

THE EUROPEAN UNION AND GEOECONOMIC CHALLENGES: INDUSTRIAL AND COMPETITION POLICY RESPONSES

Beáta Farkas, Anita Pelle and Sarolta Somosi

The study analyses the ability of the European Union to adapt to the current geoeconomic-geopolitical relations that have been undergoing a dramatic, dynamic transformation in the past few years. A substantial element of the change is the recent evolution of the USA-China relationship leading, at least partly, to the fragmentation of the global economy. The study introduces the EU's industrial, energy, and competition policy actions that simultaneously target the green and digital transition, competitiveness, and the EU's strategic autonomy. We include a review of the latest industrial policy agenda of the USA taking effect through the 2022 Inflation Reduction Act. The study comes to the conclusion that the EU has given a complex response to the new realities, involving numerous initiatives. At the same time, the original sharing of the competencies between the EU and its member states is in line with liberal competition and the rule-based international order – phenomena of the past. The shaking of the old order implies challenges, the tackling of which requires a toolset that the global competitors with state structure are considerably better able to apply than the EU.

THE EXPECTED DEMOGRAPHIC AND MACROECONOMIC EFFECTS OF THE PERSONAL INCOME TAX RELIEF FOR MOTHERS UNDER THE AGE OF 30

Izabella Kuncz, Petra Németh and Eszter Szabó-Bakos

In 2022, Hungary had the highest rate of population decline among European Union member states. In response to this issue, the government introduced a personal income tax relief for mothers under the age of 30, starting from January 1, 2023. The primary objective of this policy initiative was to slow down the increase in the average age of childbirth and potentially boost the birth rate. The central question addressed in this paper was whether it is both necessary and feasible to use family policy measures to encourage childbearing, increase the birth rate, and reduce the average maternal age. In our article, we quantified the demographic and macroeconomic effects of this specific policy action within a general equilibrium framework. However, our numerical results confirmed only one of the two anticipated goals of economic policy intervention: the average number of children increased slightly, while we could

not substantiate, through our calculations, that the measure resulted in a decrease in the average age of women giving birth.

#### DEVELOPING A FRAMEWORK FOR INDUSTRY 4.0 READINESS ASSESSMENT THROUGH TOPIC MODELLING – FOCUSING ON SMEs

Andrea Gelei, Szabina Fodor and Katalin Ternai

Several recent studies see Industry 4.0 (I 4.0) technologies as one of the solutions to firms' productivity problems. Others highlight that their use does not necessarily deliver the expected results. This is particularly true for small and medium-sized enterprises which in many cases do not seem to have the basic organisational capabilities needed to implement these technologies effectively. Despite this, we do not have an I 4.0 readiness model validated for SMEs. The objective of this study is to propose a set of evaluation criteria for such an SME-specific I 4.0 readiness model. Using a mixed methodological approach, we analyse the corpus of texts generated by seven semi-structured expert interviews using the topic modelling technique. Using artificial intelligence, topic modelling can detect and group words and phrase patterns in documents independently of the researcher conducting the analysis, in a way that best characterises the document under study in terms of content. The results of the applied BERTopic solution show that two interdependent organisational capabilities need to be highly developed before firms start adopting I 4.0 technologies: company-wide process management and IT-management capabilities. The paper discusses the building blocks of these complex capabilities that can be used to set up an SME-specific I 4.0 readiness model.

#### THE FACTORS INFLUENCING BUSINESS STUDENTS' REALISTIC AND UNREALISTIC SALARY EXPECTATIONS AND THE IMPACT OF WORK EXPERIENCE

Gábor Balogh, Brigitta Szabó-Bálint and Anett Uhrin

Our study deals with the salary expectations of university students in business and economics, including the role of experience. Among the wage equation models in economics, there are many that incorporate the number of years spent in professional practice into the models as an explanatory variable. The wages increase with experience typically in the long term. In our analysis, we focused on a special stage of the career: how university students' first work experiences affect their (expected) earnings. Our research question was whether the first few months, half a year or even a year of professional experience demonstrably increases salary expectations (i.e., does this phenomenon also apply in the short term), does it have a significant effect at all, or may it have the opposite effect on expectations. For the analysis, we used the results of a survey conducted at the University of Pécs (a sample of 296 people) in 2022.