Differences in life expectancy by migrant status across the European Union

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The objective of this abstract is to present an ongoing project at Eurostat to develop the first comparable measures of life expectancy by place of birth on a regular basis for each EU Member State. Comparable measures of life expectancy by place of birth in each Member State do not currently exist, and Eurostat therefore intends to fill this knowledge gap by starting to produce comparable statistics on life expectancy among native-born and foreign-born individuals in each Member State, starting from the first year for which data are available. For each EU Member State, native-born are defined as individuals whose country of birth is the reporting country, whereas foreign-born are defined as those whose country of birth is not the reporting country. The availability of comparable estimates of life expectancy by place of birth for each EU Member State, using comparable definitions and collection of data and a comparable methodology, is crucial in order to produce a clear overview and understanding of the differences in life expectancy by place of birth in each EU country, which is a fundamental measure to understand the conditions of foreign-born individuals across EU Member States.

Life expectancy by place of birth is one of the most important measures for identifying mortality and lifespan inequalities between native-born and foreign-born individuals. It has often been shown that migrants have lower mortality rates than the native population, the so-called "healthy immigrant effect" or "migrant mortality advantage" (Shor & Reolfs, 2021). Furthermore, migrants have been shown to have a higher life expectancy than natives in several countries (Hendi & Ho, 2021; Page et al., 2007; Preston & Elo, 2014). The literature provides three main explanations for this. The first is that there are important self-selection mechanisms that make immigrants likely to be in good health at the time of migration, which may make them more likely to be healthier later in life than natives. The second main hypothesis, although considered less relevant (Vandenheede et al., 2015), is the so-called salmon bias hypothesis, according to which migrants in poor health are more likely to return to their country of origin, which may therefore influence their mortality rates in the destination country. The last hypothesis is the data artefact hypothesis, according to which the results regarding the mortality advantage of migrants are mainly due to data limitations. This could be due either to under-coverage of deaths, as some of them may occur more often not in the country the migrants reside, or to over-coverage of the migrant population, due to the high frequency of multiple migrations among individuals who have already migrated and the usual difficulties for statistical offices to have good estimates of emigration due to the fact that many emigrants do not declare their departure.

On the other hand, migrants may also have been more affected by the COVID-19 pandemic in terms of loss of life expectancy than native-born individuals. Indeed, migrants have been shown to have had a higher increase in mortality rates than native-born individuals during the COVID-19 pandemic in several Member States such as Belgium (Vanthomme et al., 2021), France (Khlat et al., 2022; Papon & Robert-Bobée, 2020), the Netherlands (Chilunga et al., 2023) and Sweden (Drefahl et al., 2020). Previous research has also shown that individuals from lower social classes have been particularly affected by the COVID-19 pandemic (Drefahl et al., 2020), and the fact that immigrants

are over-represented in these social classes in several countries may have contributed to this severe increase in their mortality rates (Vanthomme et al., 2021).

Nevertheless, there are currently no comparable analyses of the effect of the COVID-19 pandemic on migrants' life expectancy compared to natives across EU Member States. However, although Eurostat does not currently publish measures of life expectancy by place of birth, it has a project to develop such estimates. We are exploring life expectancy statistics for native-born and foreign-born individuals in each EU Member State in order to have comparable measures of differences in life expectancy by place of birth between EU Member States.

First, this work will focus on the input data used to estimate life expectancy by place of birth. Eurostat receives data from Member States on the annual number of deaths by country of birth, sex and 1-year age groups. In addition, it receives data on the total population by country of birth, sex and 5-year age groups from each Member State. The usual Eurostat methodology for the calculation of life expectancy is applied by estimating and using as input mortality rates by 5-year age groups. Data limitation and estimation issues will be discussed.

Secondly, we will show results for all EU Member States. The average health conditions and subsequent life expectancy of foreign-born individuals are expected to depend mainly on three factors: the context of the countries of birth, the context of the country of destination, which we can analyse one by one, and the self-selection mechanisms underlying migrants' moves.

Preliminary results show that, in accordance with previous research on the topic, in most countries foreign-born individuals have a higher life expectancy than native-born individuals. The other important result, according to preliminary estimates, is that the decline in life expectancy occurred in 2020 and 2021 has been larger among foreign-born individuals than among native-born individuals in several EU Member States. Indeed, while, as explained above, foreign-born individuals had a higher life expectancy than native-born individuals before the COVID-19 pandemic period, this advantage was reduced or even reversed in the pandemic years in several countries, with foreign-born individuals experiencing significant losses in life expectancy in several countries. This points to a higher risk among foreign-born individuals of loss of life expectancy during the pandemic that should not only be analysed further, but also taken into account if other pandemics occur in the future.

Several factors can explain the higher impact of the COVID-19 pandemic on the life expectancy of the foreign-born population in the EU Member States. One main explanation may be the higher prevalence of foreign-born individuals among low-skilled workers, who have shown to be more severely affected by the COVID-19 pandemic (Berchet et al., 2023; Hawkins et al., 2020). The second main hypothesis could instead be that the salmon bias hypothesis, often used to explain the health advantage of migrants, may not have occurred during the COVID-19 pandemic due to the closure of international borders, which may not have allowed migrants in poor health to return to their country of origin.

Therefore, this work aims to present the first comparative analysis of life expectancy by place of birth, differentiated between native-born and foreign-born individuals, in the European Union for each Member State, providing estimates for a large enough number of years to visualise trends and changes. The provisional results on life expectancy by place of birth will be analysed and trends and differences will be analysed among both men and women. This work can contribute significantly to

Eurostat's efforts to focus on migrants' integration and the comparison between native-born and foreign-born individuals in different dimensions of individuals' lives in EU Member States. Life expectancy is a key measure to better understand the conditions of foreign-born individuals in the European Union.

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