

INTRODUCTION

by Beáta Farkas

This introduction of the monographic section outlines the main features of Central and Eastern European economies. It describes the achievements and vulnerabilities of the growth model of these countries, pointing out the challenges of demographic processes and of the upcoming industrial revolution, which can force a change in the current growth model. The studies of the monographic section, providing in-depth analyses on several aspects of the development of CEE economies, are also discussed.

Keywords: Central and Eastern Europe, growth models, convergence, Fourth Industrial Revolution.

La presente introduzione alla sezione monografica delinea le caratteristiche principali delle economie dei Paesi dell'Europa centrale e orientale. Descrive i successi e i punti di debolezza del modello di crescita di questi Paesi, evidenziando le sfide poste dai processi demografici e dalla futura rivoluzione industriale, sfide che possono portare a un cambiamento nell'attuale modello di crescita. Inoltre, vengono presentati brevemente gli studi inclusi nella sezione monografica, i quali conducono un'analisi approfondita su molteplici aspetti dello sviluppo delle economie dei Paesi dell'Europa centrale e orientale.

Parole chiave: Europa centrale e orientale, modelli di crescita, convergenza, Quarta rivoluzione industriale.

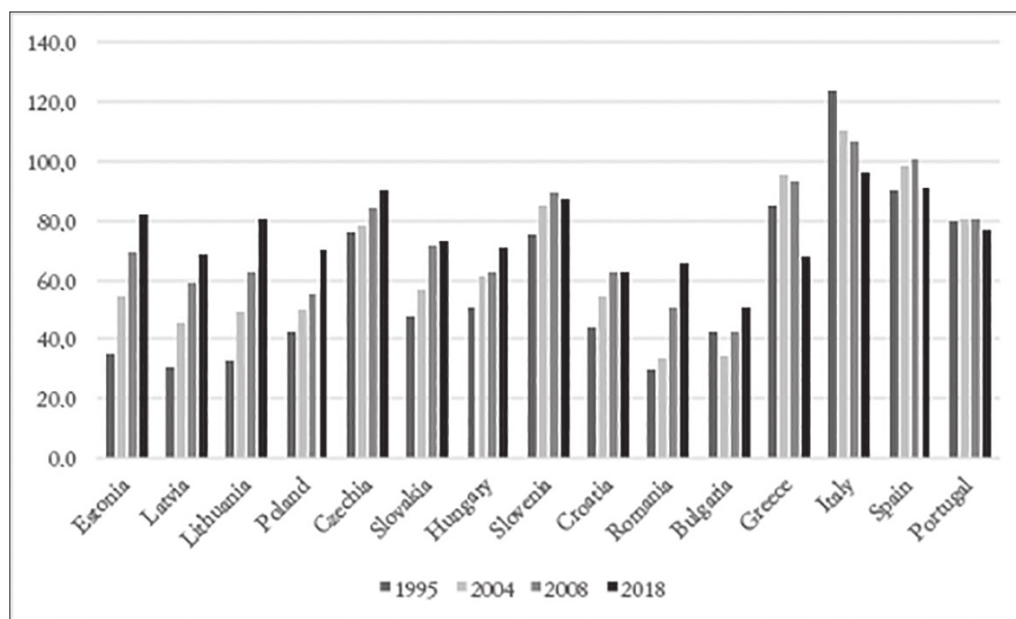
This year marks the 30th anniversary of the fall of communist regimes in the Central and Eastern European (CEE) countries. Although it is almost half a lifetime, the asymmetric knowledge within the EU has not changed much. People in CEE countries study and know more about “old” EU Member States than the other way round. Thus, it was a great pleasure that *Economia&Lavoro* offered the opportunity to introduce an overview of CEE economies. For four years, we have organised a conference series at the University of Szeged in cooperation with the European Association for Comparative Economic Studies (EACES). The topic of the 2019 conference was *Readiness for the Fourth Industrial Revolution in the EU*, which suggested the idea of collecting studies for *Economia&Lavoro*. Some partners of our cooperation network wrote papers providing a comprehensive overview of the achievements and challenges of the CEE economies.

The transformation of the CEE countries and their development path may be interesting for Italian readers. In the early 2000s, institutional analyses described the varieties of capitalism (e.g.: Amable, 2003; Sapir, 2006), and empirical investigations indicated that the institutional settings of Southern EU Member States create a distinct model of capitalism.

More recent data highlight that the models of core (Nordic, Anglo-Saxon, and Continental European) countries are much closer to each other than to the models of Mediterranean and CEE capitalism (Farkas, 2016; Rapacki, 2019). Comparative case studies show that Mediterranean and CEE countries share several similar features: less developed innovation systems and a lower quality of the governance compared with northern and north-western countries, substantial efficiency gaps between the enterprises taking part in foreign trade, and those not taking part in foreign trade, and between multinational companies and small and medium-sized enterprises (SMEs). These areas have an utmost importance in competitiveness and long-term economic growth (Farkas, 2016 and 2019).

Despite the similarities of their vulnerable features, the development trajectories of Mediterranean and CEE countries have differed since the 2008 global crisis. The pace of convergence varies across CEE countries, but the trend of convergence has not changed, while the four large Mediterranean countries (Italy, Greece, Spain, and Portugal) have diverged from the EU-28 average (figure 1).

Figure 1. GDP per capita as a percentage of EU-28 in purchasing power standards



Note: 1995: the transformation recession comes to an end; 2004: the Baltic States, the Visegrád countries (Czechia, Hungary, Poland, and Slovakia), and Slovenia join the EU; 2008: the crisis breaks out in the EU; and 2018: latest data available.

Source: Eurostat.

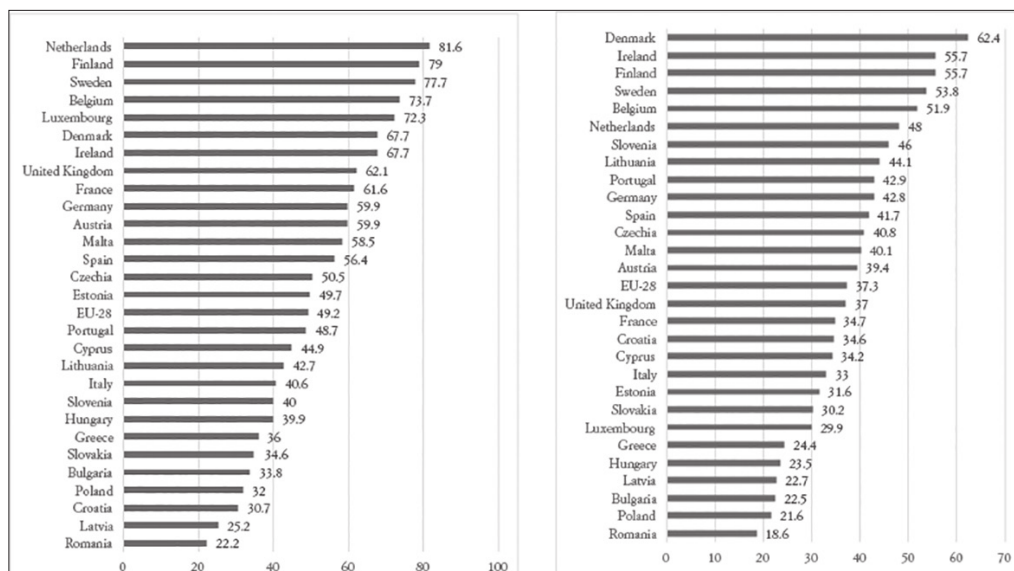
One of the reasons why CEE countries could overcome the effects of the global crisis is that, since their transformation, significant foreign direct investment (FDI) inflows have modernised their economies, and have been incorporated into global value chains. Nevertheless, there are substantial differences among them. The Baltic States suffered

a very deep recession during the crisis but, due to radical adjustment and austerity measures, their recovery was very quick. The Central European manufacturing core led by Germany protected the Visegrád countries to some extent, with the exception of Hungary, which had accumulated severe economic imbalances prior to the crisis (Farkas, 2018). Apart from Romania, the convergence of the south-eastern countries is less impressive.

On the one hand, the Central and Eastern European growth model based on FDI inflows and the attractiveness of cheap but relatively well-trained labour force turned out to be very successful. On the other hand, this model has limited convergence potential in the long term. Low labour costs can be maintained if the labour market is liberalised, and trade unions are weak. The activities carried out at foreign companies belong to the elements of lower added value of global value chains (manufacturing and typically assembly activities), while the company headquarters retain the elements of higher added value (e.g. research, design, marketing, and logistics). These factors allow for a relatively low level of investment in education and social services that limits the development of innovation and of a knowledge-based economy. These circumstances may perpetuate the current division of labour between core and CEE countries.

However, recent demographic processes challenge the CEE growth model. The population loss due to low fertility is enhanced by emigration. Despite the convergence, the wage differences between CEE countries and western countries remained considerable. When projecting the current demographic figures through the use of medium assumptions, the forecast shows that intra-EU mobility has the largest impact on population changes in the CEE Member States. In the Baltic and South-eastern EU Member States, there is a striking difference between the scenario based on the current migration rate, on the one hand, and the one based on no intra-EU mobility. For example, Romania is expected to lose 30% of its population between 2015 and 2060 in the intra-EU mobility scenario, and 14% in the scenario based on no intra-EU mobility. In the case of Poland, the difference is smaller between the scenarios, but is sizeable, approximately 10% with intra-EU mobility, and 5% with no intra-EU mobility (Lutz *et al.*, 2019, pp. 45-49). Furthermore, the forecast of the demographics-driven labour shortages in the EU suggests that the countries that are likely to experience severe supply-side constraints between 2020 and 2030 are nine CEE countries (Czechia, Lithuania, Bulgaria, Poland, Estonia, Slovenia, Hungary, Latvia, and Slovakia) and Germany (Streher and Leitner, 2019).

Recently, these demographic processes have already resulted in substantial wage growth across the CEE countries (Grieverson *et al.*, 2019). The new technologies (digitalisation, robotisation, etc.) may help to ease labour shortages and to increase productivity. The Fourth Industrial Revolution – as similar changes in history – can rearrange relationships within the EU economies. This perspective means an opportunity for faster catching-up in the less developed countries, and a threat of economic divergence at the same time. Based on the European Digital Transformation Scoreboard, the abilities of southern and eastern member countries seem to be weaker. The digital transformation enablers' index indicates that the gap between champions and laggards is large. The digital technology integration index is a narrower, more specialised indicator, which does not show such a clear north versus south and east division, as the digital transformation enablers' index does (figure 2). These differences require differentiated industrial policy at both the national and the EU level (Pelle and Somosi, 2018).

Figure 2. Digital enablers' factors and integration in the EU¹

Source: Probst *et al.* (2018, pp. 66-7).

All in all, the requirements of long-term convergence – such as to move upwards in the global value chain, to increase the productivity of domestic companies, to improve the quality of governance, and to develop education and the innovation system – are emerging in the context of ongoing technological changes, the Fourth Industrial Revolution or Industry 4.0.

The studies of the monographic section analyse various aspects of CEE economies. Compagnucci, Gentili, Valentini, and Gallegati provide a comprehensive analysis of the growth patterns of the Visegrád countries. They explain the results of these economies in the framework of a structural change approach, and compare their structural changes with those of some “old” EU Member States (including Italy). Empirical evidence shows that the structure of the Visegrád countries’ economies has moved to high-tech manufacturing and knowledge-intensive services, supported by the close relations with Germany. The authors also point out the risks of the interconnection with the German high-tech manufacturing sector.

¹ The digital transformation enablers’ index provides a ranking for EU Member States based on the assumption that infrastructure, access to finance, and the demand and supply of skills are the most important factors driving digital transformation (with a respective weight of 20%, 30%, and 30% of the index). The indices on the environmental enabling conditions (e-leadership and entrepreneurial culture) are assumed to have a lower weighting in the digital transformation enablers’ index (10% each). The digital technology integration index only takes into account the eight individual indicators measured at national level, and assumed to reflect changes in the digital transformation of European businesses: a) enterprises using radio-frequency identification (RFID) technologies as part of production and service delivery processes; b) enterprises that have in use an enterprise resource planning (ERP) software package to share information between different functional areas (e.g. accounting, planning, production, and marketing); c) enterprises that use two or more social media; d) enterprises sending invoices in an agreed standard format allowing their automatic processing, without the individual message being manually typed; e) enterprises that buy at least one cloud computing service; f) SMEs that carried out electronics sales to other EU countries; g) SMEs selling online (at least 1% of turnover); and h) SMEs’ total turnover from e-commerce.

Pelle, Sass, and Tabajdi investigate the most decisive part of the CEE manufacturing sector: the automotive industry. These countries have benefitted greatly from the European single market, as decreasing trade costs have increased their location advantages. Industry 4.0 may have an impact on trade costs (understood in a broad sense). After examining the possible changes of trade costs, the authors discuss Czech and Hungarian case studies from the automotive industry. Company cases reveal that technological changes have indeed begun; however, the effects on CEE economies are ambiguous. Some firms keep the new technologies close to their headquarters, while others invest in their CEE plants to make them capable of adapting to upcoming technologies.

Miculescu and Otil examine the important drivers of the CEE growth model: FDI and human capital in connection with the Fourth Industrial Revolution. Although they focus on Romania, they place the Romanian case in the European context, creating composite indices to compare economic development, health status, and skills. Based on these indices, the ranking of EU-28 countries in economic development and skills indicates the divide between northern and north-western versus southern and eastern countries. In the health status, the ranking of Mediterranean countries is more advantageous – it seems that the Mediterranean diet works.

Ukrainski highlights a further aspect of economic development: innovation systems and innovation policy governance. The achievements of CEE countries are introduced in comparison with those of EU-15. The author classifies innovation capabilities into strategic, external, and internal capabilities. Based on statistical descriptions, the study identifies the challenges for CEE governments to manage innovation policy related to Industry 4.0.

The four studies of this monographic section complement each other perfectly, and, by using comparative investigations, they provide in-depth analyses not only of CEE countries but also of the entire EU.

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