# Rethinking the Concept of Replacement Migration Extended Abstract

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#### Abstract

Demographers were recently concerned about population growth and the fact that the world population would soon reach 10 billion people. Yet, global fertility is falling as the world population is ageing, resulting in higher proportions of elderly due to low fertility and increased longevity. In 2000, the UN published a report on replacement migration, as an answer to this demographic challenge, where the number of migrants needed to offset declines in population size, working-age population, and potential support ratio (PSR) were estimated for some developed countries. The report concluded that replacement migration alone cannot be a solution for ageing declining populations due to the large number of immigrants needed. In 2019, Craveiro et al. reviewed the UN methodology and introduced the concept of prospective-age into replacement migration estimations. Prospective-age considers the remaining life expectancy of individuals in order to define new age limits for elderly populations. Their results showed that the number of migrants needed to prevent the prospective working-age population and prospective PSR from declining was significantly lower than the UN estimates. What happens to other contexts, such as Romania or other countries that send large numbers of migrants to Western Europe? This project proposes to analyse replacement migration and its consequences in the Romanian context and how this process affects the dynamics of the country. First, it is necessary to rethink the theoretical framework of replacement migration by including the return migration and second, Romania's net migration would have to turn positive as it is projected by EUROSTAT.

**Key Words:** Ageing Population. Replacement Migration. Romania. Eastern Europe

### 1 Introduction

During the past decades, demographers were concerned about population growth and the fact that the world population would soon reach 10 billion people. Yet, global fertility is falling as the world population is ageing, more precisely the proportion of elderly is increasing as a result of low fertility levels and increased longevity. According to the United Nations (UN), the process of ageing is "unprecedented, without parallel in human history and the twenty-first century will witness even more rapid ageing than did the century just past" (UN). Furthermore, the phenomenon is an inevitable outcome of the demographic transition. During the past decades, ageing population received more attention within developed countries because fertility levels did not recover and mortality rates continued to decline. The current projections, such as EUROSTAT (2019) and World Population Prospects (WPP-2019) indicate that ageing population will continue to increase in these countries and populations are expected to decline. These changes will have serious consequences and implications for pension systems, health-care and the economic growth of a country (UN-Report 2000).

The future population size and age-structure is determined by three demographic components, fertility, mortality and migration. Since mortality will continue to decline, fertility and migration are the two remaining demographic components that could have a reverse impact on ageing. Yet, the recent experience shows that fertility is less likely to recover to replacement level and therefore the remaining option would be international migration.

# 2 Replacement Migration Issue

In 2000, UN published the report called "Replacement Migration: is it a solution to declining and ageing populations?" in order to find a possible solution to this demographic challenge. The report presented simulations for Germany, Italy, France, United States, Japan, Korea, Europe and EU-15 in order to estimate the number of international migrants needed to offset declines in population size, working-age population, and potential support ratio (PSR). The estimates of the migrants needed to accomplish the goals mentioned above were far from reality, concluding that that replacement migration alone cannot be a solution for ageing declining populations. (UN-Report 2000).

The report generated a series of critiques because of its unrealistic results for the number of international migrants needed to offset population decline. Coleman (2002) made one of the hardest critiques for this report in an article called "Replacement migration, or why everyone is going to have to live in Korea", concluding that in order to keep the PSR at 1995 levels the entire world population would have to live in Korea by 2050. Other authors simply applied the methodology to different countries such as Czech Republic and other countries (Burcin and others, 2005; Ceobanu and Koropeckyj-Cox, 2013) without making any new contribution to the methodology.

In 2019, Craveiro et al. made a revision of the UN methodology and introduced the concept of prospective age into replacement migration estimations. The prospective age concept takes into account the remaining life expectancy of individuals in order to define new age limits for elderly populations, different from the current one of 65 years. According to Scherbov and Sanderson (2008: 2013; 2016) the new measurements of age considers a person being old when the remaining life expectancy is 15 years or less. Since life expectancy increases over time, the age-specific life expectancy will become longer and the same remaining life expectancy is reached at older ages. Due to advances in health and life expectancy, measuring population ageing turns into a difficult challenge for demographers because the meaning of the number of years lived has completely changes. For example, in western Europe in 1800 less than 25 percent of the population would survive to age 60 while nowadays more than 90 percent do so. A 60-year old person in Western Europe today would have the same life expectancy as a 43-year old person in 1800 (Scherbov and Sanderson, 2008). By using applying this new measurement of ageing, the prospective working-age group will provide an alternative indicator of potential labour force availability in any population. Therefore, by applying the prospective-age measurement into replacement migration, Craveiro et al. (2019) proved that the number of international migrants needed to prevent the prospective working age population and prospective PSR from declining, was significantly lower than the UN estimates using the conventional PSR.

Replacement migration was first introduced in the context of countries with fertility below replacement level, where mortality rates became higher than fertility rates and where the inflow of immigrants was significantly high. Furthermore, the most recent contribution to this concept (Craveiro et al., 2019) was thought for the same context, mostly Western European countries with low fertility and high rates of immigrants. So far, the literature did not explore other contexts, such as countries with fertility below replacement level and high rates of emigration instead of immigration. Therefore, the replacement migration literature is limited from this point of view. This gap could be filled by expanding the concept of replacement migration and adapting it for different contexts, such as Eastern Europe, Caribbean and so on, where other variables suited for such contexts, besides prospective-age, should be included.

# 3 Research Question

What happens to other contexts, such as Eastern European countries characterised by fertility below replacement level and high rates of emigration? If the current trend with high rates of emigration will continue, then Romania would have to face a double ageing process, not only from low fertility but also from emigration. These issues will continue to accelerate the ageing process and the population decline. This project aims at contributing to the discussion of replacement migration by providing a simulation and applying the prospectiveage concept to Romania, an Eastern European country with fertility below replacement level and negative net migration rates. Furthermore, it will analyse replacement migration and its consequences in the case of Romania and how this process affects the demographic dynamics of the country, more precisely how many migrants would stop from emigrating and how many would return back to Romania, and who is going to return in which age group? First, it is necessary to rethink the theoretical framework of replacement migration by including the return migration and second, Romania's net migration would have to turn positive as it is projected for the next decades by EUROSTAT (2019) in order to decelerate the ageing process and population decline.

## 4 Data and Methodology

The data for this project is from EUROSTAT (2019). In order to project Romania's working-age population and the PSR, the ochort component method will be used. In addition, the measurements of prospective-age from Scherbov and Sanderson (2013) will be used.

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