



**“REGIONAL DISPARITIES, AGEING AND TERRITORIAL
ASPECTS OF EMPLOYMENT”**

IZABELA STYCZYŃSKA AND CONSTANTIN ZAMAN*

* CASE-Center for Social and Economic Research.



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I. Introduction

Ageing, the slow down in population growth, and the decreasing growth rates of the working age population are the current main demographic challenges facing Europe, all of which may reduce its future potential for economic growth. Ageing is the result of falling fertility rates and increased life expectancy; it is a factor which strongly influences the size and composition of labour markets. Although ageing is a general European characteristic, there are significant regional differences. Many countries have both growing and declining regions within their borders. Most urban regions continue to grow to the detriment of rural regions. As a consequence, the potential for economic growth differs across EU regions despite the observed decline of economic inequalities between old member states (OMS) and new member states (NMS). This is because the NMS regions are catching up in terms of income and productivity but not in terms of technology, knowledge-intensity, and innovation.

Regional disparities within most EU countries are even increasing in some cases – a pattern determined by two countervailing trends: convergence and agglomeration. The agglomeration of economic activities in few locations can arise from labour market pooling, input sharing, and knowledge spill overs, as well as from plausible mega-trends such as energy transition, climate change, demographic changes and the move towards a knowledge-based society, knowledge diffusion, and growing use of ICT. Agglomeration allows for cost minimization by providing a pool of multifarious labour, input suppliers and access to know-how. However, at the same time, it induces regional disparities in terms of wages, productivity and quality of life. Although many of these disparities have diminished over the past decade, a wide gap between less developed and highly developed EU regions still persists.

In this context, and given the numerous environment-related requirements of future economic activity, the EU needs to find new ways of producing, consuming, and living according to the principles of socio-ecological transition (SET). The SET is characterized by two categories of mega-trends: the first refers to natural conditions (energy transition, increasing challenges to resource security and increasing climate change impact), and the second to societal megatrends (demographic transition, shifting economic and political centres of gravity, growing ICT use, and knowledge-spillover).

The analysis provided within NEUJOBS project approaches this regional dimension by bringing spatial considerations into the research and focusing on regional differences, as well as the urban-rural divide and their interaction with the SET and the demographic transition. The aim of this paper is to summarize main results and policy recommendations of this study.

II. Evidence and analysis

Main findings:

➤ Economic development:

- The gap between NMS and OMS in terms of economic development is declining, but regional disparities still persist. Although the NMS regions are catching up with the OMS ones in terms of income and productivity, a wide gap persists in terms of technology, knowledge-intensity, and innovation.
- With respect to the sectoral structure, the tertiarisation trend has continued but with significant regional deviations. The relative weight of services has significantly increased in LMA (large metropolitan areas) to the detriment of others, especially in the OMS. Inversely, the weight of industry in LMA has declined, but in the NMS group, there is no general “de-metropolisation” of industry. Regional specialisation in industry tends to rise in both OMS and NMS.
- The shift of employment towards knowledge-intensive activities has been faster in the OMS than in the NMS, but the gap is narrowing. This increase is almost uniform in all types of regions.

➤ Urbanisation and demography:

- The EU regions are experiencing a polarization pattern, with a large share of economic activities concentrated in metropolitan areas, which, in turn, induces an increasing agglomeration phenomenon.
- Agglomeration is mainly being caused by labour market pooling and demographic changes; energy transition, knowledge diffusion and the economic shift of gravity have an ambiguous effect on agglomeration.
- The highest agglomeration is in the smallest regions (capital cities), showing a concentration tendency and a core-periphery pattern.
- Significant differences exist in terms of agglomeration between OMS and NMS: a) the core-periphery pattern is more important in NMS; b) the 2008 crisis accelerated agglomeration in OMS but has had no effect in NMS; c) a large share of NMS regions have a comparable and relatively low level of spatial concentration of economic activity, while in the OMS this is more diversified.

➤ Population ageing:

Regional differences exist with respect to population ageing. Consequently:

- The WAP (working age population) is growing faster in predominantly urban regions where migration (especially people aged 15-24) is the main source of WAP growth.
- We therefore observe a phenomenon of urbanization of youth (15-40) and peri- or counter-urbanization of higher age groups.

- The cohort turnover effect is negative for young ages, mostly in predominantly urban regions.
- Labour market and employment:
 - Participation rates are lower in the NMS than in the OMS, but in the OMS the average working time is shorter.
 - Both participation and employment rates are relatively uniform in all OMS regions. In the NMS, significant spatial disparities are observed, with higher employment rates in LMAs.
 - There is no sharp urban-rural division with respect to unemployment.
 - At the European level, we identify a belt of very dynamic job creating regions that starts around London, passes through the Ruhr and Stuttgart areas, and then ends in the Northern part of Italy. In all of these regions, there is a strong complementarity between high job growth and low unemployment rates; this implies that the former traditional industrial regions of Europe are still very dynamic.

With EU enlargement, the development gap between Eastern and Western countries has narrowed as a result of the catching up process of Eastern member states. However, the disparities between the regions within the EU27 have not diminished and in some cases they are even larger today. The uneven development of regions is the consequence of a combination of physical, economic and social factors. The first category mainly refers to the accessibility of a specific region in terms of transport infrastructure. The economic factors refer to an unbalanced distribution of investment and economic activities. The social elements are related to regional differences in terms of labour force skills.

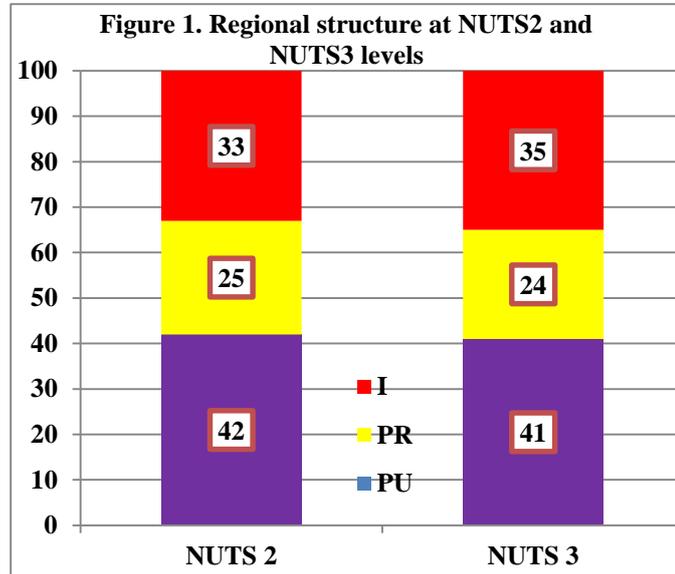
As a result, the EU regions have followed a pattern determined by two countervailing trends: convergence and agglomeration. These have resulted in a polarization process with metropolitan areas concentrating a large share of economic activities. An increasing agglomeration phenomenon is therefore observed in the regions where such metropolitan areas exist. While polarization has a positive impact on businesses and industries, it also increases societal costs and adds more pressure on the environment. At the same time, we are witnessing the depopulation of less developed regions, which are becoming increasingly vulnerable from an economic point of view.

Although agglomeration has been fairly stable both in New and Old Member States over the last decade at all NUTS2 levels, significant differences exist in terms of agglomeration distribution between the two groups of countries. The index of agglomeration is higher in the EU15 (OMS) than in the EU12 (NMS) countries and there is no evidence of convergence between the two groups. The highest agglomeration is observed in the smallest regions (mainly capital cities), which shows a concentration tendency as well as a core-periphery pattern. The two phenomena are more important in Eastern Europe.

The factors significantly influencing agglomeration are mainly related to labour market pooling and demographic changes. Other transformations, such as the energy transition (proxy for SET), knowledge diffusion, or the economic gravity shift have had an

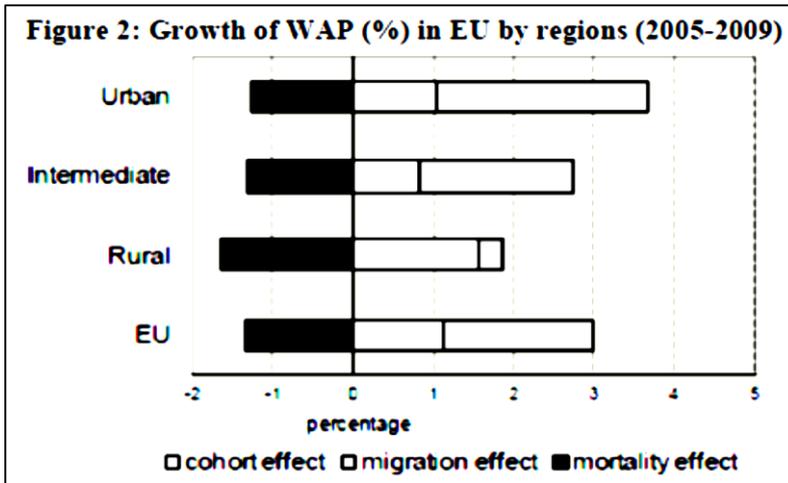
ambiguous effect and depend mainly on the level of development of a country/region. The 2008 economic crisis accelerated agglomeration in OMS but had no effect in the new ones.

Currently, about one quarter of the EU population lives in Predominantly Rural (PR) regions, while more than 40% live in Predominantly Urban (PU) regions (see Figure 1). The remaining population resides in Intermediate (I) regions. In 2010, the highest share of urban population was recorded in the Netherlands (87.4%), Belgium (79.8%) and the UK (79.3%), while the highest proportion of rural populations was found in Romania (89.5%), Slovakia (88.5%), and Denmark (69.6%).



This urbanization process has significant social and economic implications: historically, it has been an integral part of the process of economic development. While agglomeration cannot explain the cyclical growth patterns at the regional level, it is helpful in predicting long-term effects. Currently, a relatively large proportion of regions in the NMS have a comparable and relatively low level of spatial concentration of economic activity, while in the OMS, this spatial location of economic activity is more diversified. On the other hand, these regional characteristics induce a spatial hierarchy in terms of income, technology, knowledge-intensity and innovation, with large metropolitan areas at the top and rural regions at the bottom. The NMS regions are catching up in terms of income and productivity but the wide gap between the EU12 and EU15 regarding technology, knowledge-intensity and innovation is hardly narrowing.

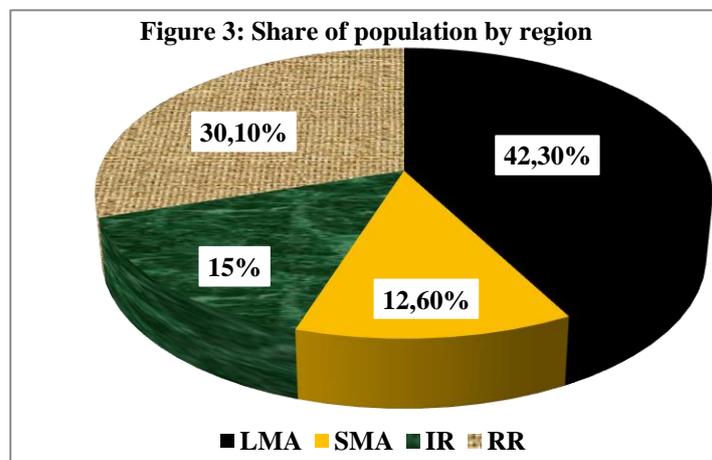
Population ageing, which is the joint effect of falling fertility rates and increased life expectancy, has a strong impact on the size and composition of European labour markets through the slowing down of growth or even decline of working age population, which will certainly affect the future potential for economic growth. Although ageing is a common phenomenon across all EU countries, there are regional differences in this respect (see Figure 2). Many countries record both growing and declining regions in terms of WAP, as it grows faster in predominantly urban regions than in others.



Changes in the size of the WAP are caused by net migration (both internal and international), cohort turnover, and mortality. In the majority of urban regions, migration (especially people aged 15-24) is the main source of this growth, which suggests that young people are moving from rural to

urban regions and that young immigrants prefer urban regions. In most of these urban regions, we observe a small inflow of middle-aged external migrants, a small outflow of middle-aged internal migrants, and a large outflow of older internal migrants. At the same time, intermediate and rural regions have a positive migration inflow of older internal migrants.

With respect to the regional level of competitiveness, the majority of the urban population live in a competitive urban region and only 15% live in underperforming rural ones. This pattern has only slightly changed over the last two decades. In 2009, the largest share of the EU population lived in large metropolitan areas (LMA) and the lowest proportion in rural regions (RR); the rest was present either in small metropolitan areas (SMA) or intermediate regions (IR) – see Figure 3.



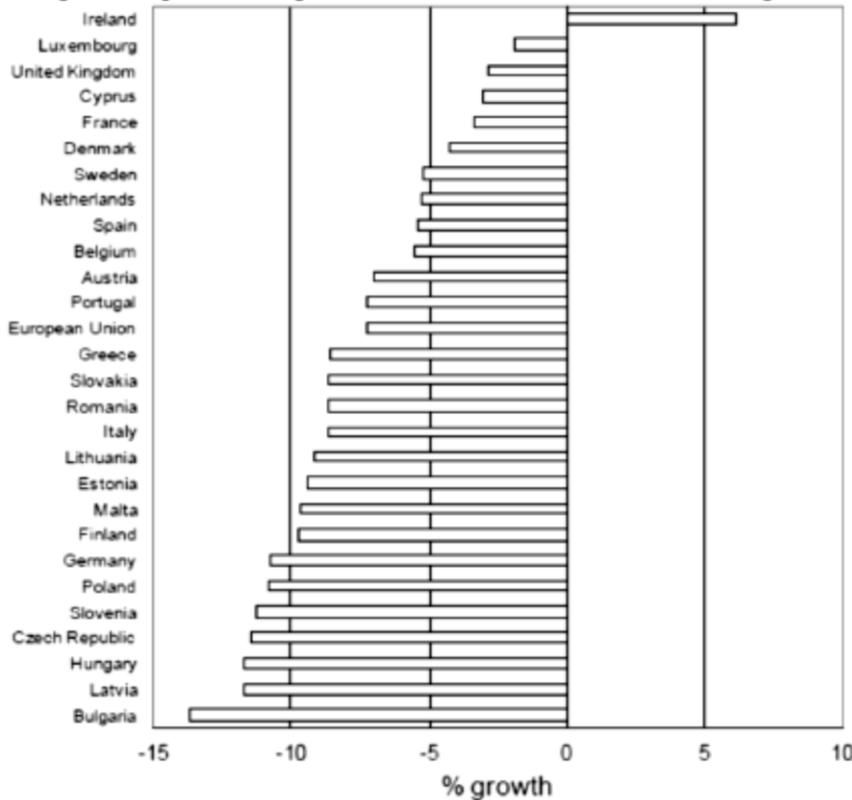
A high share of 15-34 year olds live in urban areas and a large proportion of young and middle-aged groups live in intermediate regions. Thus we are observing the urbanization of youth (15-40) and the peri- or counter-urbanization of

higher age groups. The only exception is Italy, where peri-urbanization is observed for all age groups. It follows that urban-competitive regions are more attractive for migrants than the urban-underperforming ones and therefore the latter are becoming more vulnerable as a consequence of ageing.

The cohort turnover effect is negative for young ages, mostly in predominantly urban regions. As the size of generations that will leave the labour force in the coming 15 years exceeds the size of young generations entering the labour force, the cohort turnover will start to decline in practically all countries without migration. Therefore the regions where migration has been an important source of WAP growth will be less sensitive to the effect of population ageing as compared to those where the negative effect of cohort turnover

on the working age population has not been compensated for by an increase in migration. As a result, competitive urban regions may be able to maintain their economic growth in spite of population ageing. This would widen the differences between urban-competitive regions and underperforming regions. Migration is important for regional economic development because the analysis shows that the regions experiencing net outmigration are recording negative economic growth (Bulgaria, for example); at the same time, regions where immigration is important record the highest growth rates of output (such as Spain or Luxembourg). Without migration, all EU countries, with the exception of Ireland, will record a large decline in their working age population by 2025 (Figure 4).

Figure 4: Expected WAP growth (%) between 2010 and 2025 without migration



The rate of labour market participation is much lower in NMS than in OMS (a 3.5 percentage point difference in 2009). In old member states, the average working time is shorter. Both participation and employment rates are relatively uniform across all OMS regions, while in the case of NMS countries, we observe significant spatial disparities, with much higher employment rates in large metropolitan areas than in the other types of

regions. This is due to lower unemployment and, more importantly, to a higher labour market participation in those metropolitan areas. With respect to unemployment, there is no sharp urban-rural division: relatively high unemployment rates are observed in both urban and rural regions.

Regarding the economic structure of employment, the long-standing trend of tertiarisation (shift in demand, production and employment from the goods producing sector to the services sector) has continued over the last 15 years with significant regional deviations. Germany is an exception, with technology-intensive manufacturing representing the core of the economy. While in the EU12 the share of services in total Gross Value Added has increased, in the EU15, we observe a stagnation of this indicator.

The relative weight of services follows a clear hierarchy, with a significant increase in large metropolitan areas and a less important increase in small metropolitan zones and intermediate and rural regions. This hierarchy is even more pronounced within the OMS.

Large metropolitan areas have therefore become service centres, particularly in the NMS. Inversely, the relative weight of industry in large metropolitan areas is much lower than in non-metropolitan regions, although in the NMS group there is no general “de-metropolisation” of industry. At the same time, the overall degree of regional specialisation in industry tends to rise in both old and new member states.

The shift in employment towards knowledge-intensive activities (high-tech industries and technology-based services) has been faster in the OMS than in the NMS, but recent trends show that the gap is narrowing. This increase is almost uniform across all types of regions, although the spatial hierarchy with large metropolitan areas at the top is more pronounced in the NMS.

The differences between Old and New Member States are summarized below:

Characteristic	OMS	NMS
Demography and labour market		
WAP growth: impact of mortality	Small: 1% over a five year period	High: between 2 and 3 percent
Migration: percentage of foreign-born population aged 25-39	High: from 12.8% in France to 54.3% in Luxembourg Migrants may therefore contribute significantly to the potential labour force (exception Finland)	Low The contribution of migrants to the potential labour force is low (exception Cyprus)
Employment rate (ER) Participation rate (PR) Regional difference in ER and PR	Increased from 67.5% in 1999 to 72% in 2009 Similar for various types of regions	Declined until 2004 then started to increase 3.5 pp lower than in OMS (2009) Significant spatial disparities, with ER in large metropolitan areas higher than in other regions
Economic trends		
Tertiarisation of economy: a) Share of services in total Gross Value Added (GVA) b) Spatial distribution of services sector	Increasing, to the detriment of industry (with the exception of Germany) Spatial hierarchy more pronounced than in the NMS: the gap between large and small metropolitan areas was 5.7% in 2008, almost twice as high as in NMS	Increasing, to the detriment of agriculture The role of large metropolitan areas as service centres is more important than in the OMS.
Share of Industry in GVA	Much lower in large metropolitan areas than in non-metropolitan regions: the difference increased	27% in 2008 (7 pp higher than in the OMS). No “de-metropolisation” of industry; on the contrary,

	from 3.2 pp in 1995 to 5.6 pp in 2008	the contribution of large metropolitan areas tends to grow
High-tech industries and technology-based services: a) Share of full-time employment b) Share of part-time workers	Increased from 4% in 1995 to 4.4% in 2001; has remained constant since then. 22.1% in 2010	Increasing, but still lower than in the OMS 30% in 2010
Patent applications by firms (per one million inhabitants)	12 times higher than in the NMS	
Agglomeration and urbanization		
Regional inequality	Poorest regions catching up, but richest areas also improved their relative income position	Regional inequality around the average income has increased.
Core-periphery pattern	Lower, with denser regions located in central parts of Western Europe	Stronger
Spatial location of economic activity	More diversified	Higher spatial location in few regions: core-periphery pattern
Agglomeration Impact on agglomeration of: a) R&D expenditures b) Shift to "green" energy c) Share of renewable energy in final consumption d) Life expectancy e) Internal regional migration f) Regional GDP/capita g) 2008 economic crisis	Higher than in NMS Distributed relatively more evenly Positive Positive Negative Negative Negative No impact Positive	Lower than in OMS Higher concentration Negative No impact Positive No impact No impact Positive No impact

III. Policy implications and recommendations

While the process of agglomeration is not necessarily bad, the polarization of regions leads to territorial imbalances and therefore to increasing regional disparities. The EU

cohesion policy therefore needs to be revised in order to counter-balance the long-term territorial impacts of polarization and to favour the optimal use of the economic potential of all regions in Europe such that all of them become socially, economically and environmentally sustainable. The objective of reducing the *inter-countries* gap between old and new member states in terms of economic development should be coupled with the goal of balancing the *intra-countries* regions and the *inter-regions* of Europe. Currently, all EU member states have regional disparities with the exception of France and Germany; territorial imbalances are multiple and diverse and therefore cannot be reduced to the differences between old and new member states. This situation is due to the concentration of economic activities, especially services, in large metropolitan areas to the detriment of other regions. However, in contrast to the predictions of many popular authors and some regional economists, the widespread and ever increasing use of the internet as a means of communication and data transfer does not lead to the dispersion of economic activities and the dissolution of urban agglomerations.

From the socio-ecological point of view, Europe is embarking on a new energy path, with energy prices rising and the dependency on fossil fuels increasing. As a result, the energy supply and demand will have to turn towards renewable energy sources and focus on more efficient uses of energy in the future. Recent analyses of the exposure to energy scarcity at the regional level conclude that the poorest regions in Europe have become even poorer due to the lower purchasing power standards. The main challenges from a policy point of view are how to mobilize the considerable potential for renewable energy sources in regions that lack the financial means to do so and how to coordinate a large set of policy instruments to enhance access to energy efficiency measures.

At the same time, all EU members face the challenges of climate change, increasing import dependence and higher energy prices. Regions reliant on energy intensive sectors (such as transport and heavy manufacturing) and regions that depend on distant markets could be more exposed to changing energy conditions. On the other hand, energy efficient regions can benefit from the strong role that innovation, modern technology and ICT will play in the adaptation and mitigation processes. This can create “win-win” situations, both economically and environmentally, in energy efficient regions. Some regions will potentially benefit from the production of renewable energies, including some rural and remote regions and coastal areas. Substantial disparities among regions are also observed in terms of modal splits in the transport sector and energy intensity, where the highest figures are recorded in countries with low GDP per capita. High energy prices also have significant welfare effects, in particular in low income households, for which energy related expenditure makes up a comparatively high share of their income. High energy prices might therefore reduce the purchasing power of the poorest households and regions with a low average income

Population ageing, one of the most important challenges for Europe, has direct implications for the size of the WAP and therefore the labour force. While migration can play a major role in alleviating labour shortages, it cannot fully compensate for the consequences of ageing and declining working age populations. The increase in the labour force participation, mainly of the elderly and females, represents a complementary solution but this is effective only if the EU economy creates sufficient jobs to absorb this additional supply of labour; the current high rates of unemployment reveal that for the



time being, the European economy needs to concentrate on creating work-places for jobless persons who are already participating in the labour market.

The level of fertility may be stimulated by family-friendly policies, such as subsidized day care or paid parental leave, but these policies will have effects on WAP growth only in the long run.

An increase in the retirement age, a policy already adopted by most EU countries, is probably the most effective measure under the current economic circumstances. However, two caveats should be considered when increasing the retirement age:

- a) Ensuring that there are sufficient work opportunities for those affected by this measure; otherwise the policy will end up as a shift from retirement status to unemployment status for most senior workers.
- b) Introducing flexibility in the retirement age by linking the age of retirement with:
 - i) life expectancy such that the retirement age can be easily adjusted to the increasing trends in life expectancy;
 - ii) standard contributory period such that people with long careers will not be disadvantaged.

In parallel, the European economy needs to improve its performance and therefore its labour productivity such that the gain in productivity is superior in absolute terms to the decline in the WAP.

Globalization, climate change, demographic trends (including ageing and migration) and technological changes, which offer both threats and opportunities, pose enormous challenges to European employment policy. The main consequence of these trends is the rise in the overall demand for skills in most sectors and occupations. As long as the supply does not follow demand for higher and new skills, the EU economy will continue to be confronted with relatively high rates of unemployment (especially among youth) and low salaries for those who are insufficiently qualified.

Rapid changes in the demand for skills are expected to persist in the future, which has important policy implications for the European labour market. Three main directions of policy responses can be identified for dealing with this skill bias:

- a) skills adaptability through continuous formal and on-the-job training in the case of low-skilled people already in the workforce;
- b) ex-ante skill formation in the process of education by favouring vocational rather than academic qualifications;
- c) better anticipation of skills demand and design of training programmes for meeting future skill needs.