

**Témy dizertačných prác externých vzdelávacích inštitúcií
Ekonomický ústav SAV a Prognostický ústav SAV
pre uchádzačov o doktorandské štúdium
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skratka: dE_EUSAV_21EN – denná forma, Ekonomický ústav SAV
dE_PUSAV_21EN – denná forma, Prognostický ústav SAV)

Témy sú zoradené podľa priezviska školiteľa

doc. Ing. Eduard Baumöhl, PhD.	Detection of tax manipulations using machine learning and artificial intelligence methods	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<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>		
prof. Ing. Juraj Šipko, PhD., MBA	Fragmentation of the global economy and its impact on the EU and Slovak economies	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>The geopolitical crisis led to a fragmentation of the global economy. This trend brought about geo-economic 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.</p>		
Ing. Mária Širaňová, PhD.	On construction of exchange rate policy rule in high inflationary periods	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>Itskhoki and Mukhin (2022) theorized that a combination of standard monetary policy using changes in the key interest rate and exchange rate policy is necessary to achieve an efficient allocation of resources in an open economy, especially in the case of segmented financial markets. The aim of this dissertation is to discuss the design of an exchange rate rule under different combinations of exchange rate regime flexibility, capital openness and using the standard monetary policy instrument, the key interest rate (Khatat et al., 2020). At the same time, the dissertation will discuss the issue of possible nonlinearities during high-inflation periods. The design of the exchange rate rule will also tackle the issue of uncertainty in exchange rate policy decision making.</p>		
Ing. Mária Širaňová, PhD.	On the process of de-anchoring of inflation expectations	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>Under the influence of pandemic inflation, the question of the possibility of a de-anchoring of inflation expectations is currently being debated. While the process of anchoring of inflation expectations due to the increasing monetary policy credibility and transparency has been relatively well studied, the reverse process of 'de-anchoring' in inflation targeting framework has not yet been sufficiently addressed in the literature. The aim of this dissertation is to provide a historical narrative describing the experience of existing periods of such 'de-anchoring', to explore the possibilities of theoretical modeling of such a process, and to analyse the determinants that may increase the likelihood of inflation expectations 'de-anchoring'.</p>		

doc. RNDr. Branislav Šprocha, Ph.D.	Socio-economic differentials in regions in Slovakia and its impact on family and fertility	denná forma	pre externú vzdelávaciu inštitúciu Prognostický ústav SAV
anotácia	<p>Socioeconomic conditions are one of the important factors in demographic reproduction, family, and household formation. The persistence of significant social and economic regional differences in Slovakia may be one of the reasons for the relatively large spatial differences in the formation and character of families, as well as fertility. The main goal of the work is to identify the main socio-economic differences of the regions of Slovakia and whether and to what extent these have an impact on the intensity and timing of fertility, as well as the structure of family households in Slovakia. The research question is whether the existing socioeconomic differences represent one of the decisive factors of different family and reproductive behaviour in Slovakia.</p> <p>In the theoretical part, attention will be focused on questions related to research on the influence of socioeconomic conditions on family and reproductive behaviour. Subsequently, the issue of empirical identification of regional indicators of socioeconomic conditions, as well as tools for determining differences in terms of the intensity and timing of fertility and the size and structure of family households, will be elaborated, especially in the data conditions of Slovakia. By means of selected multidimensional statistical methods, the influence of individual determinants will be tested and subsequently constructed models allowing to explain the identified regional differences in the process of childbirth and the formation of families in Slovakia. Research into possible social and economic policies of the state that could affect these differences will also be an important research question.</p> <p>The topic follows on the supervisor's research carried out as part of the VEGA projects: Temporal and spatial changes of family households in Slovakia and their possible factors, Ongoing transformation of family and reproductive behavior in Slovakia in a temporal and spatial aspect, and also APVV: Analysis and forecast of the demographic development of the Slovak Republic in the horizon 2080: identification and modelling of impacts on the socio-economic sphere at different spatial scales.</p>		
Mgr. Miroslav Štefánik, PhD.	Long term development of the private returns to tertiary education in Slovakia	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>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.</p> <p>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.</p>		
Mgr. Miroslav Štefánik, PhD.	Impact evaluation of Slovak active labour market policy measures	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>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.</p>		
Mgr. Miroslav Štefánik, PhD.	Impact Evaluation of the Support from European Structural and Investment Funds on Private Companies Operating in Slovakia	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>Slovakia receives support from multiple European Structural and Investment Funds (ESIF). At the operational level, these funding schemes translate to particular areas of support with calls. In some of these calls private firms are eligible to apply and draw funding. The student is expected to map the policy areas with calls providing support to private firms of all sizes during the programming period and choose the segment of the EU funds, with the area of support and the impacted population.</p> <p>Based on the mapping, considering data availability (including administrative data such as the ITMS system), the student will select one policy area supported by ESIF. Following the usual impact evaluation procedures (Gertler et al., 2016), the student identifies the policy goals and proposes outcome indicators covered by the available data. Subsequently, depending on the type of support and its implementation, the student picks the most suitable strategy for identifying the impact of the support (Cunningham, 2021). Finally, the estimated impacts of the support at the micro level of firms will be discussed with the available micro and macro-economic studies (Berkowitz et al., 2020, Mogina et al., 2022).</p>		

Mgr. Miroslav Štefánik, PhD.	Evaluating the impact of immigration from Ukrainian to the Slovak labour market	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>The Slovak labour market is becoming increasingly dependent on the workforce from Ukraine. Its dependency on the foreign workforce is predicted to deepen in the future. Economic immigration from Ukraine rose significantly after 2010 but was interrupted by two exogenous shocks. First, the lockdowns were introduced with the COVID-19 pandemic (March 2020) and, later, the war in Ukraine (February 2022).</p> <p>The student will be tasked to describe the changes in the intensity and structure of the population flowing from Ukraine, focusing on labour market participation and economic activity. For this purpose, mapping available survey and administrative data sources is a necessary first step. Labour market segments that are relatively more exposed to the influx of the Ukrainian workforce will be highlighted. Conditional on the data set-up, a suitable identification strategy is going to be selected to identify the impact of immigration from Ukraine on economic performance, employment and wage dynamics in segments of the Slovak labour market.</p>		
prof. Dr. Ing. Menbere Workie Tirneh, PhD.	Drivers of Remittance Inflows in Emerging Economies: Do Macroeconomic Policies Matter?	denná forma	pre externú vzdelávaciu inštitúciu Ekonomický ústav SAV
anotácia	<p>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.</p>		