,071	4,891	19.6	63,774	50,243	13,531	21.2	107,204	63,154	44,050	41.1

Note: Own elaborations on ONS data.

Table 10: Stock of Portuguese emigrants aged 20-59 in **Switzerland**

(a) by birth cohort and university education

Birth Cohort	2000				2010				2020			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
1941-1945	1,397	1,316	81	5.8	.	.	.	.	.	.	.	.
1946-1950	3,632	3,524	108	3.0	.	.	.	.	.	.	.	.
1951-1955	8,253	8,066	187	2.3	7,418	7,418	.	.	.	.	.	.
1956-1960	14,911	14,623	288	1.9	17,381	17,031	349	2.0	.	.	.	.
1961-1965	19,464	19,113	351	1.8	24,753	24,245	508	2.1	24,086	22,805	1,281	5.3
1966-1970	17,146	16,850	296	1.7	23,453	22,778	676	2.9	26,661	25,102	1,559	5.8
1971-1975	11,556	11,272	284	2.5	19,589	18,665	924	4.7	23,907	22,011	1,896	7.9
1976-1980	9,852	9,649	203	2.1	21,586	20,125	1,461	6.8	25,575	22,044	3,530	13.8
1981-1985	.	.	.	.	19,005	17,618	1,387	7.3	26,400	21,653	4,746	18.0
1986-1990	.	.	.	.	11,451	10,901	550	4.8	21,417	16,093	5,324	24.9
1991-1995	.	.	.	.	.	.	.	.	13,028	10,752	2,276	17.5
1996-2000	.	.	.	.	.	.	.	.	10,899	10,187	713	6.5
Total	86,211	84,413	1,798	2.1	144,636	138,782	5,855	4.0	171,973	150,648	21,325	12.4

(b) by age bracket and university education

Age Bracket	2000				2010				2020			
	All	No University	University	% University	All	No University	University	% University	All	No University	University	% University
20-24	9,852	9,649	203	2.1	11,451	10,901	550	4.8	10,899	10,187	713	6.5
25-29	11,556	11,272	284	2.5	19,005	17,618	1,387	7.3	13,028	10,752	2,276	17.5
30-34	17,146	16,850	296	1.7	21,586	20,125	1,461	6.8	21,417	16,093	5,324	24.9
35-39	19,464	19,113	351	1.8	19,589	18,665	924	4.7	26,400	21,653	4,746	18.0
40-44	14,911	14,623	288	1.9	23,453	22,778	676	2.9	25,575	22,044	3,530	13.8
45-49	8,253	8,066	187	2.3	24,753	24,245	508	2.1	23,907	22,011	1,896	7.9
50-54	3,632	3,524	108	3.0	17,381	17,031	349	2.0	26,661	25,102	1,559	5.8
55-59	1,397	1,316	81	5.8	7,418	7,418	.	.	24,086	22,805	1,281	5.3
Total	86,211	84,413	1,798	2.1	144,636	138,782	5,855	4.0	171,973	150,648	21,325	12.4

Note: Own elaborations on FSO data. For 2010, the number of university graduates aged 55-59 (born in 1951-1955) is scrambled due to low number of observations.

Table 11: Stock of Portuguese emigrants aged 20-59 in **Spain**

(a) by birth cohort and university education

	2001				2011			
Birth Cohort	All	No University	University	% University	All	No University	University	% University
1942-1946	2,840	2,700	140	4.9	.	.	.	.
1947-1951	4,800	4,620	180	3.8	.	.	.	.
1952-1956	5,800	5,580	220	3.8	8,343	7,951	391	4.7
1957-1961	7,660	7,460	200	2.6	9,624	9,296	328	3.4
1962-1966	6,960	6,620	340	4.9	11,986	11,058	928	7.7
1967-1971	5,720	5,420	300	5.2	9,372	8,589	784	8.4
1972-1976	4,280	4,040	240	5.6	10,400	9,220	1,181	11.4
1977-1981	3,500	3,360	140	4.0	9,734	7,748	1,986	20.4
1982-1986	.	.	.	.	7,590	5,920	1,669	22.0
1987-1991	.	.	.	.	4,718	4,444	273	5.8
Total	41,560	39,800	1,760	4.2	71,767	64,226	7,540	10.5

(b) by age bracket and university education

	2001				2011			
Age Bracket	All	No University	University	% University	All	No University	University	% University
20-24	3,500	3,360	140	4.0	4,718	4,444	273	5.8
25-29	4,280	4,040	240	5.6	7,590	5,920	1,669	22.0
30-34	5,720	5,420	300	5.2	9,734	7,748	1,986	20.4
35-39	6,960	6,620	340	4.9	10,400	9,220	1,181	11.4
40-44	7,660	7,460	200	2.6	9,372	8,589	784	8.4
45-49	5,800	5,580	220	3.8	11,986	11,058	928	7.7
50-54	4,800	4,620	180	3.8	9,624	9,296	328	3.4
55-59	2,840	2,700	140	4.9	8,343	7,951	391	4.7
Total	41,560	39,800	1,760	4.2	71,767	64,226	7,540	10.5

Note: Own elaborations on IPUMS-I data.

Table 12: Stock of Portuguese emigrants aged 20-59 in **Germany**

(a) by birth cohort and university education

Birth Cohort	2011			
	All	No University	University	% University
1951-1955	5,650	5,400	250	4.4
1956-1960	7,540	6,930	610	8.1
1961-1965	12,660	11,570	1,090	8.6
1966-1970	14,810	13,070	1,740	11.7
1971-1975	13,160	11,460	1,700	12.9
1976-1980	10,630	8,590	2,040	19.2
1981-1985	8,540	6,820	1,720	20.1
1986-1990	8,590	7,840	750	8.7
Total	81,580	71,680	9,900	12.1

(b) by age bracket and university education

Age Bracket	2011			
	All	No University	University	% University
20-24	8,590	7,840	750	8.7
25-29	8,540	6,820	1,720	20.1
30-34	10,630	8,590	2,040	19.2
35-39	13,160	11,460	1,700	12.9
40-44	14,810	13,070	1,740	11.7
45-49	12,660	11,570	1,090	8.6
50-54	7,540	6,930	610	8.1
55-59	5,650	5,400	250	4.4
Total	81,580	71,680	9,900	12.1

Note: Own elaborations on Destatis data.

Figures

Figure 1: Stock and Inflows of Portuguese emigrants by destination country and year (2000-2022)

(a) Stocks

(b) Inflows
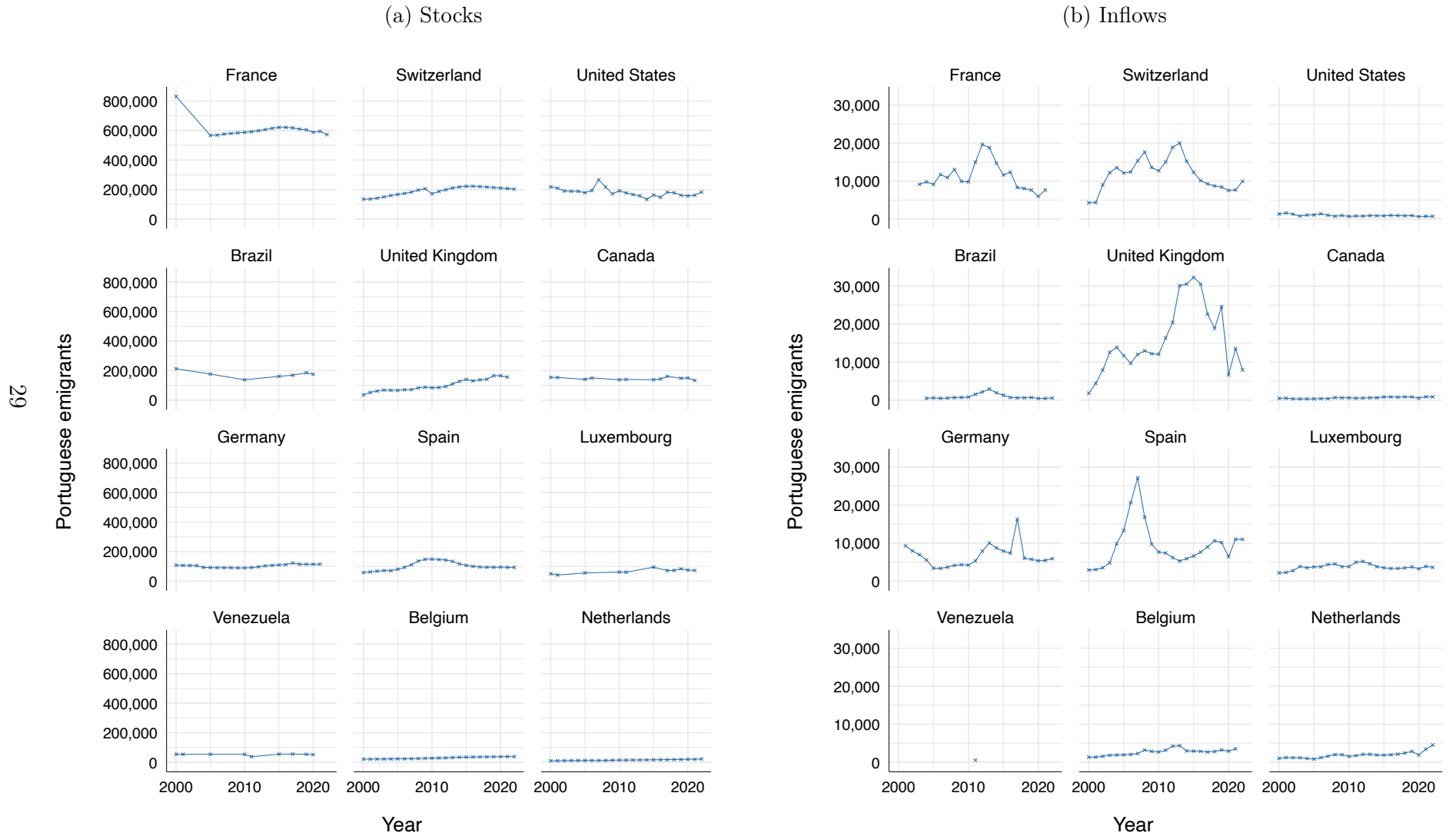
Source: Observatório da Emigração (OdE). For stocks (panel a.): Annual series of *Resident population born in Portugal* (*População residente nascida em Portugal*). Data reported in Table 1. An alternate version of Figure 1a without France and with a rescaled y-axis is provided in Figure B.1 in the Appendix. For inflows (panel b.): Annual series of *Portuguese inflows* (*Entrada de estrangeiros*). Data reported in Table 2.

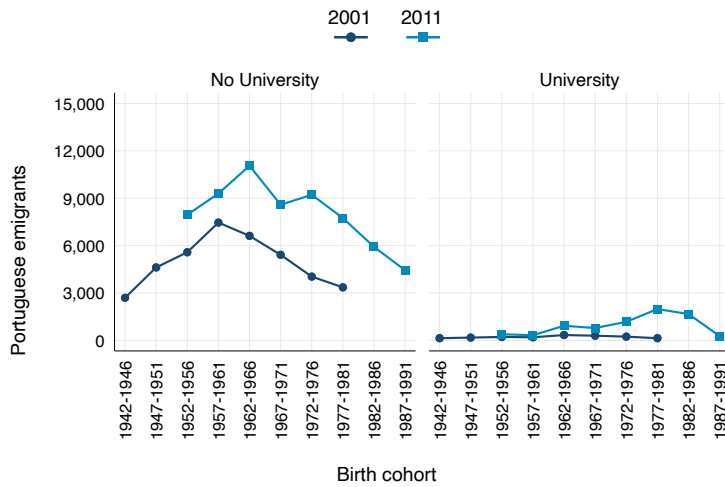Figure 2: Stock of Portuguese residents aged 20-59 in **Portugal**
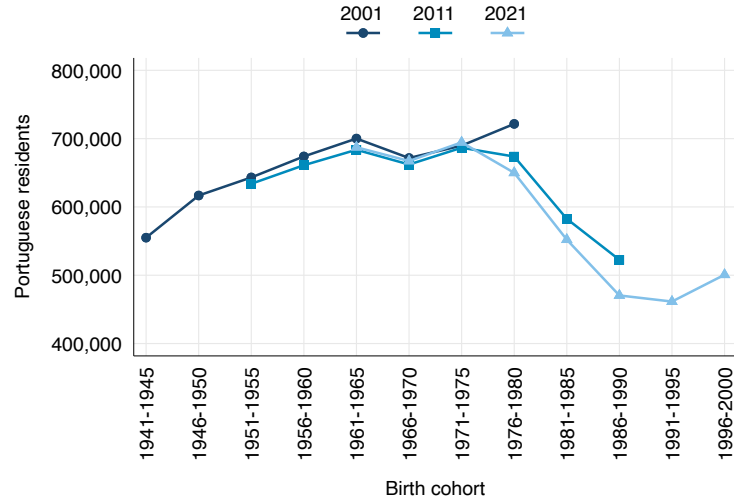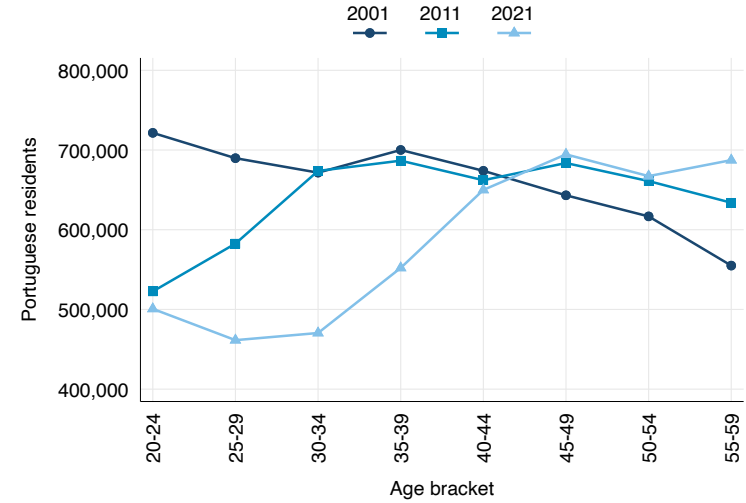
(a) By birth cohort

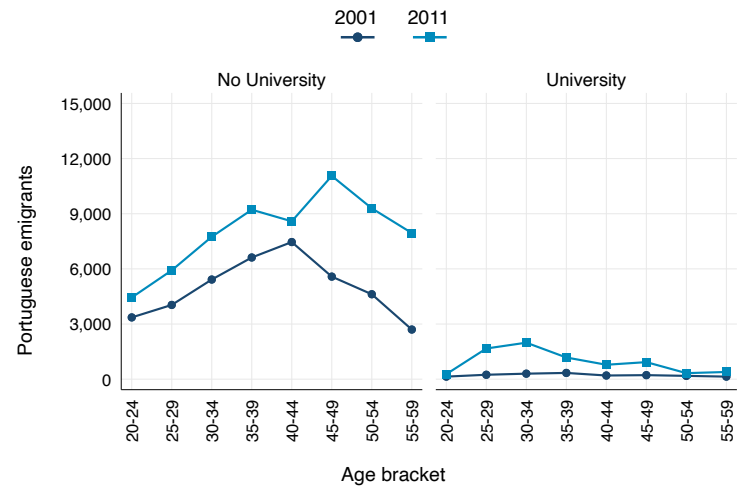
(b) By age bracket

(c) By birth cohort and university education
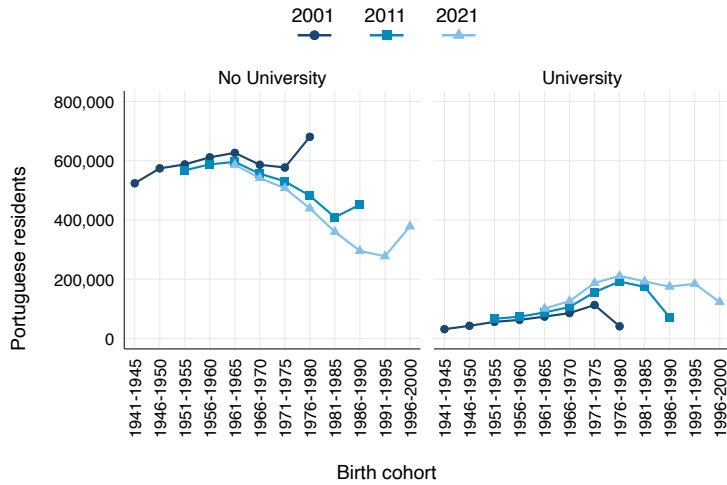
(d) By age bracket and university education
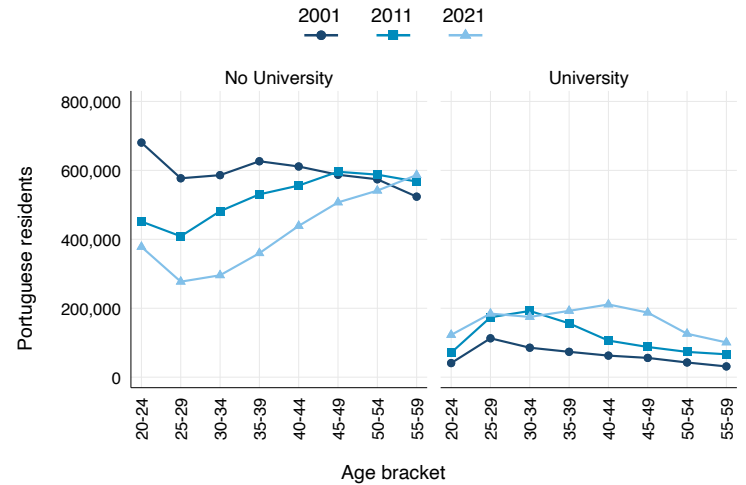
Note: Own elaborations on IPUMS-I and INE data.

Figure 3: Stock of Portuguese emigrants aged 20-59 in **France**
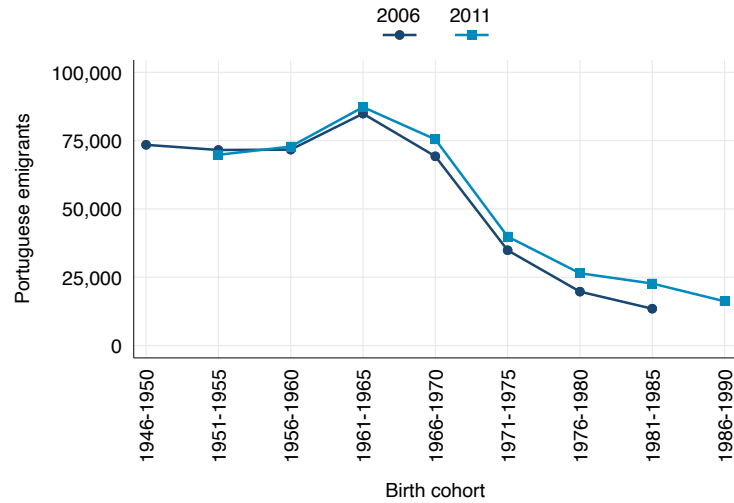
(a) By birth cohort

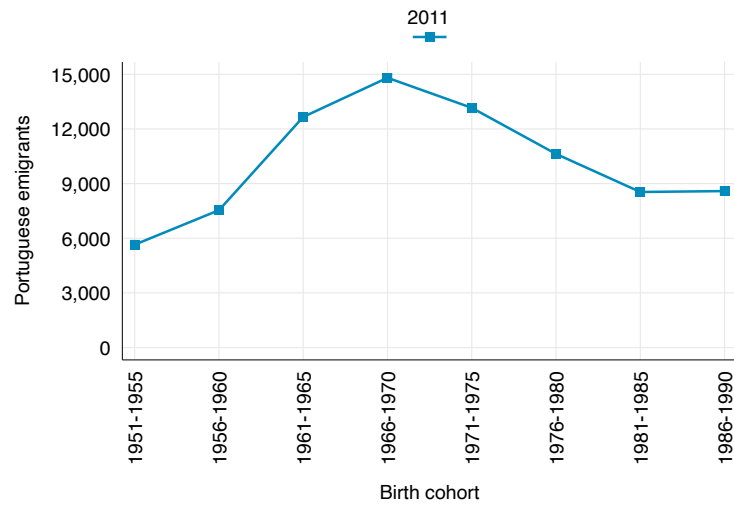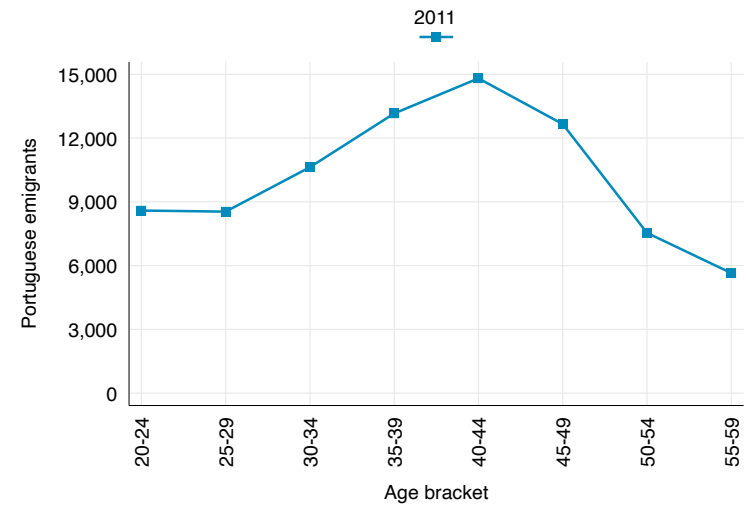(b) By age bracket
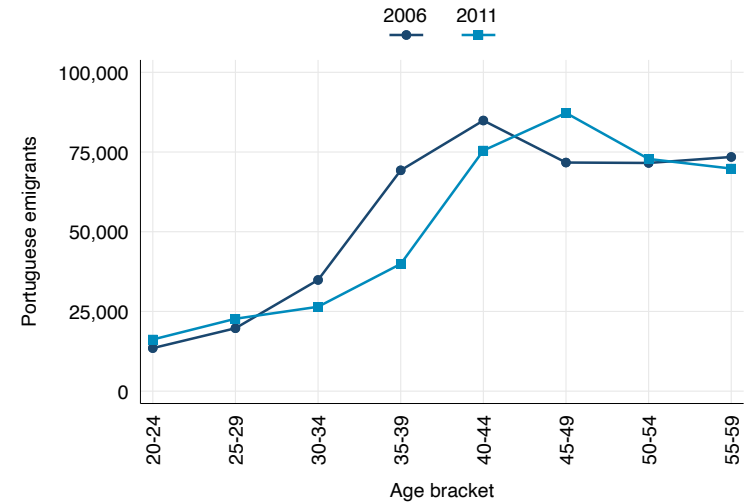
(c) By birth cohort and university education
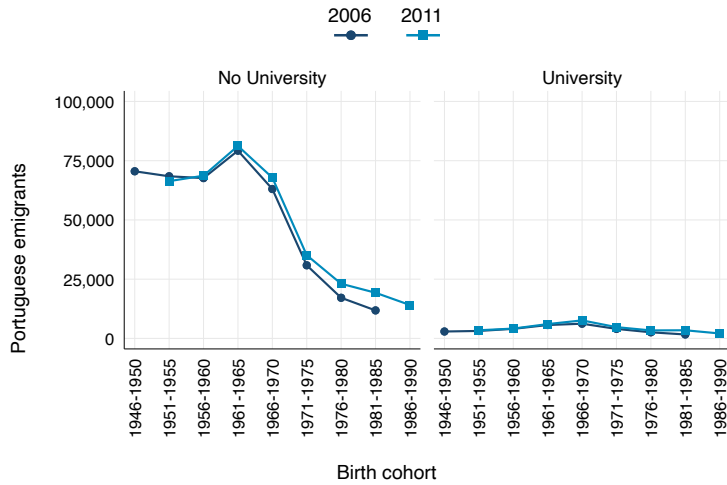
(d) By age bracket and university education
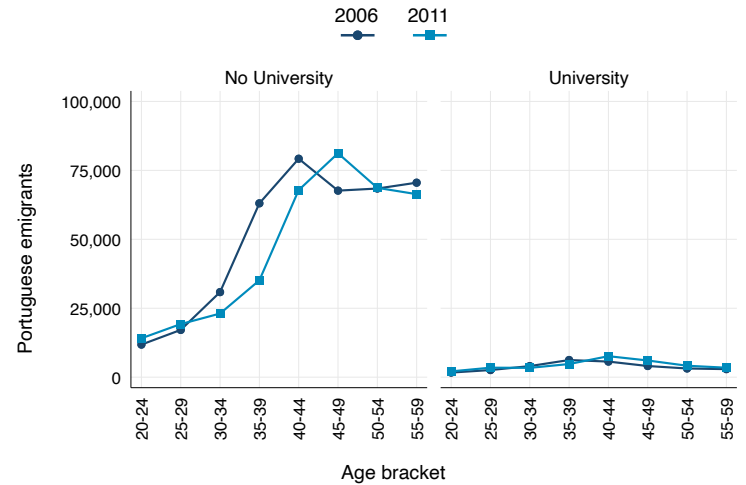
Note: Own elaborations on IPUMS-I data.

Figure 4: Stock of Portuguese emigrants aged 20-59 in the **United States**
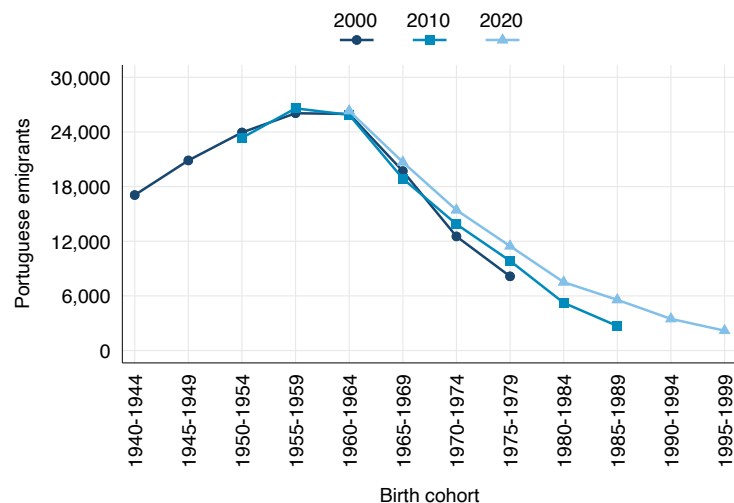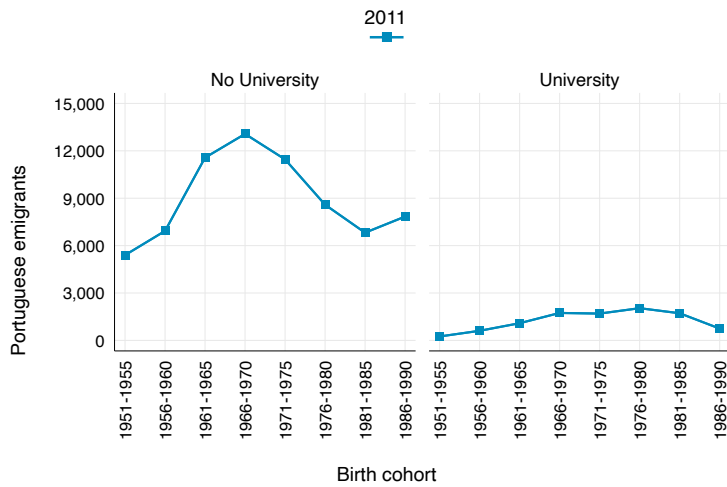
(a) By birth cohort

(b) By age bracket
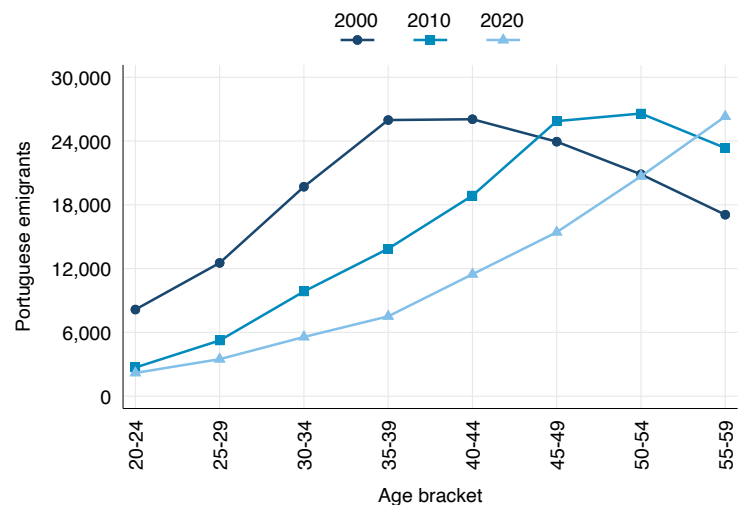
(c) By birth cohort and university education
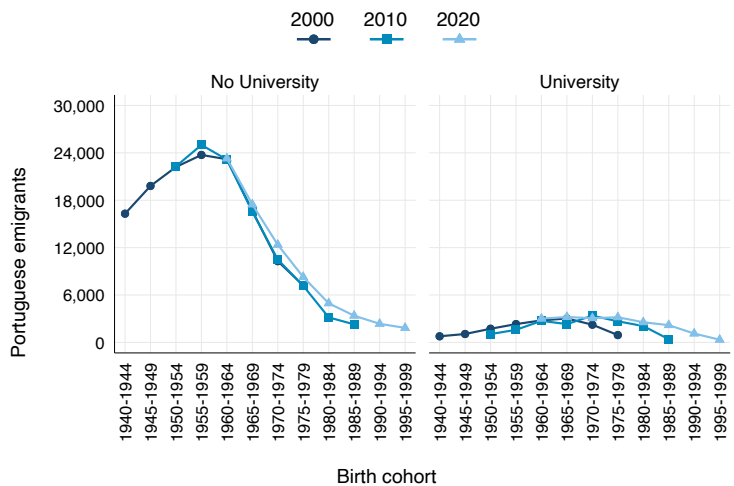
(d) By age bracket and university education
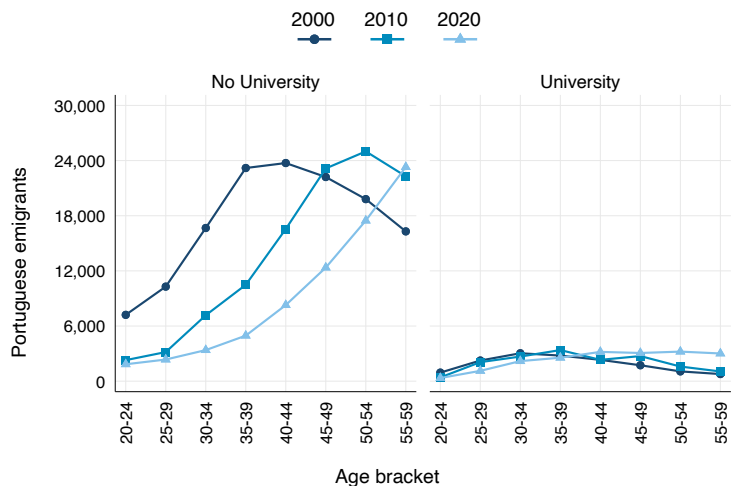
Note: Own elaborations on IPUMS-I data.

Figure 5: Stock of Portuguese emigrants aged 20-59 in **Brazil**
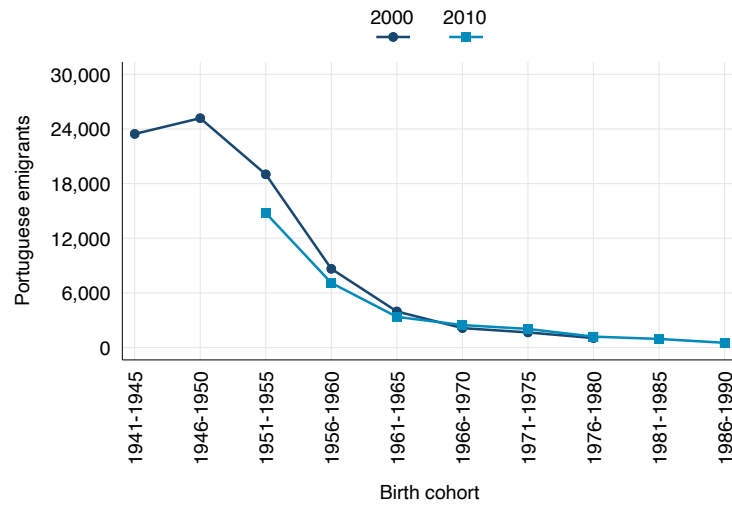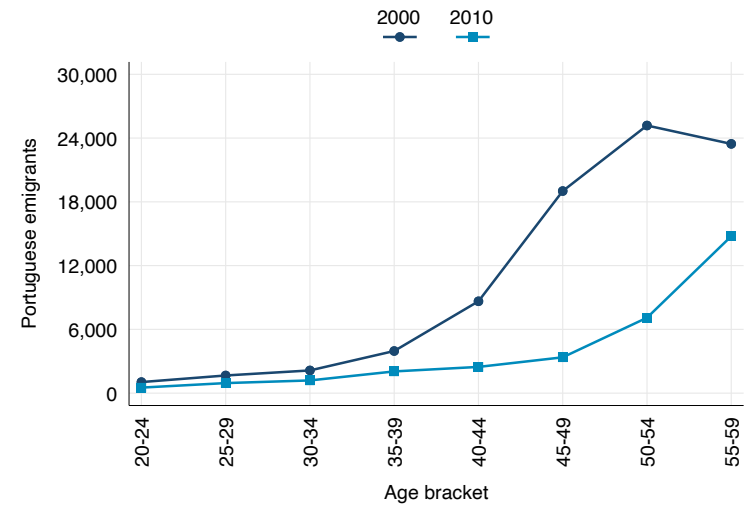
(a) By birth cohort

(b) By age bracket

(c) By birth cohort and university education
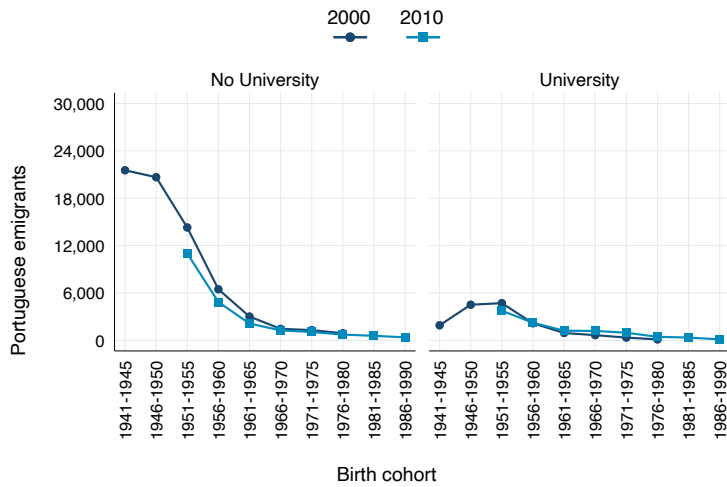
(d) By age bracket and university education
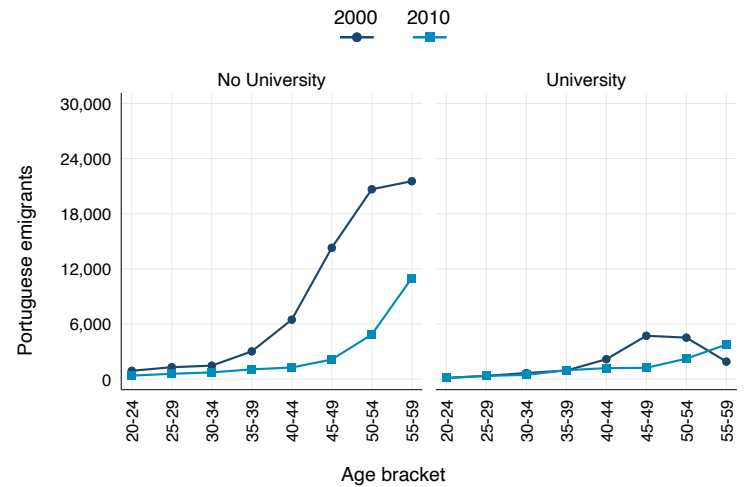
Note: Own elaborations on IPUMS-I data.

Figure 6: Stock of Portuguese emigrants aged 20-59 in **Canada**
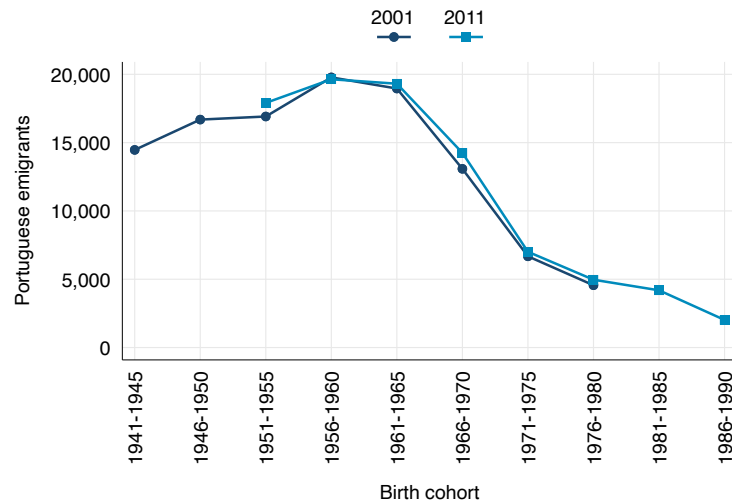
(a) By birth cohort

(b) By age bracket
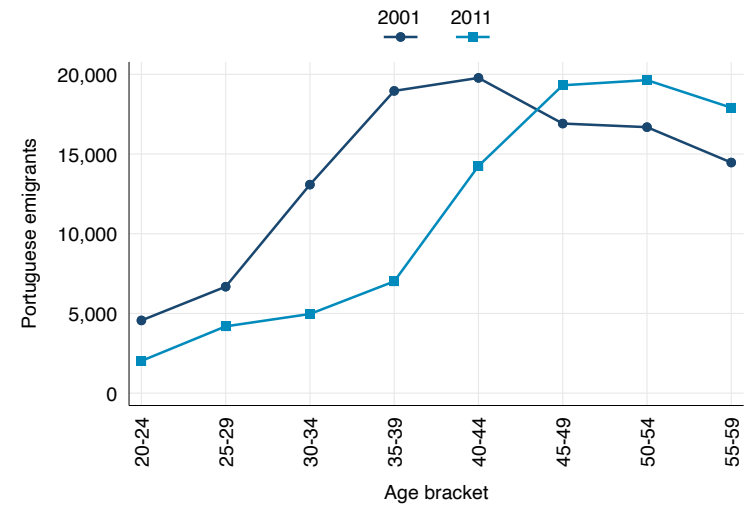
(c) By birth cohort and university education
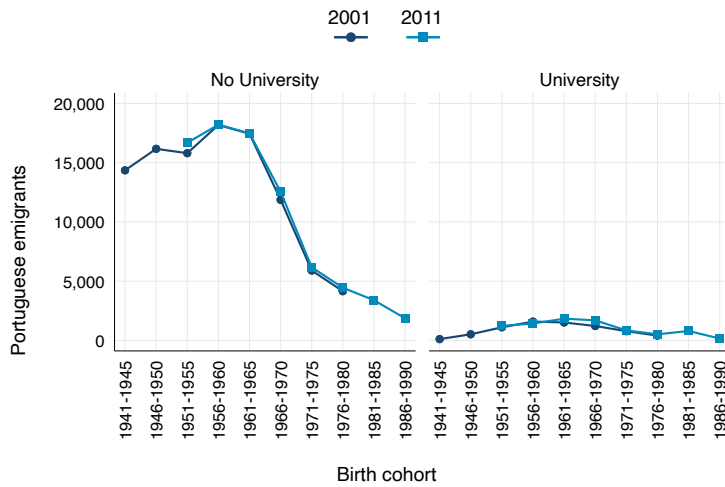
(d) By age bracket and university education
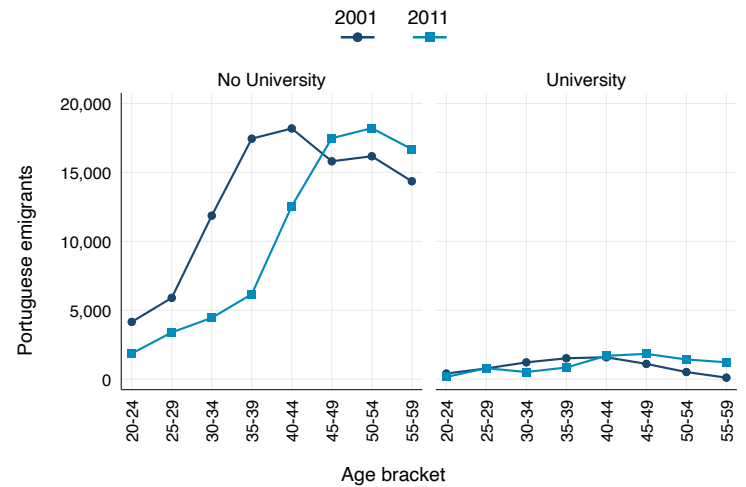
Note: Own elaborations on IPUMS-I data.

Figure 7: Stock of Portuguese emigrants aged 20-59 in the **United Kingdom**
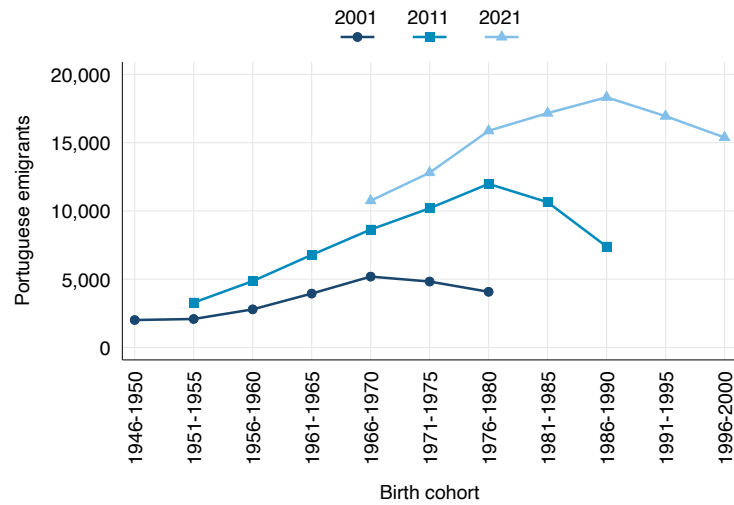
(a) By birth cohort

(b) By age bracket
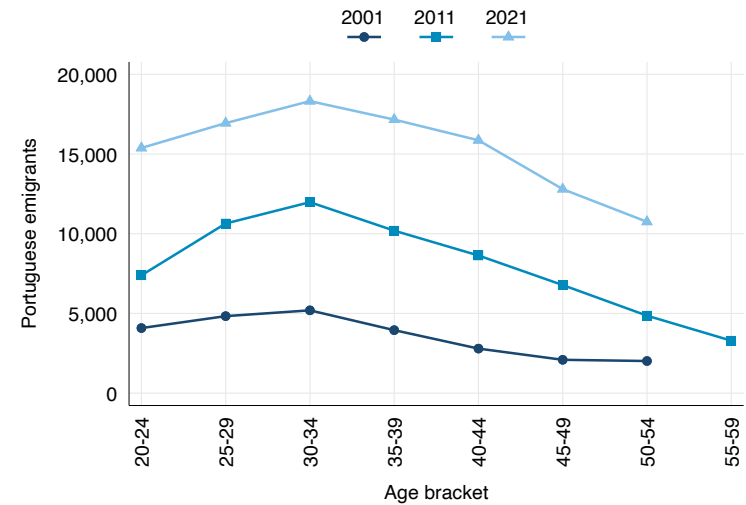
(c) By birth cohort and university education
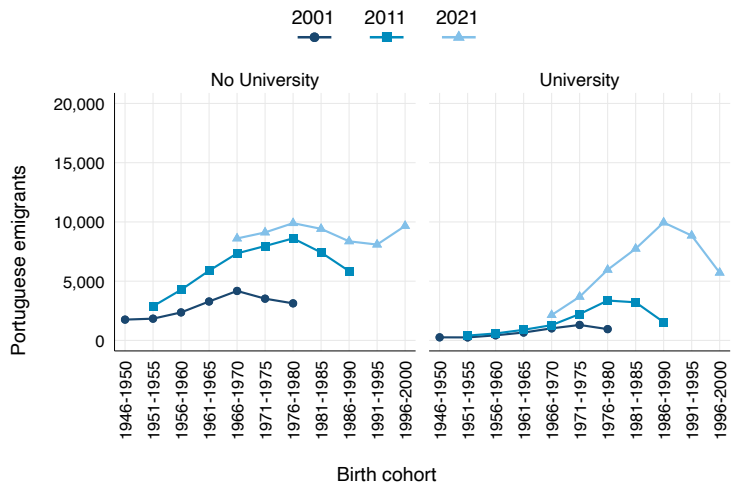
(d) By age bracket and university education
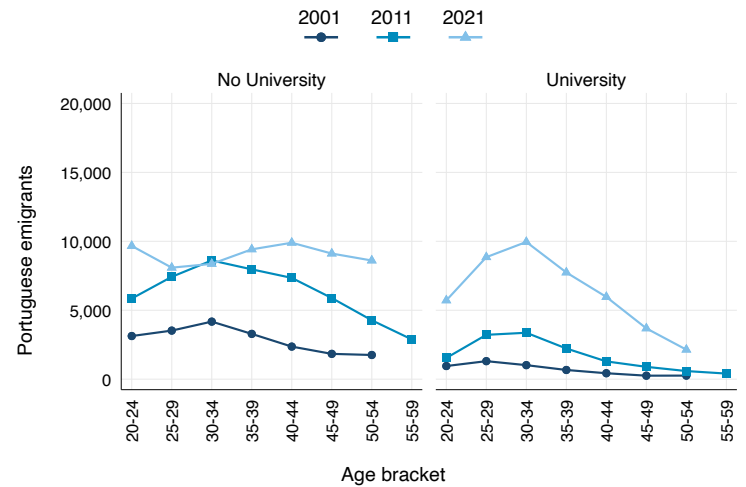
Note: Own elaborations on ONS data.

Figure 8: Stock of Portuguese emigrants aged 20-59 in **Switzerland**
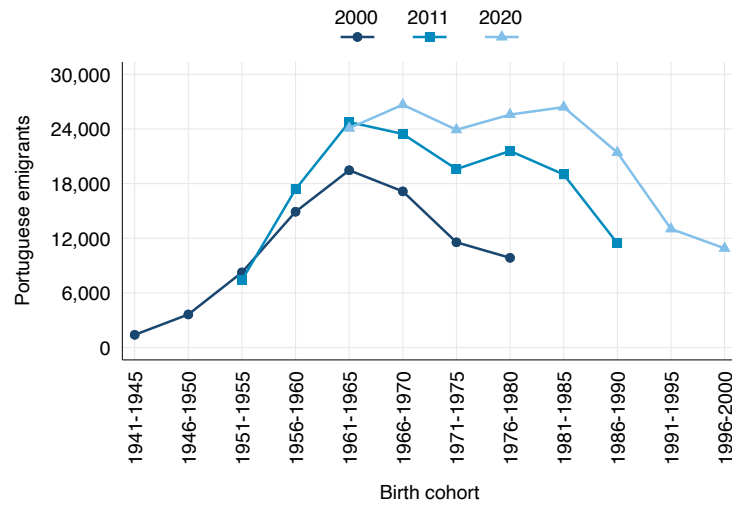
(a) By birth cohort

(b) By age bracket
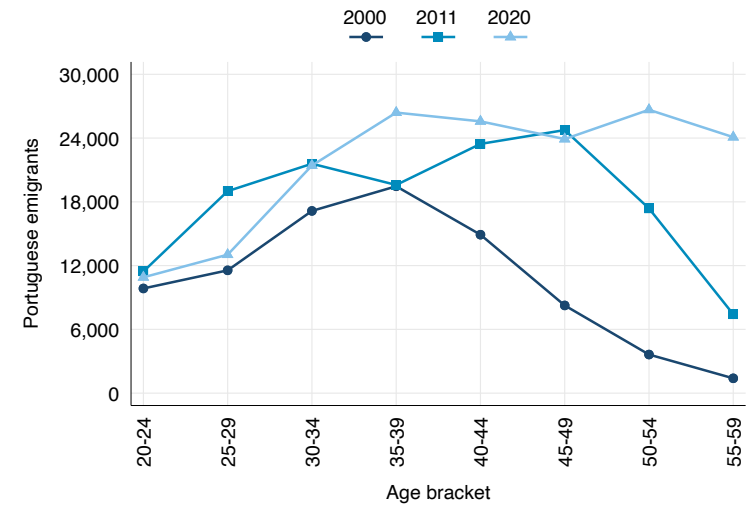
(c) By birth cohort and university education
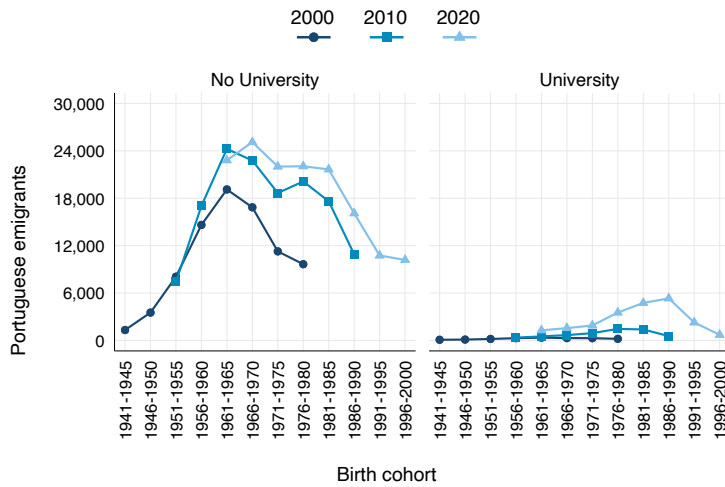
(d) By age bracket and university education
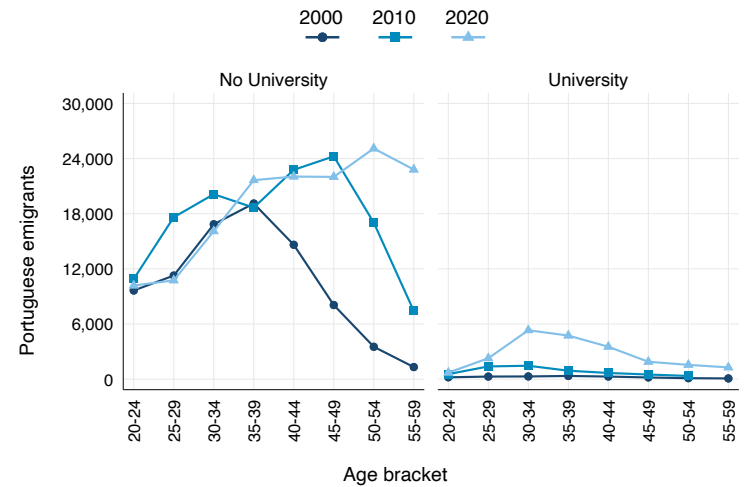
Note: Own elaborations on FSO data.

Figure 9: Stock of Portuguese emigrants aged 20-59 in **Spain**
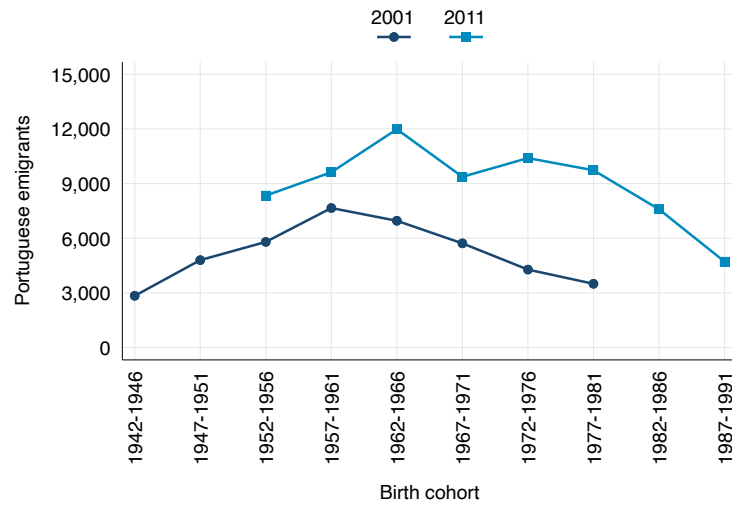
(a) By birth cohort

(b) By age bracket
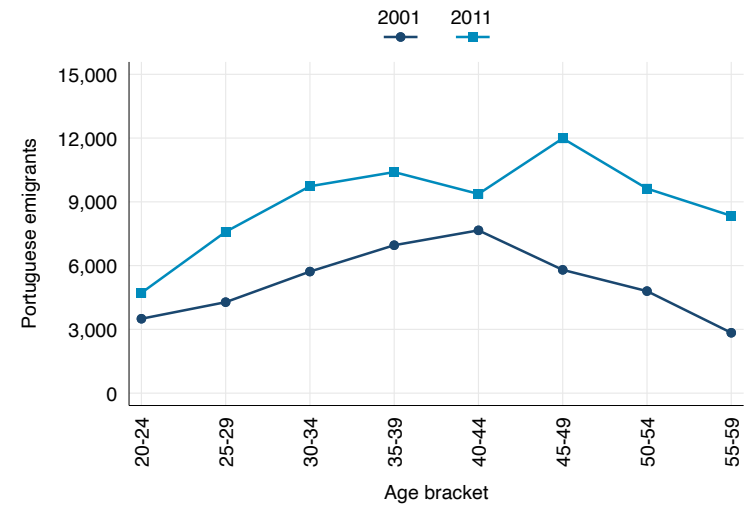
(c) By birth cohort and university education

(d) By age bracket and university education

Note: Own elaborations on IPUMS-I data.

Figure 10: Stock of Portuguese emigrants aged 20-59 in **Germany**

(a) By birth cohort

(b) By age bracket

(c) By birth cohort and university education

(d) By age bracket and university education
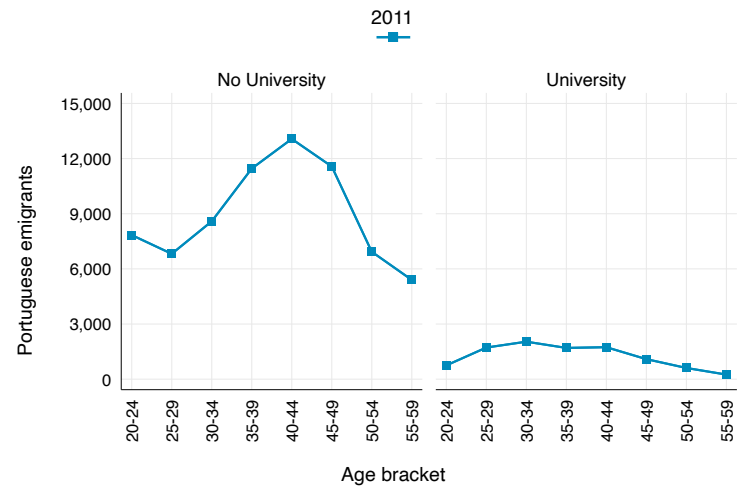
Note: Own elaborations on Destatis data.

Figure 11: Percentage of Portuguese university graduates across countries over recent decades

(a) Aged 20-59

(b) Aged 20-29

(c) Aged 30-44

(d) Aged 45-59
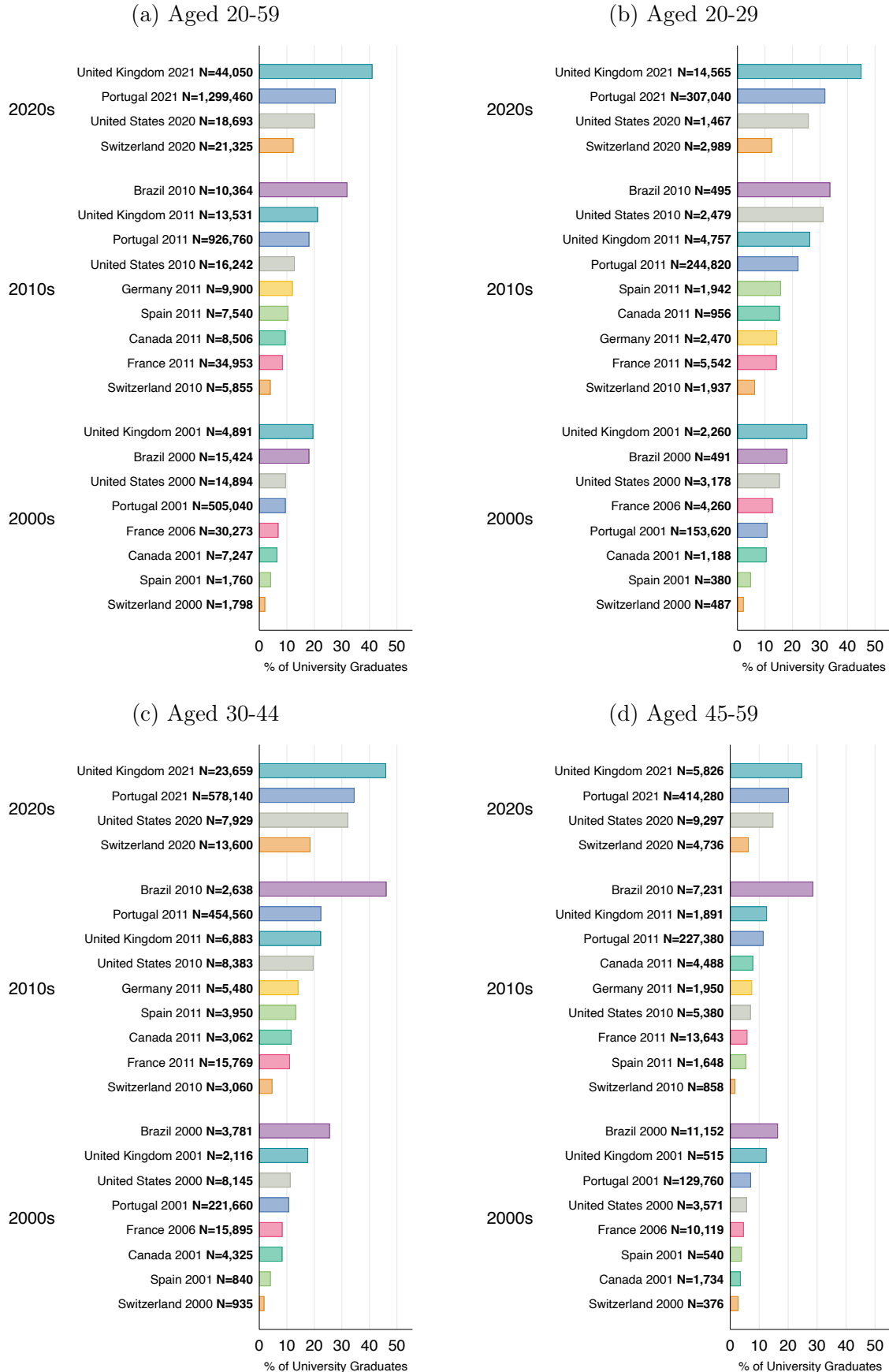
Note: Own elaborations on our integrated dataset (see Section 3.1). N is the number of university graduates.

Figure 12: Decomposition of graduate shares in destination countries, by birth cohort and decade
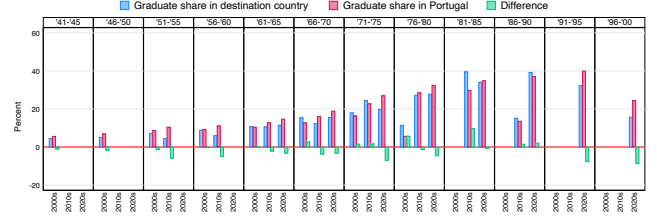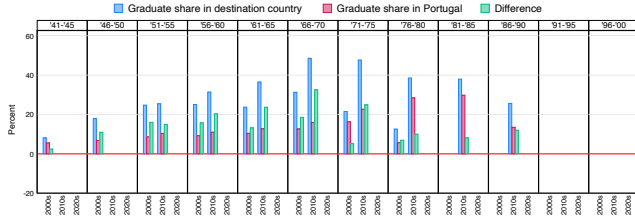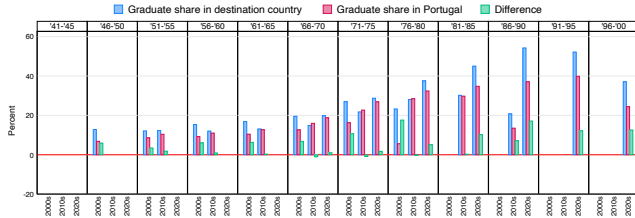
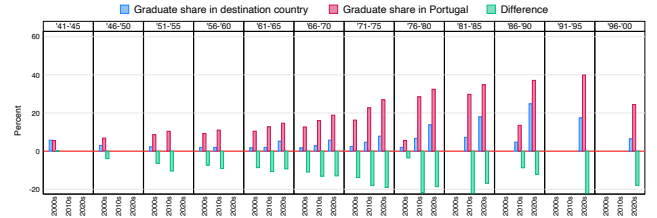(a) France

(b) United States

(c) Brazil
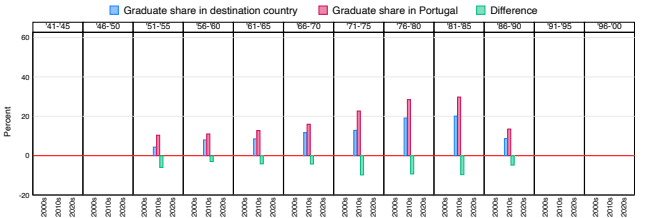

(d) Canada

(e) United Kingdom
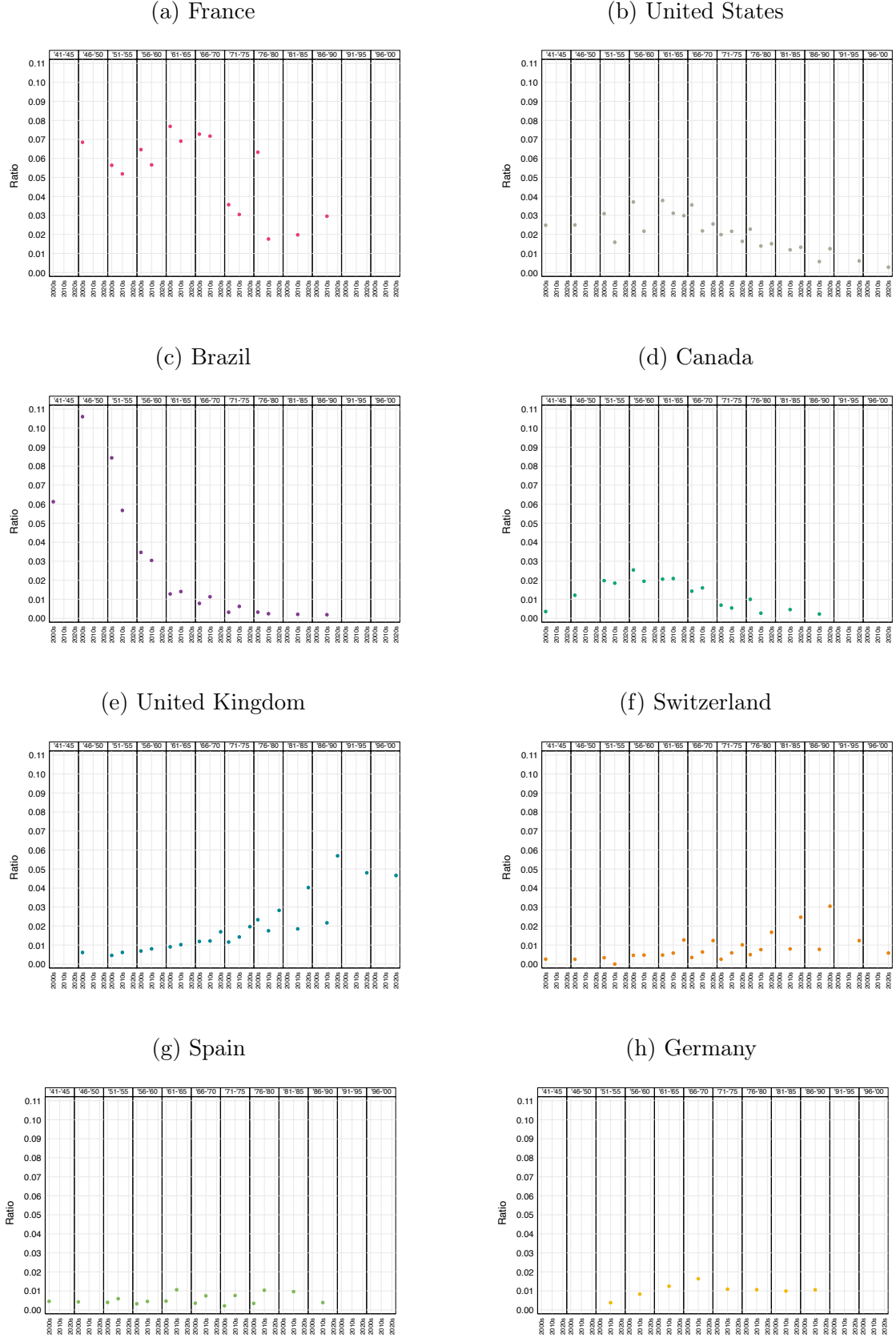

(f) Switzerland

(g) Spain

(h) Germany

Note: Own elaborations on our integrated dataset (see Section 3.1). Birth cohorts for the United States and Spain are harmonized for consistency, as detailed in Section 3.3.

Figure 13: Ratio of emigrant over domestic graduate population, by birth cohort and decade

(a) France

(b) United States

(c) Brazil

(d) Canada

(e) United Kingdom

(f) Switzerland

(g) Spain

(h) Germany

Note: Own elaborations on our integrated dataset (see Section 3.1). Birth cohorts for the United States and Spain are harmonized for consistency, as detailed in Section 3.3.

Appendices

A Observatório da Emigração Metadata

Table A.1: *OdE* metadata for stocks data (translated from Portuguese)

Country	Source	Definition
Belgium	OECD, International Migration Database (2001-2012) and Eurostat, Statistics Database, Population and Social Conditions (since 2013).	Foreign-born population counted in the registered population.
Brazil	Instituto Brasileiro de Geografia e Estatística. Information granted on request.	Foreign-born population registered in the Census.
Canada	Statistics Canada, Place of Birth, Census, 2001, 2006, 2011, 2016, 2021.	Foreign-born population registered in the Census.
France	Institut Nacional de la Statistique et des Études Économiques, répartition des immigrés par pays de naissance.	Foreign-born population listed in the annual census. The Population Census survey is collected by the municipalities and organized by the National Statistics Institute.
Germany	Statistisches Bundesamt Deutschland, Ausländische Bevölkerung.	Population counted in the Microcensus, based on data from the Central Register of Foreigners (Ausländerzentralregister). The figures for those born abroad and in Portugal correspond to those born outside Germany with foreign and Portuguese nationality, respectively (the only data available).

Country	Source	Definition
Luxembourg	Le Portail des Statistiques du Luxembourg, STATEC, Pays de naissance, Recensement de la population (data for Portugal for 2017 and 2018 granted on request).	Foreign-born population registered in the Census.
Netherlands	Centraal Bureau voor de Statistiek, Statline database.	Foreign-born population recorded in the central population register. The figures refer to January 1st of each year.
Spain	INE España, Padrón Municipal de Habitantes: datos nacionales por CCAA y por provincias, población por nacionalidad, pais de nacimiento y sexo.	Foreign-born population recorded in the population register. The figures refer to January 1st of each year.

Country	Source	Definition
Switzerland	Office Fédéral de la Statistique: Population résidante permanente et non permanente selon la région, la nationalité et le lieu de naissance (2005-2009); Population résidante permanente et non permanente selon le canton, le sexe, la nationalité, le pays de naissance et l'âge (2010-2016); Permanent and non-permanent resident population by canton, citizenship (selection), country of birth, sex and age (since 2017).	Foreign-born population recorded through censuses and residence permits. The concept of resident population has been changed by the statistical office to that of permanent population. The figures up to 2009 for those born abroad and in Portugal correspond to individuals who were born outside Switzerland with foreign and Portuguese nationality, respectively (it is not possible to have the naturality variable separated by country, only by category "outside and inside Switzerland"). From 2010 onwards, the figures for those born abroad correspond to individuals born outside Switzerland.
United Kingdom	Office for National Statistics, Annual Population Survey (APS) and Labour Force Survey (LFS), Population by country of birth and nationality.	Estimate of the foreign population, based on the Annual Population Survey (APS) and the Labor Force Survey (LFS).
United States	US Census Bureau, Current Population Survey, Annual Social and Economic (ASEC), March Supplement, Data Ferrett.	Estimates of the foreign-born population based on the Current Population Survey.

Table A.1 – continued from previous page

Country	Source	Definition
Venezuela	Instituto Nacional de Estadística, Censos de Población e Vivienda.	Foreign-born population registered in the Census.

Note: The table reports metadata published by *OdE* for its 2022 report (see Pena Pires et al., 2022) for the indicator *População residente nascida no estrangeiro*. They are available at the following webpage: https://observatorioemigracao.pt/np4/8817.html.

Table A.2: *OdE* metadata for inflows data (translated from Portuguese)

Country	Source	Definition
Belgium	OECD, International Migration Database, data based on Direction Générale Statistique et Information Économique Belge.	This includes foreigners with a residence permit who intend to stay in the country for three months or more.
Brazil	Ministério do Trabalho e Emprego, Coordenação Geral de Imigração (CGIg): permits granted to foreigners by country of origin.	Foreigners with work permits granted to foreigners are recorded by country of origin, by permanent (1 year or more) and temporary categories. Permanent work permits are indexed to minimum periods of one year and temporary work permits to periods of employment (which can be more or less than one year).
Canada	Citizenship and Immigration Canada, Permanent Resident Admissions, Permanent resident admissions by source country.	Foreigners with permanent residence status.
France	Institut National Etudes Démographiques, Institut National de la Statistique et de Études Économiques (2003-2012). Eurostat, Immigration by age group, sex and citizenship (since 2013).	Estimate based on the annual population sample census in France. Since 2004 they have used a new method, which is based on sampling by dwelling: for small geographical areas (less than 10,0000 inhabitants) one in five inhabitants are registered; for large geographical areas a sample of 8% is registered every year.

| Country	Source	Definition
Germany	OECD, International Migration Database (2001-2004) and Statistisches Bundesamt Deutschland, Ausländische Bevölkerung (2000, 2005-2021).	Foreign population registered in the Central Register of Foreigners (Ausländerzentralregister) each year, if they stay for more than 90 days. Foreigners from non-EU countries have a residence permit. The total number of foreign entries includes individuals of foreign nationality who were born in Germany in the reference year.
Luxembourg	Le Portail des statistiques du Luxembourg.	Foreigners who have arrived in the country with a residence permit and intend to stay for at least three months.
Netherlands	Centraal Bureau voor de Statistiek,Immigration by country of birth.	For European citizens entering the Netherlands from another country, with the intention of staying in the country for at least four months during the following six months, registration with the municipality where they reside is required. Foreigners who are not European citizens have a residence permit valid for one year, which can be renewed. All entries are recorded by country of birth.
Spain	INE España: estadística de variaciones residenciales, altas por país de nacionalidad sexo y edad.	Foreigners registered in the Municipal Registers (Padron Municipal de Habitantes) with the intention of staying in the country for at least one year.
Switzerland	Office Fédéral de la Statistique, Immigration de la population résidante permanente étrangère selon la nationalité, le sexe et l'âge.	Foreigners with a permanent residence permit or annual permit. Foreigners with a short-term permit, the L-Permit, are also included if their stay in the country is longer than 12 months. Foreign entries also include changes of nationality. In 2014 the Office Fédéral de la Statistique changed the method of collecting and recording entries into Switzerland.
United Kingdom	OECD, International Migration Database (2000-2001); Department for Work and Pensions, StatExplore (since 2002).	Foreigners aged 16 or over who have entered the country and have been granted a National Insurance Number (NIN) by the Department for Work and Pensions (social security system), which is compulsory for anyone wishing to work.

Table A.2 – continued from previous page

Country	Source	Definition
United States	US Department of Homeland Security, Yearbook of Immigration Statistics, Table 3 - Persons Obtaining Lawful Permanent Resident Status by region and country of birth.	The entries of foreigners correspond to permanent residence permits (including change of status), by country of birth and by fiscal year, from October 1st of the previous year to September 30th of the year indicated.
Venezuela	No metadata made available.	

Note: The table reports metadata published by *OdE* for its 2022 report (see Pena Pires et al., 2022) for the indicator *Entrada de estrangein*
They are available at the following webpage: https://observatorioemigracao.pt/np4/8817.html.

B   Additional Figures

Figure B.1: Stocks of Portuguese emigrants by destination country and year (2000-2022); **France not shown**
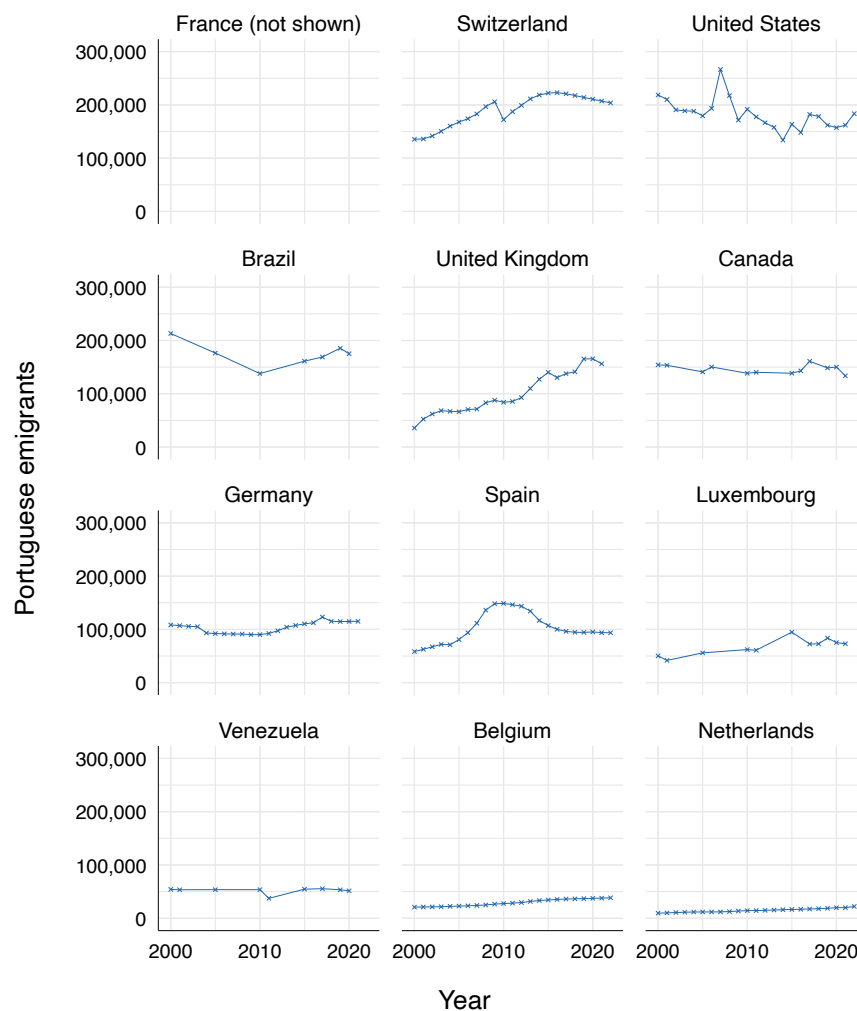
Source: Observatório da Emigração (OdE). Annual series of *Resident population born in Portugal* (*População residente nascida em Portugal*). Figures for France are not shown, while those for other countries are reported on a scale from 0 to 300 thousand. Data reported in Table 1.