



15 June 2023

RESIDENT POPULATION ESTIMATES 2011-2020

## METHODOLOGICAL NOTE ON THE REVISION OF THE PROVISIONAL RESIDENT POPULATION ESTIMATE SERIES 2011-2020

There are two types of annual estimates of resident population in Portugal: postcensal estimates, which incorporate the results of the most recent census, calculated for the year of the census and for subsequent years, and usually revised after a new census is carried out, designated as **Provisional Resident Population Estimates**; and intercensal estimates, which are calculated based on the results of two consecutive censuses for the years between their reference dates, designated as **Definitive Resident Population Estimates**, which review the postcensal series. The intercensal estimates, produced after the results of the last census are known, aim to reconcile the postcensal estimates with the census counts, thus ensuring the internal consistency of the resident population estimation system.

Statistics Portugal publishes Provisional Resident Population Estimates annually to meet the needs of the different users of this statistical information on an annual basis. These estimates are based on the last available census and are, by definition, provisional until the definitive results of the next census are made available. Thus, the series of Provisional Resident Population Estimates 2011-2020 (based on the 2011 Census) was subject to revision, in order to make it compatible with the results of the 2021 Census, in accordance with Statistics Portugal Revisions Policy, in particular the regular general revisions that follow statistical operations of structural nature. That is, on March 31<sup>st</sup>, 2023, the Definitive Resident Population Estimates for the period 2011-2020 (revised intercensal estimates based on the results of the 2021 Census). At the same date, the Provisional Resident Population Estimates for 2021, the first year of the new post-Census 2021 series of provisional estimates, were released. On June 15<sup>th</sup>, in the press release associated with this methodological note, Statistics Portugal publishes the Provisional Resident Population Estimates for 2022.

As is usual practice, the disclosure of this information on the Statistics Portugal website, on March 31<sup>st</sup>, 2023, replaced the data from the Provisional Resident Population Estimates 2011-2020 series, previously available, as well as the resulting demographic indicators.

The **Definitive Resident Population Estimates 2011-2020** are based on the census concept of resident population, adopting the method of demographic components by cohort, and were calculated by sex and age, down to the geographic breakdown level of municipality. Its calculation was based on the natural increase and net migration demographic components, respecting the population balancing equation<sup>1</sup>.

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<sup>1</sup> The population balancing equation decomposes population changes into natural increase and net migration components. Thus, the population in year  $N$  ( $P_N$ ) is given by the population in year ( $P_{N-1}$ ) added by the natural increase observed in year  $N$ , which is given by the difference between live births ( $NV_N$ ) and deaths ( $O_N$ ) observed in year  $N$ , and estimated net migration



Regarding the **natural component**, live births and deaths, the information is based on the so-called vital statistics, which are statistical operations that aim at the direct and exhaustive collection of information regarding these demographic events, that occur in the national territory, using, for statistical purposes, facts that are subject to compulsory civil registration (birth and death records) in the Sistema Integrado do Registo e Identificação Civil (SIRIC). In the period between census, particularly after the completion of the coding process of the causes of death, there were very small occasional revisions in the mortality data, with no relevant impact on the natural balance (difference between live births and deaths) (cf. Table 1).

At first, since there were no significant changes in the natural balance in the period 2011-2020, using the population balancing equation, a first estimate of net migration for the period, also known as residual net migration, was obtained by the difference between the intercensal population change and the natural balance observed in the same period. This residual component does not necessarily correspond only to migration flows, as it may also include possible coverage problems, either in the natural component, a hypothesis that is discarded, or in the census populations.

Thus, starting from the Definitive Resident Population Estimates of 2010, adding live births, by sex, registered in the period 2011-2020, and subtracting deaths that occurred in the same period by sex and year of birth, an estimate for the population on December 31<sup>st</sup>, 2020, subject only to live birth and deaths observed in the period, was obtained. The residual net migration was calculated by subtracting this estimate of the population (subject only to the natural component), and the Census 2021 population on 19<sup>th</sup> April (Census moment), adjusted to December 31<sup>st</sup>, 2020. The residual net migration estimates for the period 2011-2020 thus obtained amounted to 24 thousand people, having been negative for men (less 13 thousand) and positive for women (more 37 thousand).

In the Provisional Resident Population Estimates 2011-2020 series, estimated net migration had been negative of 44,564 less people, 87,065 less men and 42,501 more women. The comparison of these figures with the estimated residual net migration shows that, during the intercensal period, net migration was underestimated for the total population (by around 70,000 people) and for men (by around 75,000) and was overestimated for women (by about 6,000).

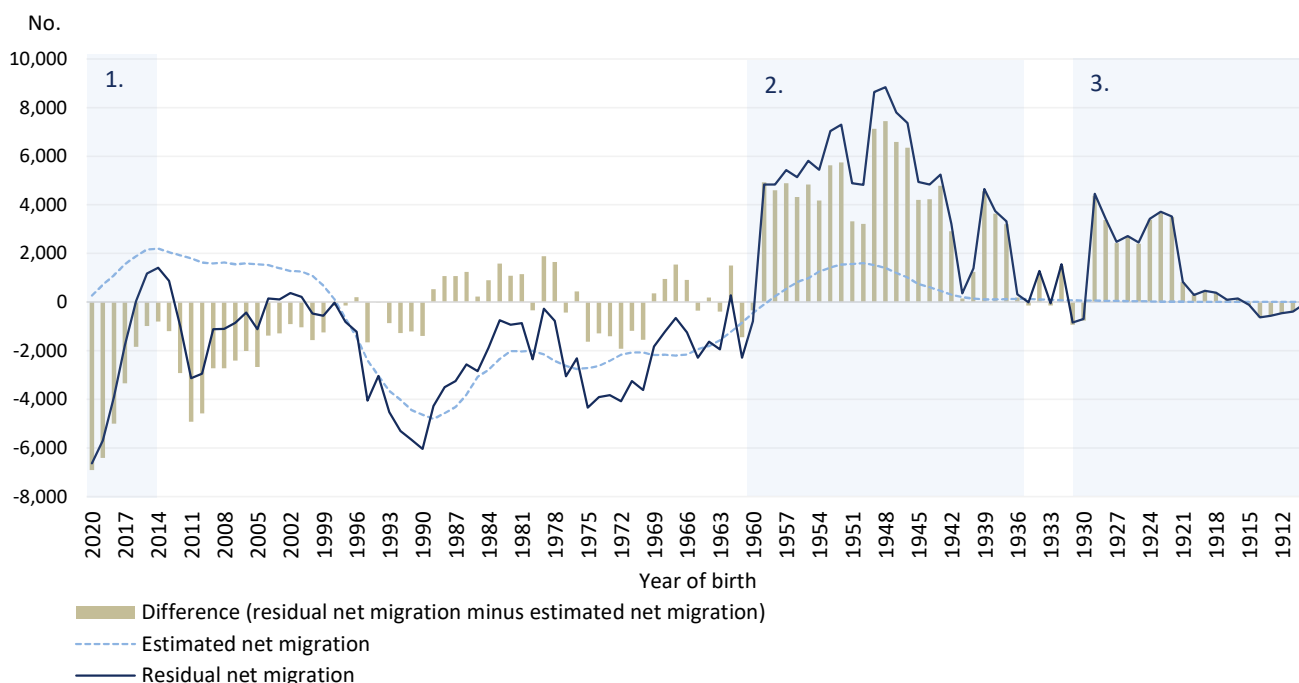
Figure 1 shows the comparison between the residual net migration and the net migration estimates incorporated in the Provisional Resident Population Estimates for the decade from 2011 to 2020.

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for the same period, given by the difference between permanent immigrants ( $I_N$ ) and permanent emigrants ( $E_N$ ). Formally,

$$P_N = P_{N-1} + NV_N - O_N + I_N - E_N.$$

Figure 1. Residual net migration and estimated net migration (accumulated values), by year of birth, 2011-2020, Portugal



Source: Statistics Portugal, Population and housing census – 2021; Demographic indicators.

The major differences (between residual and estimated net migration) found and methodological options adopted can be summarized as follows:

1. Younger generations (born between 2011 and 2020): the differences are mostly negative, meaning that the Census 2021 captured fewer people than those estimated for these generations. The biggest differences are found in generations born between 2017-2020 and in 2010 and 2011.

The differences obtained would translate into a very negative intercensal net migration in these generations, which is not plausible from a demographic point of view. In this way, considering the number of live births registered in these years, as well as the low mortality in these generations, and taking into account that the mobility of children is associated with that of adults, particularly women at childbearing age (whose estimated emigration volume is not compatible with the negative net migration in these generations), corrections to the census population volumes were made for these ages.

2. Generations born between 1936 and 1959: the differences are positive, meaning that Census 2021 captured more people in these generations than estimated, leading to higher net migration than estimated. This means that, over the course of the decade, fewer people will have left the country or more people entered the country in these generations than estimated. Treatment of these differences involved the analysis of international emigration and immigration flows, the results of which are presented below.



3. Older generations (born in 1931 or in previous years): with positive and negative differences, the largest differences are positive, indicating the existence of more people in the 2021 Census than estimated in these generations.

The differences obtained would translate into a very high positive intercensal net migration in these generations, which is not plausible, since, from the point of view of demographic behaviour, geographic mobility in these generations is very low (these people would be 79 or more years old in 2010 and 89 or older in 2020). Thus, in these generations, a statistical adjustment was made in the starting population (Definitive Resident Population Estimates 2010), incorporating the differences found in the respective generations. The introduction of this statistical adjustment represents an increase of 17.4 thousand people, which corresponds to more 0.23% in relation to the Definitive Estimate of Resident Population of 2010.

After identifying the differences between the residual net migration and the estimated net migration, for 2011-2020, and after implementing adjustments in the generations where it was not plausible that these differences were due to net migration, mentioned above, the study and evaluation of the estimated emigration and immigration flows incorporated into the Provisional Resident Population Estimates were carried out, with the use of alternative data sources.

Regarding **international emigration**, the Annual Emigration Estimates are based on the Outbound Migration Survey (IMMS), from which annual estimates of permanent and temporary international emigrants are obtained, the former being considered in the calculation of resident population estimates respecting the census concept of resident population.

The analysis of annual estimates of permanent emigrants, in the period 2011-2020, considering alternative sources of data, namely information from administrative sources (information from the Instituto dos Registos e Notariado, the Autoridade Tributária and the Instituto de Segurança Social), mirror statistics (statistics on the entry and residence of Portuguese population produced by the Member States), and the economic and social context of the period under analysis, leads to the conclusion on the coherence and maintenance of the annual volumes of permanent emigration obtained in the Annual Estimates of Emigration, used in the series of Provisional Resident Population Estimates 2011-2020.

As for the age profiles, in the first years of the decade there was an overestimation of emigration flows at younger ages, with the number of children not being consistent with the estimate of women at childbearing age who left the country in those years, corroborated by mirror statistics, which led to a review of the age structure of emigration in the period 2011-2014, thus harmonizing the methodology applied to the entire intercensal period. Thus, the distribution by age of permanent emigrants, by sex, for the period 2011-2020, was carried out based on IMMS data for the respective year and the four previous years.

Regarding **international immigration**, the Annual Immigration Estimates are based on the Labour Force Survey, as well as on administrative information produced by the Serviço de Estrangeiros e Fronteiras (SEF).





An assessment of the estimated results for permanent immigrants was also made, for the period 2011-2020, comparing immigration estimates with alternative data sources, namely administrative data (information from the Instituto dos Registos e Notariado, the Autoridade Tributária and the Instituto de Segurança Social), mirror statistics (statistics on individuals who left other countries to reside in Portugal) and the results of the 2021 Census on the resident population who lived abroad for a period of at least one year.

The study of all considered sources, in particular the incoming migration flows captured by the 2021 Census, showed there was an underestimation of the volumes of immigrants throughout the decade, namely men, from 2014 onwards.

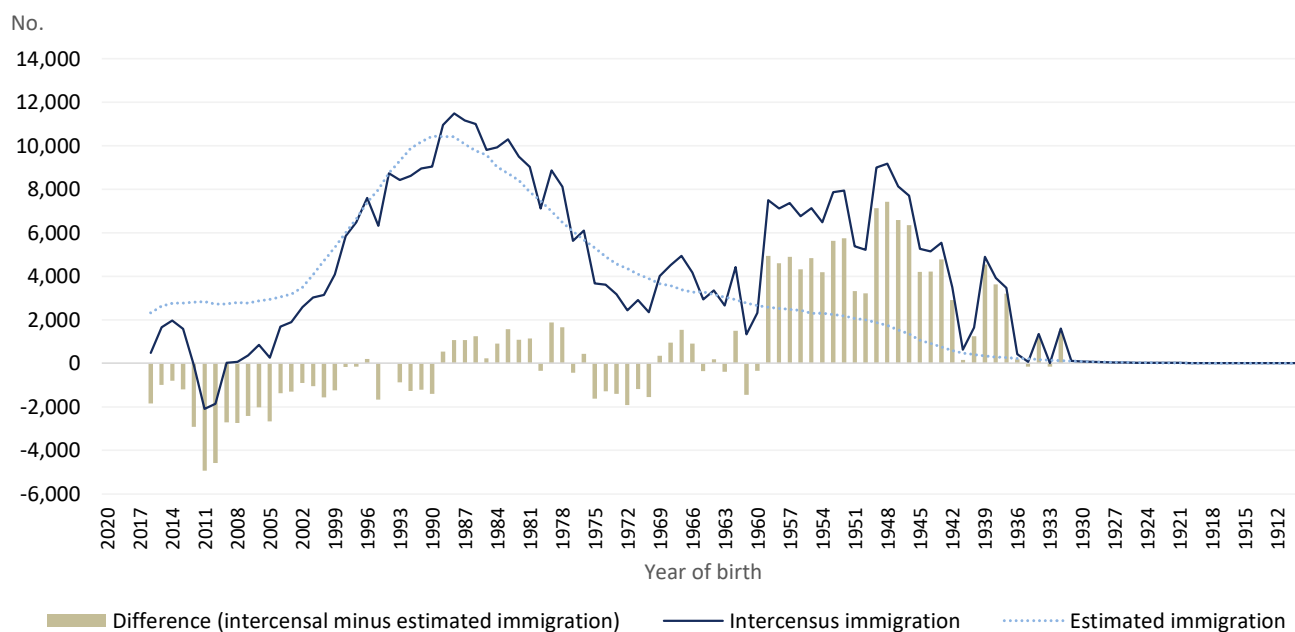
Regarding the age profiles of immigrants, the comparison with other sources showed a possible underestimation of the entry of people at retirement or pre-retirement ages, especially in more recent years.

In summary:

- (1) The Provisional Estimates of the Resident Population underestimated the population in relation to the 2021 Census. Considering that the natural components (live births and deaths) were kept constant, this means that net migration was underestimated in the intercensal period.
- (2) The analysis of the Annual Emigration Estimates led to the conclusion that the total estimated volume of emigrants was to be maintained in the period 2011-2020, with small adjustments in the age distribution in the first years of the decade.
- (3) The analysis of the Annual Immigration Estimates for the decade showed that there was an underestimation of migration flows entering Portugal, in line with the underestimation of the population, namely at retirement or pre-retirement ages, especially in more recent years.

After the corrections to the young and elderly populations were implemented, and the analysis of the Annual Estimates of Emigration and Immigration was carried out, with the decision not to revise the figures of the Annual Estimates of Emigration, an estimate for the intercensal immigration based on the population balancing equation was obtained. The intercensal immigration was calculated by subtracting the starting population (population of 2010 with statistical adjustment) subjected to the natural component and estimated emigration, to the 2021 Census backtracked to December 31<sup>st</sup>, 2020. Figure 2 shows the comparison between intercensal immigration and estimated immigration for the decade 2011 to 2020.

Figure 2. Intercensal immigration and estimated immigration (accumulated values) (Provisional Estimates), by year of birth, 2011-2020, Portugal



Source: Statistics Portugal, Population and housing census – 2021; Emigration annual estimates.

For the annual distribution of the total volume of immigration the following methodology was adopted:

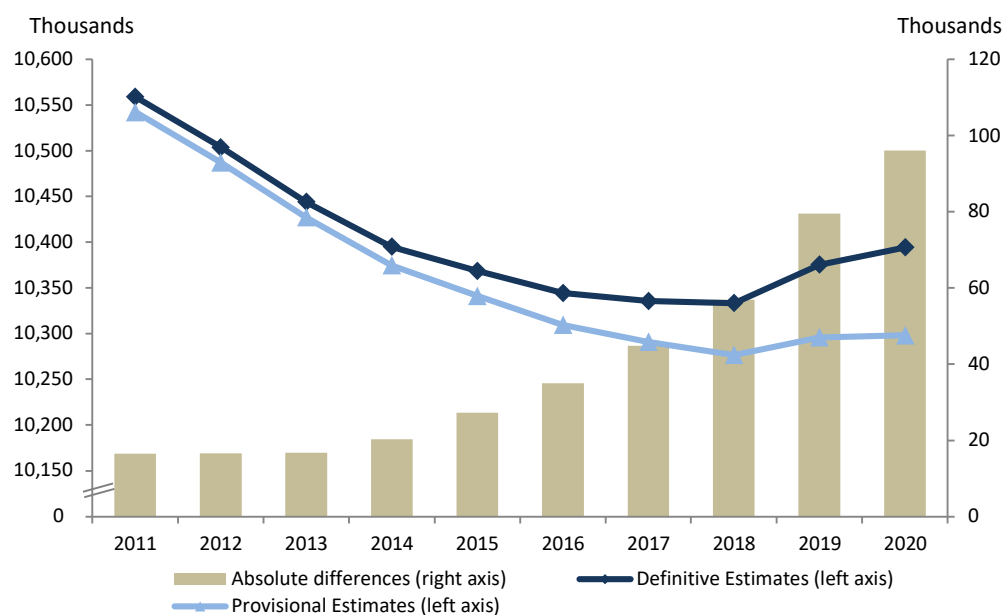
- For the period 2011 to 2013, the values of Immigration Estimates proved to be consistent with the decrease in entries recorded in these years, related to the effects of the economic and financial crisis that affected the country. As such, immigration estimates for this period were adopted in the final series of immigration, albeit with small adjustments, due to methodological revisions in the Labour Force Survey, used as the data source for estimating immigration.
- For the years 2014 and 2020 the remaining volume of immigrants was distributed, applying the annual distribution of the Immigration Annual Estimates.
- The distribution of immigration by age, in the 2014-2019 period, was obtained using the interpolation between the 2013 immigration age structure and the 2020 immigration age structure, which was computed using the 2021 Census results.

Comparison of the Definitive Resident Population Estimates series with the Provisional Resident Population Estimates series, 2011-2020, shows that the differences between the two estimates increase over time, as a result of greater immigration flows, in particular for the last years of the decade. Figures 3 to 9 and Tables 1 and



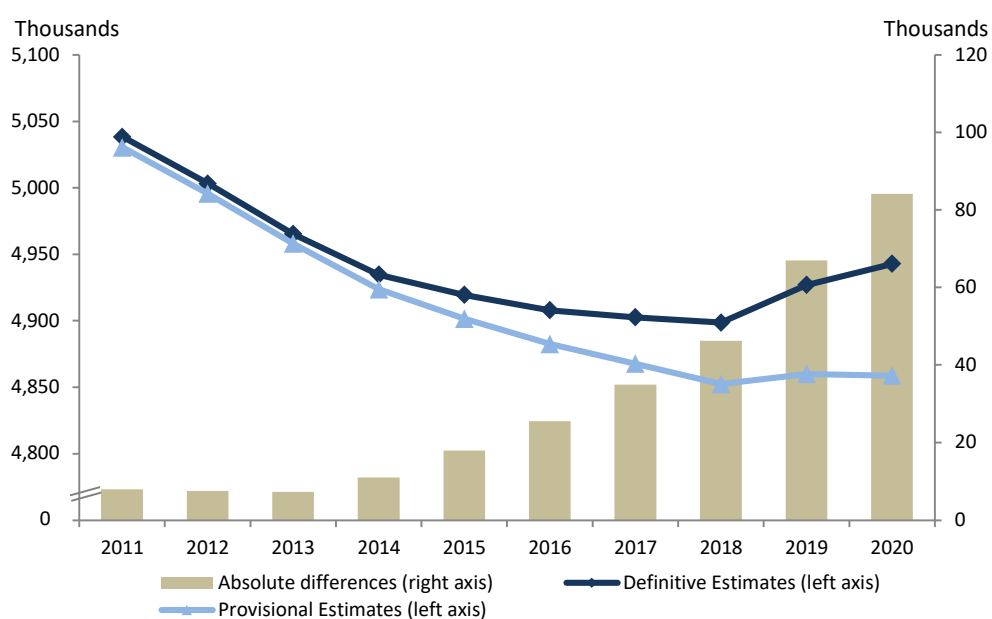
2 show the estimated populations and their components, as well as a set of demographic indicators for the two series.

**Figure 3. Definitive and Provisional Resident Population Estimates, and absolute differences, Portugal, 2011-2020**



Source: Statistics Portugal, Annual estimates of resident population.

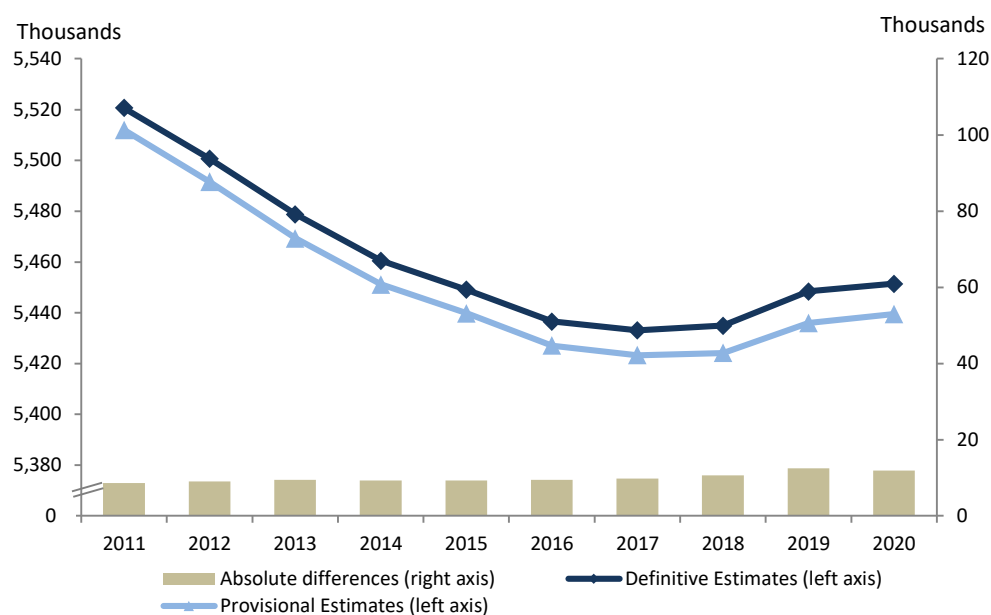
**Figure 4. Definitive and Provisional Resident Population Estimates, and absolute differences, men, Portugal, 2011-2020**



Source: Statistics Portugal, Annual estimates of resident population.

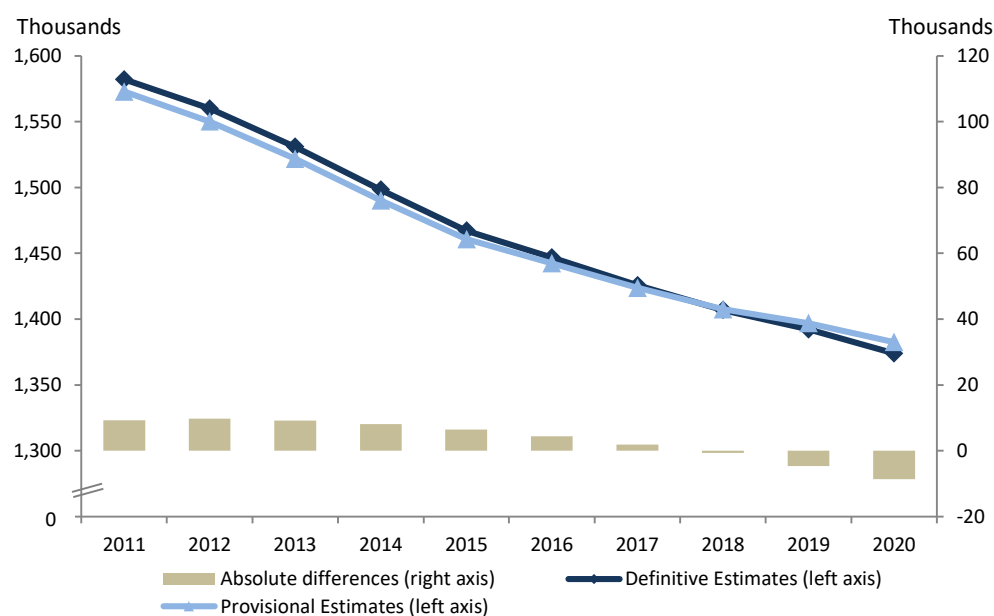


Figure 5. **Definitive and Provisional Resident Population Estimates, and absolute differences, women, Portugal, 2011-2020**



Source: Statistics Portugal, Annual estimates of resident population.

Figure 6. **Definitive and Provisional Resident Population Estimates, and absolute differences, Population aged 0-14 years, Portugal, 2011-2020**

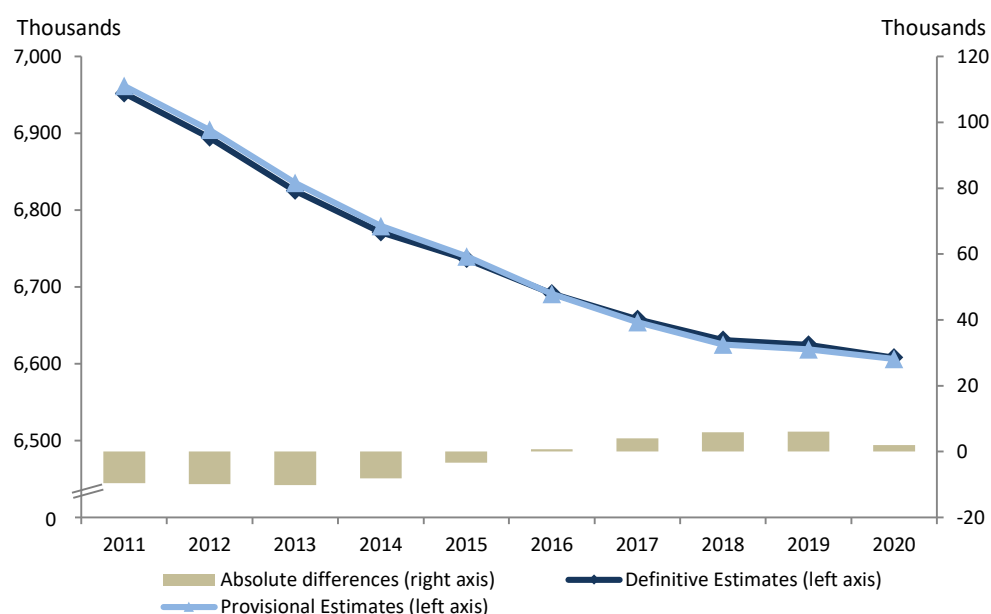


Source: Statistics Portugal, Annual estimates of resident population.



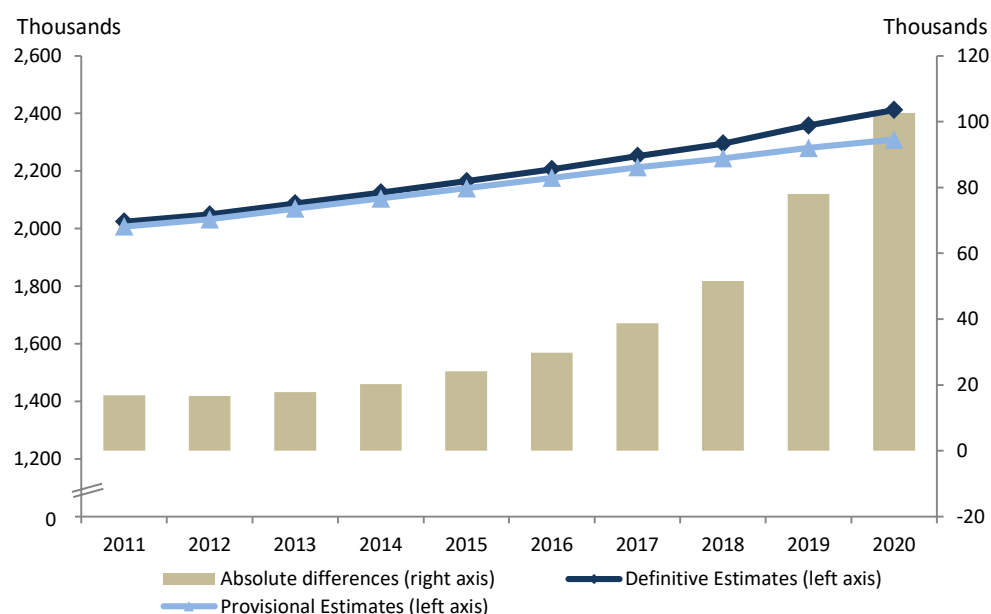


Figure 7. Definitive and Provisional Resident Population Estimates, and absolute differences, Population aged 15-64 years, Portugal, 2011-2020



Source: Statistics Portugal, Annual estimates of resident population.

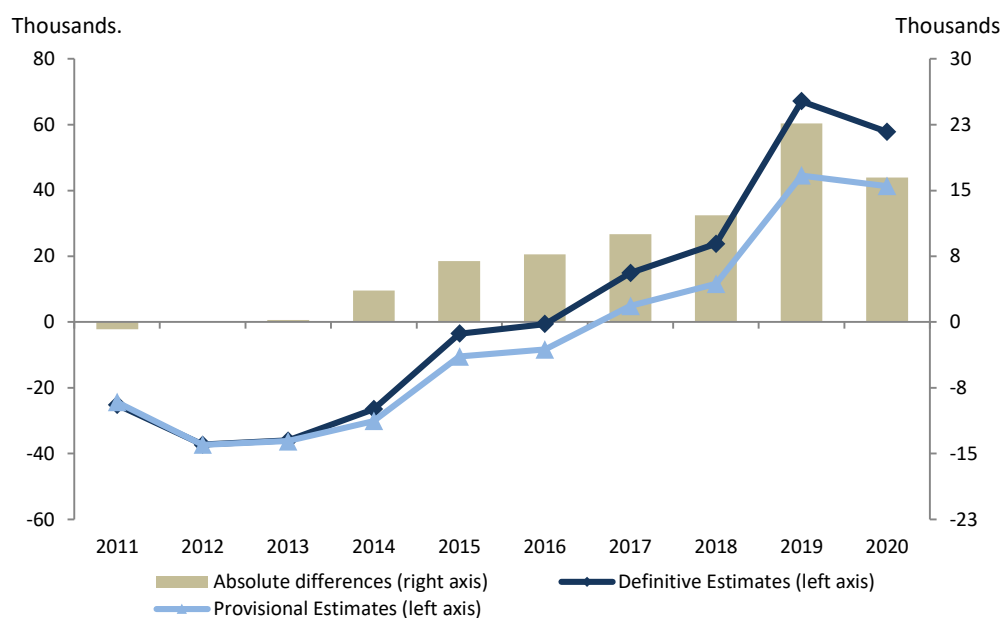
Figure 8. Definitive and Provisional Resident Population Estimates, and absolute differences, Population aged 65 years and over, Portugal, 2011-2020



Source: Statistics Portugal, Annual estimates of resident population.



Figure 9. Net migration from Definitive and Provisional Resident Population Estimates, and absolute differences, Portugal, 2011-2020



Source: Statistics Portugal, Annual estimates of resident population.



Table 1. **Definitive and Provisional Resident Population Estimates, and natural and migration components, Portugal, 2011-2020**

| YEAR                                                                                                   |    | 2011       | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       | 2020       |
|--------------------------------------------------------------------------------------------------------|----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| POPULATION                                                                                             |    |            |            |            |            |            |            |            |            |            |            |
| DEFINITIVE RESIDENT POPULATION ESTIMATES                                                               |    |            |            |            |            |            |            |            |            |            |            |
| Poulation at 31.XII (No.)                                                                              | HM | 10,558,950 | 10,503,889 | 10,444,092 | 10,395,121 | 10,368,554 | 10,344,478 | 10,335,770 | 10,333,496 | 10,375,395 | 10,394,297 |
|                                                                                                        | H  | 5,038,389  | 5,003,294  | 4,965,345  | 4,934,668  | 4,919,465  | 4,907,936  | 4,902,631  | 4,898,614  | 4,926,990  | 4,942,871  |
|                                                                                                        | M  | 5,520,561  | 5,500,595  | 5,478,747  | 5,460,453  | 5,449,089  | 5,436,542  | 5,433,139  | 5,434,882  | 5,448,405  | 5,451,426  |
| PROVISIONAL RESIDENT POPULATION ESTIMATES                                                              |    |            |            |            |            |            |            |            |            |            |            |
| Poulation at 31.XII (No.)                                                                              | HM | 10,542,398 | 10,487,289 | 10,427,301 | 10,374,822 | 10,341,330 | 10,309,573 | 10,291,027 | 10,276,617 | 10,295,909 | 10,298,252 |
|                                                                                                        | H  | 5,030,437  | 4,995,697  | 4,958,020  | 4,923,666  | 4,901,509  | 4,882,456  | 4,867,692  | 4,852,366  | 4,859,977  | 4,858,749  |
|                                                                                                        | M  | 5,511,961  | 5,491,592  | 5,469,281  | 5,451,156  | 5,439,821  | 5,427,117  | 5,423,335  | 5,424,251  | 5,435,932  | 5,439,503  |
| Absolute difference between Definitive Population Estimates and Provisional Population Estimates (No.) |    |            |            |            |            |            |            |            |            |            |            |
|                                                                                                        | HM | 16,552     | 16,600     | 16,791     | 20,299     | 27,224     | 34,905     | 44,743     | 56,879     | 79,486     | 96,045     |
|                                                                                                        | H  | 7,952      | 7,597      | 7,325      | 11,002     | 17,956     | 25,480     | 34,939     | 46,248     | 67,013     | 84,122     |
|                                                                                                        | M  | 8,600      | 9,003      | 9,466      | 9,297      | 9,268      | 9,425      | 9,804      | 10,631     | 12,473     | 11,923     |
| Percentual difference between Definitive Population Estimates and Provisional Population Estimates (%) |    |            |            |            |            |            |            |            |            |            |            |
|                                                                                                        | HM | 0.16       | 0.16       | 0.16       | 0.20       | 0.26       | 0.34       | 0.43       | 0.55       | 0.77       | 0.93       |
|                                                                                                        | H  | 0.16       | 0.15       | 0.15       | 0.22       | 0.37       | 0.52       | 0.72       | 0.95       | 1.38       | 1.73       |
|                                                                                                        | M  | 0.16       | 0.16       | 0.17       | 0.17       | 0.17       | 0.17       | 0.18       | 0.20       | 0.23       | 0.22       |
| NATURAL COMPONENT                                                                                      |    |            |            |            |            |            |            |            |            |            |            |
| DEFINITIVE RESIDENT POPULATION ESTIMATES                                                               |    |            |            |            |            |            |            |            |            |            |            |
| Natural balance (No.)                                                                                  |    | -5,993     | -17,771    | -23,768    | -22,476    | -23,039    | -23,447    | -23,604    | -26,031    | -25,264    | -38,866    |
| PROVISIONAL RESIDENT POPULATION ESTIMATES                                                              |    |            |            |            |            |            |            |            |            |            |            |
| Natural balance (No.)                                                                                  |    | -5,992     | -17,757    | -23,756    | -22,423    | -23,011    | -23,409    | -23,432    | -25,980    | -25,214    | -38,931    |
| MIGRATORY COMPONENT                                                                                    |    |            |            |            |            |            |            |            |            |            |            |
| DEFINITIVE RESIDENT POPULATION ESTIMATES                                                               |    |            |            |            |            |            |            |            |            |            |            |
| Permanent immigrants (No.)                                                                             |    | 18,820     | 14,668     | 17,757     | 23,077     | 36,849     | 37,644     | 46,649     | 55,357     | 95,382     | 83,654     |
| Permanent emigrants (No.)                                                                              |    | 43,998     | 51,958     | 53,786     | 49,572     | 40,377     | 38,273     | 31,753     | 31,600     | 28,219     | 25,886     |
| Net migration (No.)                                                                                    |    | -25,178    | -37,290    | -36,029    | -26,495    | -3,528     | -629       | 14,896     | 23,757     | 67,163     | 57,768     |
| PROVISIONAL RESIDENT POPULATION ESTIMATES                                                              |    |            |            |            |            |            |            |            |            |            |            |
| Permanent immigrants (No.)                                                                             |    | 19,667     | 14,606     | 17,554     | 19,516     | 29,896     | 29,925     | 36,639     | 43,170     | 72,725     | 67,160     |
| Permanent emigrants (No.)                                                                              |    | 43,998     | 51,958     | 53,786     | 49,572     | 40,377     | 38,273     | 31,753     | 31,600     | 28,219     | 25,886     |
| Net migration (No.)                                                                                    |    | -24,331    | -37,352    | -36,232    | -30,056    | -10,481    | -8,348     | 4,886      | 11,570     | 44,506     | 41,274     |

**Source:** Statistics Portugal, Annual estimates of resident population, Immigration annual estimates, Emigration annual estimates, and Demographic indicators.



Table 2. **Definitive and Provisional Resident Population Estimates, by age group, and demographic indicators, Portugal, 2011-2020**

| YEAR                                                                                                   |       | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |
|--------------------------------------------------------------------------------------------------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| POPULATION BY AGE GROUPS                                                                               |       |           |           |           |           |           |           |           |           |           |           |
| DEFINITIVE RESIDENT POPULATION ESTIMATES                                                               |       |           |           |           |           |           |           |           |           |           |           |
| Population at 31.XII (No.)                                                                             | 0-14  | 1,582,153 | 1,560,006 | 1,531,002 | 1,498,345 | 1,467,263 | 1,446,824 | 1,425,820 | 1,406,939 | 1,392,316 | 1,374,057 |
|                                                                                                        | 15-64 | 6,952,259 | 6,894,640 | 6,825,389 | 6,771,316 | 6,736,280 | 6,691,202 | 6,657,888 | 6,630,739 | 6,624,597 | 6,607,987 |
|                                                                                                        | 65+   | 2,024,538 | 2,049,243 | 2,087,701 | 2,125,460 | 2,165,011 | 2,206,452 | 2,252,062 | 2,295,818 | 2,358,482 | 2,412,253 |
| PROVISIONAL RESIDENT POPULATION ESTIMATES                                                              |       |           |           |           |           |           |           |           |           |           |           |
| Population at 31.XII (No.)                                                                             | 0-14  | 1,572,900 | 1,550,201 | 1,521,854 | 1,490,241 | 1,460,832 | 1,442,416 | 1,423,896 | 1,407,566 | 1,396,985 | 1,382,628 |
|                                                                                                        | 15-64 | 6,961,852 | 6,904,482 | 6,835,604 | 6,779,414 | 6,739,674 | 6,690,517 | 6,653,857 | 6,624,826 | 6,618,500 | 6,605,976 |
|                                                                                                        | 65+   | 2,007,646 | 2,032,606 | 2,069,843 | 2,105,167 | 2,140,824 | 2,176,640 | 2,213,274 | 2,244,225 | 2,280,424 | 2,309,648 |
| Absolute difference between Definitive Population Estimates and Provisional Population Estimates (No.) |       |           |           |           |           |           |           |           |           |           |           |
|                                                                                                        | 0-14  | 9,253     | 9,805     | 9,148     | 8,104     | 6,431     | 4,408     | 1,924     | -627      | -4,669    | -8,571    |
|                                                                                                        | 15-64 | -9,593    | -9,842    | -10,215   | -8,098    | -3,394    | 685       | 4,031     | 5,913     | 6,097     | 2,011     |
|                                                                                                        | 65+   | 16,892    | 16,637    | 17,858    | 20,293    | 24,187    | 29,812    | 38,788    | 51,593    | 78,058    | 102,605   |
| Percentual difference between Definitive Population Estimates and Provisional Population Estimates (%) |       |           |           |           |           |           |           |           |           |           |           |
|                                                                                                        | 0-14  | 0.59      | 0.63      | 0.60      | 0.54      | 0.44      | 0.31      | 0.14      | -0.04     | -0.33     | -0.62     |
|                                                                                                        | 15-64 | -0.14     | -0.14     | -0.15     | -0.12     | -0.05     | 0.01      | 0.06      | 0.09      | 0.09      | 0.03      |
|                                                                                                        | 65+   | 0.84      | 0.82      | 0.86      | 0.96      | 1.13      | 1.37      | 1.75      | 2.30      | 3.42      | 4.44      |
| TOTAL DEPENDENCY RATIO, YOUNG AGE DEPENDENCY RATIO, OLD-AGE DEPENDENCY RATIO AND AGEING RATIO          |       |           |           |           |           |           |           |           |           |           |           |
| DEFINITIVE RESIDENT POPULATION ESTIMATES (No.)                                                         |       |           |           |           |           |           |           |           |           |           |           |
| Total dependency ratio                                                                                 |       | 51.9      | 52.3      | 53.0      | 53.5      | 53.9      | 54.6      | 55.2      | 55.8      | 56.6      | 57.3      |
| Young-age dependency ratio                                                                             |       | 22.8      | 22.6      | 22.4      | 22.1      | 21.8      | 21.6      | 21.4      | 21.2      | 21.0      | 20.8      |
| Old-age dependency ratio                                                                               |       | 29.1      | 29.7      | 30.6      | 31.4      | 32.1      | 33.0      | 33.8      | 34.6      | 35.6      | 36.5      |
| Ageing ratio                                                                                           |       | 128.0     | 131.4     | 136.4     | 141.9     | 147.6     | 152.5     | 157.9     | 163.2     | 169.4     | 175.6     |
| PROVISIONAL RESIDENT POPULATION ESTIMATES (No.)                                                        |       |           |           |           |           |           |           |           |           |           |           |
| Total dependency ratio                                                                                 |       | 51.4      | 51.9      | 52.5      | 53.0      | 53.4      | 54.1      | 54.7      | 55.1      | 55.6      | 55.9      |
| Young-age dependency ratio                                                                             |       | 22.6      | 22.5      | 22.3      | 22.0      | 21.7      | 21.6      | 21.4      | 21.2      | 21.1      | 20.9      |
| Old-age dependency ratio                                                                               |       | 28.8      | 29.4      | 30.3      | 31.1      | 31.8      | 32.5      | 33.3      | 33.9      | 34.5      | 35.0      |
| Ageing ratio                                                                                           |       | 127.6     | 131.1     | 136.0     | 141.3     | 146.5     | 150.9     | 155.4     | 159.4     | 163.2     | 167.0     |
| Absolute difference between Definitive Population Estimates and Provisional Population Estimates (No.) |       |           |           |           |           |           |           |           |           |           |           |
| Total dependency ratio                                                                                 |       | 0.5       | 0.4       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.7       | 1.0       | 1.4       |
| Young-age dependency ratio                                                                             |       | 0.2       | 0.1       | 0.1       | 0.1       | 0.1       | 0.0       | 0.0       | 0.0       | -0.1      | -0.1      |
| Old-age dependency ratio                                                                               |       | 0.3       | 0.3       | 0.3       | 0.3       | 0.3       | 0.5       | 0.5       | 0.7       | 1.1       | 1.5       |
| Ageing ratio                                                                                           |       | 0.4       | 0.3       | 0.4       | 0.6       | 1.1       | 1.6       | 2.5       | 3.8       | 6.2       | 8.6       |

**Source:** Statistics Portugal, Annual estimates of resident population, and Demographic indicators.