

**Demographic ageing, labour-employment prospects and migration in the EU  
with an emphasis on the Southern European countries**

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**ABSTRACT**

*Introduction*

In the years to come, all EU countries are expected to face a shrinking and ageing working-age population, with wide-ranging social and economic implications. In particular, questions relating to demographic shifts and their impact on labour market gain increasing attention, both at national and at EU level as well. Despite common assumption a decrease in the number of individuals at working age is not necessarily associated with a shrinking labour force. Upward trends in participation rates, especially among women and specific age-groups, and migratory inflows may, at least partially, off-set the bearing of demographic ageing on labour and employment prospects. In fact, the above mentioned prospects depend not only on the magnitude of demographic factors (such as the age and sex composition of the working-age population and the migratory trends) but also on the possibility of further increase in current participation and employment rates<sup>1</sup>. Since differences in all those elements are essential across Europe, different countries have different margins of manoeuvre against the anticipated trends.

Despite their fast ageing populations, the context is not that discouraging for the countries of Southern Europe, where participation and employment rates in all age

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<sup>1</sup> Participation rate is defined as the ratio of employed and unemployed persons to population at working age. Employment rate is defined as the ratio of employed persons to population at working age.

groups are still lagging behind the EU average. An activation of labour and employment reserves, especially among women and elder workers, coupled with the recent remarkable changes in migratory balances appear as major potential, which can be tapped to increase labour and employment prospects during the next decades.

### *Data and method*

This paper aims to examine the potential volume of both labour force and employed population in selected European countries. Throughout this analysis employment is examined uniquely from the supply point of view. Broader than the analysis of the labour force trends, our approach aims to investigate the employment potential of the non-employed, which includes both the economically inactive and the unemployed. Such an approach innovates by taking into account the unemployed persons and therefore provides a better analysis of employment reserves for the years to come. The employment potential of the non-employed is subject to four discrete factors: *(i)* the overall employment level, *(ii)* the age and sex composition of the working-age population, *(iii)* the employment rates by age and sex and *(iv)* the rate of job creation, a factor that is not analysed in this paper since we focus on the supply side. The paper emphasizes on the impact of international migration on the size and the age structure of the working-age population and examines the over time variations of employment reserves.

The first stage of our analysis is focused on the evaluation of the size and variations of a theoretical “maximum” employment, for each of the selected countries. The estimation of maximum employment results from *(a)* a maximum employment rates profile which is common to all countries *(b)* the age and sex structure of the working-age population of each country. The maximum employment can be estimated by applying an empirical upper limit of the employment rate (by age and sex) on the working-age population projections. In other words, for every future working age population of a given age and sex structure there is only one maximum employment level.

At a second stage, we set an objective about future annual employment growth (i.e. 0.5%, 1% and 1.5%). These objectives are applied on the most recent employment level (observed in each country) in order to estimate different scenarios about future employment levels. For each of the concerned countries, we attempt to evaluate a critical year/period beyond which labour-employment reserves will not allow any further increase in employment level. This represents a “tight” labour market where employment level –calculated from specific employment growth objectives- exceeds maximum employment level<sup>2</sup>. The timing of such a condition is affected by employment growth objectives and also by different scenarios about future migration flows.

For the estimation of the population at working age we relied on the 2004 Eurostat’s population projections, using two different scenarios: the “baseline” and the “zero

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<sup>2</sup> For instance, employment growth needed to compensate for the future increase in the ratio between pensioners and employed persons could be such an objective. In this case, the comparison between the maximum employment level (from the supply side) and the necessary employment level could inform us about the chances of the realisation of this objective.

migration” scenario. We can therefore isolate the role of international migration on the evolution of working-age population size and structure. Thereafter, using the LFS data, maximum employment rates profile by age and sex are estimated, through the maximum levels observed in the EU (mainly the EU-15) countries in the period 1985-2004. This provides an empirical upper limit by age and sex. Working-age population prospects by age and sex are combined with the assessment of maximum employment rates in order to estimate the theoretical maximum employment levels over the coming years. In a next step, those levels are compared with various future objectives in terms of annual employment growth, namely 0.5%, 1%, 1.5% and 2%, applied to the overall employment levels, as observed in the year 2004. The comparison between the two distinct employment levels, namely the maximum employment and the employment based on fixed objectives, allows investigating the timing of a tight labour market which derives from the expected demographic shifts and the gradual convergence of employment rates towards the maximum levels. It also allows assessing to what extent migration could modify the timing of the aforementioned development as well as to investigate diversities across countries. Obviously, the greater the divergence between real employment rates observed in 2004 from the maximum employment rates, the longer the period till the emergence of tight labour market conditions. By contrast, as employment rates converge towards the maximum level, any increase in employment becomes more and more dependant on the variations of the volume of each age group of the working-age population.

### *Results*

Our findings indicate that in the EU-15 as a whole, the employment potential of the non-employed could lead, in the years to come, to an annual employment growth of 1.5%, 1% or 0.5% up to around 2015, 2020 and 2030 respectively. Sooner or later, the demographic shifts, as dictated by the ageing process, imply a weak employment growth. In fact, the higher the objectives for a future employment growth, the lower the perspectives for a long term increase in employment, since the rise in the working age population comes to a halt and the employment rates converge towards the maximum levels.

Differences across countries appear to be rather pronounced. For instance Denmark faces limited perspectives of employment growth (from the supply point of view) rather soon since the employment potential of the non-employed permits an annual employment growth lower than 0.5% up to the early 2010s. For countries with already high employment rates, such as the Netherlands, Sweden, Austria, the United Kingdom, Germany, Finland and to some extent Portugal there is a relatively short period till tight market conditions. In the rest of the countries, this period is quite longer. Particularly, in Greece, Italy and Spain labour-employment reserves could be combined with an annual employment growth of 2% over the next 20 years. This time length becomes longer (10 or 20 years more) if a lower employment objective is adopted (an annual growth of 1% or 0.5% respectively) and becomes clearly shorter under the hypothesis of “zero migration” population scenario.

### *Discussion and Conclusion*

In an ageing context, future employment growth will be more closely connected to the increase in employment rates by age and sex as well as to migration trends than it has been in the past. During the last decades, the rising working age population coupled

with the socio-economic organisation affecting life course patterns have led to an over-representation of the intermediate age group (30-49 years) in labour market and employment. In the coming decades, demographic shifts will claim for a further increase in the participation of women, young and elder persons (50-64 years) in the labour market, so as to respond to an eventual increase in the rate of jobs creation. Future activation of labour and employment reserves will claim for policy adjustments regarding the link between education and labour market, the reconciliation between work and family and the further implementation of active ageing. It also claims for most appropriate migration policies aiming to promote the socio-economic integration of migrants in the host countries.