

Dissertations thesis – Faculty of National Economy – 2021/2022

Study programme: Economic Theory	
Supervisor	prof. Ing. Anetta Čaplánová, PhD.
Dissertation thesis topic	Behavioral Insights into Economics of Happiness
Mode of study	full time/part time
Annotation	Behavioural economics examines the deviations of individual behaviour from rationality. In the framework of the dissertation research, the doctoral student will study the determinants of subjective happiness of individuals and the impact the deviations from rationality in the behaviour of individuals have on this subjective feeling. The dissertation research will also be of the applied relevance. It will focus on identifying ways, how the subjective feeling of happiness could be increased through behavioural interventions at macro-level, or through behavioural nudges at micro-level (so called „happy nudges“). In the dissertation research, both theoretical and empirical methods will be used. The method of randomised controlled trials will play a key role among empirical methods.
Supervisor	prof. Ing. Anetta Čaplánová, PhD.
Dissertation thesis topic	Impact of Fiscal Councils on Fiscal Stability
Mode of study	full time/part time
Annotation	The increase in the number of fiscal councils in the world and in EU countries, which occurred after the financial crisis in the first decade of this millennium and was part of strengthening these countries' fiscal frameworks, was intended to prevent deepening of fiscal imbalances and worsening their long-term sustainability of public finances. If we look at the institutional set-up and competencies of fiscal councils in individual countries, we see that they differ to a greater or a lesser extent. In the dissertation, the doctoral student will focus on examining the impact of fiscal councils in selected countries on fiscal stability (defined by the level of debt, deficit, structural balance, or long-term sustainability of public finances) and compare the institutional framework and competencies of fiscal councils in these countries. Based on the performed analysis, they will formulate conclusions on the most appropriate form of institutional set-up of fiscal councils in terms of their impact on fiscal stability. The starting point of the research will be the state of the art (e.g. Beetsma and Debrun, 2016, Maltritz and Wuste, 2016, Larch and Braendle, 2018), with regard to empirical analysis available databases (e.g. fiscal council dataset - IMF) and the fiscal data of countries concerned will be used. From the theoretical perspective, this research will be anchored in the new institutional economics

Study programme: Economic Policy	
Supervisor	doc. Ing. Martin Lábaj, PhD.
Dissertation thesis topic	Global Value Chains: Network Analysis of the European Production Clusters
Mode of study	full time
Annotation	The rise of global value chains has significantly changed the nature of international trade. More than two-thirds of world trade occurs through global value chains in which production crosses many borders before final assembly. Xiao et al. (2020) provide a new perspective on this issue using network analysis based on the measure of trade in value added. Their network analysis reveals that global value chains are more likely organized regionally and dominated by large countries like the US, China, and Germany. This conclusion is in line with Baldwin and Lopez-Gonzalez (2015) and Estevadeordal et al. (2013), and in contrast to Los et al. (2015). In the thesis, a network analysis will be applied to a more nuanced analysis of production chains across the European countries. Then, it will be extended for a new aspects related to functional specialization. Transnational corporations play a key role in global value chains. Their analysis is left aside by Xiao et al. (2020) but is considered to be among perspective subjects for further research. In this respect, we will utilize a new comprehensive OECD AMNE database (OECD, 2021), that links TIVA database, OECD Inter-regional input-output database and database of activities of transnational corporations into a comprehensive data source.
Supervisor	doc. Ing. Martin Lábaj, PhD.
Dissertation thesis topic	Automation, Education, and Inequality: Theoretical And Empirical Aspects
Mode of study	full time
Annotation	Prettner – Strulik (2020) analyze the effects of automation on economic growth, education, and inequality using an R&D-driven growth model with endogenous education in which high-skilled workers are complements to machines and low-skilled workers are substitutes for machines. The model predicts that automation leads to an increasing share of college graduates, increasing income and wealth inequality, and a declining labor share. A specific assumption about the parameter sigma allows them to derive the analytical solution of the model and it ensures that technological progress has no effects on the wages of low-skilled workers. More general specification could bring much richer interactions between technological progress and wages. Though it could only be analyzed numerically. One of the central implications of their model with is that automation drives skill-upgrading. Thus, there should be a causal effect of industrial robot adoption on the demand for education. In the thesis, we will test this implication in various ways (Greatz – Michaels, 2015; Acemoglu – Restrepo, 2017) with the data of the International Federation of Robotics.

Study programme: Finance and Banking	
Supervisor	prof. Ing. Pavol Ochotnický, CSc.
Dissertation thesis topic	Methods of explainable artificial intelligence in modeling the failure of companies
Mode of study	full time/part time
Annotation	<p>Although statistical methods provide transparent results, they also have some limiting assumptions. On the contrary, artificial intelligence (AI) methods, sometimes called machine learning or algorithmic learning methods, not only do not have such assumptions but are also more accurate. Therefore, it was only a matter of time before these models penetrated the field of corporate failure prediction. First, relatively simple neural networks were used in the mid-1990s (Wilson and Sharda, 1994; Wilson et al., 1995). Other techniques such as support vector machines - SVM (Gestel et al., 2006; Belotti and Crook, 2009) and decision trees with methods of their combination such as bagging and boosting (Barboza et al., 2017) followed. Another promising approach employs deep neural networks (Luo et al., 2017).</p> <p>AI models are very flexible and their output is often only predicted values of the dependent variable. That is why conclusions about the direction and magnitude of the effect of individual variables on the dependent variable cannot generally be drawn from the results of these models. The proposed project of the dissertation emphasizes the study of methods of explainable artificial intelligence, their detailed assessment and then uses selected methods to model the failure of companies in Slovakia.</p>
Supervisor	doc. Ing. Jana Péliová, PhD.
Dissertation thesis topic	Experimental Investigation on Risk Taking for Others
Mode of study	full time/part time
Annotation	<p>In economics and finance a 'decision maker' is usually modeled as an individual. When examining risk attitudes, research is mainly focused on the perception of individual's risk. Is our willingness to take risks different if the outcome of the procedure can affect other fellow citizens, family members?</p> <p>Experimental economics provides a suitable tool for studying behavior of individuals and teams under controlled conditions and allows for causal inference by implementing an exogeneous ceteris paribus variation in the studied factors. The current dissertation project employs experimental economics methods to systematically investigate impact factors on behavior of individuals and its influence on organizational and financial decisions in a market context. Fehr, a Schmidt (1999), Bolton et. al (2005), Bursztyn, et.al (2014).</p>

Study programme: Insurance	
Supervisor	prof. Ing. Erika Pastoráková, PhD.
Dissertation thesis topic	Financial behaviour of households and its effects on financial stability
Mode of study	full time
Annotation	The rise in household indebtedness, the stagnation in concluding life insurance contracts as well as other aspects of household behavior in the Slovak Republic point to changes in fundamental paradigms in household finance. The doctoral thesis analyzes the current state of art in the research of household finance with an emphasis on behavioral aspects in decision-making of individuals / households on financial issues with an impact on the financial stability of the country.

Study programme: Public Administration and Regional Development	
Supervisor	doc. Mgr. Miroslav Šipikal, PhD.
Dissertation thesis topic	Support of entrepreneurship in less developed regions
Mode of study	full time/part time
Annotation	Entrepreneurial activities are an essential element of the competitiveness of regions. Especially in lagging regions, the rate of business activities tends to be low and therefore they are often supported in various forms. The low level of entrepreneurial activity in these regions also opens up the effectiveness and efficiency of these tools. As part of the dissertation, we will analyze one of the frequently used tools to support entrepreneurship - supporting entrepreneurship of the unemployed and its potential advantages and disadvantages for less developed regions, while empirically examining its effectiveness, efficiency and sustainability. At the same time, it turns out that this tool is not primarily used to start a business, but to compensate for the inability to get a job. Therefore, the research will use a combination of qualitative analysis in the form of interviews and quantitative analysis in the form of one of the counterfactual methods.