Ekonomický ústav SAV
Institute of Economic Research SAS

Meeting of the Institute of Economic Research
4th International Conference
Institute of Economic Research SAS

3. – 4. April 2025
Smolenice, Congress Centre of SAS Smolenice, Slovakia

Conference Programme and Book of Abstracts

Organized by: Institute of Economic Research SAS

Institute of Economic Research, Slovak Academy of Sciences, Bratislava, Slovakia

Edited by: Miroslava Jánošová
The work is supported by The Slovak Research and Development Agency in the frame of the projects: APVV-20-0621, APVV-20-0499, APVV-23-0125,

ISBN 978-80-7144-349-0

ISBN 978-80-7144-352-0

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Foreword

Dear colleagues and participants,

We are pleased to present the Book of Abstracts for MIER 2025, which brings together contributions from this year's conference on key economic and social issues. Main areas include real convergence and global challenges, Slovakia's economic development, population ageing and its impact on public finances, and the financial system and corporate finance in Slovakia.

The abstracts in this volume reflect the broad spectrum of views and research directions represented at the conference. While the contributions differ in approach and focus, they share a common goal: to better understand current issues and support informed discussion on economic and policy topics.

MIER 2025 has created a space where ideas can be exchanged, networks formed and questions raised that are relevant to both academic research and practical decision-making. We are convinced that this collection will be a useful resource for anyone interested in the ongoing development of the Slovak and wider European economic landscape.

We would like to thank all speakers and participants for their contributions and attendance. We hope you find the contents of this book useful and inspiring and look forward to seeing you again at MIER 2026.

Bratislava, April 2025
MIER 2025 Organising Committee

Conference Programme

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Wednesday 2. 4. 2025

17:30 - 18:00	**Early Registration**
18:00 - 20:00	**Dinner**

Thursday 3. 4. 2025

8:30 - 9:00	**Registration**
9:00 - 9:50	**BIG ROOM**
9:00 - 9:10	Conference opening **M. Štefánik**
9:10 - 9:50	Plenary session: **Horváth Peter** - *The role of global value chains (GVCs) as a driver of economic growth in regions*

Parallel Sessions	**BIG ROOM**	**SMALL ROOM**
10:00- 11:15	**Public Policy, Financial Risks, and Economic Support in the EU** *Chair: Boris Fišera*	**Convergence and Competitiveness** *Chair: Hošoff Boris*
10:00 - 10:25	**Lalinský Tibor** - *Zombie Firms in the Pandemic Era and The Role of Government Support*	**Ondrovič Adrián** - *Selected aspects of geopolitics in relation to the process of economic convergence of states*
10:25 - 10:50	**Abille Adamu Braimah** - *Illicit flows, shadow banking and banking crises in the EU*	**Sipko Juraj** - *How to increase the European Competitiveness*
10:50 - 11:15	**Fišera Boris** - *Sentiment Driven Loans*	**Vokoun Jaroslav** - *Strengthening and Weakening of Convergence* **Hošoff Boris** - *The evolution of GDP per capita in the world economy*

11:15 - 11:45	**Coffee Break**
11:45 - 12:30	**BIG ROOM** - Plenary session: **Yamarik Steven** - How would have Czechoslovakia fared? A synthetic control method examination
12:30 - 13:15	**Lunch**

Parallel Sessions	**BIG ROOM**	**SMALL ROOM**
13:15 - 14:55	**Real convergence dynamics and global challenges** *Chair: Výrost Tomáš*	**Economic development of Slovakia** *Chair: Frank Karol*
13:15 - 13:40	**Grodzicki Tomasz** - *The Spatial Impact of Innovation on Economic Development in a Regional Perspective: Evidence From Central-Eastern European Countries*	**Oravec Ján** – *Selected methodological aspects of measuring the quality of the business environment in Slovakia*
13:40 - 14:05	**Kiss Gábor Dávid** - *Uncovered Interest Rate Parity Paradox and Foreign Exchange Regimes in CEE and Balkan Countries*	**Morvay Karol/Martin Hudcovský** - *Current issues of economic development of the Slovak Republic*
14:05 - 14:30	**Výrost Tomáš** - *EU Cohesion Policy in Action: Analyzing Slovakia During the 2014-2020 Programming Period*	**Šikulová Ivana** - *The Slowdown in Slovakia's Foreign Trade amid Increasing Uncertainties in the External Environment*
14:30 - 14:55	**Csápai Ádám** - *Shock analysis using an Input-Output model*	**Frank Karol** - *Development of Public Finance in Slovakia - Challenges Ahead*

15:00 - 15:20	**Coffee Break**

Parallel Sessions	**BIG ROOM**	**SMALL ROOM**
15:20 - 16:30	**Applied microeconomics** *Chair: Lafférs Lukáš*	**Population Ageing and Other Challenges of Public Finance** *Chair: Fišera Boris*
15:20 - 15:45	**Šebo Ján** - *Enterprise Competitiveness Index*	**Senaj Matúš/Valachyová Jana** - *Migration Trends in Slovakia: Youth Mobility and International Migration Flows*
15:45 - 16:05	**Kališ Richard** - *The Effect of Ambulantory Emergency Service Accessibility on Health Care Outcomes*	**Martiška Peter** - *Modelling the Sustainability and Adequacy of the Pension System in Slovakia, Gender Pension Gap*
16:05 - 16:30	**Lafférs Lukáš** - *Correcting for Nonignorable Nonresponse Bias in Ordinal Observational Survey Data*	**Fišera Boris** - Illicit Financial Flows and Income Inequality: The Evidence from Trade Misreporting?

16:30 - 18:30	**Social event**
19:00 - 22:00	**Conference Dinner**

Friday 4. 4. 2025

9:30 - 10:15	**BIG ROOM** - Panel session: **Horváth Július** - *Some Historical Notes on the Development of Economy and Economic Thought in Central Europe: From the Early Times Till Almost Today*	
10:15 - 10:45	**Coffee Break**	
Parallel Sessions	**BIG ROOM**	**SMALL ROOM**
10:45 - 12:00	**Shadow Banking Sector and the Illicit Financial Flows** (APVV-20-0499) *Chair: Širaňová Mária*	**Regional Development, Innovation Dynamics, and Demographic Challenges** *Chair: Tomáš Domonkos*
10:45 - 11:10	**Tóth Balázs** - How Can The Information Use Behavior of Stakeholders in The Public Accounting Information System Be Examined?	**Veronika Hvozdíková** - The Role of Socio-Economic Partners in the Formulation and Implementation of Regional Development Strategies (Case Study of Upper Nitra and the Banská Bystrica Region)
11:10 - 11:35	**Alipanah Sabri** - *Government Bond Yield Synchronisation and Monetary Policy Shocks in Europe based on State-Dependent Local Projection*	**Daneš Brzica** - New technologies as a dynamic factor of convergence: the example of China
11:35 - 12:00	**Širaňová Mária** - *Follow the Money - Deciphering the Link between Shadow Banking Sector and the Illicit Financial Flows*	**Tomáš Domonkos** - Migration as a strategic response to demographic pressure: insights and implications
12:00 - 13:00	**Lunch**	

Book of Abstracts

Illicit financial flows, shadow banking, and Banking Crises in the EU

Adamu Braimah Abille*
*Institute of Economic Research, Slovak Academy of Sciences

The European Union (EU) has experienced substantial growth in the assets of non-bank financial intermediaries (NBFIs), which now constitute approximately 40% of the region's financial system. At the same time, global data on illicit financial flows (IFFs) indicate that the EU remains a significant destination for illicit capital movements. This raises concerns about whether IFFs amplify the impact of shadow banking on systemic risk, particularly in times of financial distress. To address this issue, this study employs an unbalanced panel dataset covering approximately 16 EU countries. It applies a panel logistic framework to investigate the relationship between IFFs, shadow banking, and financial stability. The findings reveal that among various measures of IFFs, the interaction between net trade misinvoicing and shadow banking significantly increases both the probability and the odds of a banking crisis, particularly in contemporaneous terms. Additionally, the results suggest that this effect is driven almost equally by the two key components of shadow banking—other financial intermediaries (OFIs) and investment funds (IFs)—although IFs alone do not significantly predict banking crises. These findings underscore the importance of regulatory scrutiny and policy measures to mitigate financial instability risks arising from the intersection of IFFs and shadow banking activities.

This work was supported by project no. APVV-20-0499

Government Bond Yield Synchronisation and Monetary Policy Shocks in Europe based on State-Dependent Local Projection

Sabri Alipanah*, Maria Siranova*
*Institute of Economic Research, Slovak Academy of Sciences

This study explores the determinants of cross-country co-movement of government bond yields within the euro area. We build on the work of Cuaresma & Fernández (2024) to assess the synchronization of long-term government bond yields in this region during the 2008-2023 period. We focus on the impact of the European Central Bank (ECB) standard monetary policy shocks, as identified by Altavilla et al. (2019). This study is particularly motivated by the introduction of the ECB's Transmission Protection Instrument (TPI), which aims to enhance effective monetary policy transmission across the euro area by purchasing securities from jurisdictions experiencing unwarranted deterioration in financing conditions based on country-specific fundamentals. Consequently, we examine whether the efficacy of monetary policy transmission can be influenced by the level of public debt to GDP. To accomplish this, we employ a panel state-dependent local

projection method, conditioning on the level of public debt to GDP. As this policy has yet to be implemented, our research aims to enhance understanding of how government bond yield synchronization may respond if the policy were to be activated. Our findings indicate that the effects of monetary policy on synchronization vary between countries with high debt levels and those with lower debt-to-GDP ratios.

This work was supported by project no. APVV-20-0499

New technologies as a dynamic factor of convergence: the example of China

Daneš Brzica*
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Recently, a race has been underway to see which country will achieve greater success in the use of modern technologies. Traditionally, countries such as the USA, France, Japan were the centers of development of modern technologies. Later, others joined in – for example, South Korea. However, new emerging technologies – such as big data or artificial intelligence – are also beginning to attract new actors. New technologies can thus become an important dynamic factor in convergence or divergence between countries.
An example of gradual, but dynamic, convergence is China, which has recently invested considerable capital in the development of these technologies, and progress is clear. The program of this economy is currently focused mainly on the use of modern advanced technologies to give the country a strategic advantage in competition with other countries and regions. China uses some advantages such as obtaining large amounts of data for the purpose of "learning" artificial intelligence as well as a sufficiently developed technological background.
The paper aims to highlight some of the successes and challenges that China faces in its efforts to become a major actor in the field of these latest technologies.

This work was supported by project no. VEGA No. 2/0060/23

Sentiment Driven Loans

Boris Fišera*, Zuzana Košťálová*, Štefan Lyócsa
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Consumer sentiment affects economic growth by influencing consumption and investment choices. We explore one of the channels through which sentiment influences the real economy; the demand for consumer and housing loans. We create fundamental-driven and pure sentiment indices using data-driven machine learning (ML) techniques: penalized regressions, complete subset regressions, and random forest. Fundamental-driven sentiment is the expected sentiment as indicated by ML models augmented with common macro-economic drivers of loan growth. Pure sentiment is represented by forecast errors, the unexpected shock to sentiment. Using local projections approach and data for a group of Central European countries that experienced considerable expansion in bank lending over the past decade, we find that positive shocks to sentiment contribute to an increase in housing loans, while it has limited effect on consumer loans. We also find that sentiment about future economic conditions has a more positive effect on loans than sentiment about present economic conditions. Finally, we find that monetary policy stance influences the effect of sentiment: Specifically, sentiment only influences bank lending when monetary policy stance is persistently loose.

This work was supported by project no. VEGA 2/0165/24

Illicit Financial Flows and Income Inequality: The Evidence from Trade Misreporting

Boris Fišera*, Brian Konig*
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Illicit financial flows have significant macroeconomic consequences, but their distributional effects remain unexplored. We study the effect of illicit financial flows on income inequality in a large sample of advanced and emerging economies. We construct novel estimates of one form of illicit financial flows, the misreporting of international services trade, for 187 economies over the years 2005-2023. Next, we use the local projections approach to study the distributional consequences of illicit financial flows in a panel of 123 economies. To improve the identification of causal effects, we use an augmented inverse probability weighted (AIPW) estimator. Our findings indicate that a higher volume of illicit financial flows contributes to higher income inequality. More specifically, illicit financial outflows contribute to higher in-come inequality, whereas illicit financial outflows reduce inequality. Illicit financial inflows appear to decrease inequality by contributing to higher economic growth, while outflows seem to increase inequality by contracting the economic growth.

This work was supported by project no. VEGA 2/0165/24

Development of Public Finance in Slovakia - Challenges Ahead

Karol Frank*
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In 2024, Slovakia faced significant challenges in public finances. The public finance deficit reached approximately 5.8% of GDP, one of the highest levels in the

eurozone. This development was influenced by the ongoing effects of security and energy crises, which led to increased spending on defense and energy. In response to this situation, the government prepared a consolidation package worth 2.7 billion euros, aimed at reducing the deficit to 4.7% of GDP in 2025. These measures include an increase in value-added tax and other fiscal adjustments to bring the deficit below 3% of GDP by 2027, in line with European Union requirements.
The main challenges for public finances in the coming years will be demographic changes, as an aging population will put additional pressure on the pension system and healthcare, potentially leading to increased public spending. Another critical issue will be the consolidation of public finances, as achieving fiscal stability will require effective measures to reduce the deficit and debt while ensuring that these measures do not hinder economic growth. Lastly, external risks will play a significant role, as geopolitical tensions and developments in global financial markets could impact the country's economic stability, requiring flexible and effective fiscal policies. Addressing these challenges will be crucial to ensuring the long-term sustainability of public finances and Slovakia's overall economic stability.

This work was supported by project no. VEGA 2/0042/23

The Spatial Impact of Innovation on Economic Development in a Regional Perspective: Evidence From Central-Eastern European Countries

Tomasz Grodzicki*, Mateusz Jankiewicz*
*Nicolaus Copernicus University in Toruń, Faculty of Economic Sciences and Management, Toruń, Poland

Innovation is an essential driver of economic development in countries worldwide. Innovation is often spreading. Although innovation usually has a global impact, it is created in a particular region. This research aims to examine the impact of innovation level on economic development in central and eastern European countries from a regional perspective (NUTS-2 level) and explore the effect of innovation spread between these regions. This paper aims to explore the link between innovation level and economic development in central and eastern European countries from a regional perspective and examine the impact of innovation spread between these regions. The spatial scope of this paper includes regions from central and eastern European countries since they are still in the process of catching up with more developed Western EU economies. The analysis uses the data on the regional innovational index and gross domestic product per capita from 2016 to apply spatio-temporal models. The research results demonstrate: (1) that western and northern regions had, on average, higher levels of innovation and economic growth than southeastern ones; (2) the positive impact of innovation on economic development in these regions; (3) that there were spatial innovation spillovers with the most significant effect in the regions of

Poland (near its capital city's region) and Romania while the weakest one was in the regions of Slovenia, Bulgaria, and further from the capitals of Romania, Poland, and the Czech Republic.

The role of global value chains (GVCs) as a driver of economic growth in regions

Peter Horvat

Trade has long been a crucial driver of economic prosperity. Modern communication technologies and declining transportation costs have transformed its nature in the last three decades and led to the increasing fragmentation of production processes and a higher degree of economic connectivity at the global level. This dynamic, where production processes are spread over multiple regions, countries and firms, gives rise to global value chains (GVCs). This transformation has introduced a range of policy challenges and regional disparities as the benefits and impacts of GVC participation vary markedly across different areas. Understanding these dynamics is essential for designing policies that foster sustainable and inclusive regional development.
This paper highlights the critical importance of high-quality regional data in mapping the involvement and specialisation of regions within national and international value chains and assessing how GVCs contribute to regional economic growth. It leverages experimental data and traditional statistics to examine the sensitivity of regional Trade in Value Added (TiVA) indicators to the underlying assumptions and data inputs used to construct these measures. We demonstrate how experimental microdata could inform the construction of regional Supply-Use and Input-Output (SUT/IOT) tables, thereby enhancing the precision of regional statistics.
Drawing on detailed microdata, our research introduces novel metrics and assessments of regional participation in GVCs, ensuring alignment with National Account statistics. We offer a technical delineation of the methodological procedures employed to generate these regional statistics and discuss approaches to bridge existing data gaps. Furthermore, the paper illustrates how the derived tables can be incorporated into the Inter-Country Input-Output (ICIO) framework while providing an overview of methodologies for constructing subnational TiVA indicators.
The paper's findings underscore the significant role that GVCs play in driving economic growth in regions by enhancing productivity, stimulating innovation, and fostering economic integration. This refined understanding of regional value chains is crucial for policymakers who want to leverage GVCs to catalyse sustained regional development in an increasingly interconnected global economy.

Some Historical Notes on the Development of Economy and Economic Thought in Central Europe: From the Early Times Till Almost Today

Julius Horvath

In this lecture we discuss from a historical point of view the development of economy and economic thought in Central Europe.
We divide the historical periods in the beginning till approximately the XIX century, then we follow with the period before World War One, continue with the interwar period, discuss the economic thought during World War Two, the short period before the socialist revolution, and the last period under consideration will be the socialist period.
This lecture addresses the comparative history of economic thought in Central European countries where there is a notable common historic heritage and political traits. The author explores issues of Central European identity, Habsburg and Soviet influence, and nationalistic traditions, and reveals commonalities between Czech, Hungarian, Polish and Slovak economic thought: such similarities proceed to explain aspects of contemporary economic and social policies in these countries. We highlight connections among Central European economists in different historical period.

The Role of Socio-Economic Partners in the Formulation and Implementation of Regional Development Strategies (Case Study of Upper Nitra and the Banská Bystrica Region)

Veronika Hvozdíková*
*Institute of Economic Research, Slovak Academy of Sciences

The paper presents the methodological framework and interim findings of a stakeholder survey on their involvement in the design, management, monitoring, and implementation of activities developed within current regional development strategies. The research is set in the context of just transition in two selected Slovak regions: Upper Nitra and the Banská Bystrica Region. Special attention is given to the skill component of regional strategies and the participation of key regional actors in skill-related elements.
The depth and scope of the participatory approach in the design and implementation of development strategies are examined through desk research, exploratory interviews, and structured in-depth interviews. The differences in interim findings stem from the fact that, while Upper Nitra follows a specific transition strategy (the Action Plan for the Transformation of Upper Nitra) that does not correspond to standard regional governance structures, the Banská Bystrica Region adheres to a conventional regional document, the Economic and Social Development Programme.

The interim findings revealed issues that are unsurprisingly linked to the insufficient territorial and governance alignment between the specialized strategy and self-government centers in the first case, as well as discrepancies in the level of representation of socio-economic (SE) partners at regional versus national governance structures. There is also a notable lack of representation of those SE partners who directly contribute to and influence regional employment, alongside a striking underrepresentation of employee representatives.
A well-documented issue is the inadequate allocation of resources beyond EU funds, which reinforces the dominant role of EU-funds implementation bodies, even at the regional level. On a positive note, both self-government bodies and SE partners initially demonstrated a strong commitment to the participatory principle and bottom-up approach. However, over time, the intensity of SE partner engagement gradually declined due to various factors.
Despite the dismantling of some governance structures that had enabled their involvement in later stages of the process, some regional government officials managed to maintain informal consultation mechanisms with SE partners even during the later phases.

This work was supported by projecta no. VEGA 2/0042/23 and VEGA 2/0060/23

Migration as a Strategic Response to Demographic Pressure

Miroslava Jánošová*, Veronika Miťková*, Tomáš Domonkos*
* Faculty of Social and Economic Sciences, CU

Migration is increasingly recognized as a strategic response to the challenges of demographic aging, especially in countries with persistently low fertility rates and a growing proportion of older adults. This research examines the current state of knowledge on the interaction between migration and demographic change, focusing on three key dimensions: the demographic impact of migration, its fiscal and economic implications, and the social and institutional challenges associated with the integration of migrants.
Particular emphasis is placed on empirical findings from OECD and EU countries, taking into account their potential applicability in the Slovakian context. The analysis shows that, under appropriate conditions, migration can help to balance the age structure of the population, strengthen public finances and improve the stability of the labor market. At the same time, it underlines the importance of well-thought-out integration strategies and a coherent, long-term migration policy. The aim of this research is to contribute to a deeper understanding of migration as a multifaceted phenomenon with significant implications for social and economic development.

This work was supported by project no. APVV-22-0526

The Effect of Ambulantory Emergency Service Accessibility on Health Care Outcomes

Richard Kališ*, Jakub Červený**
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**Institute of Health Care Analyses & Masaryk University Brno, Faculty of Economics and Administration

This study investigates the impact of ambulatory emergency service (AES) accessibility on healthcare outcomes, particularly focusing on stroke mortality and ambulance dispatch rates in Slovakia. Leveraging exogenous changes in AES availability due to policy reforms, we employ a two-way fixed effects model to estimate causal effects. Our preliminary findings indicate that the presence of AES increases stroke incidence among men, while the effect on women is statistically insignificant. Additionally, AES expansion is associated with a significant reduction in ambulance dispatches—suggesting a substitution effect between AES and emergency medical services. This shift may negatively affect stroke survivability, as patients potentially delay hospital visits in favor of AES. Moreover, our analysis highlights the need for a well-balanced policy approach to emergency care accessibility. These results provide critical insights for policymakers in optimizing emergency care systems to balance accessibility, efficiency, and overall patient outcomes effectively.

This work was supported by R2 Excellent Research Project 09I03-03-V04-00512

Uncovered Interest Rate Parity Paradox and Foreign Exchange Regimes in CEE and Balkan Countries

Gabor David Kiss*
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Using a Bayesian Model Averaging model for variable selection and Vector Autoregression for impulse response estimations, we assess the presence of the uncovered interest rate parity (UIP) paradox on a sample on Central and East European (CEE) and Balkan peninsula currencies by comparing the periods after the global financial crisis and the post-COVID-19 pandemic with its peaking inflation. While some of the sample currencies were free floating or fixed, some of them implemented temporary stabilized arrangements.
Uncovered interest parity (UIP) paradox is present when the currency depreciates under increasing real interest rate premium. We show that most of the non-floating currencies were not affected by real UIP paradox, but some floating ones were, which signs a strong exposure towards external funding conditions. We also find evidence that the UIP paradox better describes the reasons behind the HUFEUR depreciation as well. Thus, this paper makes a new contribution to the debate of

currency valuation impact on small and open economies around the Eurozone, while highlighting the importance of the instantaneous nature of UIP paradox.

Correcting for Nonignorable Nonresponse Bias in Ordinal Observational Survey Data

Lukáš Lafférs*, Michal Mintál*, Ivan Sutoris
* Matej Bel University

Nonresponse bias poses a significant challenge in survey research, particularly when response decisions depend on the content of the response—a phenomenon known as nonignorable nonresponse. Various models address nonignorable nonresponse bias. However, few effectively correct for it in observational survey data while retaining the benefits of weighting methods by incorporating observable covariates into the adjustment. Among these, contributions are primarily limited to Peress (2010) (Correcting for survey nonresponse using variable response propensity. JASA, 105(492), 1418-1430.) estimator, which is implemented for binary outcomes. However, many surveys collect data on ordinal scales, such as support for policies or issue salience— where binary models are insufficient to fully leverage the richness of the data. To address this gap, we extend the estimator introduced in Peress (2010) to accommodate ordinal outcome data. This approach uses an ordered probit framework for the outcome equation and models the data using an updated likelihood function that accounts for thresholds in ordinal responses, enabling joint estimation of selection effects and outcomes, while accounting for both observable and unobservable factors. By doing so, our method reduces nonignorable nonresponse bias in observational surveys with ordinal outcome data, where a measure of response propensity is observed for respondents.

This work was supported by project no. VEGA 1/0398/23

Zombie Firms in the Pandemic Era and The Role of Government Support

Tibor Lalinský*, Eduard Baumohl**
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The pandemic-induced recession revived discussions on zombie firms and their impact on aggregate economic developments. Extensive pandemic support for businesses heightened concerns about increased zombie lending and a potential zombie boom. Using a large representative sample of non-financial firms operating

in Slovakia, we analyse the evolution and key drivers of zombie firm prevalence during the pandemic. Additionally, we merge detailed balance-sheet data with information on individual pandemic policy support to examine its role.
We decompose zombie firm growth into several categories, distinguishing between zombie entries, exits, and continuous zombies. Further, we break down zombie entries and exits based on whether changes in firm profitability, debt or interest costs drive the transition. We then employ logit regressions to assess the allocation of pandemic support to zombie firms and apply propensity score matching and instrumental variables techniques to quantify its impact on zombie margins.
Our findings confirm a negative relationship between zombie firm incidence and economic growth. However, the prevalence of zombie firms is primarily driven by firms' cyclical financial conditions. Interest rates have a limited direct effect, influencing zombie prevalence with a time lag. Our results also suggest that the pandemic support was only marginally allocated to zombie firms, did not trigger a zombie boom, and may have reduced zombie entries by providing liquidity to firms in temporary distress.

This work was supported by project no. 09I03-03-V04-00337, Dawn of the Dead? Zombie firms in Slovakia

How to increase the European Competitiveness

Juraj Sipko*
* Institute of Economic Research, Slovak Academy of Sciences

The paper focuses on modeling both the sustainability and adequacy of the pension system using a dynamic microsimulation model. According to EUROPOP forecasts, Slovakia is one of the fastest-aging economies in the EU. Slovak age-related expenditures are projected to grow at one of the highest rates among EU countries by 2070, as stated in the European Commission's 2024 Ageing Report. In addition to demographic shifts, the pension system undergoes frequent legislative changes. For these reasons, assessing both the sustainability and adequacy of the pension system is crucial, as they represent two sides of the same coin.
A specific adequacy-related issue is the pension gap between men and women. Women face a double disadvantage regarding pension benefits: (1) maternity leave, which lasts for a considerable period, is treated as earning the minimum wage for pension accumulation purposes, and (2) mothers retire earlier due to a reduced retirement age. This paper explores these disparities and simulates various scenarios to address the issue.

This work was supported by project no. VEGA 2/0003/23

Modelling the Sustainability and Adequacy of the Pension System in Slovakia, Gender Pension Gap

Peter Martiška*, Miroslava Štefánik*
* Institute of Economic Research, Slovak Academy of Sciences

The paper focuses on modeling both the sustainability and adequacy of the pension system using a dynamic microsimulation model. According to EUROPOP forecasts, Slovakia is one of the fastest-aging economies in the EU. Slovak age-related expenditures are projected to grow at one of the highest rates among EU countries by 2070, as stated in the European Commission's 2024 Ageing Report. In addition to demographic shifts, the pension system undergoes frequent legislative changes. For these reasons, assessing both the sustainability and adequacy of the pension system is crucial, as they represent two sides of the same coin.
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Enterprise Competitiveness Index

Tomáš Mikulík, Ján Šebo*, Miroslav Uhliar**
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** Faculty of business management UE

We introduce the Composite Enterprise Competitiveness Indicator (ECI), adapted from Banco de Portugal’s methodology to assess the capacity of Slovak firms to compete domestically and internationally. Drawing on 2023 data from the Register of Financial Statements (RÚZ) and Social Insurance Agency—encompassing 278 069 registered entities, of which 144 190 reported activity and are deemed “active”—we compute firm-level ECIs across six equally weighted dimensions: Return, Product Costs, Productivity, Access to Resources, Risk, and Quality Orientation .
We further refine our sample by excluding firms without sectoral labels, yielding 119 240 companies categorized by technological intensity. Although conventional wisdom posits that high-tech and knowledge-intensive sectors should exhibit superior competitiveness, our analysis reveals the opposite: low-tech industries attain the highest median ECI (0.365), surpassing their high-tech counterparts (median ECI = 0.362 across all active firms) . Sectoral breakdown shows leaders in recreation,

sport, entertainment, accommodation, and personal services, while mining, social care, and professional, scientific and technical activities lag behind.
To highlight practical implications, we identify the top-10 performers (ECI > 0.64) among standard firms with at least three years of history and minimum annual personal costs of €15 000—criteria designed to exclude outliers such as state-backed SPV entities. The overall champion, Slovenská banská, emerges from the traditionally low-competitive mining sector, owing to its unique status as the last operational ore-processing plant in the former Czechoslovakia.
These findings challenge assumptions about the intrinsic advantages of high-tech sectors in Slovakia and underscore the need to explore structural barriers to innovation. Future research will integrate granular wage and employment data to examine productivity–wage links and assess the efficacy of state aid in fostering competitiveness, in collaboration with the Slovak Academy of Sciences and Comenius University Bratislava.

This work was supported by projects no. VEGA 1/0462/23 and APVV-23-0125

Selected aspects of geopolitics in relation to the process of economic convergence of states

Adrián Ondrovič*
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Economic convergence of states, i.e. the convergence of the economic performance of less developed states to the economically strongest, is not a self-evident and welcome phenomenon in the international relations environment.
International relations in the contemporary world are characterized by capitalist competition and power competition of states, and both of these competitions are in direct contradiction with convergence processes.
The economic strength of a state is a fundamental factor in the overall strength of a state and its position in international affairs. The international power competition environment, which is globally dominated by a few great powers, is hostile to trends eroding the status quo, i.e. fundamental changes in the economic and power distribution of the world.
China's decades-long successful convergence with Western powers and their current confrontational course towards China is a real example of the contradiction between convergence and power interests in international relations.
Capitalist competition and the interests of market entities such as transnational corporations also play a significant role in shaping the policy of international relations and their impact on convergence or polarization

between states. For example, the geographical distribution of known mineral deposits around the world is reflected in the interventionist policy of economically developed states, promoting the interests of their domestic corporations.
External extractive interests have an impact on the convergence efforts of states rich in mineral resources. Several violent conflicts in the world, as obstacles to economic development, are directly related to the extractive interests of powerful international players.
In the current globalized world, economic and power interests are also global, especially the interests of great powers. In this environment, the domestic policy of a state becomes the subject of the foreign policy of other states. Real convergence or polarization is therefore the result of many often conflicting interests.

This work was supported by project no. VEGA 2/0060/23

Selected methodological aspects of measuring the quality of the business environment in Slovakia

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Measuring the quality of the business environment is a challenge, if only because there are many factors influencing the business environment and there is no established definition of what actually constitutes the business environment.
Entrepreneurs have the best knowledge of its individual parameters, which is why the measurement often includes questionnaires examining the state of the business environment through the responses of its actors. These are usually the weakest part of the measurement due to sometimes the low quality of the responses and their inevitable subjectivity. If they have too much weight in the measurement, they can negatively affect the overall result.
Equally important is the weight of indicators that measure the quality of the government's economic policy in relation to indicators that measure the quality of the business infrastructure.
Today, Slovakia is dependent on international rankings measuring the level of economic freedom, international competitiveness, or its individual components such as innovation, digitalization or the quality of the workforce. Therefore, the possibility of preparing and regularly monitoring the quality of the business environment in Slovakia through its own project remains a challenge.

Real convergence in the world economy

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The evolution of GDP per capita in the world economy has experienced major changes over the last three decades, which have had varying intensities manifested in fluctuations in GDP per capita, with only a few economies managing to develop the potential for sustained real convergence over this period. The most significant increases in GDP per capita have been among the Asian economies. In parallel, as the ratio of GDP per capita of high-income countries to that of the US has shrunk after 2010, the ratio has increased for middle-income countries. After Japan, another large and advanced economy, the European Union, began to lag behind the US during the second decade of the new millennium. The gap in GDP per capita levels between the new EU Member States has narrowed over the years, while the gap between the old EU Member States has persisted. Thus, in the context of the new Member States, convergence has not only been towards the more advanced economies, but also between them. The EU's lag behind the US was further exacerbated during the SARS-CoV2 pandemic and by the impact of the war in Ukraine and the associated fluctuations in the business cycle, which asymmetrically affects European economies in particular. The EU's underperformance in recent years has been all the more pronounced because the decline in the relative level of GDP per capita vis-à-vis the US has been driven mainly by the large European economies. During the second period under review (2010-2023), the average value of the correlation coefficient between TFP and GDP per capita increased significantly in the EU. The relationship between TFP growth and GDP p.c. strengthened in the EU.

This work was supported by project no. VEGA 2/0060/23

Shock analysis using an Input-Output model

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This study modifies and updates a 64-sector input–output model to capture the complex interdependencies inherent in the Slovak economy. The enhanced model is designed to provide a comprehensive framework for analyzing the propagation of demand-side shocks across a wide range of sectors. In this research, we simulate numerous shock scenarios using robust calibration techniques and meticulously gathered, high-quality data to ensure that our results accurately reflect real-world economic conditions. Our simulations reveal heterogeneity in sectoral responses, highlighting the need for finely tuned, sector-specific policy interventions. The analysis uncovers cascading effects in which shocks to one

sector trigger ripple effects across interconnected industries, ultimately influencing overall economic performance. By incorporating detailed structural relationships and intersectoral linkages, the model facilitates an in-depth exploration of the interplay between sectors under various conditions. These insights prove invaluable for policymakers, economic analysts, and stakeholders who are focused on enhancing economic resilience and stability. The findings support the development of adaptive measures and strategic planning initiatives that mitigate vulnerabilities, promote sustainable growth, and foster long-term economic prosperity. Overall, the research contributes to a deeper understanding of the structural dynamics within a complex economic system and offers a solid foundation for future investigations and effective policy formulation.

This work was supported by project no. VEGA 2/0165/24

Migration Trends in Slovakia: Youth Mobility and International Migration Flows

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Population ageing poses a significant challenge for Slovak public finances. The ongoing emigration of young people, particularly those with higher education, further exacerbates this issue. This contribution aims to explore migration trends to assess whether this phenomenon constitutes a fiscal risk for Slovakia.
In the first part of our analysis, we examine the mobility of university students, recognizing that higher education enhances labor productivity and economic growth. By comparing the inflow and outflow of university students, we estimate the loss of educated employees.
In the second part, we analyze individual-level health insurance datasets from Slovakia to investigate migration trends from 2017 to 2023. We track individuals entering and exiting the Slovak mandatory health insurance system, using these movements as a proxy for migration flows. Our analysis considers both year-on-year migration dynamics and more permanent migration patterns. To assess the scope and limitations of our approach, we compare our findings with official migration statistics, examining what they capture and what they may overlook.

APVV-20-0499 - Project Discussion and New Research Paths

Maria Siranova*
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The roundtable will discuss outputs and findings from research conducted under the umbrella of the project APVV-20-0499 - Follow the Money - Deciphering the Link between Shadow Banking Sector and the Illicit Financial Flows. New follow-up agenda will be debated given the many unexplored avenues that were not taken and could lead to new promising research findings.
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This work was supported by project no. APVV-20-0499

How Can The Information Use Behaviour Of Stakeholders In The Public Accounting Information System Be Examined?

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The study focuses on the data use patterns of the government accounting information system. The size of the state and the importance of the services it provides make the public sector a key player in each national economy, and therefore the efficient and effective management of the available financial resources is of great importance. The operational efficiency of the public sector can be improved by enhancing the quality of accounting information and by strengthening the use of the resulting data in decision-making.
In line with international trends, Hungary has introduced a more modern accrual accounting system. However, as several studies have shown, the modernisation of the accounting system is in itself a necessary but not a sufficient condition, as more reliable data can only be beneficial if it is included in decision support.
The study of this topic should explore what factors influence the demand for information and what information is available, i.e. the supply side. Both sides are fundamentally determined by the logic of the specific functioning of the public

sector and the resulting specific set of stakeholders. It is therefore also worth examining which stakeholders can be identified in the public sector and what accounting information they may be interested in. The use of the data is also determined by the management rules observed in the sector and the resulting margin of manoeuvre.
In addition to accounting reforms, the Hungarian public finances have undergone a major reorganisation over the past decade, one of the central elements of which has been the redefinition of the operational framework of local governments. The scope of local governments' functions and funding has also changed, opening up a new era in the history of Hungarian public sector operations.
The aim of the research is to explore the extent to which the reform environment provides an adequate supply of data, i.e. the extent to which the accounting system provides relevant and reliable data, and to examine the type of data that decision-makers are willing to use. In addition, an attempt will be made to further examine and address possible limiting factors.

Strengthening and Weakening of Convergence

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Economic research has long examined the link between globalization, liberalization, and convergence. The widespread application of new technologies brings new opportunities for growth. Economically less developed countries need to gain the opportunity to acquire modern technologies from abroad, thus accelerating the convergence process.
The overall convergence pattern includes human capital, investment, technology, market forces, institutions and their policies, infrastructure, and openness of the economy. These factors, both internal and external, can either enhance or limit convergence.
However, economic convergence is weakened by macroeconomic instability, a weak legal environment, corruption, an unstable political situation, high fiscal imbalances, low levels of investment, insufficient infrastructure, and the structure of the economy. Furthermore, the convergence process is disrupted by shocks resulting from the instability of the global economy, such as the global economic crisis, protectionist measures, climate change, and geopolitics. Therefore, cooperation, communication, and assistance to weaker economies are crucial.

This work was supported by project no. VEGA 2/0060/23

EU Cohesion Policy in Action: Analyzing Slovakia During the 2014-2020 Programming Period

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The main objective of the European Union (EU) Cohesion policy (CP) is to strengthen economic, social, and territorial cohesion by reducing regional disparities. Brexit, the new challenges facing the EU, and the socio-economic consequences of the COVID-19 pandemic created pressures, particularly on the effectiveness and efficiency of its resources. By far, most studies find a conditional impact of CP on growth and convergence, where the effectiveness of CP depends on various factors, such as quality of institutional set-up, decentralized administrative structure, other supportive policies on national and regional levels, sound macroeconomic policies, industrial structure, territorial capital and regional characteristics, human capital, and others. In our paper, we present an analysis of the Cohesion policy and its effects during the 2014-2020 programming period in Slovakia. Our analysis on the aggregate level is augmented by using granular microeconomic data on Slovak enterprises engaged in EU Cohesion policy-funded projects by utilizing a unique dataset on financials and ownership structures spanning all Slovak legal entities in the given period.

This work was supported by Corporate Efficiency, Failure, and EU Funds: Lessons from Slovakia, grant No. 09I03-03-V04-00429

How would have Czechoslovakia fared? A synthetic control method examination

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In this paper, we ask how would have the nation of Czechoslovakia fared economically if it had not split into two countries. We use a synthetic control method (SCM) to estimate the impact of break-up of Czechoslovakia on real GDP, inflation, trade and inequality. A SCM builds a counterfactual for each treatment unit as a weighted combination of control (donor) units that provide the best match of the pre-treatment outcome variable. We use other former Communist and middle-income countries from Latin America and South Asia as our donor countries. We use pre-treatment values of investment, government, education, population growth and institutional development to construct our counterfactual.
The difference between the observed outcome and the synthetic counterfactual is called the "treatment effect" We estimate an individual "treatment effect" for each economic outcome using both 1991 and 1993 as the break-up period. We find

that the nation of Czechoslovakia would have experienced a slightly lower level of real GDP per capita and Gini coefficient, but a higher trade share and inflation rate.

The Slowdown in Slovakia's Foreign Trade amid Increasing Uncertainties in the External Environment

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The paper discusses the development of Slovakia's foreign trade in 2024 and the factors influencing it. After strong foreign trade dynamics in 2023, the following year saw a year-on-year decline in exports at current prices, while the value of imports remained roughly unchanged. Monthly trade surpluses were lower throughout the year compared to 2023, and December recorded a deficit several times higher than in the previous year. As a result, the full-year external trade surplus contracted by nearly a third year-on-year. The decline in Slovakia's total exports, due to weaker foreign demand, was primarily reflected in a year-on-year decrease in car exports by over 4% – the most significant drop in more than a decade. Nearly four-fifths of Slovakia's export value was directed to the European Union (EU) Member States, while imports from the EU accounted for almost two-thirds of total imports. In 2024, Slovakia achieved a trade balance surplus of nearly EUR 16 billion in trade with EU countries, whereas trade with non-EU countries resulted in an overall deficit of approximately EUR 13 billion. The future trajectory of Slovakia's foreign trade will largely depend on developments in the external environment, which remains uncertain and exposed to multiple risks, particularly trade barriers, foreign conflicts and their potential consequences.

This work was supported by project no. VEGA 2/0042/23

How much to offer?

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We look for the optimal advertised income using data from a dominant online job advertising (OJA) portal covering 2022 and 2023 in Slovakia. Slovak employers are legally obliged to include the information on advertised income when posting OJA. After extensive natural language text data processing, we arrived at a dataset of over 355 thousand OJAs with reliable information on posted income, provider-coded demanded skills, occupation and employer characteristics, and JobBERT-extracted skills with occupational titles. These are complemented by an exhaustive

list of additional contextual information related to the OJAs. Finally, our data includes various measures of OJA attractiveness, such as the number of views, reactions, or posting duration. Exploring this data, we address the question of the optimal level of advertised working income, conditional on the advertised position, contextual factors, demanded skills and other information communicated through the OJA.
Building on our previous research on predicting OJA attractiveness, we estimate the function of offered income on the expected OJA attractiveness. The function is drawn conditionally based on the characteristics of the advertised job using a dose-response function estimated under adjustment for the generalised propensity score. Further, we explore differences in the shape of the offered-income/OJA attractiveness function for the ISCO 4-digit occupational groups.
The unconditioned linear association between offered income and indicators of OJA attractiveness is U-shaped. The shape of the function is varisome when estimated within narrow occupational groups. After allowing for non-linearity, the function assumes a U-shape. After controlling for the important predictors of OJA attractiveness, the shape of the function reveals its growing pattern. Region of the offered job, non-salary benefits, and text morphology are, among other, important in explaining OJA attractiveness.
Our case study documents the importance of both labour market supply and demand side factors in analysing and interpreting OJA data; additionally, we highlight some of the less often considered factors, such as OJA text morphology. Economic theory assumes a positive association between offered income and the attractiveness of the job offer. Nevertheless, when inspected in the data, this association became clouded. Our analysis offers an example of using OJA data to test a simple concept of economic theory, revealing some of the pitfalls and limitations of OJA data.

This work was supported by project no. VEGA 1/0398/23