

### **Human capital, business cycle and the labour market performance: A DSGE approach**

The thesis aims to investigate the role of human capital in business cycle persistence and labour market dynamics. The research will be based on a formulated dynamic stochastic general equilibrium (DSGE) model with heterogeneous labour market (with search and matching frictions) and human capital-based endogenous growth. DSGE model will be identified on real data.

### **Corruption and the dynamics of the underground economy through the lens of a DSGE model**

The main goal of the thesis is to evaluate the impacts of corruption on the extent and dynamics of both the official and the underground economy. The thesis will quantify and compare the effects of alternative transmission mechanisms of corruption on the economy implemented into a dynamic stochastic general equilibrium (DSGE) model with the underground sector. DSGE model will be identified on real data using Bayesian estimation techniques. Building an original DSGE model with alternative settings of corruption mechanisms should be one of the thesis's main theoretical contributions.

### **Spatial dynamics of the regional labour markets**

The thesis aims to identify the spatial patterns of the regional labour market dynamics. The first goal is to reveal how spatial interactions influence the matching process at the regional level (including the cross-border effects). The second goal is connected to the identification of spatial propagation of macroeconomic shocks in regional labour markets. The main research methods will be based on spatial econometrics approaches.