

**Workshop at Alpen-Adria-Universität Klagenfurt:
Models and Methods for Analysing
Regional and National Economic Policies
Friday, March 31, 2017, North Building, Room I.0.42**

13:00 Registration and Opening welcome of the Workshop

13:30 Using regional HERMIN model at NUTS3 level for CSF ex-post assessment in Slovakia

Presenter: Marek Radvansky, PhD.

Co-authors: Ivan Lichner, PhD., Tomas Miklosovic, PhD.

Main scope of the paper is ex-post assessment of Structural Funds and Cohesion Fund (SF and CF) implementation impact on eight Slovak regions during programming period 2007-2013. Assessment is based on the system of regional econometric structural models HERMIN. This approach is generally suitable for regional ex-post assessment due to its dependency mainly on generally available regional data. Main advantage of regional approach is identification of the particular effects of SF and CF on regions and regional convergence, which is not considered by the policy makers. Model framework is based on eight (satellite) regional models that are mutually interlinked only on the level of aggregated statistical indicators. From sectoral point of view, the HERMIN model covers the spill-over effects between individual (five) sectors within the given region. In case of creating new jobs, the model assumes that all jobs are filled with labour force from the given region, thus the aspect of interregional labour migration is not depicted. Additionally, using ex-ante prolongation of the model run, we were able to estimate sustainability of created jobs. Applied methodology on regional level is not yet broadly utilized and paper brings new perspective for further application for assessment of regional disparities within EU. However, due to limited links between regions there is lack of information related to regional spill-over effects, which should be aim of following research (especially in terms of employment and household consumption).

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14:00 Optimal Implementation Curves of European Structural and Investment Funds – The Case of Slovakia

Presenter: Ivan Lichner, PhD.

Co-authors: Karol Frank, PhD., Marek Radvansky, PhD.

Slovakia is a cohesion country and receives significant funding from European Structural and Investment

Funds (ESIF) in 2014-2020. Similarly, as in the previous programming period, the implementation of Operational programmes started to pick up delay. Optimal implementation curves serve to support more effective implementation planning in the current 2014 – 2020 period. Several papers (e.g. Radvanský – Frank, 2010) show that a more even temporal distribution of the ESIF implementation provides the most efficient and sustainable macroeconomic multipliers. The applied methodology and its results represent unique framework in the area of EU Cohesion Policy analysis and implementation. The optimisation model that takes into account a set of characteristics applied for already opened calls, planned and expected calls for the remainder of the 2014-2020 programming period. Applied characteristics are based on information about development of implementation in programming period 2007 - 2013. The optimisation model finds a solution that meets the criterion of least square deviation from yearly commitment for each operational program, type of European fund and region.

Acknowledgement: This work was supported by VEGA project No. 2/0135/17: Modelovanie a analýza možností znižovania regionálnych rozdielov v SR prostredníctvom verejných politík.

14:30 Evaluating the Effectiveness of Policy Measures to Support Spatial Mobility in Slovakia: The Contribution for Commuting to Work and the Contribution for Resettlement

Presenter: Miroslav Stefanik, PhD.

This paper evaluates the impact of two active labour market measures providing financial contributions to cover costs related to spatial mobility of the unemployed. One supports daily commuting and the other resettlement. For the purpose of evaluation, administrative data from the obligatory social insurance database and the official register of the unemployed were linked. Three indicators of outcome are identified, commuting time, the income of individuals and employment after the end of support. The richness of the data allowed us to use propensity score matching and IV estimates in order to rule out possible selectivity issues. After achieving satisfactory balance, we have yielded comprehensive and robust, significant positive effects of both of the measures under evaluation. The estimated impact differs regionally and is based on the individual characteristics of the beneficiaries.

Acknowledgement: This work was supported by VEGA project No. 2/0135/17: Modelovanie a analýza možností znižovania regionálnych rozdielov v SR prostredníctvom verejných politík.

15:00 Analysing the Relevance and Predictive Power of the Macroeconomic Imbalance Procedure (MIP) Scoreboard's Indicators

Presenter: Maria Siranova, PhD., Filip Ostrihon, PhD.

Co-authors: Tomas Domonkos, PhD., Ivana Sikulova, PhD.

This research aims to evaluate crisis prediction ability of the Macroeconomic Imbalance Procedure Scoreboard's headline and auxiliary indicators. We test the indicators separately by employing signals approach and loss and usefulness function of the policymaker and then as one system by estimating limited dependent variable models. We also evaluate the thresholds and estimate their optimal value subject to a policymaker with preferences assigning equal importance to both missed crisis and false crisis prediction errors. Moreover, impact of statistical data revisions on crisis predictions is examined. The results show, that the tested indicators perform better for the euro area in comparison to the non-euro area. The external sector indicators along with the new labour market indicators seem to have the best prediction abilities. Our outcomes also suggest that if the Macroeconomic Imbalance

Procedure had been employed as an early warning system before the recession in 2009, it would have provided moderately useful alerts in terms of crisis prediction. However, this would mostly have applied to the EA countries and for only few indicators.

Acknowledgement: This research was financed under the Horizon 2020 programme, FIRSTRUN (grant 649261).

15:30 Coffee/Tea Break

16:00 Environmental Tax as the Possible Part of EU Own Resources

Presenter: Tomas Miklosovic, PhD.

Co-Author: RNDr. Viliam Páleník, PhD.

Own resources of the European Union are the base of the European budget revenues. The share of classical resources is decreasing. Significance of the resource based on the proportion of gross national income is increasing and it is based on rather complicated rules. Moreover, current status of own resources is inconvenient and confusing. A new concept of environmental taxes proposed in this paper can serve as an example of new efficient EU own resource. It would lead to a better environmental protection and more transparent financing of the EU budget. In combination with the application of the principle of fiscal neutrality, which consists of a collateral reduction of certain direct taxes, the tax could accelerate economic growth. The possibility of introduction of this tax has been recently discussed by the representatives of EC.

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16:30 Economic Consequences of a Brexit for Austria

Presenter: Dr. Klaus Weyerstrass, Ass.-Prof.

What will be the economic consequences of a Brexit for Austria? Lower demand from the UK will dampen Austrian exports, but these are likely to be small. Only about 3% of Austrian exports (only goods) got to the UK, and the share of the UK in Austrian imports is even lower (1.8% in 2015). Against this backdrop, the Austrian economy should only be marginally directly be affected by the BREXIT. However, the uncertainty about the future shape of the EU, for example with regard to the economic policy orientation, could affect confidence in the entire EU, hence also in Austria. Furthermore, for the German car industry the UK is an important market, and German car manufacturers are important destinations of Austrian exports. Hence, non-negligible indirect trade effects can also be expected for the Austrian industry. In the talk, the channel through which Brexit could affect the Austrian economy will be elaborated. Firstly, these effects will be discussed qualitatively. Then, based on the trade linkages between Austria and UK, as well as the car manufacturing exports of Germany to Austria in combination with the linkages between the Austrian and the German car industry, some rough quantitative impacts of Brexit on the Austrian economy will be given.

17:00 How to Achieve the Take-off into Sustained Growth? A Case Study for Slovenia

Presenter: Prof. Dr. Reinhard Neck

Co-Authors: Dr. Klaus Weyerstrass, Ass.-Prof., Dr. Dmitri Blueschke, Ass.-Prof., Boris Majcen, PhD., Andrej Srakar, PhD., Prof. Miroslav Verbi, PhD

In this presentation, we show that a successful policy aiming at enhancing economic growth in the long run must be based on policies improving human capital and technological progress. This is done for a small open economy in the European Union and the Euro Area, Slovenia. In particular, we investigate how fiscal policies aiming at supporting economic growth without violating the EU Stability and Growth Pact should be designed. Using the SLOPOL10 model, an econometric model of the Slovenian economy, we analyse the effects of different fiscal policies in Slovenia over the next couple of years by means of simulations. The fiscal policy multipliers of the Slovenian economy are shown to be small and short-lived, which renders demand-side expansionary fiscal policies inappropriate as means of achieving higher growth. As expected from economic theory, increasing government transfers, public consumption or public investment result in hikes of real GDP but not in a sustained increase or even higher growth. However, if an increase in government expenditures directly related to technical progress (such as higher funding of tertiary education or subsidies to firms' investment in research and development) is implemented, this triggers a path of output permanently higher than that of the baseline simulation. This result shows that the key to prosperity and sustained growth is investment in human capital and technology, also for a small open economy like Slovenia.

17:30 Approximate solutions of nonlinear-quadratic tracking games

Presenter: Dr. Dmitri Blueschke, Ass.-Prof.

Co-Author: Dr. Viktoria Blueschke-Nikolaeva

Dynamic game theory is a standard tool for modelling conflicts or cooperation between heterogeneous agents. When dealing with economies in a monetary union, the interaction of several decision makers with conflicting objectives constitutes an essential element of the policy-making process. In this study, two models of a monetary union are presented. In particular, we consider a dynamic game between fiscal (played by national governments) and monetary policy (played by a central bank) in a monetary union. Using the game-theoretic approach optimal policies for the players are calculated. In addition to more 'traditional' methods based on linear-quadratic (LQ) techniques, a novel method is presented, which is based on a heuristic approach. Apart from replicating the results of the LQ-based techniques in a standard setting, we solve a 'non-standard' extension of this game (introducing asymmetry in the penalties of the objective function), identifying both a cooperative Pareto and a non-cooperative Nash equilibria, where the traditional methods are not applicable. Our results demonstrate that using the proposed method one can apply a much more differentiated set of policy objectives, which lead to a better macroeconomic outcome.

18:15 Closing remarks