

METHODOLOGICAL NOTE ON THE ESTIMATED MIGRATION FLOWS OF 2015 AND THE ESTIMATED POPULATION ON 1.1.2016

BACKGROUND

This note presents the first estimates of migration flows for 2015 on which the estimated population on 1.1.2016 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 a number of asylum seekers due to the refugee crisis is added.

The estimation of emigration is based only on 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:

$$\ln(X_t) = 3,219 + 0,711 * \ln(X_{t-1}) + 0,008 * Z_{t-1} \quad (1)$$

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 $X_{2014} = 59.014$ and $Z_{2014} = -1,5$,
the estimated immigration for 2015 is: $X_{2015} = 60.944$.

Moreover, in this number 3.502 asylum seekers from Syria and Iraq in 2015 were added. This number is the difference between the total number of asylum seekers from Syria and Iraq in 2015 (4.156) and the average of the asylum seekers from these countries during the previous three years (654).

Therefore, the total number of the estimated immigration for 2015 is **64.446**.

Estimated immigrants (60.944) are disaggregated by sex and age group of citizenship/country of birth/country of previous residence according to the figures of the 2011 Population Census.

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 for 2015, for which according to the German data, immigrants from Greece amounted to 32.494, the resulting estimate for total emigrants is **109.351**.

For disaggregation by sex for emigrants, German data on immigration from Greece were used.

ESTIMATED POPULATION ON 1.1.2016

On the basis of the demographic equation $P_{t+1} = P_t + B_t - D_t + I_t - E_t$,
where,

$P_{2015} = 10.858.018$ (population 1.1.2015)

$B_{2015} = 91.847$ live births

$D_{2015} = 121.212$ deaths

$I_{2015} = 64.446$ (immigrant's estimation)

$E_{2015} = 109.351$ (emigrant's estimation)

the estimated population on 1.1.2016 is: **$P_{2016} = 10.783.748$.**