

METHODOLOGICAL NOTE ON THE ESTIMATED MIGRATION FLOWS OF 2019 AND THE ESTIMATED POPULATION ON 1.1.2020

BACKGROUND

This note presents the first estimates of migration flows for 2019 upon which the estimated population on 1.1.2020 is based. As regards immigration flows, the model to be applied is the same as the one outlined in the note entitled “Short methodological note on the estimated migration flows and the estimated population 1991-2014”. The note is available at the following link:

<http://www.statistics.gr/documents/20181/a483cf24-b563-4ef8-8ae9-d502d7d21675>.

In this estimation people living in the country due to the refugee crisis is added.

The estimation of emigration is based upon data on immigrants from Greece to Germany, as reported by the German Statistical Office (DESTATIS), given that neither the Greek Ministry of Foreign Affairs nor any other country disposes any relevant data. Knowing that Germany is the more popular destination country for Greek emigrants, the data of Germany are used by applying regression models.

IMMIGRATION

Using the aforementioned note on estimating immigration flows for the years 1991-2014 and taking also into consideration the advantages and disadvantages of the examined models, a model with two independent variables was selected, namely immigration of the previous year and the percentage change of Gross Domestic Product (GDP) for the previous year, as well.

The formula is as follows:

$$\ln(X_t) = 3.219 + 0.711 \cdot \ln(X_{t-1}) + 0.008 \cdot Z_{t-1} \quad (1)$$

where,

X_t: Total annual immigration

X_{t-1}: Total annual immigration (previous year)

Z_{t-1}: percentage change of Gross Domestic Product (previous year)

If **X₂₀₁₈** = 66,447 and **Z₂₀₁₈** = 2.49,
the estimated immigration for 2019 is: **X₂₀₁₉**=68,461.

Moreover, 60,998 persons related to the refugee crisis are added to this number, living in Greece on 1.1.2020 and according to the preconditions of the Regulation of the E. Parliament and of the Council (EC) 862/2007, as amended by the regulation 851/2020, on Community statistics on migration and international protection are considered as immigrants. Therefore, the total number persons immigrating in Greece during 2019 is estimated **129,459**.

The number of 68,461 estimated immigrants is disaggregated by sex, age, group of citizenship/country of birth/country of previous residence according to the figures of the 2011 Population Census. Persons living in the Country due to the refugee crisis are allocated according to administrative data from Asylum Service and the Ministry of Migration Policy.

EMIGRATION

Estimates for the years 1991 – 2013 were produced on the basis of the results of the MIMOSA projects and immigration data of other countries. These estimates are included in the previously published study “Short methodological note on the estimated migration flows and the estimated population 1991-2014”.

For the years from 2014 onwards the model to be applied is outlined in the note “Methodological note on the migration flows 2014 and the estimated population on 1.1.2015”. The note is available at the following link:

http://www.statistics.gr/en/statistics?p_p_id=documents_WAR_publicationsportlet_INSTANCE_CE_

A regression model, on the basis of available data on immigrants from Greece to Germany, as reported by the German Statistical Office DESTATIS, was selected.

The regression formula that was selected is the following:

$$E_t = 6755,205 + 3.157393 * D_t$$

where E_t is t total emigration during the year t and D_t is data on migration from Greece to Germany for the same year according to DESTATIS.

By applying the regression formula to the 27,955 immigrants from Greece to Germany according to Destatis data for 2019, the resulting estimate for total emigrants is 95,020. For disaggregation by sex and age for emigrants, German data on immigration from Greece were also used.

ESTIMATED POPULATION ON 1.1.2020

In order to estimate the population on 01/01/2020 based on the demographic equation

$P_{t+1} = P_t + B_t - D_t + I_t - E_t$, we set

$P_{2019} = 10,724,599$ (population 1.1.2019)

$B_{2019} = 83,628$ live births (by mothers residing in Greece)

$D_{2019} = 124,101$ deaths (of persons residing in Greece)

$I_{2018} = 129,459$ (immigrant's estimation)

$E_{2019} = 95,020$ (emigrant's estimation).

Thus, the estimated population on 1.1.2020 is: **$P_{2020} = 10,718,565$.**