

**Topics of Dissertations Theses for Applicants for Doctoral Studies for the Academic Year 2025/2026
in the Study Programme Economics - External Educational Institution Institute of Economic Research SAS**

Code: dE_EUSAV_21EN, Full Time

Topics are arranged according to the surname of the supervisor

Supervisor: doc. Ing. Eduard Baumöhl, PhD.	Dissertation Thesis Topic: Detection of tax manipulations using machine learning and artificial intelligence methods	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	<p>Juggling with the corporate accounting and financial statements is an integral part of corporate finance, particularly in Slovakia. The first significant problem in the research area of detecting tax manipulation stems from the data available for such analysis; that is why a substantial part of attention has primarily focused on advanced economies (Shackelford and Shevlin, 2001). Naturally, the construction of detection models in the conditions of less developed systems (from the perspective of data availability) is problematic (Perols et al., 2017). In such situations, models developed elsewhere are often applied in practice, which usually leads to incorrect conclusions about the possible detection of tax manipulation or, in some cases, to unverifiable conclusions, primarily due to the size of the analyzed sample.</p> <p>The second concern about tax fraud detection models is related to the problem that many manipulative firms are poorly categorized during the development of models because they were not explicitly revealed (Dechow et al., 2011). During the construction of prediction models, we usually work under the naive assumption that companies that have not been detected are so-called non-manipulators, which significantly distorts the results within these models. Therefore, detection models with a high degree of accuracy (approximately 80%) successfully detect manipulative firms in which authorities have detected manipulation (Persons, 1995). Thus, if the model is applied to the entire sample of companies in a given country, the results will likely be affected by either type I or type II errors.</p> <p>Hence, to address the pitfalls mentioned above, the main goal of this proposal is to develop a new model based on the recent advances in neural networks and machine learning, suited for the conditions of Slovak business environment. The recipient of the results from our applied research is the official authority in Slovakia – Financial Directorate of SR (FD SR henceforth) – responsible for tax collection and control functions. As such, we have an access to a unique database aggregating the results of all on-site financial inspections conducted by this authority. This database is paired with firm-level accounting data from the Registry of Financial Statements and the Business Register to obtain additional corporate governance data.</p>		
Supervisor: prof. Ing. Saleh Mothana Obadi, PhD.	Dissertation Thesis Topic: The Impact of the EU Decision to Ban the Import of Russian Crude Oil and limiting the Import of Russian Natural Gas on the Energy Security of the V 4 Countries	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	<p>The EU's decision to stop the import of Russian oil and limiting the import of Russian natural gas has a different impact on energy security and the economy as a whole for individual countries of the EU. This decision has a much more visible impact on the energy security of the V4 countries. The dissertation shall be investigating the impact of the mentioned decision on the energy security of the V 4 countries and on their overall economic situation. One of the methods that should be used in the dissertation is the quantitative analyses appropriate to reach the main research question, f.e. NARDL Model or even CGE Model (Perdana et al. (2022)).</p>		
Supervisor: prof. Ing. Juraj Sipko, PhD., MBA	Dissertation Thesis Topic: The future of introduction of the digital euro	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	<p>The rapid process of technological innovation in the financial sector has led to the gradual development of central bank digital currencies (CBDC) around the world. Like other central banks worldwide, the European Central Bank (ECB-Eurosystem) adopted a decision in July 2021 to launch an "investigation phase" ahead of the possible introduction of a digital euro. After finishing "investigation phase" on October 2023, since November 1, 2023 the ECB has moved to the final stage of digital euro introduction e.i., "practical phase" of the introduction of the digital euro. The thesis will analyse all necessary steps and measures towards the introduction of a digital euro. Currently, the ECB-Eurosystem is the process of taking a step-by-step approach towards the adoption of a digital euro.</p>		
Supervisor: prof. Ing. Juraj Sipko, PhD., MBA	Dissertation Thesis Topic: Climate change and its impact on the economy of the EU and Slovakia	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	<p>Climate change is having an immediate impact on macroeconomic indicators, financial and social stabilities, the real economy, international trade, infrastructure and agriculture, including the health of the population. In addition, climate change will have very negative impact on the elderly and the aging population, increasing mortality. At the macroeconomic level in the monetary field, climate change is expected to lead to higher inflation rates and thus to higher interest rates, a decline in working conditions and a more difficult labour market, a decline in labour productivity and, consequently, a slowdown in economic growth. From a fiscal perspective, climate change is bringing about increased additional expenditure linked to natural disasters, floods, forest fires, and costs related to damage infrastructure. Moreover, it is having a significant impact on the external balance of individual EU countries' economies.</p>		

Supervisor: prof. Ing. Juraj Sipko, PhD., MBA	Dissertation Thesis Topic: Fragmentation of the global economy and its impact on the EU and Slovak economy	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	The geopolitical crisis led to a fragmentation of the global economy. This trend brought about geoeconomic blocks. New technological, payment standards, including new developments in the international monetary and payment systems have been created. The fragmentation of the global economy has a significant impact on individual economies / countries. The current process of global fragmentation has led to growing trade restrictions and has had a very negative impact on the economy as a whole. These very negative trends caused technological decoupling, disrupted capital flows as well as have had unpredictable impacts on future international monetary and payment systems. All these negative developments have led to higher levels of costs. Since current humanity is living in turbulent times, and in a world of prone shocks, mutual and beneficial cooperation would be needed.		

Supervisor: prof. Ing. Juraj Sipko, PhD., MBA	Dissertation Thesis Topic: Reform of the International Monetary System	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	The causes of the breakdown of the Bretton-Woods international monetary system. Transition from fixed to floating exchange rates. Kingston's international monetary system and functioning of floating exchange rates. Comparison of fixed and floating exchange rates and their impact on international trade, investment, and international financial stability. The main factors of instability of the present international monetary system. Growing the role of the emerging market countries on international trade, investments, foreign exchange reserves, the GDP; in particular, a significant increase in the role of their currencies in the international monetary system. Gradual transition process from a unipolar to a multipolar international monetary system. Expected creation of the multipolar monetary system based on more reserve currencies could create assumptions for the relative stability of the international monetary system as a whole. There are many prominent economists such as Jack T. Boorman and André Icard (2011), Emmanuel Farhi, Pierre-Olivier Gourinchas and H��l��ne Rey (2011) and John B. Taylor (2019), emphasizing the instability of exchange rates. Despite the fact that there have been efforts to reform the international monetary system, due to the outbreak of the global financial crisis and the deep recession, this topic did not receive its due attention.		

Supervisor: prof. Ing. Juraj Sipko, PhD., MBA	Dissertation Thesis Topic: The future competitiveness of the EU and Slovak economy	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	The main driver of the decrease in economic growth in the EU in the last two decades is low productivity. The European economy has been gradually losing its positioning in the international market due to a low productivity level, which has led to lower competitiveness and lower economic growth in comparison with the US and some new emerging market economies. Therefore, the decision-making bodies on the EU level as well as on the national level should adopt a comprehensive strategy on the way towards sustainable and resilient economic growth. Since there is a relative lack of financial resources in public finance, a completion of the financial union, i.e., both the capital market union and the banking union is of paramount importance. In addition, it will be necessary to provide a broad based analysis of the EU economy in line with the current unprecedented geo-economic fragmentation and its impact on the competitiveness of the EU economy as a whole.		

Supervisor: Mgr. Miroslav ��tef��nik, PhD.	Dissertation Thesis Topic: Impact evaluation of Slovak active labour market policy measures	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	The lack of a skilled workforce is perceived with increasing urgency in the Slovak labour market. Investment in activating and re-skilling of available job seekers, thus, becomes more important. Resources flowing into active labour market policies (ALMP) present a scarce good; their effective allocation, therefore, remains a challenge for economic and social research. Thanks to the availability of administrative data, the impact of particular ALMP measures can be quantified using relatively reliable methods. Empirical microeconomics develops quite dynamically in this field, whether in the case of methods reconstructing a scientific experiment by matching participants to eligible applicants, panel data processing methods, or other regression-based types of analysis. The main task is going to be the description of the intervention logic of ALMP measures provision in Slovakia, documenting its particular measures using available information sources and evaluating the efficiency of particular elements of Slovak ALMP, applying up-to-date techniques of counterfactual impact evaluation. In selecting the evaluated ALMP programme(s), the student will depart from the already available empirical studies and consider the robustness of available evidence and policy relevance.		

Supervisor: Mgr. Miroslav ��tef��nik, PhD.	Dissertation Thesis Topic: Long term development of the private returns to tertiary education in Slovakia	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	Together with other countries of the Middle and East European region, Slovakia experienced a dramatic increase in the tertiary educated population. After 2010, the expansion of higher education was intensified by the ageing of the population, limiting the age cohorts usually entering the universities. More recently, universities have gained importance in attracting a skilled workforce with flows in and out of the country. The student is expected to generate credible estimates of private returns to higher education using the EU-SILC micro-data available for all EU countries since 2004. The long-term development of the private return to tertiary education is going to be interpreted in the context of educational expansion, migration, but also other potential explanatory factors, such as the innovativeness of the economy or changes in the structure of employment.		

Supervisor: Mgr. Miroslav Štefánik, PhD.	Dissertation Thesis Topic: The contribution of the European Structural and Investment Funds to the Slovak economy	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	Investments in Slovakia are mainly made from European Union sources. Recently, there have been more and more voices questioning Slovakia's integration into EU structures. The aim of the dissertation is to estimate the effects of European Structural and Investment Funds in Slovakia using the econometric model HERMIN. The focus of the work will consist of an analysis of the mitigation of regional disparities within Slovakia.		
Supervisor: Mgr. Miroslav Štefánik, PhD.	Dissertation Thesis Topic: Microsimulation model of Slovak schooling	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	Microsimulation modeling is a suitable tool for evaluating potential changes in social, health, economic or educational policies before they are implemented. The aim of the dissertation is to construct a microsimulation model for the Slovak education system in order to predict the educational system and subsequently apply potential changes to individual policies.		
Supervisor: prof. Dr. Ing. Menbere Workie Tiruneh, PhD.	Dissertation Thesis Topic: Determinants of Remittances Inflows in Emerging Economies: Do Macroeconomic Policies Matter?	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	While remittances belong to one of the most examined topics in international finance and development economics literature, there is ongoing controversy regarding measurement errors, identifying key determinants and understanding their contribution to economic growth (Lucas and Stark, 1985; Schiopu and Siegfried, 2006; Carling, 2006; Adams, 2009; De, et al. 2019; Yoshino, et al., 2020; and Bidawi, et al. 2022). The aim of this dissertation is to reexamine the key drivers of remittance inflows in light of recently changing macroeconomic landscape following the 2008-2009 financial crisis as well as the Covid-19 pandemic that affect both the size of labor migration and the corresponding remittance inflows.		
Supervisor: prof. Dr. Ing. Menbere Workie Tiruneh, PhD.	Dissertation Thesis Topic: Populism and Institutions	Full Time	External Educational Institution Institute of Economic Research SAS
Annotation	In recent decades, global challenges such as climate change, surges in humanitarian migration, the COVID-19 pandemic, and economic and energy crises have emerged (Guriev, 2024; Funke et al., 2023). These developments are widely believed to have fueled the rise of populism, which initially gained importance in developing economies but is now increasingly evident also in developed countries. Recently, the spread of populist policies has been further accelerated by technological changes, such as the proliferation of fake news and the targeted dissemination of simplified answers to complex questions aimed at narrowly defined groups of potential voters. After decades of gradual improvement in institutional quality (Acemoglu & Robinson, 2010), populism now poses a significant threat to democratic values and institutional resilience (Acemoglu et al., 2020). Populist policymakers often seek to maximize their income, rents, and privileges by creating institutional frameworks that best serve their own interests (Acemoglu et al., 2005).		