

# Mitigating the labour market consequences of population ageing in the EU\*

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*L'invecchiamento della popolazione è inevitabile, ma le sue conseguenze sulle futura forza lavoro dell'Unione europea, fino al 2060, potrebbero essere notevolmente attenuate se le donne e gli immigrati fossero più presenti nel mercato del lavoro (raggiungendo, rispettivamente, gli stessi livelli degli uomini e dei nativi) e se aumentasse l'istruzione della popolazione (dato che la partecipazione lavorativa aumenta con il crescere dell'istruzione). Utilizzando metodi di microsimulazione, Guillame Marois, Patrick Sabourin e Alain Bélanger dimostrano che, nello scenario ottimale, in cui tutti questi sviluppi favorevoli sono considerati congiuntamente, il futuro economico dell'EU-28 non sembra così cupo. Resta da vedere, ovviamente, se tutto questo potenziale riuscirà ad esplicarsi.*

## Background

Following several decades of low fertility, the working-age population is or will soon be shrinking in many European countries, while the number of older adults will increase. Population ageing is unavoidable in Europe, but it need not affect, or only marginally, the size of its labour force: reducing differentials in labour force participation and educational attainment can have a very large impact, even greater than, for instance, immigration or population ageing.

## Objectives

In a recent paper (Marois, Sabourin, and Bélanger 2019a), we assessed the impact of different policy-oriented scenarios on the future labour force of the European Union Member States up to 2060. More precisely, in addition to a reference scenario assuming the simple continuation of past trends, we constructed four alternative scenarios with the following characteristics:

1. *Gender equality in labour force participation*, where women progressively increase

- their activity rates until, by 2050, they are as high as those of men living in the same country and having the same educational attainment;
2. *Immigrant equality in labour force participation*, which assumes a convergence of labour force participation between immigrants and natives with a similar age-sex-education profile by 2050. This scenario shows the possible impact of efficient policies focused on better economic integration of immigrants, such as removing barriers to employment;
  3. *Education equality*, which removes the disadvantage in educational achievement for children of low-educated mothers and those with an immigrant background. Since education is a major determinant of labour force participation, this scenario reveals the strongest possible effect of targeted investments in education aimed at eliminating the barriers to educational attainment of the most vulnerable children;
  4. *Super equality*, which combines the assumptions on inequality reductions of the three previous scenarios.

We constructed these alternative scenarios using CEPAM-Mic (Bélanger et al. 2019; Marois, Sabourin, and Bélanger 2019b, 2019c), a sophisticated microsimulation model developed for the Center of Expertise on Population and Migration (CEPAM)<sup>1</sup>. CEPAM-Mic can be used to project the population of EU28 member countries while controlling for as many as 13 different socio-economic and ethno-cultural dimensions, and to create scenarios combining different hypotheses on the future evolution of the components of population change. All scenarios share the same basic assumptions for fertility, mortality, and domestic migration (see below).

### **Projection assumptions**

Age-, education-, and country-specific fertility rates follow the trends predicted by experts in the field (Basten, Sobotka, and Zeman 2014), and reported in Lutz et al (2018). For the whole EU28, the total fertility rate estimated from this model is projected to increase slightly from 1.64 in 2015 to 1.78 in 2060.

Mortality rates by age, sex and educational attainment are taken from Lutz et al. (2018). Future trends for these rates combine statistical models with expert judgement (Caselli et al. 2014). Continuous improvement in life expectancy is assumed – exceeding 90 years in most European countries by 2060 – with long-term regional convergence.

Migration assumptions are those used in Lutz et al. (2019). For domestic migration and emigration, trends from recent years are assumed to remain constant. The same goes for the number of international immigrants (about 2 million annually for the whole EU) and their regional distribution, but in this case a correction was made to allow for the abnormally high immigration inflows resulting from the recent refugee crisis.

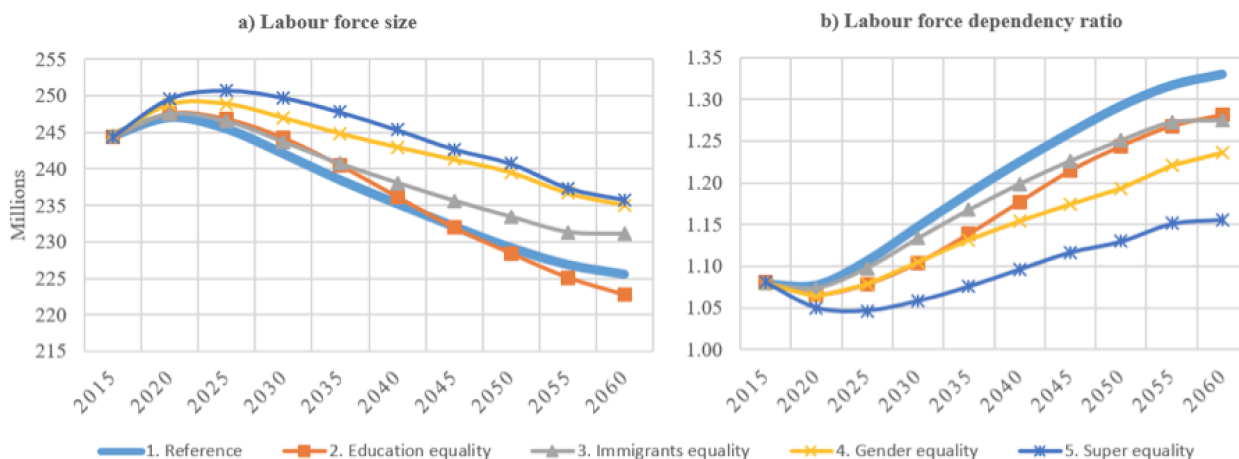
Regarding educational attainment, the development of postsecondary education is assumed to continue. The *Gender equality* and *Immigrant equality* in labour force participation scenarios assume that differentials across sociocultural groups remain, while in the last two scenarios, *Education equality* and *Super equality* (i.e. with more rapid progress among the initially most disadvantaged groups) they progressively disappear.

Constant entry and exit rates by age, country, and education are used for future labour force participation. This results in increasing participation rates for women and older adults in most countries. Country- and sex-specific differentials for immigrants by duration of stay and age at arrival are then applied, but are progressively removed in the *Immigrant equality* scenario.

## **Results**

Under the reference scenario, the labour force of the European Union is expected to decline by about 19 million by 2060, as shown in Figure 1a, falling from about 244.6 million workers in 2015 to 225.6 million in 2060. As the inactive population will grow because of increasing life expectancy and the entry into retirement of the baby-boom generation, the labour force dependency ratio (LFDR) – the ratio of the inactive (including children and older adults) to the active population – is projected to increase from about 1.08 in 2015 to 1.33 in 2060 (figure 1b). This scenario is similar to other labour force projections (Loichinger 2015; European Commission and Economic Policy Committee 2017).

**Figure 1 – Projected labour force size and labour force dependency ratio (LFDR) of the European Union under five scenarios, 2015-2060**



Source: Marois, Sabourin and Bélanger (2019a)

The gender equality scenario yields a large positive impact on both the labour force size and the labour force dependency ratio. If the participation rates of women gradually reached those of men by 2050, the expected decline in the labour force would be reduced by about 50% compared to the reference scenario.

Removing inequalities in labour force participation for immigrants also yields a sizeable effect. Compared to the reference scenario, the expected decline in the labour force by 2060 would be reduced by 29%, (about 231 million workers vs. 225.6 million). In addition to increasing the number of workers, turning inactive immigrants into active ones, as we do in this scenario, reduces the increase in the LFDR by 22%, to 1.27 in 2060 vs. 1.33 in the reference scenario.

Removing inequalities in education has a smaller impact on the labour force size: although an increase in education positively affects participation rates, future cohorts become smaller, because more educated women also tend to have fewer children. The positive impact of this scenario is more apparent on the labour force dependency ratio (LFDR), which would increase only to 1.28 vs 1.33 under the reference scenario. In addition, since education is highly correlated with productivity, the education equality scenario could markedly improve the general economic situation of the EU (not shown here). Indeed, this scenario yields a sharp increase of 61% in the number of highly educated workers, compared to only 24% in the reference scenario, thus significantly changing the educational profile of the future labour force.

### The best that we can hope...

Finally, combining the positive assumptions of the three previous “what-ifs” (*Super equality* scenario) results in a labour force of about 236 million in 2060, which is only 4% lower than the current (2015) size. In 2060, the labour force would be similar in size to that of 2008. Although this scenario cannot prevent the expected increase in the LFDR, it would significantly reduce the pace of its growth, with a ratio of 1.16 in 2060, only 0.08 higher than that observed in 2015. Two-thirds of the impact of population ageing would thus be offset (compared to the reference scenario), in addition to preventing a significant labour force decline.

Although population ageing is an outcome largely driven by past demographic behaviours, this research shows that its broad consequences, in terms of labour force size and labour force dependency ratios are not set in stone.

\*"Articolo presente anche sul sito [www.niussp.org](http://www.niussp.org)"

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