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#### Contact information

IIASA

Wolfgang Lutz (Ed.)

International Institute for Applied Systems Analysis (IIASA), Schlossplatz 1, A-2361 Laxenburg, Austria

Email: *lutz@iiasa.ac.at* Tel. +43(0) 2236807294

**JRC** 

Delilah Al Khudhairy

European Commission, Joint Research Centre, Rue du Champ de Mars 21, 1050 Brussels, Belgium

Email: Delilah.AL-KHUDHAIRY@ec.europa.eu

Tel. +32 22999158

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# EXECUTIVE SUMMARY

At the very heart of a changing society lies the number and composition of its members. Population growth has shaped the EU over recent decades and now its population is ageing. The slow-moving shift towards longer-living, lower-fertility, higher-educated societies brings the EU to new demographic frontiers, as it does in North America and East Asia.

Facing these developments naturally prompts the questions: Who will live and work in Europe in the coming decades? How many, and with what skills? To answer these, we consider key factors that will influence European demographics over the coming decades.

To move beyond some common misconceptions, this report brings relevant scientific analyses to the forefront by presenting a series of demographic scenarios for the future of the EU. By examining not only the role of migration, fertility and mortality, but also education and labour force participation, we can outline a more comprehensive view of possible futures than conventional demographic projections.

While some of the scenarios indicate probable developments, others are hypothetical and meant to be instructive for understanding the full spectrum of possible futures. The value of these scenarios is to improve our ability to anticipate the coming changes and to guide our responses to them.

The following key messages express the core findings from the work of the Centre of Expertise on Population and Migration.

## We are living longer and can lead more productive lives

One of the most important trends in the EU is ageing. Thanks to advances in medicine and quality of life, the average life expectancy at birth in the EU is about 81 years. Shifts to longer lives come as part of the larger, nearly universal process of transitioning from pre-modern to post-industrial demographic patterns.

While it is an important achievement that we are on average living longer, an increasing proportion of people aged 65+ can also bring social and economic challenges. There are concerns about how to provide for the growing proportion of retired citizens who are dependent on a smaller labour force. Yet, absent from the often superficial discussions are reflections on the increasing number of years of active and healthy life, greater productivity, and possible loss of jobs due to technological advancements. All of which have profound implications on what societies will require from their future working populations. Automation alone may significantly cut the need for labour, calling into question conventional assumptions about what policymakers should target as the 'ideal' size of the labour force.

It is important to acknowledge that neither higher fertility nor more migration will stop population ageing because the momentum has been decisively set by past, long-term demographic trends. However, reaching the age of 65 is no longer synonymous with the end of a person's productive life. Overall, we are living more productive lives which, together with flexible retirement ages, can help to alleviate the economic challenges arising from changes in the conventionally defined

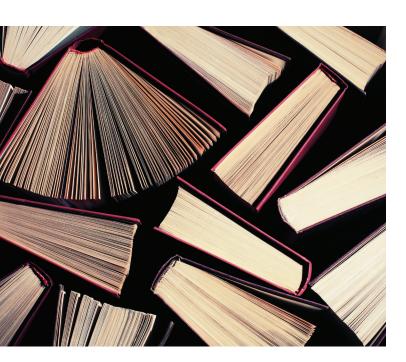
working-age population and the increasing ratio of workers to non-workers (known as the dependency ratio).

### A smaller, better-educated labour force on the horizon

Another reason for optimism is the fact that the EU's labour force is clearly becoming better educated over time. In almost all scenarios, the EU's future labour force will be more highly skilled and therefore likely to be more productive and adaptive to an ever-changing job market.

The EU labour force is transforming through social development and the ageing process. The total size of the labour force is projected to get smaller over the next four decades, based on the assumption that the current patterns continue. According to this assumption, the projected decrease in the size of the labour force will come from the population with low (from 50.7 to 14.0 million) and middle (from 108.2 to 74.2 million) levels of education.

At the same time, the number of workers with a short post-secondary education (such as technical training), a bachelor's, a master's degree or higher, is rising, not just as regards their



proportion of the overall labour force, but also in absolute terms. In every country, since the younger cohorts are better educated than the older ones, these post-secondary groups are expected to almost double (+45%) over the next 40 years.

Considering the future context, any possible reduction in the size of the labour force may not be an economic problem if future jobs are fewer in number and require more skills. Already today unemployment is generally higher among the lower skilled and there may be even fewer low skills jobs in the future. Regardless of changes in the population's age structure and labour force size, it can be expected that the human capital of future workers of any age, measured by the highest level of their educational attainment, will be higher than it is today.

## Labour force participation as a remedy for the challenges of population ageing

Using a set of demographic scenarios of the future that highlight the impact of changes to a variety of factors, it becomes clear that the most feasible and effective remedy to negative consequences of population ageing is neither focusing on higher fertility nor more migration, but rather increasing labour force participation.

Extending constant labour-force participation rates into the future shows the likely path to a smaller labour force and increasing dependency ratio. Scenarios that deviate from this course, following either 1) the equalisation of labour-force participation between men and women, or 2) a gradual convergence of all Member States to the participation rates of men and women already seen in Sweden today, demonstrate the power that improving labour-participation rates has to nullify potential increases in dependency.

In fact, the momentum is on the side of increasing labour-force participation.

If it continues to grow in the future, the labour

force size and dependency ratio could stabilise at current levels. In other words, a strong but realistic increase – as is already the reality in Sweden – of labour-force participation over time could compensate for a large part of the anticipated negative economic consequences of population ageing in the future.

# Higher immigration volume would increase labour force size, but much less the essential ratio of workers-to-non-workers

To the extent the EU is a destination region for international migration, immigration becomes an influential factor on demographic developments. Policymakers regularly balance migration policy with the best interests of the Member State. Doing so while being mindful of a long-term understanding of demography is crucial. At the core of such considerations are factors including: the volume of immigrants from third countries entering the Member State, their levels of education, how well they will integrate into the labour market and society at large, and how effective the Member State is at enforcing their migration policy.

Migration levels can have a large influence on the total population size and the size of the labour force. With no third country immigration, the natural decline resulting from lower fertility would bring the EU population to 466 million by 2060, the level observed in the 1980s. However, migration levels have a limited effect on changing the EU's age structure, in part because migrants tend to settle for the long term and to age just as the native population does. As such, irrespective of various levels of immigration, the findings of this report show an almost inevitable trend towards continued demographic ageing in the EU.

While a high volume of immigration would increase the overall size of the EU labour force, it would have a limited impact on the proportion Greater labour force participation has more impact on alleviating pressure from ageing than either fertility or migration

of workers to non-workers in the long-run. If higher immigration volumes were to coincide with deteriorating economic integration of migrants, it would actually result in a labour force situation that is worse than with medium or low volumes of immigration, which highlights the importance of effective efforts for economic integration.

## Westward movement inside the EU has substantial impacts on the population sizes of Member States

In recent decades, intra-EU mobility – the free movement between EU Member States – has facilitated population changes within the EU. Over the past 25 years, some of the Eastern European Member States have lost a large share of their population through a combination of low fertility and, most notably, sizeable emigration.



Dramatically, Bulgaria and the Baltic States lost between 16% and 26%.

Intra-EU mobility has the potential to produce large population shifts within the EU over time. If the movements of recent years persist as they have, the population of Romania would reduce from 19.9 million in 2015 to 13.8 million by 2060 (-30% of the population). Conversely, the losses would be less than half without intra-EU mobility (only -14%). The receiving Member States rely on these flows to help compensate for their own ageing populations, but the effect on their total populations is more limited because they are generally more populous.

Pre-existing economic disparities between Member States have encouraged many citizens to search for work in places other than their country of origin.

These developments have likely been to the economic benefit of the union as a whole, but not necessarily for all sending Member States. This contributes to slowing the convergence between Member States, and impacts areas such as infrastructure, education and even population ageing. This in turn has implications for the goals of economic development and Cohesion Policy, in particular when the movement is disproportionately highly skilled workers educated in the sending Member States.

Differences in wages and living standards continue to drive westward migration within the EU. Targeting economic inequality between Member States can encourage greater cohesion and integration and can help those Member States facing disproportionate population decline, a loss of working-age population, brain drain and more pronounced population ageing. Policies should address practical, labour-force-oriented skills and try to reverse the education selectivity of emigration by offering competitive employment opportunities to the highly skilled and possibly facilitating return migration of some of the talent that has left.

# Losing large numbers of highly skilled workers leads to lower productive potential and accelerated population ageing

The loss of talent to comparatively higher-income countries continues to confront some societies within the EU, and many others around the globe. This has demographic implications, whereby sending countries find themselves with a smaller and less-educated workforce. Such changes would coincide with a more rapidly ageing population because emigrants tend to be early-career adults. The high emigration of talent may also negatively impact innovation and economic growth.

As an illustrative example of how high emigration impacts demographics, we use a hypothetical case of the EU falling far behind in future global

competition. By simply extending Spain's financial crisis emigration rates into the future for the EU as a whole, we can see how fast high emigration depletes the working-age population of the EU – 50% by 2050 in this hypothetical case. While not a scenario to be viewed as a likely future for the EU as a whole, it helps demonstrate what some countries are facing and how the currently observed pattern of net migration inflows should not be automatically assumed to continue in the long term.

The question of high emigration by educated citizens, or 'brain drain', highlights the interconnectedness between global migration flows and local demographics. Therefore, to understand the context of the EU's future population, it is also necessary to look beyond the borders of the EU. Neighbouring regions such as Africa and Western Asia face very different demographic and migratory trends.

Actual realised migration to the EU will, in part, depend on its attractiveness as a destination – that is, the pull factors created by Member States. At the same time, socio-economic development in third countries may also increase the propensity to undertake migration journeys. Creating a system which does not undermine the development of human capital in countries of origin by making it harder for third countries to retain their highest-skilled workers is one of many dilemmas.

### Pressure from continued population growth in Africa and Western Asia can lead to an increase in push factors for migration

Africa's population is projected to increase by a factor of two to three over the coming decades, or possibly even more in the event of stalled socio-economic development. In addition, population growth in Western Asia will also be significant. For example, the population of Afghanistan is likely to triple and that of Pakistan to almost double. Such massive

projected population increases require consideration of the future job opportunities and economic growth.

The peace and stability necessary to facilitate such opportunities may also be challenged by population growth. These challenges can contribute to creating push factors for migration, that is, conditions that drive people to emigrate from their home countries. Conflict and insecurity are central push factors. Emigration is also linked to people deciding to migrate because of a lack of opportunities to thrive in their own country, for instance due to high youth unemployment and too few appropriate jobs.

Similarly, climate change can influence migration by affecting other push factors of migration such as political and economic conditions. For example, climate change can be a possible trigger of conflict, which in turn would lead to migration. When direct climate-change-related migration does occur, we find that it tends to be mostly intra-regional.

Regardless of changes in the size of the labour force, the human capital of future workers in the EU will be higher than it is today

This is in line with the fact that intra-regional migration, for example within Africa, makes up by far the largest share of migration globally.

The prospect of climate change and the expected population growth in Africa and Western Asia are likely to present important challenges. Thus, pursuing policies that enhance general resilience and local employment opportunities and foster stability and security are critical to building sustainable alternatives to migration in the countries of origin.

### Girls' education matters greatly for the future of population growth in Africa

While Africa and Western Asia are facing high population growth, many regions of the world have progressed towards late stages of the demographic transition with low rates of both mortality and fertility, notably East Asia, North America and Europe. During the second half of the century, world population may even eventually peak and start to reduce slightly, depending largely on how fast fertility levels in Africa fall to moderate levels.

Rapid population growth creates an urgent need for expanding education in Africa. Education expansion must keep pace with the pressure coming from rapid population growth, as it holds the key to accelerating the demographic transition and bringing development successes within reach. Achieving such goals depends, in particular, on giving girls access to education, as education and family planning are closely intertwined. Education broadens horizons and helps bring fertility into the realm of conscious choice for both women and men. Evidence from educational subpopulations within countries indicates that higher living standards and decisions for moderate fertility levels accompany higher education and the associated wider range of life choices.



Demographic changes are long term and occur at a steady and predictable pace. This provides us with a unique opportunity for foresight because it enables us to study how certain trends are likely to impact the future populations of EU Member States and the world. In this way, the scenarios examined in this report help to enable evidence-based planning for the future.

# DEMOGRAPHIC SCENARIOS FOR THE EU MIGRATION, POPULATION AND EDUCATION KEY MESSAGES

### The share of the population over age 65 is bound to increase

age 65+ 1980 13% 466 million

19% 509 million 32% 521 million

life expectancy in the EU today

A *longer active life* can help to population ageing



How can we avoid overburdening our social system with population ageing?

increase migration?

29%

no migration 2060 34% 467 million

increase fertility? no migration, +25% birth rate 30%

will not change the pace of population ageing significantly by 2060



632 million

Population ageing and a smaller labour force means that European workers will need to support more dependents in the future

### The EU's future labour force will be smaller and better educated

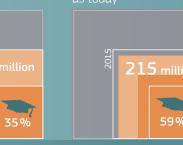


Increasing labour force participation is the most effective way to cope with population ageing

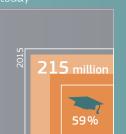


2060

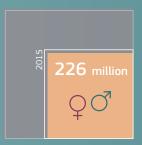
**2060** if trends continue, *labour force participation rate* as today



A smaller, better-educated labour force may prove to be *more adaptable* to the changing nature of work,



2060 if men and women equally participated



*if participation rate* as



lowest ratio



Migration increases the EU's total labour force size, but has a limited effect on the ratio of dependents to workers



2060 if trends



and *higher* integration



double migration

Even *doubling migration has little effect* compared as if immigrants were better integrated and participated

108

133

126

127

### The movement of workers towards wealthier EU states speeds up ageing and population decline in eastern Member States

In 2015, 54% of EU-28 population lived in western Member States. If trends continue by 2060 that share will be 59%

### **2060** if intra-EU mobility



In 2015, the share of *people* aged 65+ was the same in both country groups, but it will grow faster in the eastern Member States by 2060



in **eastern countries** 

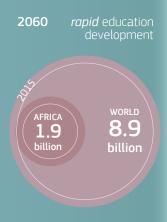
35 %

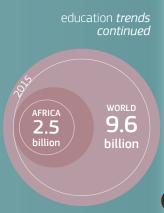


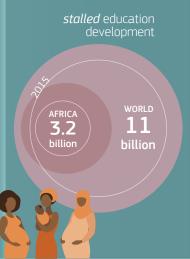
Girls' education matters greatly for the future of world population growth

If trends continue, by 2060 the world population will be **2.3** billion larger than today, with Africa contributing **57** % (1.3 billion) of this growth

AFRICA 1.2 WORLD 7.3 billion







The education of *girls* has the strongest and most consistent connection to *moderate fertility rates* 

Total fertility rate - number of children per woman in Africa

2015

2060 rapid education

4.7 A plated of development

continued \_\_\_\_\_2.26

education *trends* 

stalled education development

Women with less than primary education in Africa

44 %

0 %

10 %

37 %



